

VOLUNTARY PARTICIPATION AND COMMITMENT FORM (BID)

Please list any MBEC Certified and SBA vendors that will participate in this bid, including the Primary Bidder.

Minority (MBE), Women (WBE), and Disabled (DSBE) Owned Business Enterprises¹

Bid Number		Name of Bidder			
Primary Bidder	MBE <input type="checkbox"/>	WBE <input type="checkbox"/>	DSBE <input type="checkbox"/>	N/A <input type="checkbox"/>	SBA <input type="checkbox"/>
Federal Tax Identification #					
Amount Committed		Type of Work or Materials			
Dollar Amount	\$				
Percent of Total Bid	%				
Sub Contractor	MBE <input type="checkbox"/>	WBE <input type="checkbox"/>	DSBE <input type="checkbox"/>		
Vendor Name					
Federal Tax Identification #					
Amount Committed		Type of Work or Materials			
Dollar Amount	\$				
Percent of Total Bid	%				
Sub Contractor	MBE <input type="checkbox"/>	WBE <input type="checkbox"/>	DS-DBE <input type="checkbox"/>		
Vendor Name					
Federal Tax Identification #					
Amount Committed		Type of Work or Materials			
Dollar Amount	\$				
Percent of Total Bid	%				
Sub Contractor	MBE <input type="checkbox"/>	WBE <input type="checkbox"/>	DSBE <input type="checkbox"/>		
Vendor Name					
Federal Tax Identification #					
Amount Committed		Type of Work or Materials			
Dollar Amount	\$				
Percent of Total Bid	%				

REVISED 4-2007

¹ MBE/WBE/DSBES listed above **MUST** be certified by the MBEC prior to Bid Opening Date.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT	BID NUMBER S8XT6530	PAGE OF 2 19
	PHILADELPHIA, PA 19102 - 1685	FIRM NAME (Must be filled in)	

SECTION 1: GENERAL BID SUBMISSION

1.1 TITLE: FIRE FIGHTING PUMPER 1500 GALLON

1.2 CONTRACT TERM: **Date of Award to 12 Month** ("Initial Term"), with an option to renew for up to **three (3)** additional **one (1)** year periods, ("the Renewal Term") exercisable, at the City's sole discretion, as of the expiration of the Initial Term or then current Renewal term. The City may, at its sole discretion, renew the contract for up to three (3) months at the beginning of each renewal period(s) (the "Additional Performance Period"), if a decision has been made not to renew the contract for an entire year.

1.2.1 The City shall exercise such sole option to renew the Contract Term by issuing a letter (the "Renewal Notice") notifying the Contractor that the Contract is renewed for the Renewal Term or Additional Performance Period (identified by commencement and termination dates) that is specified in the Renewal Notice. The Contract shall be deemed to be renewed for such Renewal Term or Additional Performance Period, and Contractor shall be obligated to perform all terms and conditions of the Contract throughout such Renewal Term or Additional Performance Period, as of the effective date indicated on the City's Renewal Notice, whether or not Contractor has agreed, verbally or in writing, to such renewal of the Contract term.

1.2.2 If an individual Performance Bond and/or Payment Bond is required under this Invitation and Bid, such bond(s) shall be and remain in full force and effect throughout the Initial Term, all Renewal Terms, any Additional Performance Period, and the period of any unexpired warranty provided or required under the Contract, without notice of Contract renewal by the City to the surety or the consent of the surety thereto. It is the sole responsibility of the Contractor to ensure that such bond(s) remain in full force and effect as provided in this Section 1.2.2, and failure to do so shall be an event of default pursuant to Section 19, Default, of the attached Terms and Conditions of Bidding and Contract.

If participation in the City's Master Performance Security Program is required under this Invitation and Bid, Contractor shall pay the required annual fee for such participation for each Renewal Term upon the issuance of the Renewal Notice.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 3 19
		FIRM NAME (Must be filled in)	

1.3 CONTRACT TYPE: **REQUIREMENTS**

1.3.1 The following items are required in the operation of various City agencies as ordered. Exact quantities cannot now be determined but estimates thereof are listed herein. Quantities listed may be increased or decreased to meet the requirements of the City during the period of this contract. A minimum is not guaranteed. Purchase orders issued as a result of this bid will be for equipment to be delivered generally on an as-needed basis. Successful bidders are cautioned not to deliver any equipment without first being advised to do so by the ordering agency.

1.3.2 It is the intent of the Procurement Department to make an award for the period as stated above subject to the appropriation of funds in succeeding fiscal year/years by City Council. The City's fiscal year is from July 1st to June 30th inclusive.

Vehicles on the bid to be ordered after the end of the fiscal year are subject to the issuance of purchase orders for the following fiscal years. The City is not liable for the award involving following fiscal years' funds until such orders are issued.

The successful bidder(s) obligation to deliver on such purchase orders shall not take effect until the orders are issued. To simplify the contract procedure, however, the successful vendor will be required to furnish a Performance Bond or Performance Security Fee to cover units awarded to him.

1.4 METHODOLOGY OF ACQUISITION: **PURCHASE** only.

1.5 STATEMENT OF DIRECTION:

1.5.1 It is the intent of the City of Philadelphia to make an award for **Firefighting Pumper 1500 Gallon** for the Fire Department as specified herein during the contract period.

1.6 BID SECURITY

1.6.1 Bid security shall be based upon **cumulative bid amount per Section 5.**

For the purpose of this bid only, paragraph 2 of the attached "Conditions of Bidding-General" is hereby deleted. Instead, bidders must submit with their bid a Bid Bond executed on the attached City Bid Bond Form in the amount of 10% of the bidder's bid.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 4 19
		FIRM NAME (Must be filled in)	

1.7 BID INFORMATION:

1.7.1 All information concerning this bid will be contained in this bid document as issued or amended.

1.7.2 Information provided verbally by any City official shall not be binding or relevant.

1.8 BID SUBMISSION:

1.8.1 Bid information must be submitted to the City of Philadelphia no later than the time and date for the bid opening.

1.8.2 Advertised sealed bids will be received and read publicly at 10:30 AM in Room #170A, 1st Floor, Municipal Services Building, 1401 JFK Boulevard.

1.8.3 Bid should be complete and include ALL information required as described in the various paragraphs of the bid specifications.

1.8.4 COPIES OF BID SPECIFICATIONS

This bid makes reference to Procurement Department Specifications and/or Purchase Descriptions.

Bidders are requested to retain Procurement Department Specifications for future reference.

1.8.5 All pricing must be completed on the forms provided; be complete; and be in ink or typed.

1.8.6 The bid must be complete as to required bid signatures and corporate seal, and fully accept the terms and conditions contained in the bid.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 5 19
		FIRM NAME (Must be filled in)	

1.8.7 LBE CERTIFICATION:

In accordance with the City of Philadelphia's Regulations Relating to Local Bidding Preferences for Procurement Contracts, this bid may be subject to a 5% local bid preference. In order to determine eligibility to receive the 5% preference, if applicable, **bidder or subcontractor must be certified at the time of the bid opening and must submit with the bid the Local Business Entity Certification number** as issued by the Procurement Department for the prime contractor or the applicable subcontractor. If the prime relies upon its subcontractor's LBE status in order to be eligible for the preference, the name and certification number of the subcontractor **must** be submitted with the bid. **Failure to submit the prime's LBE certification number or the subcontractor's name and the LBE certification number with the bid will deem bidder ineligible for the 5% preference.**

Further, by submission of this bid, bidder makes the following certification in connection with the grant of any local bidding preference:

"I certify, that if awarded this contract on the basis of application of the LBE preference, my company or my subcontractor, throughout the entirety of this contract, will perform the majority of the work under this contract within the geographic limits of the City of Philadelphia, and I will, or cause my subcontractor to, maintain within the City a majority of the inventory or equipment that will be used on this contract or the amount of inventory that is customary for this industry."

Prime or subcontractor's LBE Certification Number _____

If applicable:
Subcontractor's Name _____

NOTE: If you wish to apply for Local Business Entity (LBE) certification, go to www.phila.gov/bids. Please provide sufficient time prior to bidding for processing of the LBE application.

1.8.8 **BID PROCESSING FEE:**

All bids submitted where the bid total is greater than \$25,000 must be accompanied by the proper Bid Processing Fee. The fee shall be in the form of a separate check or money order in accordance with Paragraph 3 of the "Terms and Conditions of Bidding and Contract".

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 6 19
		FIRM NAME (Must be filled in)	

1.8.9 CONTACT PERSON:

PRE-AWARD:

Indicate below to whom in your firm questions concerning this Invitation and Bid should be directed:

Name: _____

Address: _____

City/State/ZC: _____

Telephone No. (_____) _____ Ext.: _____

Fax No. (_____) _____

E-mail address _____

POST-AWARD:

Indicate below to whom in your firm questions concerning the Contract resulting from this Invitation and Bid should be directed:

Name: _____

Address: _____

City/State/ZC: _____

Telephone No. (_____) _____ Ext.: _____

Fax No. (_____) _____

E-mail address _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 7 19
		FIRM NAME (Must be filled in)	

1.8.10 ALTERNATES SUBMITTED

If an alternate to any item is offered, bidder must follow instructions in Paragraph 4 of "Terms and Conditions of Bidding and Contract". State the brand name and the model number of each alternate offered.

Detailed technical information on the alternate should accompany the bid. Failure to state alternates will obligate bidder to provide material and/or service specified in the bid.

Any other product information submitted by bidder in connection with this bid is for purposes of product description, information and specification only. Bidder agrees that any additional terms or conditions contained therein, including, but not limited to, disclaimers or limitations of liability, do not become part of the bid.

1.8.11 FORMS TO BE RETURNED WITH BID:

Form #80-247B (one for each type of vehicle offered) is to be completed and returned with bid.

The Temporary Certificate shall be forwarded to the Office of Fleet Management, Attention: James Muller, 100 S. Broad St., 3rd floor, Philadelphia, PA 19102. Bidder shall state year, make, model, body model, manufacturer's cut off date, and delivery after receipt of order.

YEAR: _____

MAKE: _____

MODEL: _____

BODY MODEL: _____

MANUFACTURER'S CUT OFF DATE: _____

DELIVERY ARO: _____

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 8 19
		FIRM NAME (Must be filled in)	

1.8.12 BID QUESTIONS OR PROBLEMS

In preparing the bid response, should any bidder need clarification on the bid requirements, identify a discrepancy in the specifications, determine that a specified product has been discontinued or an alternate procedure is advised, etc.; then the bidder is STRONGLY encouraged to bring these issues to the attention of the Procurement Department's Public Information Unit prior to the bid opening by calling (215) 686-4720 or 4721, or by faxing (215) 686-4716. Questions, whether phoned or faxed, should be received no later than seven (7) calendar days prior to the scheduled opening date of the bid. The City reserves the right to only respond to those questions submitted prior to the stated deadline. If it is in the City's best interest to do so, the bid MAY be amended to reflect the proposed changes/modifications. Exceptions taken DO NOT obligate the City to change the specifications. The City of Philadelphia, Procurement Department will notify all bidders in writing, by addendum duly issued, of any interpretations/changes made to specifications or instructions. The City will not accept responsibility for oral instructions, suggestions or changes by any City agency.

Otherwise the successful bidder will have to provide the product or service exactly as defined in this bid, and in accordance with the directions in Section 2.

1.9 BIDDER QUALIFICATION:

1.9.1 All bidders must be a bona fide manufacturer of, or dealer in, the article specified within the bid. To demonstrate this, bidders should submit the following reference information with their bid. References provided should be pertinent to the commodity requested in this Invitation and Bid and demonstrate the bidders ability to perform on a contract of this size and scope.

Please note that reference information in each section must be completed. Failure to submit this information may result in the bidder's disqualification.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 9 19
		FIRM NAME (Must be filled in)	

SECTION 1:

Customer Reference other than an employee or department of the City of Philadelphia, (excluding suppliers or financial institutions).

Firm Name: _____

Contact Name: _____

Phone No.: _____

Type Work: _____

Years dealing w/your firm: _____

SECTION 2:

Previous purchase order(s)/contract(s) with the City of Philadelphia; (State "None" if applicable).

Dept. Name: _____

Contact Name: _____

Phone No.: _____

PO#/Contract#: _____

Items: _____

1.10 MANDATORY PRE-BID MEETING

A MANDATORY PRE-BID MEETING for all interested parties will be held on **Monday, April 21, 2008 at 12:00 P.M.** at the Municipal Services Building, 1st Floor, Bid Room 170A, 1401 J.F.K. Boulevard, Philadelphia, PA 19102.

The purpose of this meeting is to respond to questions from prospective bidders. Bidders are encouraged to submit questions in writing at this time. All questions that materially impact upon the bid process will be answered, in writing, in a formal addendum issued by the City. Oral responses by City employees or their representatives are not binding and shall not in any way be a commitment by the City.

Attendance at this Pre-Bid Meeting is Mandatory. Only bidders who attend the Pre-Bid Meeting and are subsequently qualified by the City will be eligible for award.

Section 2: SPECIFIC REQUIREMENTS:

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 11 19
		FIRM NAME (Must be filled in)	

2.2 DELIVERY INSTRUCTIONS:

Department will contact vendor with delivery instructions.

All Invoices Against This Purchase Order Should Be Mailed To:

Office of Fleet Management
Accounting Unit, 3rd Floor
100 South Broad Street
Philadelphia, PA 19110

- 2.3 All motor vehicles, which are furnished by the awarded vendor, must be manufactured in the United States, Canada or Mexico. Motor vehicles consist of passenger cars and trucks in accordance with 75 Pa. C.S. §102, known as the Vehicle Code. A motor vehicle is manufactured in the United States, Canada or Mexico if a substantial majority of the principal components are assembled into the final products in an assembly plant in the United States, Canada or Mexico. The awarded contractor shall be prepared to prove that the motor vehicles which will be or have been furnished to the City of Philadelphia are, or were, in fact, manufactured in the United States, Canada or Mexico in accordance with Sections 3731-3736 of the Commonwealth Procurement Code (62 Pa. C.S. §§3731-3736, with applicability to the City of Philadelphia at 62 Pa.C.S. §3102), known as the Motor Vehicle Procurement Act. No payment shall be made to the awarded contractor unless the City of Philadelphia is satisfied that the contractor has complied with these provisions and the Motor Vehicle Procurement Act. Any payments made to the contractor, which should have not been made, shall be recoverable directly from the contractor. In addition to the withholding of payments, any person who willfully violates any of the provisions of the Motor Vehicle Procurement Act, may be prohibited by the City of Philadelphia from participation in contracts awarded by the City of Philadelphia for a period of three years from the date of the determination that a violation has occurred.

Bidder to Complete Section 5, "Type of Transport".

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 12 19
		FIRM NAME (Must be filled in)	

SECTION 3: BID EVALUATION AND AWARD

3.1 EVALUATION

3.1.1 Bid will be evaluated by the Procurement Department.

3.1.2 Bids will be evaluated for responsiveness to the bid specifications and for responsibility of the bidders.

3.1.3 Bids which are determined to be non-responsive for reasons of:

- (i) improper bid security
- (ii) improper bid execution
- (iii) incompleteness
- (iv) offering counter terms and conditions
- (V) improper or incomplete execution of MBEC documents (if applicable)

may be disqualified by the City without notice to the bidder. The decision of the City is final.

3.1.4 Bidders whose bids are determined to be non-responsible for reasons of bidder qualification shall be notified by the City of the reasons for the determination and may contest the finding of non-responsibility through the prescribed procedures described in paragraph 9 of "Terms and Conditions of Bidding and Contract".

3.2 AWARD

3.2.1 This Invitation and Bid shall be awarded to the lowest responsive and responsible bidder(s).

3.2.2 BASIS OF AWARD

The award will be based on the lowest price for item 5.1 only.

The prices used for the calculation of the Basis of Award must be the same prices as quoted in Section 5 - Pricing. In the event of a conflict between the prices quoted in Section 5, "Pricing", of the bid and those used in the Basis of Award, the prices quoted in the Pricing Section will prevail and will be used for calculations.

3.2.3 The contract award will be in the amount of the total amount bid for the items plus a 5% contingency amount to allow and provide for technological changes, improvements or amplifications as the result of the pilot inspection, etc.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 13 19
		FIRM NAME (Must be filled in)	

If the 5 % local bid preference is applicable, the total bid price or total section price of the certified Local Business Entity (LBE) will be multiplied by .95 and rounded to the second decimal place. The adjusted bid price of the LBE will then be used in determining the lowest responsive and responsible bidder.

Unless the Procurement Commissioner determines not to grant a preference for the reasons stated in subsection b., of the LBE Regulation, an LBE, whose bid is otherwise responsive and responsible and who has submitted the information required above, shall be granted a five percent bid preference on competitive bid(s) awards that are over \$25,000.00 and awarded as a whole or by section.

3.2.4 Performance Security

If the total award amount exceeds \$500,000, the Master Performance Security Program does not apply. Upon notification of award, the City will require the successful vendor to provide an individual Performance Bond in the amount of 100% of the contract award as specified in the Letter of Award. For any subsequent renewal periods, sections 1.2.1 and 1.2.2 shall apply.

3.2.6 **City of Philadelphia-Business, Corporate and Slavery Era Insurance Disclosure**

In accordance with Section 17-104 of The Philadelphia Code, the Bidder, after execution of this Contract, will complete an affidavit certifying and representing that the Bidder (including any parent company, subsidiary, exclusive distributor or company affiliated with Bidder) has searched any and all records of the Bidder or any predecessor business entity regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any slaves or slaveholders described in those records must be disclosed in the affidavit.

The Bidder expressly understands and agrees that any false certification or representation in connection with this Paragraph and/or any failure to comply with the provisions of this Paragraph shall constitute a substantial breach of this Contract entitling the City to all rights and remedies provided in this Contract or otherwise available in law (including, but not limited to, Section 17-104 of the Philadelphia Code) or equity and the contract will be deemed voidable. In addition, it is understood that false certification or representation is subject to prosecution under Title 18 Pa.C.S.A. Section 4904.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 14 19
		FIRM NAME (Must be filled in)	

3.2.7 Insurance

Insurance is a requirement for this bid in accordance with Paragraph 15 of the "Terms and Conditions of Bidding and Contract". No contract will be executed nor purchase order issued unless and until all required insurance certificates, in the required amount, are received. **All insurance MUST meet the following requirements:**

- Insured must be in the same name and address as the Bidder
- The insurance carrier must be rated "A" or better by AM Best
- The certificate holder must be the City of Philadelphia, and specifically named as an additional insured on the certificate the "Description of Operations section".
- Certificate must be signed by an authorized representative of the insurance company/carrier

All certificates are to be sent to the Office of Risk Management, One Parkway, 1515 Arch Street, 14th Floor, Philadelphia, PA 19102, Attn. Debbie Lawton or FAX to (215) 683-1705.

SECTION 4: CONTRACT MANAGEMENT

4.1 CITY OF PHILADELPHIA RESPONSIBILITY

4.1.1 Order Against Contracts

Subsequent to contract conformance of a Requirements bid, purchase orders will be issued at such time that the product is needed. Such purchase orders will show if delivery is to be made upon receipt of order, or only after notification by the using department.

- 4.1.1.1 The purchase order will be issued for unit and price not including contingency.
- 4.1.1.2 If during the production process the City identifies a need, the City will issue a change order. The total of the original purchase order and the change orders cannot exceed the contract total.

4.1.2 Invoices submitted shall be processed for payment upon the City's acceptance of the subject vehicle or equipment.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 15 19
		FIRM NAME (Must be filled in)	

4.1.3 The using agencies and departments are responsible for monitoring the products delivered as described in the contract. If any problems arise, a letter should be sent to the vendor requesting resolution by a specified date. A copy should be sent to the buyer. If vendor does not resolve the breach of contract by the requested date the matter should be turned over to the buyer.

4.1.4 ADD-ONS

The City reserves the right to add, delete or change locations; or to acquire other types of options that the vendor can supply that are similar to, but not specifically called for in this bid. The procedure for such acquisitions shall be as follows:

Procurement or the using department will obtain from the Vendor a letter (on his/her letterhead) verifying the items to be added. The letter shall include the complete description of the item, the location (if applicable), the bid number, bid scheduled number, the price to the City and the applicable contract period; and upon receipt and approval by the Procurement Department shall automatically become part of the contract.

4.2 VENDOR RESPONSIBILITY

4.2.1 Contractor may deliver only vehicle(s) or equipment as authorized in the contract and only after receipt of a purchase order or other authorized document from the Procurement Department. All orders must be in writing. Contractor shall not accept verbal delivery requests until after receipt of purchase order or other authorizing document from Procurement.

4.2.2 Contractor may deliver only vehicle(s) or equipment at the prices quoted and the quantities reflected in the contract

4.2.3 In the event that the contractor receives an order for vehicle(s) or equipment not specifically priced and incorporated into the contract, they must:

- (i) bring this to the immediate attention of the Procurement Dept., and
- (ii) notify the ordering agency in writing and refuse to deliver.

4.2.4 Should vehicle(s) or equipment be delivered that are not specifically incorporated and priced into the contract, and/or be delivered without purchase order, the City shall have no obligation for payment.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 16 19
		FIRM NAME (Must be filled in)	

4.2.5 For delivery of vehicle(s) or equipment, contractor shall honor and be paid for orders placed until the close of business of the date of purchase order expiration. Delivery of vehicle(s) or equipment may occur following purchase expiration, so long as the order was placed prior to the purchase order expiration date.

4.2.5.1 Liquidated Damages For Late Deliveries

These specifications shall be subject to the following contractual provisions:

- (1) Time is an essential element of this agreement and Seller agrees that deliveries of items in condition satisfactory to the Procurement Commissioner shall be completed as provided on the day(s) specified pursuant to the delivery schedule contained in specifications.
- (2) For each and every day that a vehicle is late, in accordance with the delivery schedule, the Procurement Commissioner may deduct from the monies due or becoming due Seller the sum per day per undelivered vehicle specified in the bid as liquidated damages to compensate Buyer for its damages arising out of delay in delivery. The number of days of default shall be computed as including the day of default through to but not inclusive of the day when delivery is made. Provided, however, as to item delivered but rejected, the item shall be considered as non-delivered from the date on which the vendor is notified of rejection until the date the item is re-delivered.
- (3) The term "vehicle" as used above shall refer to each vehicle, vehicle body, chassis, or other unit of equipment awarded to the bidder.
- (4) Notwithstanding the above provisions Seller shall not be liable for liquidated damages for delays in delivery caused by Acts of God, acts of public enemy, acts of government, quarantine restrictions and general strikes throughout the industry or freight embargoes not caused by or participated in by Seller.
- (5) Resort to liquidated damages provision by Buyer shall not preclude by Buyer from resorting to other available remedies for subsequent or continuing breaches by Seller.

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 17 19
		FIRM NAME (Must be filled in)	

(6) Liquidated damages will be in the amount of \$100.00 per calendar day per vehicle that delivery of each vehicle exceeds the delivery schedule stated.

4.2.6 Successful bidder(s) will invoice after delivery and acceptance of vehicle(s) or equipment by the City to the address shown on purchase order.

4.2.7 Escalation Price

Vendor shall provide current model year vehicles at the prices set forth in Section 5. For subsequent model years, the vendor may increase or decrease the price provided that:

Next model year vehicle and optional pricing will be based on the percentage difference between the new dealer cost sheet and pricing level and the dealer cost sheet and pricing level effective on the date of the bid opening. This proportional (percentage) increase or decrease will be applicable to the contract price for the current model year vehicle and/or option, thus establishing the new price next model year vehicle and options.

Notice of any price changes in the dealer cost sheet and pricing level established by the Manufacturer shall be given in writing to the Procurement Department, Department of Finance and the Controller Office. This notice must be accompanied by the notice from the manufacturer to the vendor showing the price changes. The City reserve the right to review the propriety of the price rise and cancel the contract at its discretion.

In no event shall the increased prices exceed the dealer's cost sheet and pricing level for vehicles under similar terms and conditions.

4.2.8 At the conclusion of this contract, Contractor agrees to cooperate with any incoming vendor on a transition plan to ensure an orderly changeover of responsibilities.

4.3 VENDOR ACCEPTANCES - IN SUBMITTING AN EXECUTED BID, THE BIDDER AGREES TO THE CONTRACT MANAGEMENT PROCEDURES IN THIS SECTION.

SECTION 5: PRICING

INVITATION AND BID Continuation	CITY OF PHILADELPHIA PROCUREMENT DEPARTMENT PHILADELPHIA, PA 19102 - 1685	BID NUMBER S8XT6530	PAGE OF 18 19
	FIRM NAME (Must be filled in)		

(PRICES QUOTED MAY NOT EXCEED THREE (3) DECIMAL PLACES)

Unit pricing quoted below will prevail in case of any discrepancy(ies) between unit price and the extended amount and will be the determining factor in establishing applicable contract amount(s)/award.

	QTY	UNIT	UNIT PRICE	AMOUNT
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Estimated initial purchase is 3 units.

5.1 42881 000 046 Firefighting Pumper Apparatus, 1500 GPM. Specifications 41-V-20M:86 and Spec. Code 32744c.13, attached.	3	EA	\$ _____	\$ _____
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Omit 15.5 Spare Tire

The City of Philadelphia will accept bids for the Pumper units of an Aluminum cab with a Stainless steel body.

OPTIONS

5.2 42881 009 125 15.5 Spare Tire, Front (1-ea)	1	EA	\$ _____	\$ _____
5.3 42881 009 126 15.5 Spare Tire, Rear (1-ea)	1	EA	\$ _____	\$ _____
5.4 42881 009 127 19.1 Pre-Construction Conference (Cost per individual)	1	EA	\$ _____	\$ _____
5.5 42881 009 128 19.2 Completed Chassis Inspection Trip (Cost per individual)	1	EA	\$ _____	\$ _____
5.6 42881 009 129 19.3 Pre-Paint Inspection Trip (Cost per individual)	1	EA	\$ _____	\$ _____

	QTY	UNIT	UNIT PRICE	AMOUNT
--	-----	------	------------	--------

BID No.			ITEM No.			QUANTITY		
CHASSIS								
MAKE			MODEL NO.			WHEELBASE		
ENGINE								
MAKE			MODEL	DISPL. (CU. IN.)		NO. CYL	MAXIMUM NET H.P.	GOVERNED RPM
TRANSMISSION								
MAKE			MODEL NO.			TYPE		
SPEED RATIOS						NO. PTO OPENINGS		
CLUTCH								
MAKE			NOMINAL DIAMETER			TYPE <input type="checkbox"/> Single Disk <input type="checkbox"/> Twin Disk		
AXLES								
FRONT	MAKE		MODEL NO.			CAPACITY AT GROUND Lbs.		
REAR	MAKE		MODEL NO. RATIO			CAPACITY AT GROUND Lbs.		
FRAME								
SECTION MODULS			MAX. RESISTING MOMENT Inch-Lbs.			YIELD STRENGTH. MIN Lbs./Sq. In.		
SIDE RAIL DIMENSIONS								
STEERING								
TURNING RADIUS FT.			POWER <input type="checkbox"/> NO <input type="checkbox"/> YES			(MAKE)		(MODEL)
WHEELS								
FRONT-MAKE AND RIM SIZE					REAR-MAKE AND RIM SIZE			
TIRES								
FRONT	NO.	SIZE	PLY RATING	CAPACITY Lbs. @ Psi.		TYPE <input type="checkbox"/> Tube <input type="checkbox"/> Tubeless		CORD MATERIAL
REAR	NO.	SIZE	PLY RATING	CAPACITY Lbs. @ Psi.		TYPE <input type="checkbox"/> Tube <input type="checkbox"/> Tubeless		CORD MATERIAL
80-247B(Rev.4/69)			AUTOMOTIVE DATA					

SPECIFICATION

**TRUCKS: AUTOMOTIVE
INTERNAL COMBUSTION ENGINE**



1. SCOPE & CLASSIFICATION:

This specification covers the general requirements for Trucks in various body styles and weight classifications. The Trucks shall be powered by internal combustion engines. They shall be constructed, assembled and equipped to perform properly under the operating conditions for which they are intended. Each unit shall be unused in all component parts and shall be the latest model in current production and include all accessories normally furnished as standard as shown in current literature. These specifications shall be construed as minimum and where the manufacturer's fleet standard exceeds these, vehicles shall be so furnished; where optional equipment is specified, the description thereof shall be the governing minimum. They shall be registered with the Pennsylvania Department of Revenue for the License Class and Axle Weights indicated in the purchase description.

This specification shall be used in conjunction with appropriate detailed chassis purchase description for the specific type of truck called for in the Invitation to Bid (See Index - Last Page).

(NOTE): - Reference to GVW in these specifications is a guide only; final GVW rating shall be determined by the D.O.T. Rules and Regulations in regard to axles, springs, suspension, brakes and tires as required in the T-Form Specifications.

2. APPLICABLE SPECIFICATIONS:

The following specifications, of the , latest issue in effect on the date of the Invitation to Bid, shall form a part of this specification.

- Department of Transportation - Federal & State Motor Vehicle Safety Standards.
- Society of Automotive Engineers, Inc. - SAE Standards & Recommended Practices.

**TRUCKS, AUTOMOTIVE, INTERNAL COMBUSTION
ENGINE - SPECIFICATION 41-V-20M:86**

TABLE OF CONTENTS

(1) SCOPE AND CLASSIFICATION	PAGE 1 OF 32
(2) APPLICABLE SPECIFICATIONS	PAGE 1 OF 32
(3) CAB & CHASSIS	PAGE 5 OF 32
(4) BODY	PAGE 8 OF 32
(5) CAB 7 BODY EQUIPMENT	PAGE 8 OF 32
(6) FRAME	PAGE 9 OF 32
(7) SUSPENSION AXLES	PAGE 10 OF 32
(8) BRAKES	PAGE 11 OF 32
(9) ENGINE	PAGE 12 OF 32
(10) ENGINE EQUIPMENT	PAGE 13 OF 32
(11) TRANSMISSION	PAGE 13 OF 32
(12) STEERING PAGE	PAGE 14 OF 32
(13) COOLING SYSTEM	PAGE 14 OF 32
(14) ELECTRICAL EQUIPMENT	PAGE 14 OF 32
(15) TIRES	PAGE 15 OF 32
(16) FUEL TANK	PAGE 16 OF 32
(17) SAFETY EQUIPMENT	PAGE 17 OF 32
(18) WARRANTY	PAGE 18 OF 32
(19) PRE-PRODUCTION INSPECTION	PAGE 18 OF 32
(20) QUESTIONNAIRE	PAGE 18 OF 32
(21) QUESTIONS REGARDING BID	PAGE 18 OF 32
(22) ILLUSTRATIONS & DRAWINGS	PAGE 18 OF 32
(23) REPAIR PARTS AND SERVICE	PAGE 18 OF 32

(24) CERTIFICATION OF COMPLIANCE WITH SPECIFICATIONS	PAGE 19 OF 32
(25) REQUIREMENTS	PAGE 19 OF 32
(26) MATERIALS	PAGE 19 OF 32
(27) GROSS VEHICLE WEIGHT & DRY CHASSIS WEIGHT RATINGS	PAGE 20 OF 32
(28) FINISH	PAGE 20 OF 32
(29) WORKMANSHIP	PAGE 20 OF 32
(30) SHIPMENT & DELIVERY	PAGE 20 OF 32
(31) INSPECTION	PAGE 21 OF 32
(32) CERTIFICATES & MANUALS TO BE FURNISHED BY VENDOR	PAGE 22 OF 32
(33) SIGNS	PAGE 23 OF 32
(34) SCHOOLS	PAGE 23 OF 32
"T" - SPECIFICATIONS:	
-T1 - TRUCK, CHASSIS, REFERENCE 7,001 - 9,000 LB. GVW	PAGE 24 OF 32
-T2 - TRUCK, CHASSIS, REFERENCE 9,001 - 11,000 LB. GVW	PAGE 24 OF 32
-T3 - TRUCK, CHASSIS, REFERENCE 14,001 - 17, 000 LB. GVW	PAGE 24 OF 32
-T4 - TRUCK, CHASSIS, REFERENCE 17,001 - 21,000 LB. GVW	PAGE 25 OF 32
-T5 - TRUCK, CHASSIS, REFERENCE 21,001 - 26,000 LB. GVW	PAGE 25 OF 32
-T6 - TRUCK, CHASSIS, REFERENCE 26,001 - 30,000 LB. GVW	PAGE 25 OF 32
-T7 - TRUCK, CHASSIS, REFERENCE 44,001 - 48,000 LB. GVW	PAGE 26 OF 32
TRUCKS, BODIES, GENERAL	PAGE 26 OF 32
DUMP BODIES	PAGE 28 OF 32
VAN BODIES	PAGE 30 OF 32
COMPACT VANS	PAGE 31 OF 32

No. 41-V-20M:86
Supersedes 41-V-20L:85
Effective Date: 1/16/86

- OSHA Rules & Regulations - Shall apply when applicable.
- Federal Department of Health, Education & Welfare - Air Pollution Control for New Motor vehicles.
- Commonwealth of Pennsylvania - Traffic & Motor Vehicle Rules and Regulations.
- Manufacturer Line Set Ticket - Shall be forwarded to the Director of Automotive Services upon delivery of the chassis to the City of Philadelphia, or if Pilot Model Inspection, at the factory.

(NOTE) - Any intent of this specification shall be superseded by the provisions of the above.

3. **CAB & CHASSIS:**

- 3.1 Cab - Shall be conventional, three-man adjustable seat with three seat belts.
- 3.2 Chassis - The chassis shall be sturdily constructed and shall be of strength capable of withstanding all imposed loads when operating at the gross vehicle weight without excessive strain on any members or parts.
- 3.3 Chassis Body & Cab Colors:

3.3.1 City of Philadelphia, Paint Colors & Lettering by Department as follows:

<u>DEPARTMENT</u>	<u>COLOR</u>	<u>DUPONT REF. #</u>	<u>LETTERING COLOR</u>
Fair. Pk.	GREEN	72001	IVORY
Fire Dept.	RED	55141	GOLD LEAF
Police (Body)	BLUE	5351A	-----
Police (Roof)	WHITE	92635	-----
Sheriff (Body)	BLUE	5351A	-----
Sheriff (Roof)	WHITE	92635	-----

Water (Up to 21,000 lbs. GVW)	WHITE	508	BLUE
Water (26,000 Lbs. GVW & Up)	SAFETY YELLOW	75306	BLUE
Recreation (Stadium)	BLUE	78387	WHITE
All Other Depts. Except Library	SAFETY YELLOW	75306	BLUE

3.3.2 - All lettering listed above shall be three inches (3") high on front doors, both sides, as follows.

PHILADELPHIA

(NAME OF DEPARTMENT)

(6-DIGIT VEHICLE NUMBER)

NOTE) Stenciling of Lettering is NOT acceptable.

3.3.3 Optional Lettering - Streets Department: All vehicles shall have 1-1/2" size numbers placed on the left side of the front bumper and three inch (3") size numbers on the rear of the body as follows:

Department # - Vehicle # - Division

This lettering is in addition to the lettering specified in 3.3.2 above and lettering instructions may be obtained from the Automotive Services Division of the Department of Public Property.

3.3.4 Official Colors & Lettering of ALL Free Library Vehicles:

A) The vehicle shall be painted as follows:

1. Top Half = White
2. Bottom Half = Dark Blue
3. Dividing Stripe (3" Wide) between top and bottom halves located approx. 3" above blue bottom half = Bright Green

B) The vehicle shall be lettered as follows:

1. "THE FREE LIBRARY OF PHILADELPHIA" in large bold letters.
2. "READ" in large bold letters with a book-and-bell design (using white, blue and green) in the center of the letter "R".
3. Dark Blue lettering on white areas; white lettering on dark blue areas.

C. Paint Color Reference Numbers

<u>COLOR</u>	<u>LIBRARY PANTONE</u>	<u>TRADE NAME</u>	<u>DUPONT NO.</u>
WHITE	-----	WHITE	92635
DARK BLUE	287	DARK BLUE	24160
BRIGHT GREEN	368	BIG BAD GREEN	5081D

(NOTE): Instructions for the above Library Lettering may be obtained from the Automotive Services Division of the Department of Public Property.

4. **BODY:**
Body provided shall be as required in Bid Specs.

5. **CAB & BODY EQUIPMENT:**

5.1 Equipment & Accessories - The following equipment, and/or accessories shall be provided.

Cab & Body:

- 5.1.1 Fresh Air Heater and Defroster with separate control for temperature and fan.
- 5.1.2 All gauges shall be provided for ammeter, oil pressure, water temperature and fuel, 16,000 GVW & up.
- 5.1.3 Dual windshield wipers, power-operated, two-speed or variable.
- 5.1.4 Dual sun visors.
- 5.1.5 Dome Light.
- 5.1.6 Directional Signals - Class "A" Type, as per Pennsylvania DOT Motor Vehicle Regulations - with traffic hazard switch for flashing all turn signal lights simultaneously.
- 5.1.7 Combination arm rest/inside grab handle on cab doors adjacent to driver and passenger seats.
- 5.1.8 Safety Seat Belts - Belts shall comply with DOT Rules and Regulations.

5.1.9 **Mirrors:**

Inside Adjustable, up to 12,000 GVW
Outside, Dual Right/Left W/C to 12,000 GVW
Outside, Dual Right/Left W/C, 6" x 16", for
16,000 lbs. GVW and up.

5.1.10 **Undercoating** - Shall be applied to all exposed sheet metal under chassis and body including fender wells unless constructed of plastic.

(NOTE): Compacting-Type Trucks - are to be undercoated on the cab and chassis but NOT under the compactor Body.

5.1.11 **Cab Outside Grabhandles** - Shall be provided on trucks 16,000 lbs. GVW and up.

6. **FRAME:**

The Chassis Frame shall be constructed of pressed steel or equal; and shall be provided with adequate cross-members, exclusive of engine supports, so designed and constructed as to support adequately the gross weight of the body and load, the power plant, and all other necessary equipment under the operating conditions for which the truck is intended.

6.1 Frame shall be specified in terms of minimum acceptable resisting moment, which is the product of the section modulus of the frame section and the unit stress at the minimum yield point.

$$\text{MOMENT (M)} = \text{SECTION MODULUS (S)} \times \text{UNIT STRESS (F)}$$

In the case of built-up frame sections, the combined section modulus shall be considered as the sum of the individual section moduli.

6.2 Frame Attachments - Front & Rear Towing hooks or Eyes shall be provided, 16,000 lbs. GVW and up. They shall be fastened to the frame in such a manner as to develop maximum tension and minimum bending in the frame members.

6.3 Factory Frame Reinforcement - Shall be provided for 16,000 lbs. and up GVW, GCW and Chassis when specified in bid specifications.

Frame reinforcement is required on all Dump Trucks and Trucks with Cranes, Hydraulic Buckets and other Attachments inducing high twisting and weight stresses.

6.4 Frame Strength - The vehicle frame as supplied by the manufacturer shall meet all requirements as established and set forth by the Federal Government and the Commonwealth of Pennsylvania, Department of Transportation, to meet the GVW of the vehicle bid and shall have the prescribed Certification Sticker affixed to said vehicle. In order to meet the aforementioned standards, the bidder may provide a frame that is either structurally reinforced ("J" type, "L" type, "C" type, etc.) or is constructed of a "high tensile" rating steel or specially heat treated steel (minimum rating of 110, 000 PSI).

7. **SUSPENSION AXLES** - Rear Axles shall be capable of operating under all conditions with multi-purpose gear lubricants.

7.1 Springs - Springs shall match rating of front and rear axles capacity in pounds.

7.2 Shock Absorbers - Shock Absorbers shall be provided front and rear for all 7,500 lb. and 12,000 lb. capacity chassis.

7.3 Tire Chain Clearance - On Drive Wheels, single and dual, wheel chain clearance shall be provided.

7.4 Tandem Axle Suspension - Shall be walking beam type, with at least 50" axle spacing, rubber bushings and a cast steel saddle with steel springs to match axle capacity.

7.5 Axle Capacity shall be provided at least as follows:

<u>GVW REF.</u>	<u>FRONT AXLE</u>	<u>REAR AXLE</u>
7,500 LBS.	3,300 LBS	5,000 LBS.
11,000 LBS	4,000 LBS.	8,000 LBS.
16,000 LBS.	5,000 LBS.	15,000 LBS.
21,000 LBS.	6,000 LBS.	17,000 LBS.
26,000 LBS.	9,000 LBS	19,000 LBS.
30,000 LBS.	12,000 LBS.	23,000 LBS.
48,000 LBS.	16,000 LBS.	38,000 LBS.

(NOTE) - The above listed front axle capacities generally are not applicable to tractor specifications and they will be specified in the bid documents.

7.6 All single driving axles shall be equipped with limited slip differential, positive drive. Tandem axles shall be provided with inter-axle differential lock, air operated; dash switch with a red warning light.

8. **BRAKES:**

Service Brakes shall be provided on all wheels as follows:

8.1 7,500 lbs. to 11,000 lbs. GVW - Power Assisted Brakes

8.2 16,000 lbs. to 25,000 lbs. GVW - Vacuum-Boosted Hydraulic Brakes with a reserve tank, or power steering pump assist, and dash gauge.

- 8.3 26,000 lbs. GVW and UP - Full Air Brakes with dual reserve tanks, air pressure gauge on dash, buzzer, 12 cu. ft. (min.) water cooled air compressor, fail-safe rear brakes (Berg or Maxi type) released by air pressure, automatic reservoir drain valves and dash mounted controls.

(NOTE) - "S" Type Cam Brakes with automatic slack adjuster shall be provided in lieu of "wedge"-type brakes.

9. **ENGINE:**

Engine as specified and provided shall be in accordance with all the applicable provisions of Section #2, and it shall be of at least the listed minimum displacement, in accordance with the truck GVW, as follows:

9.1 Gasoline Powered Engines, if specified -

7,500 lbs. GVW = 345 cu. in.
11,000 lbs. GVW = 345 cu. in.
16,000 lbs. GVW = 360 cu. in.
21,000 lbs. GVW = 360 cu. in.
26,000 lbs. GVW = 390 cu. in.
30,000 lbs. GVW = 425 cu. in.
48,000 lbs. GVW = 425 cu. in.

(NOTE) - Trucks with GVW under 7,500 lbs. will use the 7,500 lbs. GVW rating as a guide.

9.2 Diesel Powered Engines, if specified.

16,000 lbs. GVW = 500 cu. in./4 cycle
21,000 lbs. GVW = 500 cu. in./4 cycle
26,000 lbs. GVW = 500 cu. in./4 cycle
30,000 lbs. GVW = 550 cu. in./2 cycle
30,000 lbs. GVW = 670 cu. in./4 cycle
48,000 lbs. GVW = 550 cu. in./2 cycle
48,000 lbs. GVW = 670 cu. in./4 cycle

(NOTE) - A key-type electrical solenoid or a manual type shut-down

system shall be provided on all diesel engines.

10. **ENGINE EQUIPMENT:**

All engines shall be provided with the following equipment:

- 10.1 Replaceable-type lube oil filter, engine-mounted.
- 10.2 Electronic-type ignition system, if gasoline engine.
- 10.3 Non-leaded Fuel System, if gasoline engine; all engines to have in-line replaceable fuel filters.
- 10.4 Engine Governor shall be provided on all trucks with a GVW of 16,000 lbs. or over; top governed speed limit allowable through transmission and rear axle ratios is 55 MPH.
- 10.5 Manufacturer's rated heavy-duty dry-type intake air cleaner.
- 10.6 All engines shall be provided with an automatic shutdown system for high water temperature and low oil pressure when specified in the Invitation to Bid.
- 10.7 Diesel engines are to be provided with cold weather starting provisions.

11. **TRANSMISSION:**

- 11.1 All trucks will be provided with fully automatic transmissions having the minimum number of forward speeds, in accordance with the truck GVW, as follows:

Up to 7,500 lbs.	3 speeds
11,000 lbs.	3 speeds
16,000 lbs.	4 speeds
21,000 lbs.	4 speeds
26,000 lbs.	4 speeds
30,000 lbs.	5 speeds
48,000 lbs.	5 speeds

(NOTE) - Transmissions provided on Trucks with GVW's of 26,000 lbs. or over shall have factory installed external type oil filters and an oil temperature gauge mounted on the dash.

12. **STEERING:**

All trucks shall be provided with Power Steering

13. **ENGINE COOLING SYSTEM:**

13.1 All engines shall be provided with increased cooling including a sealed radiator coolant recovery system with a surge tank.

13.2 All coolant systems shall be protected by permanent-type anti-freeze down to temperature of at least minus 30oF.

14. **ELECTRICAL EQUIPMENT:**

The chassis shall be provided with 12-volt electric starting, lighting and ignition system with two (2) keys. Alternator shall be heavy-duty type, at least 60 amp output, with 30 amp output at idle. All electrical systems in the vehicle shall be protected by circuit breakers or fuses. Battery shall be a 12-volt "Maintenance Free" type.

15. **TIRES:**

15.1 Tires of the same size and manufacturer shall be provided on the front and rear unless specified otherwise in the Invitation to Bid.

15.2 Front tires shall be "regular" tread type.

15.3 Rear driving axles shall be provided with "All Traction" type tires.

15.4 All-Wheel Drive Type Trucks, (including "Jeeps"), shall be provided with "all traction" type tires on all front and rear driving axles.

(NOTE) - "Military" Grade tires or Wide-Open Tread type tires are not acceptable for "All Traction" Type tires.

Police 4WD type vehicles shall be provided with blackwall "all traction" type steel belted radial tires.

15.5 A mounted "regular" tread type tire ("all traction" type for 4WD type vehicles) and rim shall be provided as a spare unit.

15.6 Trucks shall be provided with the number of tires sized and rated, in accordance with the trucks GVW, as follows:

<u>LBS GVW</u>	<u>NO OF TIRES</u>	<u>RIM SIZE</u>	<u>TIRE SIZE</u>	<u>TIRE PLY</u>
7,000	4	--	8.75 X 16.5	8
11,000	6	--	8.00 X 19.5	8
16,000	6	7.00	9.00 X 20	10
21,000	6	7.00	9.00 X 20	10
26,000	6	7.50V	10.00 X 20	12
30,000	6	7.50V	10.00 X 20	14
48,000	10	8.00V	10.00 X 20	14

(NOTE) The above ratings are to be considered as the minimum acceptable.

15.7 Cast spoke wheels are to be provided on all trucks with GVW ratings of 16,000 lbs. and above.

16. **FUEL TANK:**

All Trucks will be provided with the listed minimum size fuel tank, in accordance with their rated GVW, as follows:

<u>RATED GVW</u>	<u>TANK SIZE & TYPE</u>
7,500 LBS.	20 GALLON - REGULAR TANK
11,000 LBS.	20 GALLON - REGULAR TANK
16,000 LBS.	30 GALLON - REGULAR TANK
21,000 LBS.	50 GALLON - SAFETY STEP TANK
26,000 LBS.	50 GALLON - SAFETY STEP TANK
30,000 LBS.	50 GALLON - SAFETY STEP TANK
48,000 LBS.	DUAL 60 GALLON - SAFETY STEP TANK

17. **SAFETY EQUIPMENT:**

17.1 All trucks shall be provided with all safety equipment as required by DOT/ICC for vehicles in interstate operations. This equipment shall include, but not be limited to:

Fire Extinguisher - Dry Charge Type, Flags, Flares, Reflectors, etc.

Each Kit shall be mounted in a convenient location inside the cab.

17.2 Backup warning buzzer/alarm shall be provided on trucks with a GVW of 16,000 lbs. or above.

17.3 A Manual Engine Shut-Down System shall be provided on all diesel engines.

18. **WARRANTY:**

Warranty - In addition to any policy guarantees usually extended to the general public, the contractor shall guarantee the vehicle and body, and parts thereof against defective material, workmanship, and/or faulty design for a period of one (1) year from date of acceptance delivery to the Department of Public Property. The vendor shall replace all defective assemblies or parts without cost to the City (including labor), f.o.b. manufacturer's nearest dealer or branch, or to original destination whichever is designated by the using agency. The contractor shall make immediate replacement from his plant or through his dealer or branch.

Warranty Rate - Rate shall be \$25.00 per hour, plus 15% parts handling charge, when repairs are performed at City garages.

19. **PRE-PRODUCTION INSPECTION:**
Provide transportation and costs for two (2) persons to inspect pilot model unit at factory. All preparations; travel, lodging, meals and other arrangements will be made by the bidder at his own expense.
20. **QUESTIONNAIRE:**
The questionnaire included with the Invitation to Bid shall be completely filled out and submitted by bidder with his bid.
21. **QUESTIONS REGARDING BID:**
All questions regarding Bid Specifications should be directed to the Director of Automotive Services Division, Room 1140, M.S.B. or call extension (215) 686-4481.
22. **ILLUSTRATIONS & DRAWINGS:**
The bidder shall furnish with his bid, two (2) sets of illustrations and complete data sheets to assist the purchasing and using agencies in determining whether the vehicle offered is adequate to perform the work specified and if it meets the Bid requirements/description.
23. **REPAIR PARTS & SERVICE:**
As the continuous operation of the vehicle contemplated by this specification is of utmost importance, contractor shall be able to furnish, upon request, sources of maintenance and repair, parts and supplies for a period of ten years.

24. **CERTIFICATION OF COMPLIANCE WITH SPECIFICATIONS:**

The bidder shall certify on the form furnished with the Invitation and Bid that the Truck, component units, and parts shall be suitable for the work to be performed and will be constructed to definite standard dimensions, with proper clearance and fits; that previously published or set ratings shall not arbitrarily be raised without prior approval of the manufacturer of the actual unit and further, that the truck offered shall comply in every respect with the terms of this specification. In the event that the truck offered does not comply with this specification, the bidder shall state definitely, referring to the proper paragraph of this specification, where the Truck he proposes to furnish does not comply. Where no statement is received, the successful bidder shall be required to meet every requirement of the specification.

25. **REQUIREMENTS:**

General - Though they shall not be specifically enumerated herein, all parts necessary to provide a complete and efficient truck shall be furnished. All parts shall conform to current engineering practices of the industry relative to design, strength, quality of material and workmanship. The City reserves the right, at its option alone, to accept trucks with minor deviations from this specification.

26. **MATERIALS:**

The Truck and all parts thereof shall be made of materials which are suitable for the intended service and shall be produced by current standard manufacturing processes. The materials shall be free from characteristics or defects which affect the appearance or which shall affect the proper functioning of the finished product.

27. **GROSS VEHICLE WEIGHT AND DRY CHASSIS WEIGHT RATINGS:**
These shall be as specified in the Invitation to Bid. The gross vehicle weight rating shall include the weight of the complete chassis and cab with all attachments, accessories, and equipment required by this specification, and the body with its rated load, full complement of fuel, lubricants, coolant and the operator.
28. **FINISH:**
All surfaces and parts not having a chrome-plated or polished metal surface shall be department color-coated as per paragraph 3.3.1 over a rust-inhibiting primer coat. All concealed metal surfaces are to be protected with a rust-inhibiting primer coat.
29. **WORKMANSHIP:**
Workmanship shall conform to current best manufacturing practices followed from Trucks of similar type and capacity. Component parts and units shall be manufactured to definite standards dimensions, with proper fits and clearance.
- 30 **SHIPMENT & DELIVERY:**
- 30.1 Delivery Information - Final delivery shall be made between the hours of 8:00 AM and 4:00 PM, Monday through Friday, except City Holidays. Each vehicle shall be accompanied by a Delivery Slip which will contain the City's Bid Number, Purchase Order Number, Item Number on the Purchase Order, and Serial Number of the Vehicle. Delivery shall be made to:
- Department of Public Property
Automotive Services Division
6000 N. Broad St.
Philadelphia, PA
- Phone (215) 548-0481
- (NOTE) - Unless a different location is specified in the Invitation to Bid.

Notification of any changes in the delivery location will be made to

the successful bidder at least one week prior to the scheduled delivery date.

- 30.2 Where mounted equipment, such as bodies and accessories are to be furnished under separate contracts, the chassis vendor shall deliver the vehicle to the mounted equipment vendor location designated by the City. He shall secure a dated receipt for delivery with a copy for the City.

Upon completion of the work for which he is responsible, the mounted equipment vendor shall deliver the complete unit to the City of Philadelphia. It is the responsibility, however, of the chassis vendor to obtain the State Inspection Stickers on each vehicle, and therefore, he shall make such arrangements with the mounted equipment vendor as may be mutually agreeable which shall enable the body vendor to get the necessary State Inspection before final delivery.

The Prime Bidder retains the ultimate responsibility of providing a completely assembled and acceptable vehicle in all respects as per this specification and the Invitation to Bid.

30.3 **DELIVERY CONDITIONS:**

- 30.3.1 Vehicles, regardless of delivery point, shall be ready for use including all lubricants, coolant and operating fluids as required. Minimum ten (10) gallons of fuel shall be provided. Battery fully charged, tires properly inflated.
- 30.3.2 Unloading and any labor, equipment or material required for it, shall be the responsibility of the bidder. The City will designate the unloading area of the delivery site to be used.

31. **INSPECTION:**

- 31.1 Pennsylvania State Inspection - Each vehicle shall pass the Vehicle Code Examination of the Department of Transportation, Commonwealth of Pennsylvania; when delivered, chassis vendor shall have attached current State Inspection Stickers in the proper location.
- 31.2 Exhaust Emissions Inspection - All vehicles with GVW's subject to the provisions of the Pennsylvania Department of Transportation exhaust emission regulations must meet said requirements and have the appropriate sticker affixed to the windshield, along with the State Vehicle Inspection Sticker, when the vehicle is delivered to the City.
- 31.3 City Inspection - City Inspection of delivered vehicles will be conducted at the specified delivery point. It will be conditioned upon the satisfaction of all of the requirements of this specification and the Invitation to Bid.
- 31.4 Director of Automotive Services, Department of Public Property, shall be notified when Pilot or First Production Model is available for inspection at Manufacturer's Plant.

32. **CERTIFICATES & MANUALS TO BE FURNISHED BY VENDOR:**

- 32.1 Operator's Handbook with each vehicle.
- 32.2 Provide the necessary forms (completed) and documents for the City to take Title to the vehicle in accordance with the Pennsylvania Motor Vehicle Code.

32.3 Vendor shall supply the Director of Automotive Services, Public Property, not less than five (5) copies each (for chassis, body and accessories furnished) of Shop Manuals, Parts Catalogues, Flat Rate Manuals, and Price Lists, including updated supplements for a period of one year for each type of vehicle. The City shall pay the bidder his costs from the manufacturer for any additional copies required by the operating department.

32.4 Financial Responsibility Statement - Successful bidder is to provide with each delivered vehicle, a Pennsylvania "Financial Responsibility Statement" card (MV-45) completely filled out as per instructions thereon for that vehicle.

33. **SIGNS:**

Signs - Decals or other devices showing Dealer's Name and/or Address shall not be permitted on the outside of the vehicle.

34. **SCHOOLS:**

Each bidder shall arrange with the Director of Automotive Services Division, Department of Public Property, a formal school training program for the current year vehicles and equipment bid upon. These schools shall be available for all City Department's automotive maintenance employees, such as Foremen, Inspectors and Maintenance Mechanics. The Department of Public Property shall make available classroom facilities at Automotive Shop II, Front Street & Hunting Park Avenue, for the required training.

PURCHASE DESCRIPTIONS/PENNA. REGISTRATION CLASSES FOR TRUCKS AND CHASSIS ACCORDING TO THEIR G.V.W.

It is the intention of this Purchase Description Section to indicate the Pennsylvania Registration Class for the various size trucks generally specified for City services.

Reference: Pa. Manual on Automotive Titles and License,
13th Edition

T-1 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF: 7,001-9,000 LBS.**

GVW

1. **Classification:**

- 1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class #3.

T-2 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF: 9,001-11,000 **
LBS. GVW

1. **Classification:**

- 1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class #4.

T-3 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF: 14,001-17,000**
LBS. GVW

1. **Classification:**

- 1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 6.

T-4 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF. 17,001-21,000
LBS. GVW**

1. **Classification:**

1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 7.

T-5 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF. 21,000-26,000
LBS. GVW**

1. **Classification:**

1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 8.

T-6 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF. 26,001-30,000
LBS. GVW**

1. **Classification:**

1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 9.

T-7 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF. 44,001-48,000**

LBS. GVW

1. **Classification:**

- 1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 14.

BODIES

The Bodies as required in Bid items shall fit the chassis and be properly and securely mounted thereon. The bodies shall harmonize perfectly with the chassis, to be correctly proportioned, properly balanced (load distribution), compact and satisfactory in appearance. The materials used in the construction of the bodies shall be of the highest quality. All vehicles with Bodies shall be equipped with mud flaps/stone deflectors as required by DOT and Commonwealth of Pennsylvania. Approximately three (3") inches shall be provided from back of cab to front of body for best load distribution factor.

The following Body Classifications shall be provided as specified in the Invitation to Bid:

BODY:

The truck body, including equipment and body operating devices, shall be completely installed as specified in the Invitation to Bid.

BODY STYLE:

In addition to the cab normally provided with the truck chassis, a body described as follows will be provided according to the body class specified in the Invitation to Bid.

BUMPERS:

Bumpers/Liftgates - Manufacturer's standard type front and rear bumpers shall be provided on all vehicles as per D.O.T. regulations except as specified in the bid specifications. If a lift gate is specified on a vehicle that normally has a rear bumper, the rear bumper is still a requirement as an extension of the chassis or incorporated into the liftgate if either is compatible with the lift gate provided.

Class A-1; Crew Cab:

All steel construction of integral design with four doors; 6-man seating, adjustable front seat, 6 seat belts.

Class A-2; Pickup:

All steel construction at least 96" long x 50" wide beyond wheelhousing; full width rear tailgate, safety chain, stake pockets and rear bumper.

Class A-3; Suburban:

All steel construction, full width rear doors, windows all around, at least 9-passenger seating with removable intermediate and rear axle seats, one seat belt per passenger and a rear bumper.

Class A-4; Stake/Platform:

Body shall be wood or steel construction with removable slatted stake sections on sides and ends. Front-end shall permit adequate rear vision from cab windows. All sections shall interlock. Body shall be securely mounted to frame with full length oak stringers under body.

Class A-4-1(A) Stake & Platform as per A-4, above, at least 12 feet long, 82" wide with 40" high sections.

Class A-4-2(B) Stake & Platform as per A-4, above, at least 14 feet long, 82" wide with 40" high sections.

Class A-5; Step Van:

Shall consist of all-metal construction integral with chassis manufacturer's flat-back" type step van mounted on forward control type chassis, with double full-width rear doors, driver adjustable stand-up seat, passenger seat, and a rear safety step bumper.

Class A-5-1(A) Step Van - As per A-5, above, at least 10 feet long, 78" wide, 68" high.

Class A-5-2(B) Step Van - As per A-5, above, at least 12 feet long, 78" wide, 68" high.

DUMP BODIES AND HOISTS

CLASSIFICATION:

Dump Bodies shall be constructed of high strength corrosion resistant steel. Hoists for Dump Trucks shall be underbody hydraulic power type hoists with controls in cab. They shall provide a dumping angle of not less than 50 degrees and shall be of such a type that will positively control the position of body throughout the entire dumping angle. The hoisting shall be stopped automatically when the body reaches the maximum dumping angle (at least 50 degrees) and retain its position until released. The hoist cylinder shall be so designed as to allow for disassembly and servicing with ordinary hand tools. The pump shall be of the manifold type and oil tracts shall be cored or of seamless steel tubing or high pressure composition hose that shall withstand a minimum burst pressure of 6,000 lbs. per sq. inch. The pump shall be so designed as to compensate for end thrust and the shafts shall rotate on anti-friction bearings. The pump shaft shall be of the automatic self-adjusting seal type, eliminating the necessity for packing nuts and glands.

- Provide red warning light(s) on dash to alert operator that the PTO is engaged.

- Provide rear window protector screen.
- Provide rear spring-loaded pintle hook, "V" reinforced to main frame rails, (clear dump body at full dumping position).
- Approximately three (3") inches shall be provided between cab and dump body for good load distribution.
- A sliding universal joint assembly shall be provided at the pump end of the drive shaft. The body hinges shall operate on hinge pins under double shear or if single shear, a through hinge shaft shall be provided with a center support to prevent deflection. The power take-off shall be anti-friction bearing type. Hoist, power take-off and control parts shall be of sufficient capacity to amply take care of power required to operate hoist with 100% overload in body with relief valve.
- Full length longitudinal hardwood sills shall be provided with hoist frame mechanism to clear dump body for chain clearance at full load (full spring deflection shall be allowed). Hoist mechanism shall be securely mounted. The tailgate shall be double-acting with offset top hinges, tailgate and spreader chains.

TYPE DU-1 8 Ft. length medium duty Dump Body, 3 cubic yard capacity, with at least 16" sides, 84" width, constructed of not less than #10 USS Gauge Steel. Sides shall be reinforced with vertical "V" braces, not less than (2) two on each side. Ends shall be at least 6" higher than sides. Cab shield shall be provided, full width of body, projected at least 18" forward - #10 USS Gauge Steel. Class - #30 Hoist shall be provided with cab PTO controls to include detailed specifications as listed in Classification #1. Flooring shall be ten (10) USS Gauge Steel, minimum.

TYPE DU-2

10 Ft. length heavy-duty Dump Body, 5 cubic yard capacity, with at least 24" sides, 84" width, constructed of not less than #10 USS Gauge Steel. Sides shall be reinforced with vertical "V" braces, not less than (3) three on each side. Ends shall be at least 6" higher than sides. Cab shield shall be provided, full width of body, projected at least 18" forward - #10 USS Gauge Steel. Class - #50 Hoist shall be provided, power-up and down, with cab PTO controls to include detailed specifications as listed in Classification #1. Flooring shall be ten #8 USS Gauge Steel, minimum

TYPE DU-3

12 Ft. length heavy-duty Dump Body, 10 cubic yard capacity, with at least 39" sides, 84" width, constructed of not less than #8 USS Gauge Steel. Sides shall be reinforced box section design with at least four (4) vertical bars on each side. Ends at least 6" higher than sides. Cab shield shall be provided, full width of body, full cover shield, #10 USS Gauge Steel. Class - #80 Hoist shall be provided, power-up and down, with cab PTO controls to include detailed specifications as listed in Classification #1.

VAN BODIES

1. **CLASSIFICATION:**

Van Bodies shall be reinforced aluminum construction. Exterior panels shall be .40" thickness minimum and sides shall be beaded on 4" centers, for extra strength and rigidity, with 5-post, smooth front. Side uprights, top rail roof bows, and radius shall be extruded aluminum section of minimum .125 thickness. Corner post shall be extruded aluminum minimum of .125 thickness. Side sills shall be extruded aluminum minimum of .156 thickness. Exterior panels shall be riveted to uprights and roof on not less than 2" centers.

Rivets shall be of the side lock" moisture proof type. Uprights and roof bows shall be installed at 12" centers to provide adequate strength. All roof joints, side panels, and front panels shall be leak-proof. Body shall have a minimum of 7, three (3") inch cross members, #12 gauge aluminum or of a heavy-duty steel gauge 4" type, securely mounted to the truck chassis by means of "U" bolts. Interior of body shall be protected on sides and front with 1/4" grade AC waterproof plywood lining approximately 36" high, installed 8" above floor, with lengthwise slats above extending to roof. Front of body shall be provided with shatterproof glass windows of not less than 220 square inches in area and aligned with cab rear windows. Floor shall be kiln dried 4 x 4 (finished dimension) oak construction or as specified in the Invitation to Bid. Rear of body shall be equipped with full width roll-up door with safety catch and key lock.

TYPE VB-1 Van Body, complete as per above specifications and at least 12 ft. long, 78" high and 88" wide.

TYPE VB-2 Van Body, complete as per above specifications and at least 14 ft. long, 78" high and 88" wide.

COMPACT VANS

1. **CLASSIFICATION:**

Bodies shall be reinforced steel construction. They shall have full width rear doors with safety glass and locks. Maintenance accessibility shall be convenient and not require major removal of components to change oil, oil filter or air filters. It should also offer ease of service to windshield washer reservoir, master brake cylinder, oil crankcase check, automatic transmission fluid level check, battery and radiator service. Driver's seat should be adjustable and a passenger seat shall be included.

TYPE CV-1 Shall have wheelbase of at least 123" with curbside full width opening doors and as in Classification #1, Compact Vans.

TYPE CV-2 Shall have wheelbase of at least 123" with seating capacity of at least 12 adult passengers; seat belts shall be provided for all passengers. Van shall be provided with safety glass all sides and with a curbside double door safety step and as in Classification #1, Compact Vans.

TABLE OF CONTENTS

VOCATION: FIRE FIGHTING 1500 GAL PUMPER

SPEC. CODE 32744c.13

REF. PURCH. DESCRIPTION 41-V20M:86

Item	Page
INTENT OF SPECIFICATIONS	1
"OR APPROVED EQUAL"	2
SINGLE-LINE RESPONSIBILITY.....	2
1.0 GENERAL INFORMATION.....	2-5
INFORMATION REQUIRED WITH BID.....	2-3
PERFORMANCE TESTS AND REQUIREMENTS.....	3-4
PUMPING SYSTEM PERFORMANCE TEST	4
FAILURE TO MEET TESTS	4
TECHNICAL EVALUATION	5
ADDENDA AND INTERPRETATIONS	5
USER'S LIST.....	5
MODIFICATION TO STANDARD SPECIFICATION.....	5
2.0 APPLICABLE SPECIFICATIONS.....	5-6
2.1 PROVIDE TWO (2) LINE SET TICKETS FOR EACH UNIT DELIVERED.....	5
2.2 CRITERIA AND CODE CONFORMANCE.....	5-6
3.0 CAB AND CHASSIS.....	6-15
3.1 CUSTOM CAB, FOUR-DOOR ALUMINUM	6-12
3.1.1 CAB CONSTRUCTION AND DIMENSIONS	6-7
3.1.2 CAB DOORS AND STEPS	7-8
3.1.3 FRONT CAB SECTION	8
3.1.4 CAB GLASS.....	8
3.1.5 CAB ACCENT MOLDING	8
3.1.6 CAB INTERIOR.....	8-9
3.1.7 ENGINE ENCLOSURE.....	9
3.1.8 SWITCH PANEL.....	9
3.1.9 DARK CHARCOAL VINYL INTERIOR	9-10
3.1.10 DRIVER'S SEAT.....	10
3.1.11 OFFICER SEAT.....	10
3.1.12 CREW SEATS, REAR (four seat version).....	10-11
3.1.13 CREW SEATS, REAR (three seat version/ medical cabinet	11
3.1.14 VINYL SEAT COVERS	11
3.1.15 CAB TILT MECHANISM	11-12
3.1.16 CAB FENDERS AND WHEEL WELL LINERS	12
3.1.17 SLIDING SIDE WINDOWS.....	12
3.1.18 WINDOW CONTROLS.....	12
3.1.19 FIXED REAR WINDOWS.....	12
3.2 APPARATUS DIMENSIONS	12-13
3.2.1 WHEELBASE	13
3.3 PAINT AND FINISH SPECIFICATIONS	13-15
3.3.1 TWO TONE CAB PAINT.....	13-14
3.3.2 LETTERING AND STRIPING.....	14

Item	Page
SCOTCHLITE LETTERING.....	14
UNIT NUMBERING.....	14
SCOTCHLITE STRIPE.....	14-15
3.3.3 OMIT.....	15
3.3.4 OMIT.....	15
3.4 VOGEL LUBRICATION SYSTEM.....	15
4.0 BODY AND COMPARTMENT SPECIFICATIONS.....	16-25
4.1 GENERAL APPARATUS BODY DESIGN CONSTRUCTION.....	16
4.2 BASIC MATERIALS – COMPARTMENT FABRICATION	16
4.3 BASIC CONSTRUCTION SUPERSTRUCTURE.....	16
4.4 OTHER SPECIAL PROVISIONS	17
4.4.1 BEAVERTAILS	17
4.4.2 FENDER LINERS AND FENDERETTES.....	17
4.4.3 BODY RUB RAILS.....	17
4.4.4 REAR BODY PANEL.....	17
4.4.5 REAR STANCHIONS.....	17
4.5 HOSE AND HOSE REEL COMPARTMENTS.....	18
4.5.1 MAIN HOSE COMPARTMENT HOSE BED.....	18
4.5.2 HOSE LOAD.....	18
4.5.3 HOSE BED FLOORING.....	18
4.5.4 HOSE BED PARTITIONS.....	19
4.5.5 HOSE REEL COMPARTMENT.....	19
4.6 EQUIPMENT COMPARTMENTS	19-21
4.6.1 ROLL-UP DOORS	19-20
4.6.2 SWEEP-OUT COMPARTMENTS.....	20
4.6.3 COMPARTMENT TOPS.....	20
4.6.3.1 DRIP MOLDING	20
4.6.4 FASTENERS.....	20
4.6.5 COMPARTMENT LOUVERS.....	20
4.6.6 ACCESS PANELS.....	21
4.7 SPECIFIC COMPARTMENTS.....	21-22
4.7.1 SIDE COMPARTMENTS: (C,)	21
4.7.2 FRONT SIDE COMPARTMENTS (A, E)	21
4.7.3 REAR SIDE COMPARTMENTS (C, F).....	21-22
4.7.4 OFFICERS/STREET SIDE REARWARD	22
4.7.5 OFFICERS/STREET SIDE FORWARD	22
4.8 ADJUSTABLE COMPARTMENT SHELVES.....	22
4.9 SLIDE OUT TRAY.....	22
4.10 AIR BOTTLE STORAGE COMPARTMENTS.....	23
4.11 EXTERIOR EQUIPMENT AND ACCESSORY MOUNTINGS	23-24
4.11.1 HARD SUCTION HOSE	23
4.11.2 STRAINER	23
4.11.3 SOFT SUCTION HOSE STORAGE.....	23
4.11.4 LADDERS.....	23-24
4.11.5 LADDER MOUNTING BRACKETS	24
4.12 RUNNING BOARDS, AND REAR STEP	24
4.12.1 RUNNING BOARD	24
4.12.2 REAR STEP.....	24

Item	Page
4.12.3	AUXILIARY STEPS24
4.13	BODY PROTECTION PANELS.....24-25
4.14	HANDRAILS25
4.14.1	GENERAL.....25
4.14.2	HANDRAIL GASKETS25
5.0	CAB AND BODY EQUIPMENT.....25-29
5.1.1	HEATER, DEFROSTER AND AIR CONDITIONING25-26
5.1.2	DRIVER AND OFFICER INSTRUMENTS CONTROLS.....26-27
5.1.3	WINDSHIELD WIPERS27
5.1.4	PADDED VINYL VISORS27
5.1.5	INTERIOR CAB LIGHTING.....27
5.1.7	CAB GRAB HANDLES.....28
5.1.8	OCCUPANT SEAT BELTS.....28
5.1.9	CAB MIRRORS.....28
5.1.10	RUSTPROOFING28-29
5.1.11	EXTERIOR GRAB HANDLES.....29
5.1.12	AUXILARY 12 VOLT OUTLET.....29
5.1.13	FLUID LEVELS.....29
6.0	FRAME29-30
6.2	FRONT TOW EYES.....29
	REAR TOW EYES.....29-30
6.3	FRAME LINER.....30
6.4	FRONT BUMPER.....30
7.0	AXLES AND SUSPENSION SYSTEM30-31
7.1	FRONT SUSPENSION WITH SHOCK ABSORBERS.....30
	REAR SUSPENSION.....30
7.2	SHOCK ABSORBERS.....30
7.3	AS PER 41-V-20M:86.....30
7.4	FRONT AXLE30
7.4.1	FRONT AXLE HUBS31
7.5	REAR AXLE31
7.5.1	REAR AXLE SEALS.....30
7.5.2	REAR AXLE RATIO31
7.6	ROLLOVER STABILITY.....31
8.0	BRAKES.....31-34
8.3	AIR BRAKE SYSTEM.....31-32
8.3.1	AIR TANK DRAIN VALVES32
8.4	AIR DRYER32
8.5	ABS BRAKING SYSTEM.....32-33
8.6	REAR BRAKES.....33
	SLACK ADJUSTERS FOR REAR BRAKES33
	REAR BRAKE CHAMBERS33
8.7	FRONT BRAKES.....33
	SLACK ADJUSTERS FOR FRONT BRAKES33
	FRONT BRAKES, DISC.....33
8.8	ACCESSORY AIR SYSTEM.....33
8.9	AIR COMPRESSOR.....34
8.10	AIR COMPRESSOR 120 VOLT.....34

Item	Page
9.0 ENGINE.....	34
10.0 ENGINE EQUIPMENT.....	34-37
10.1 FULL FLOW OIL FILTERS.....	34
10.4 ENGINE GOVERNOR	35
10.5 AIR CLEANER	35
10.6 ENGINE PROTECTION ALARMS	35
10.7 ENGINE BLOCK HEATER.....	35
10.8 FAST IDLE.....	35
10.9 ENGINE COMPARTMENT LIGHTS.....	35
10.10 ENGINE STARTER.....	36
10.11 ENGINE BRAKE.....	36
10.12 MAGNETIC FILL/DRAIN PLUGS.....	36
10.13 ENGINE STOP CONTROL.....	36
10.14 EXHAUST.....	36
10.14.1 EXHAUST HEAT SHIELD.....	36-37
10.15 FUEL COMPATABILITY.....	37
11.0 TRANSMISSION.....	37-38
11.1 MAGNETIC DRAIN PLUGS.....	37
11.2 TRANSMISSION PROGRAMMING.....	37
11.3 TRANSMISSION SHIFTER.....	37
11.4 DRIVELINE.....	38
11.0 STEERING.....	38
12.1 STEERING GEAR.....	38
12.2 STEERING COLUMN	38
12.3 POWER STEERING PUMP	38
12.3 POWER STEERING RESERVOIR.....	38
13.0 COOLING SYSTEM.....	38-40
13.1 RADIATOR.....	38-39
13.1.1 RADIATOR DRAINCOCK.....	39
13.2 ENGINE COOLANT	39
13.3 FAN DRIVE.....	39
13.4 COOLANT HOSES.....	39
13.5 HEATER HOSES.....	39-40
13.6 AUXILIARY COOLER.....	40
14.0 ELECTRICAL SYSTEM.....	40-47
14.1 VEHICLE WIRING INTERFACE	40-42
14.2 ELECTRICAL LOAD MANAGEMENT SYSTEM	42
14.3 ICC APPARATUS LIGHTING.....	42-43
14.4 INTERLOCK CONTROL AND MONITORING MODULE.....	43
14.5 DOOR AJAR.....	43
14.6 ALTERNATOR.....	44
14.7 BATTERIES.....	44-45
14.7.1 BATTERY CHARGER.....	44
14.8 SUPER AUTO EJECT RECEPTACLE.....	45
14.9 12 VOLT BODY ELECTRICAL SYSTEM.....	45
14.10 BODY ELECTRICAL JUNCTION COMPARTMENT	45-46
14.11 COMPARTMENT LIGHTS	46
14.12 STEP LIGHTS	46

Item	Page
14.13 PUMP ENCLOSURE WORK LIGHTS.....	46
14.14 DECK LIGHTS	46
14.15 AUXILIARY 12 VOLT OUTLETS.....	46
14.16 ADDITIONAL SWITCH.....	46
14.17 HAND-LIGHTS.....	46
14.18 NON-WARNING LIGHTS – CAB	47
14.19 WARNING LIGHTS AND DEVICES.....	47
15.0 TIRES & WHEELS	47-49
15.2 FRONT TIRES.....	47-48
15.3 REAR TIRES.....	48
15.3.1 REAR WHEELS.....	48
15.5 OPTIONAL WHEELS AND TIRES	48
15.7 POLISHED FRONT WHEELS	48
15.8 POLISHED REAR WHEELS.....	48
15.9 TIRE CHAINS	48
15.10 TIRE MONITORING SYSTEM	48
15.11 WHEEL CHOCKS.....	48
15.12 MUD GUARDS.....	48-49
16.0 FUEL SYSTEM.....	49-50
16.1 FUEL TANK	49
16.2 FUEL FILL	49
16.3 FUEL COOLER.....	49
16.4 REINFORCED FUEL LINES.....	49
16.5 FUEL PRIMER PUMP	50
16.6 FUEL/WATER SEPARATOR.....	50
17.0 SAFETY EQUIPMENT	50-53
17.2 BACK-UP ALARM.....	50
17.3 OMIT	50
17.4 DUAL ELECTRIC HORNS.....	50
17.5 AIR HORNS.....	50
17.6 SIREN.....	50-51
17.7 OPERATOR INSTRUCTION, CAUTION, AND WARNING SIGNS	51
17.8 VEHICLE DATA RECORDER.....	51-52
17.9 HEADSET.....	53
ADDITIONAL ITEMS SUPPLIED WITH THE VEHICLE.....	53
18.0 WARRANTIES	53-56
18.1 CAB STRUCTURE AND SHEET METAL WARRANTY	54
CAB CORROSION WARRANTY	54

Item	Page
18.2	WARNING EQUIPMENT WARRANTY54-55
18.3	CROSSMEMBERS WARRANTY55
18.4	FRAME RAILS WARRANTY.....55
18.5	AXLES WARRANTY.....55
18.6	ALLISON TRANSMISSION WARRANTY55
18.7	PAINT WARRANTY.....55
18.8	ENGINE WARRANTY.....55
18.9	FIRE PUMPS, VALVES AND ELECTRONIC CONTROLS55-56
18.10	WATER TANK WARRANTY.....56
19.0	PRE-PRODUCTION INSPECTION.....55-56
19.1	PRE-CONSTRUCTION CONFERENCE.....56
19.2	CHASSIS INSPECTION TRIP.....56
19.3	PRE-PAINT INSPECTION TRIP.....56
19.4	FINAL COMPLETION INSPECTION TRIP.....56
20.0	BIDDER’S QUESTIONNAIRE.....57-59
	SERVICE ABILITY FORM.....60
21.0	QUESTIONS REGARDING BID61
22.0	ENGINEERING DRAWINGS.....61
23.0	PARTS AND SERVICE.....61
	SERVICE CENTER AND PARTS DEPOT.....61
	LOCAL REPRESENTATION.....62
29.0	QUALITY OF WORKMANSHIP.....62
	GENERAL CONSTRUCTION... 62-63
30.0	DELIVERY RESPONSIBILITY63
30.1	DELIVERY INFORMATION.....63
31.0	INSPECTION.... 63-64
31.1.1	STATE INSPECTION.....63
31.1.2	EXHAUST EMISSION INSPECTION63
31.1.3	CITY ACCEPTANCE INSPECTION63-64
31.1.4	NOTIFICATION.....64
32.0	CERTIFICATIONS & MANUALS (PER ORDER).....64-66
32.2	NECESSARY DOCUMENTS.....64
32.3	OPERATION, MAINTENANCE AND REPAIR DATA64-65
32.3.1	MANUALS.....65
32.3.2	PREVENTIVE MAINTENANCE INSTRUCTIONS.....65
32.3.3	RECOMMENDED SPARE PARTS... 65-66
32.3.4	SERVICE66
34.0	INSTRUCTIONS & TRAINING.....66-67
	TRAINING PROGRAM.....66-67
	PROGRAM OUTLINE.....67
35.0	ENGINEERING RESPONSIBILITY & CHRONIC COMPLAINTS/FAILURES67-68
36.0	COMMUNICATION EQUIPMENT SPECIFICATIONS.....68
37.0	PUMPING SYSTEM SPECIFICATION.....68-76
37.1	PUMPING SYSTEM CONSTRUCTION REQUIREMENTS.....68
37.2	PIPING AND FITTINGS69
37.3	PUMP BODY.....69

Item	Page
37.4 DISCHARGE MANIFOLD.....	69
37.5 IMPELLER.....	69
37.6 WEAR RINGS.....	70
37.7 IMPELLER SHAFT.....	70
37.8 ANTI-FRICTION BEARING.....	70
37.9 SEAL HOUSINGS.....	70
37.10 TRANSFER VALVE.....	70
37.11 PUMP TRANSMISSION.....	70
37.12 PRIMING SYSTEM.....	71
37.13 PRESSURE CONTROL SYSTEM.....	71
37.13.1 DISCHARGE RELIEF VALVE.....	71
37.13.2 INTAKE RELIEF VALVE.....	71
37.14 MANIFOLD DRAIN VALVE ASSEMBLY.....	71
37.14.1 INDIVIDUAL BLEADERS AND DRAINS.....	72
37.15 TANK TO PUMP VALVE.....	72
37.16 DISCHARGE VALVES.....	72-73
37.16.1 DISCHARGES.....	72
37.16.2 DISCHARGE SIZE AND LOCATION.....	72-73
37.16.3 VALVES GENERAL.....	73
37.17 SUCTION INLETS.....	73-74
37.17.1 MONARCH INTAKE VALVE.....	73
37.17.2 SIDE SUCTIONS – 2 ½ AUXILIARY.....	73-74
37.18 AUTO TANK FILL SYSTEM.....	74
37.19 PUMP TO TANK CONNECTION.....	74
37.20 PUMP TO BOOSTER REEL CONNECTION.....	74-75
37.21 PORTABLE MONITOR.....	75
37.22 OVERHEAT PROTECTION MANAGER.....	75
37.23 PUMP INTAKE STRAINER AND ANODES.....	75
37.24 OPERATING CONTROLS AND DEVICES.....	76
37.24.1 PUMP SHIFT.....	76
37.24.2 PUMP SHIFT INDICATOR LIGHTS.....	76
37.24.3 TRANSLOCK.....	76
37.24.5 BRAKING SYSTEM.....	76
38.0 PUMP - GENERAL DESCRIPTION AND CAPACITY.....	76-77
38.1 PUMP ACCESS PANELS.....	76
38.2 PUMP DRAFTING CAPABILITY - RESPONSE TIME.....	76
38.3 RATED CAPABILITY.....	76
39.0 PUMP OPERATOR'S PANEL.....	77-80
PANEL LOCATION.....	77
39.1 PUMP PANEL - SIDE MOUNT.....	77
39.2 PUMP PANEL MATERIAL.....	77
39.3 HINGED PUMP ACCESS DOOR.....	77
39.4 PANEL FASTENERS.....	77
39.5 PUMP PANEL TRIM PLATES.....	77
39.6 PUMP PANEL RUNNING BOARD, STEP AND STORAGE TRAY.....	77
39.7 GAUGES, INSTRUMENTS, AND CONTROLS.....	78
39.7.1 GAUGE PANEL AND GAUGES.....	78

Item	Page
39.8 PUMP PANEL ARRANGEMENT	78-79
39.9 LABELS - IDENTIFICATION PLATES FIRE PUMP AND GAUGE PANELS.....	79
39.10 MASTER GAUGES.....	79
39.11 PRESSURE GAUGES.....	80
39.12 ENGINE GAUGES AND WARNING SYSTEM.....	80
39.13 PANEL ILLUMINATION	80
39.13.1 SIDE MOUNT OPERATOR'S PANEL LIGHTING	80
39.13.2 VISUAL DISPLAYS.....	80
39.14 AUDITORY ALARMS.....	80
39.15 MICROPHONE BOX/SPEAKER GRILLE.....	80
40.0 WATER TANK.....	81-82
40.1 TANK WARRANTY.....	81
40.2 TANK MATERIALS AND CONSTRUCTION.....	81
40.2.1 WATER TANK.....	81
40.2.2 TANK MOUNTING.....	81
40.2.3 TANK ACCESS.....	81
40.2.4 TANK BAFFLES.....	81
40.2.5 TANK FILL TOWER.....	82
40.2.6 OVERFLOW AND VENT PIPE.....	82
40.2.7 TANK SUMP AND CONNECTIONS.....	82
40.2.8 TANK OUTLETS.....	82
40.3 WATER LEVEL GAUGE.....	82

It should be noted that the specific requirements, as outlined below, supersede and/or modify the corresponding paragraphs in the standard reference purchase description specification. It also should be noted that any deviation of a line item must be addressed in letterform and included in the bid package.

This specification is not meant to be restrictive. It is recognized that manufacturers may have used different methods to insure integrity if their system. Bidders may substitute, for evaluation, alternate systems and the testing programs or protocols they have conducted to demonstrate compliance of their product. ("Or Approved Equal Clause")

"OR APPROVED EQUAL"

The mention in the specifications of apparatus, equipment or material by brand name or by such specified description of the same as is hereby made, is intended to convey to the bidder's understanding, the degree of excellence required. Any article, equipment, or material, which will conform to the standards and excellence so established, and is of equal merit, strength, durability and appearance to perform the desired function, and are in service with other major municipalities in the United States. The Bidder is deemed eligible for offer as a substitute. The qualifications of the offering will be judged as to their conformance with these specifications. Any equipment offered other than herein specified will be subject to a competitive demonstration and evaluation by the using department. This demonstration is to be provided on request within ten (10) working days after the receipt of bids. The result of that demonstration and evaluation will be of prime importance in the recommendation to the governing body for the final contract award.

Single-Line Responsibility

Since it is the Purchaser's desire to eliminate divided responsibility on the part of the manufacturers, the apparatus that is bid must be from manufacturers who build their own apparatus chassis and bodies. All components provided to be of the highest quality, proven and tested. The apparatus that is bid must have its chassis, and body built by the bidding manufacturer of record. At least twenty-five (25) similar pumper units must have been sold and delivered of the type described herein. The apparatus chassis, body, and pumper device **MUST** be manufactured in the United States of America

1.0 General Information

Information Required with Bid

Each Bidder will provide with his bid:

- a. These General Instructions, Requirements, and Specifications sheets as a part of the Bidder's bid proposal. All questions and fill-in blanks **MUST** be filled out completely. **FAILURE TO DO SO WILL CAUSE IMMEDIATE REJECTION OF THE PROPOSAL AT TIME OF OPENING.**

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

These specifications will indicate size, type, model, and make of all parts, components, and equipment.

- b. A list of exceptions to the Purchaser's specifications, under the following rules:

The following chassis and body specifications will be strictly adhered to. Exceptions will only be allowed if they are equal or superior to that specified, in the sole opinion of the Purchaser, and provided they are listed and fully explained on a separate page entitled: "EXCEPTIONS TO SPECIFICATIONS."

The Bidder's exception list will refer to the Purchaser's specifications by page and paragraph to prevent misinterpretation.

Any deviation from the following specification should be considered as an "exception" and listed as such. All exceptions not taken will be assumed by the Purchaser to be included in the Bidder's proposal, and the Bidder will conform to the Purchaser's specifications, regardless of cost to the Bidder.

PROPOSALS TAKING "TOTAL EXCEPTION" TO THE PURCHASER'S SPECIFICATIONS WILL NOT BE ACCEPTED.

- c. The number of calendar days required to deliver an apparatus from the time of contract acceptance.
- d. State the time frame for which the Bidder's price will remain valid.

Performance Tests and Requirements

A SCAAN Analysis of the proposed vehicle will be supplied by the bidder when the bid is submitted.

A road test will be conducted with each delivered apparatus fully loaded on a continuous run of ten (10) miles that will be made under all driving conditions, during which time the apparatus will show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles will run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. The successful Bidder will furnish a weight certificate showing weight on the front axle, rear axle, and total weight for the completed apparatus at time of delivery. The apparatus, when loaded, shall have not less than 25% nor more than 45% of the weight on the front axle, and not less than 55% nor more than 75% on the rear axle.

The apparatus when loaded to its estimated in-service weight will meet the following requirements:

1. The apparatus must be capable of executing both a left and right turn having a radius of not more than 36 feet (approximate) as defined in SAE J6. wall to wall
2. The Apparatus must be capable of accelerating to 35 MPH from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed speed of the engine
3. The apparatus must be capable of attaining 50 MPH from a standing start within 27 seconds on a level highway without exceeding the maximum governed speed of the engine.

MUST BE FILLED IN
 FIRM (VENDORS) NAME _____ BID NUMBER _____

4. The service brakes will be capable of stopping the fully loaded vehicle in 35 feet from a speed of 20 MPH on a level concrete highway.
5. The apparatus, fully loaded, will be capable of obtaining a speed of 55 MPH on a level concrete highway with the engine not exceeding its full load governed RPM.
6. The apparatus will be tested and certified by an independent third-party certification organization accredited in accordance with ISO/IEC. in accordance with their standard practices for pumping engines per NFPA 1901, 2009 or latest edition. Certificate of Compliance shall be submitted.
7. The Manufacturer will furnish copies of the Pump Manufacturer's Certification of Hydrostatic test, the engine manufacturer's current Certified Brake Horsepower curve, estimated in service weight, and the Manufacturer's Record of Construction Details when delivered.
8. Performance on a grade of not less than 9%, on a hard surfaced road, must meet the following criteria. Twenty (20) mph will be the minimum acceptable speed for the uphill performance with the vehicle transmission in the normal "drive" position. Twenty (20) mph will be the maximum acceptable speed for the downhill performance test with the vehicle in no less than second gear with the Jake brake on the high setting.

PUMPING SYSTEM PERFORMANCE TEST

In addition to the independent third-part certification pump tests performed at the factory in accordance with Section 38.3 of this specification; the apparatus shall be given a pumping test after delivery under the auspices of the Fire Department Technical Support Unit.

Failure to Meet Tests

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the Bidder within 30 days of the date of the first trials. Such trials will be final and conclusive, and failure to comply with these requirements will be cause for rejection. Failure to comply with changes, as the Purchaser may consider necessary to conform to any clause of the specifications within 30 days after notice is given to the Bidder of such changes will also be cause for the rejection of the apparatus.

Permission to keep or store the apparatus in any building owned or occupied by the Purchaser or its use by the Fire Department during the above-specified period with the permission of the Bidder will not constitute acceptance.

Technical Evaluation

Technical evaluation will be based upon the ability of the Bidder to meet or exceed the minimum requirements set forth in the specifications during the expected life of the apparatus bid. Estimates concerning the ability of the fire apparatus to perform accordingly will be made by the Purchaser.

1. Quality of workmanship, materials, and components that are used in construction of fire apparatus.
2. Functional design of fire apparatus.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

3. Warranties.
4. Any other factors the Purchaser deems to be relevant.
5. Compliance with, and ability to exceed, the requirements of NFPA 1901, Chapter 4 & 5.

Addenda and Interpretations

No interpretation of the meaning of the specifications or other contract documents will be made to any Bidder verbally. Every request for such interpretation will be in writing and addressed to the Purchaser, and must be received at least ten (10) days prior to the date fixed for the opening of the bids to be given consideration. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed by certified mail to all prospective Bidders not later than five (5) days prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such addendum or interpretation will not relieve any Bidder from any obligation under his bid as submitted. All addenda so issued will become a part of the contract documents.

User's List

The Bidder will provide the Name, Address, and Telephone Number of at least five (5) similar 1500 gallon pumper units that have been manufactured and delivered to Fire Departments in the United States. The Bidder will also indicate the full name of a responsible person to contact at each Fire Department.

MODIFICATION TO STANDARD SPECIFICATION

2.0 APPLICABLE SPECIFICATIONS

All line set ticket (actual part numbers and descriptions used in manufacturing), service, parts, operator, and preventive maintenance manuals will be provided in a computer readable media. Acceptable file formats are: ASCII, Microsoft Word, Microsoft Excel, and Lotus, if available.

2.1 Provide two (2) line set tickets for each unit delivered.

2.2 Criteria and Code Conformance

The pumper will be designed to conform to the intent of the City of Philadelphia **Procurement Department Specification, 41V-20M:86** or latest edition and NFPA 1901 Standard for Automotive Fire Apparatus, latest edition. (for the purposes of this bid 2009 edition approved proposals shall be met.)

The following additional design criteria will be applicable to this specification to the extent specified herein:

American Society for Testing and Materials (ASTM) A-36 Specification for Structural Steel

Society of Automotive Engineers, Inc. (SAE) SAE Handbook

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

American Welding Society (AWS) AWS014.4-77 Classification and Application of Welded Joints for Machinery and Equipment
AWS D1.1, Structural Welding Code-Steel, 2006
AWS D1.2, Structural Welding Code-Aluminum, 2003
AWS D1.3, Structural Welding Code-Sheet Steel, 1998
American Society of Non-Destructive Testing (ASNT)ASNT Guidelines; Procedure SNT-TC-1A.

Department of Transportation - Federal & State Motor Vehicle Safety Standards.

Federal Department of Health, Education and Welfare - Air Pollution Control for New Motor Vehicles.

Commonwealth of Pennsylvania.- Traffic & Motor Vehicle Rules and Regulations.

OSHA Rules & Regulations - Shall apply when applicable.

The apparatus device will be designed, fabricated, and tested in accordance with these codes and specifications.

3.0 CAB AND CHASSIS (Seagrave - Attacker, KME - Predator SS, for reference)

3.1 CUSTOM CAB, FOUR-DOOR ALUMINUM

The cab shall be designed and engineered specifically for the rigors and ergonomics of emergency response. The cab and chassis shall be designed, engineered and assembled as a premium quality, integrated unit which provides for safe and comfortable entry and egress of firefighters properly clothed in full protective gear. Safe and comfortable transport shall be afforded each occupant who is properly seated and restrained. Split tilt cab design shall not be acceptable.

The interior trim shall be tooled to facilitate serviceable component access. Interior surfaces shall be comfortable, easy to clean and long lasting under the rigors of contact with firefighter's clothing and personal safety equipment.

The cab and chassis, defined as an "incomplete vehicle", shall meet and/or exceed all applicable FMVSS and FMCSR, Title #49, U.S. Code Requirements for vehicles domiciled in the United States and all applicable CMVSS and Canada Transport Regulations for vehicles domiciled in Canada.

3.1.1 CAB CONSTRUCTION AND DIMENSIONS

The cab shall be an all aluminum structure using extruded sub frame, wall supports, and roof bows. Using the aluminum extrusions that are centrally located and connect to the wall sub-frame shall create a roll cage effect. All metal joints shall be caulked. The cab design shall not require the use of body fillers to achieve smooth contours or flat surfaces.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

The maximum cab outer skin dimension shall be 98". With appurtenances including door hinges, fenders, cab trim, hand rails and warning lamps, the outer dimension shall not exceed 102" without mirrors and 119" overall width including mirrors. The finished cab will be provided with rain gutters and stainless steel fenderettes.

The cab design shall be for a minimum of five (5) firefighters, width and length shall permit installation of two (2) seats in the front portion and up to four (4) seats, if possible, in the rear portion. The rear cab section roof shall provide a minimum of 53", not to exceed 61" of clear standing room. The cab will be of the fully open design with no divider wall or window separating front and rear cab sections. The entire roof shall be aluminum and shall be free of indentations.

The cab shall be completely insulated against heat and sound intrusion. The cab roof, side, rear and front walls shall be covered with closed cell foam insulation. The cab floor shall be completely covered by aluminum treadplate. The floor shall be insulated to minimize exterior noise intrusion while maximizing control of cab interior temperature, with optimal glass area. Cab interior noise shall not exceed 80 db at 45 mph when the engine fan is not engaged.

A removable headliner will be provided in the front and rear sections. Provide brushed Stainless steel kick plate approximately 8" high inside rear cab area on back wall or in areas of high traffic.

3.1.2 CAB DOORS AND STEPS

The cab shall have four (4) side mounted, flush fit, 'barrier' type weatherproof sealed doors. The doors shall be equipped with a full length, fully adjustable, stainless steel bolt on piano hinge, with a 5/16 hinge pin secured not to move. The doors shall be engineered to provide access to the cab for fire persons dressed in full gear with SCBA. The interior and exterior of each door shall be equipped with a flush mount, cast metal, no plastic, paddle style latch handle, if available, with manual door locks. The interior lock shall be activated by a push/pull tab only when door is closed. The latches shall meet FMVSS 206.

The cab entrance step well areas will be painted, with an open bustin "grip strut" type aluminum extrusion material used to trim around each step well where the treadplate flooring and aluminum tread plate join. All steps will be of the open bustin "grip strut" type or safety grate type.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

The inner door panels of each cab door will be equipped with 1/8" brushed finished stainless. Each panel will be fitted to the compartment door framework and will be equipped with adjustment slots for door hardware.

The cab shall be provided with a bolt on step at each door to aid in ingress and egress. This step shall follow the contour of the cab. Door opening limiting straps shall be provided to protect door hinges.

3.1.3 FRONT CAB SECTION

The windshield slope in combination with its proximity to driver and officer seating positions shall provide optimal upward visibility to identify overhead obstructions at scene locations. Additionally the officer and driver shall be able to see the ground surface 11.5 feet in front of the cab.

3.1.4 CAB GLASS

Tinted, laminated safety glass will be provided for the cab's fixed windows. Tinted, tempered safety glass will be provided for the cab's door windows.

The side windows of the cab/canopy between the front and rear cab doors will be of the fixed type.

The cab will be equipped with two non-opening rear windows, one on each side of the apparatus, positioned to allow the rear cab occupants to check for traffic before opening the rear doors.

A two piece windshield shall be supplied where available.

3.1.5 CAB ACCENT MOLDING

No additional chrome molding is required. Standard cab accent shall be accepted.

3.1.6 CAB INTERIOR

The interior will provide a work environment that provides safety, comfort and ease of communication. It will be engineered to meet the NFPA standards for noise levels, control accessibility, and visibility.

The cab will be insulated with noise barrier material in the roof, rear cab and cab doors.

A removable headliner will be provided in the front and rear cab sections.

An aluminum treadplate floor covering material will be provided over top the insulation.

The cab will be ruggedized to provide a safe cleanable long lasting finish; charcoal in color.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

A aluminum brush finished storage bin with knock trim, large enough to hold and include a mechanism to secure four (4) 2” thick x 11” wide x 12” high 3-ring binders will be provided in the cab with securing straps to hold books in place.

A certified bracket for one (1) halligan tool will be installed on the lower rear wall inside the cab. Location TBD at pilot inspection (ref. **Ziamatic**).

A certified bracket for a pick-head axe (6 lbs) to be installed on the drivers side, to include a box for the axe head and a bracket for handle.

3.1.7 ENGINE ENCLOSURE

The enclosure will match the rest of the cab interior. The engine compartment side of the enclosure will be insulated and completely lined with 1/8” or .090 gauge aluminum plate to reduce noise and heat from the engine compartment from penetrating into the cab interior. In addition the engine enclosure, interior of cab must be covered in a durable ABS high endurance plastic cover, or approved equal, and reinforced to mount storage bin,

The engine enclosure will have access doors that will permit daily fluid checks for all fluids and filling from within the cab interior, without requiring the cab to be tilted.

3.1.8 SWITCH PANEL

The cab shall have a switch panel with one (1) master and ten (10) rocker switch locations as required. The panel shall be mounted within easy reach of both front seats. If cab design does not allow for this a split design may be offered, however final decision will be made by the City if the design conforms to the Fire Departments needs.

The panel shall include one (1) amber "Compartment Door Ajar" warning lamp. The warning lamp and buzzer shall be activated when either a cab door or body compartment door is ajar when the engine is running and parking brake released.

3.1.9 DARK CHARCOAL VINYL INTERIOR

The cab interior shall be a "Dark Charcoal" color. Accent trim shall also be dark charcoal. The following interior components shall be consistent in material and color:

1. HEADLINER: Dark charcoal padded vinyl, removable
BACK WALL ruggedized material
2. ENGINE TUNNEL: Dark charcoal ruggedized composite material

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

- 3. DOORS: Door panels – entire interior panel to be brushed stainless steel.
- 4. SEAT UPHOLSTERY: Color coordinated 44-ounce vinyl bolster and headrest, Duraware / Duracoat
- 5. VISORS: Black padded vinyl
- 6. GAUGE PANEL: Color coordinated powder coated aluminum or ABS molded, hinged if available
- 7. OVERHEAD CONSOLE: Dark charcoal molded composite
- 8. FLOOR: Aluminum Treadplate over insulation material, provide rubber mat for Driver and Officer

3.1.10 DRIVER'S SEAT

The driver seat shall be an H.O. Bostrom model "Firefighter Sierra Air" series or approved equal, high back seat. The seat shall have highest available fore and aft adjustment, most available height adjustment, tilt and a reclining seat back. All seat movements shall be air controlled from a control panel on the forward, lower edge of the seat. Provide high stalk seat belt with three-point seat belt with retractor and flip up arm rests.

3.1.11 OFFICER SEAT

The officer seat shall be an H. O. Bostrom "Firefighter Tanker" 450 high back, non-suspension SCBA seat with a full seat cushion and 6" of fore/aft travel. SCBA brackets shall be Zico ULLH bottle brackets and restraint strap assembly. The seat base shall be large enough to contain a two-way radio power unit and it shall be equipped with a bottom-hinged door, complete with a twist-to-lock latch. Provide high stalk seat belt with three-point seat belt with retractor.

3.1.12 CREW SEATS, REAR (four seat version)

The rear cab area shall contain two (2) H. O. Bostrom "Firefighter Tanker" 450 SCBA high back non-suspended rear facing seats. They shall be mounted behind the driver and officer seats. A minimum of 40 inches overall height is required above each seat. Provide high stalk seat belt with three-point seat belt with retractor.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

The rear cab area shall contain two (2) H.O. Bostrom Firefighter Res-Q-Back 450 SCBA seats. The two (2) seats shall be mounted at the center of the back wall on an aluminum storage riser. Provide high stalk seat belt with three-point seat belt with retractor.

**3.1.13 CREW SEATS, REAR
(three seat version with medical cabinet)**

The rear cab area shall contain three seats in total. Provide (1) H.O. Bostrom "Firefighter Tanker" 450 SCBA high back non-suspended rear facing seat mounted behind the driver seat. A minimum of 40 inches overall height is required above each seat. Provide high stalk seat belt with three-point seat belt with retractor.

In addition two (2) H.O. Bostrom Firefighter Res-Q-Back 450 SCBA seats. They shall be mounted at the center of the back wall on an aluminum storage riser. A minimum of 40 inches overall height is required above each seat. Provide high stalk seat belt with three-point seat belt with retractor.

Provide medical storage cabinet with lock. Cabinet shall be mounted behind Officers seat. Exact design of cabinet, height, width and depth shall be decided at pre-construction meeting.

3.1.14 VINYL SEAT COVERS

All seats all positions shall be covered with solid color flat finish 44 ounce flat vinyl, dark charcoal. Durawear/ Duracoat

3.1.15 CAB TILT MECHANISM

The entire cab shall tilt up, 35 to 50 degrees, providing access to the drive train for maintenance and repair. The cab shall pivot at the front, raised by dual hydraulic cylinders with a mechanical lock and a push button control with hard wired tether cable, minimum 10ft. The tether cable shall allow the operator to have a view of the area around the cab while the cab is in motion. An aluminum weather proof box shall be fabricated in/under the step to house the tether cable and control.

The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.

The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set. If the parking brake is released the cab tilt mechanism will be disabled.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Power will not be supplied directly to the operating solenoid, but will go through a switched relay in order to prevent uncontrolled rising of the cab. A remote cylinder lock release shall be located in the left hand front door step well, co-located with Tether control

A 12-volt motor driven pump with a self-contained hydraulic oil reservoir and a manual back-up pump shall be provided. A monitor light shall warn the driver if the cab is not latched.

Provide an audible alarm when either raising or lowering cab.

3.1.16 CAB FENDERS AND WHEEL WELL LINERS

The cab shall be equipped with polished stainless steel fender extensions that fit into the radius of the cab fender well. Aluminum or Poly wheel well liners shall be provided. The fenders shall provide protection against water and mud spray onto the cab from the front tires

3.1.17 SIDE WINDOWS

The cab shall have fixed windows, one (1) each side between the front and rear doors. They shall be tinted and include solar management treatment.

3.1.18 WINDOW CONTROLS

The four (4) cab doors shall be equipped with manual roll-up windows. Each window shall be operated by an automotive type handle, positioned within easy reach of personnel. Window crank handles must not allow for a snag point for Firefighter clothing

3.1.19 FIXED REAR WINDOWS

There shall be two (2) 12" wide x 7" high fixed windows mounted one (1) each side of the rear cab wall. The windows shall be tinted and include solar management treatment.

3.2 APPARATUS DIMENSIONS

The intent of this specification is to procure a maneuverable and compact 1500 gallon per minute pumper apparatus. With this in mind, the apparatus proposed may be smaller but will not exceed the following maximum dimensions:

Overall Height:	10.5
Overall Length:	30 ft. MAX
Overall Width sheet metal:	102 in. MAX
Overall width mirrors, fenderettes etc	119 in. MAX
Est. Weight at time of delivery:	40,500 lbs. approximate

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

3.2.1 WHEELBASE

The chassis wheelbase shall be approximately 170” to 175”.

3.3 PAINT AND FINISH SPECIFICATIONS

The PPG Delta, Low V.O.C., polyurethane finishing system, or equal, will be utilized.

All exposed welds will be ground smooth for final finishing of areas to be painted. All removable items, such as brackets, compartment doors, etc. will be painted separately to insure finish paint behind mounted items. All compartment-unwelded seams exposed to high moisture environments will be sealed using permanent pliable caulking prior to finish paint.

The inside and underside areas of the complete body assembly will be painted RED in, prior to the installation of the body on the chassis.

The interior of the compartments will be finish painted job color with a scuff resistant webbing type paint of a contrasting color applied over the painted surfaces.

The chassis frame rails, suspension and axles will be painted RED in color with a Polyurethane base paint prior to installation of any air lines or electric systems to ensure proper serviceability.

The body will be finish sanded and prepared for final paint. Upon completion of final preparation, the cab exterior and body will be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint. Finish paint will be applied in multiple coats to ensure proper paint coverage with a high gloss finish.

3.3.1 TWO TONE CAB PAINT

The cab shall be painted two (2) colors. The paint break line shall be approximately 3” below the window line. The break line shall be trimmed with a ½ inch black pin stripe trim strip. The trim strip shall encircle the entire cab. Cab paint shall be PPG base coat-clear coat system.

Upper Color: WHITE
Number: 817U

Lower Color: RED
Number: 55141

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

One (1) pint of each exterior color paint for touch-up purposes will be supplied when the apparatus is delivered to the end user.

3.3.2 LETTERING AND STRIPING

SCOTCHLITE LETTERING

Lettering and striping will be computer generated 3M "ScotchLite", reflective acrylic vinyl appliqué with a black drop shadow. Lettering shall match existing PFD apparatus. Reflective material must comply with Section 15.9.3.3 NFPA 1901 2009 edition

Computer generated lettering and striping configuration have been developed to ensure symmetrical layout design and durability, which exceeds current hand applied gold leaf standards and provides economical replacement costs.

Up to sixty (60), three (3) inch computer generated gold vinyl letters with 1/8 inch black outline will be provided to coincide with the Fire Departments existing lettering.

Two (2) Philadelphia Fire Department seals will be affixed to the cab’s front doors. (Provided by the City)

UNIT NUMBERING

Up to four (4) 12" white **Scotchlite** numerals will be provided to affix to the cab sides.

Up to four (4) 12" aluminum numerals painted yellow outlined in black will be provided to be affixed to the front bumper and the rear of the apparatus. Due to engine airflow requirements Scotchlite lettering may be affixed to cab grille in place of aluminum plate.

SCOTCHLITE STRIPE

A six (6") inch high gold "ScotchLite" stripe will be provided.

The stripe will be applied on a minimum of 60 percent of each side of the unit, and 40 percent on the front of the unit. The ScotchLite stripe layout will be determined by the fire department.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Accent striping, 1/2" wide with a black border, will be provided at the lower horizontal portion of the cab and body.

The rear vertical surfaces of the apparatus shall be equipped with a minimum of 4 inch alternating yellow and red chevron retro-reflective striping angling downward and away from the centerline of the apparatus at a 45 degree angle.

3.3.3 Omit

3.3.4 Omit

3.4 VOGEL LUBRICATION SYSTEM

The chassis and superstructure shall be equipped with an automatic centralized chassis lubrication system, which must meet or exceed the following specifications:

A 12 volt DC driven pump, shall deliver the lubricant over reinforced, abrasion resistant flexible lines to spring loaded pistons as distributors (where applicable) to fittings. Cab located warning lights shall indicate non-performing trunk lines. The pump/reservoir, 6-liter capacity, shall be in an inconspicuous but accessible location, protected from inclement weather and road splash.

The distributor shall be capable of dispensing a metered amount of lubricant in the off-time of the lube cycle. There shall be an interlock which will allow Vogel operation only when parking brake is released.

Rubber reinforced lines must be used throughout from pump to distributors, no steel. Provide plastic lines from distributor to grease fitting. If aluminum manifolds are available Aluminum must be provided in lieu of plastic manifolds

**Ref: VOGEL MODEL KFU 6
or approved equal.**

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

4.0 BODY AND COMPARTMENT SPECIFICATIONS

4.1 GENERAL APPARATUS BODY DESIGN CONSTRUCTION

The body side and compartment assemblies, all stainless steel construction, will be designed and assembled to provide maximum strength and durability under all operating conditions. Formed or rolled construction types or any combination shall be acceptable.

Special attention will be taken to minimize rust or corrosion on all fabricated parts and structural members of the body. All bolt on components, including overlays will be provided with a dissimilar metals isolation barrier to prevent electric corrosion. All tread plate overlays will be sealed with a silicone base caulking around perimeter after installation. The body design will also incorporate removable panels to access spring hangers, rear body mounts, and fuel tank sending units.

The body assembly will be an all-welded configuration, utilizing 2" (+ or - ¼") vertical body corner radius. The body will be completely isolated from the cab and pump module structure.

4.2 BASIC MATERIALS - COMPARTMENT FABRICATION STAINLESS STEEL

All compartment panels and body side sheets will be of 304L Stainless Steel; Minimum of 12-gauge. Each side compartment assembly will be both spot-welded and stitch welded to ensure proper weld penetration on all panels while avoiding the warpage caused by a full seam weld. All seams will be caulked prior to finish paint to ensure proper compartment seal.

4.3 BASIC CONSTRUCTION SUPER STRUCTURE

The body super structure will be constructed of 304L Stainless Steel utilizing a minimum of 3" x 2" x 3/16" rectangular stainless steel structural tubing configuration. This structure will be designed to totally support the full length and width of the body and will be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment. All cross tubes of the structure will be capped and butt-welded at their point of termination to prevent water from lying inside the super structure. The super structure will be bolted to the sides of the chassis frame at four (4) points using grade 8 bolts at a minimum. The mounting system shall allow for flexing of the chassis frame rails. All compartments shall be provided with vents.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____

BID NUMBER _____

4.4 OTHER SPECIAL PROVISIONS

4.4.1 BEAVERTAILS

The body design required by the City **shall include beaver tail design**. This area shall provide for a larger step design for hose bed access. Two vertical handrails upper section and two booster reel roller assemblies lower section shall be provided on the outermost rearward facing surface of the beavertail structure.

4.4.2 FENDER LINERS AND FENDERETTES

Fully removable, bolt-in, 12 gauge aluminum or poly fender liners, front (cab) and rear, which extend into the truck frame and have vertical splash shields, inward of the wheels, will be provided. The completely removable fender liners are designed to protect the front and rear compartments and main body supports from road salts, dirt accumulation and corrosion.

The rear wheel wells will be trimmed with bolt-in, replaceable type, polished, stainless steel fenderettes.

4.4.3 BODY RUB RAILS

Sacrificial rubber rub rails with track, will be mounted at the base of the body, extend outward a minimum 3/4", downward 2". The rub rails will extend the full length of the main body and wrap around the rear body corners. Rub rails will be designed to bolt to the body from the bottom side of the compartment area, so as not to damage the body side panels on initial impact and to provide for ease of replacement.

4.4.4 REAR BODY PANEL

The rear body panel will be fabricated from a minimum of 1/8" stainless plate and will extend the full width. Finished by paint and covered with Chevron striping. This panel will be full height from the rear step to the hose bed floor. No part of the rear panel will be part of the booster tank. Panel will be bolted on and removable.

4.4.5 REAR STANCHIONS

Two (2) light support brackets will be provided at the rear of the body, one each side. These brackets will be trimmed with aluminum cover plates to protect stanchion light wiring.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

4.5 HOSE AND HOSE REEL COMPARTMENTS

4.5.1 MAIN HOSE COMPARTMENT HOSE BED

The hose bed will be located directly above the booster tank and will be free from all sharp objects such as bolts, nuts, etc, to avoid damage to fire hose.

For added strength, rigidity and appearance, the hose bed side walls will have the top edge flanged outward two (2) inches and downward one (1) inch. In a similar fashion, the top edge of the front wall will be flanged inward two (2) inches and downward one (1) inch.

The hose bed will be designed with 70 cubic feet of hose storage with a maximum hose bed floor height measured from the lowest point of the hose bed floor to the ground of 75". This design will accommodate the following hose load:

4.5.2 HOSE LOAD

The hose bed will be capable of carrying 1000' 5" H.L. one lay, 1000' 3" H.L. two lays 500' each, & 200' of 1 3/4" H.L. and hard suction all in the rear. A total of four hose lays with three adjustable dividers on the drivers side and one fixed divider on the officers side. The first hose lay on the officers' side will measure 8" square with a second 8" square shelf directly above. The lower 8" squared area shall hold and secure one the two (2) hard suction. The second hard suction shall be mounted and secured on the top of the compartments drivers' side.

4.5.2.1 HOSE BED NETTING

All open ended hose beds will have netting installed to meet NFPA standards, to eliminate the accidental deployment of hose while in transit. Netting specifications must be in compliance with those specifications on file for Philadelphia Fire Department with:

D&S Custom Covers
3055 Kingwood Rd.
Rockwood PA 15557
(814-926-4075)

4.5.3 HOSE BED FLOORING

Hose bed flooring will be of composite material, fiberglass, or approved equal, properly spaced for ventilation and removable for access to the water tank. The flooring will be smooth and free from sharp edges to avoid hose damage. A removable panel will be provided in the floor to allow access to the water tank level gauge sending units, without removing the entire hose bed floor.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

4.5.4 HOSE BED PARTITIONS

A total of one fixed and three adjustable 3/16", brushed finish, stainless steel hose bed partitions will be provided. Use a number of four (4) for bidding purposes final amount to be determined at pre-construction. Partitions will be easily adjustable by means of uni-struts channels located at the front, middle and rear of hose bed. Partitions must be capable of supporting hose bed load and will be removable for access to the booster tank.

The top and rear edge of the adjustable hose bed partitions will have an integral tubing reinforcement welded on for additional rigidity. The rear most section of rail of the partition to be utilized as a handrail. Provide adequate spacing between tubing and sheeting of divider. Provide a cross-member reinforcement installed across the top, rear of the hose bed to hold dividers for stability. Dividers to match body design and should not exceed four inches below the top of the side walls. To be discussed further at pre-construction.

4.5.5 HOSE REEL COMPARTMENT (D)

One (1) rear step compartment, approximately 30" high x 46 wide x 24" deep, will be provided with an opening approx. 29" high x 45-1/2" wide. Rear step compartment will be designed to accommodate a booster reel. The booster reel and assembly, framing etc., shall be made of all stainless steel and be provided with a weatherproof motor and hold 300 foot of 3/4" hose. The mounting of the reel assembly must be through subframe structure not just the flooring in this area to include access for removal. Provide isolation from Aluminum plate to prevent electrolysis. The wire gauge of the supply shall be equal to the amperage draw of the motor. Provide a terminal block with ring terminals for this supply and a Bushman H-AMP circuit breaker. Terminal must be easily accessed and protected from weather using only the length of wire provided with rewind motor.

4.6 EQUIPMENT COMPARTMENTS

4.6.1 ROLL-UP DOORS (Robinson or approved equal)

The roll-up doors will be constructed from brush finish, anodized aluminum, extruded slats, which will have a flexible seal between each slat for proper sealing of the door.

A synthetic rubber seal will be provided at each side, top and bottom edge of the door to prevent entry of dirt into the compartment.

The door will be equipped with a lift bar style latch mechanism, which will latch at the bottom of the door mounting extrusion. All doors over 36" in width shall have a minimum of three latch points.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____

BID NUMBER _____

The roll-up door assembly will be furnished with a spring-loaded, counter balance assembly to assist in door actuation.

Roll-up doors will be furnished for all compartments

4.6.2 SWEEP-OUT COMPARTMENTS

Compartment floors are welded to compartment walls, with door opening flanges flanged down to produce a sweep-out design to permit easy cleaning. Compartments set on running boards or with lip at bottom of door opening are not acceptable.

4.6.3 COMPARTMENT TOPS

Compartment tops will be covered with polished aluminum diamondette on both sides. Diamondette will be flanged up at hose bed wall, and will have a 90-degree flange downward over the top of compartments with a 2" radius corner to provide a snag-free body design. Provide electrolysis barrier.

4.6.3.1 DRIP MOLDING

Compartment tops over all side compartments will have a 45-degree flange formed out to provide protection against water run-off. A secondary extruded drip molding will be provided between low compartments and auxiliary high side compartments, when auxiliary compartments are provided.

4.6.4 FASTENERS

All exterior fasteners used for holding panels or diamondette will be stainless steel. All fasteners will be equipped with a lock nut or lock washer and will also be coated with "Loc-tite" material

In no case will pop rivets or self-tapping screws be used. In blind areas weld nut to surface.

4.6.5 COMPARTMENT LOUVERS

Machine stamped ventilating louvers will be furnished in each compartment, and so located that water cannot normally enter the compartment. A metal hat section will be welded in place on the inside body wall to further prevent moisture from entering through the louver.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

4.6.6 ACCESS PANELS

Removable access panels will be provided in all lower compartments to access spring pins, fuel tank sender, and rear body mounts.

Protective panels will be located in the rear compartments providing access to the lights and associated wiring. The covers will also service as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.

Dri-deck floor grids, black in color, will be provided to protect each compartment tray, shelf or floor.

4.7 SPECIFIC COMPARTMENTS

All compartment sizes are approximate. COP and PFD understand that each manufacturer may have compartments that vary in size. Bidders shall provide the following compartments sizes as close to the specified dimensions as possible. Any change in compartment sizing shall be supported, at the time of bid submission, with engineering reasons as to why the compartment as specified is physically impossible to provide. The COP and PFD reserve the right to have this apparatus manufactured to our specification.

4.7.1 SIDE COMPARTMENTS: (C) – (L2)

Left Side above wheel well compartment approximately 56” wide x 29” high x 24” deep. This compartment shall be provided with a fixed tool board, mounted on uni-strut, of aluminum construction and of sufficient gauge to withstand severe duty service over the lifetime of the apparatus for mounting of tools. Awarded vendor shall be responsible for providing the city with the proper adaptors and include mounting. Mounting and brackets needed shall be discussed at pre-construction and finalized during dealer prep for delivery

4.7.2 FRONT SIDE COMPARTMENTS (A, E)

Two (2) front running board compartments will be provided, one (1) each side forward of the rear wheels.

The left side front compartment (A) / (L1) will measure - 62" high x 30" wide x 25" deep.

The right side front compartment (E) / (R1) will measure - 32” high x 30” wide x 25” deep.

4.7.3 REAR SIDE COMPARTMENTS (B, F)

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

Two (2) rear running board compartments will be provided, one (1) each side to the rear of the rear wheels.

The left side rear compartment (B) / (L3) will measure - 62" high x 38" wide x 25" deep

The right side rear compartment (F) / (R2) will measure - 32" high x 38" wide x 25" deep.

4.7.4 OFFICER / STREET SIDE REARWARD

There shall be an aluminum diamond plate shelf with lip that will provide mounting of the PFD High-Rise bag which shall be secured with three (3) seat belt type fasteners, stainless steel mechanism. This shelf is located directly in front of rear compartment below ground ladders.

4.7.5 OFFICER / STREET SIDE FORWARD

Provide a storage box approximately 8" high x 45" long x 10" deep constructed of aluminum, with a drop down door, piano type hinge, slam type locks, (2) mounted on top of compartment (E).

4.8 ADJUSTABLE COMPARTMENT SHELVES

Six (6) fully adjustable shelves will be supplied and mounted in a location determined by the Fire Department.

Uni-Strut "C" type channels (stainless steel construction) with spring nuts will be installed vertically in the middle of the forward and rear bulkheads of each compartment specified to receive an adjustable shelf.

Each shelf will be constructed of unpainted aluminum. The side panels of each shelf will be bolted to the channels using stainless steel bolts, stainless steel lock-washers and a flat washer for full adjustability.

4.9 SLIDE OUT TRAY

Four (4) slide out trays will be installed as the bottom shelf in compartments A, B, E, F as designated by the Fire Department. Roller type slide assemblies will be bolted on each side of the tray assembly and to the compartment floor to facilitate cleaning and/or maintenance of the compartment floor and track assembly.

The slide out trays will extend at least 3/4 the depth of the compartment and will have the capacity for carrying equipment weighing up to 250 lbs. in the extended position. Locks will be provided to automatically lock the tray in the extended and stowed positions.

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

4.10 AIR BOTTLE STORAGE COMPARTMENTS

A minimum of four (4), however, six (6), if possible air bottle storage compartments 8" H x 8" W x 24" D will be inserted into the body fender area on a 5 degree pitch. The compartments will be located one (1) at the front and one (1) at the rear of each side body fender. The compartments will be completely rubber lined to absorb shock. If manufactures design doesn't allow for all four bottles stored at the specified location bidder must provide a location as close to specified location as possible. City reserves right to approve or disapprove alternate locations.

Each storage compartment will be equipped with a polished aluminum door.

4.11 EXTERIOR EQUIPMENT AND ACCESSORY MOUNTINGS

4.11.1 HARD SUCTION HOSE

Two (2) 10 foot sections of six (6) inch hard suction hose with lightweight hard coat couplings will be furnished. Couplings will include a long handle, female on one end and a rocker lug male on the other. All threads will be six (6) inch N.S.T Each pipe shall be mounted on the top outside section of the body on a tray. Philadelphia Hydrant Thread: 4" bore – 4 7/8" from outer thread to outer thread, seven (7) threads per inch. Suctions will be TANK FLEX from Firequip, approved for municipal system. Burst pressure of 495psi, working pressure 165psi or equivalent.

4.11.2 STRAINER

A basket type strainer and screw base-mounting bracket will be provided to attach to the suction hose.

4.11.3 SOFT SUCTION HOSE STORAGE

Storage trough for a 20' x 5" soft suction hose with a lightweight 6" NST female swivel x Philadelphia hydrant thread female swivel will be built into the right side running board.

4.11.4 LADDERS

One (1) Duo-Safety Series 900-A, 24 foot, aluminum, two- (2) section extension ladder will be provided.

One (1) Duo-Safety Series 775-A roof ladder, 14 foot, aluminum with folding hooks will be provided.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

One (1) Duo-Safety Series 585-A Attic Ladder, 12 foot, Aluminum, folding type.

4.11.5 LADDER MOUNTING BRACKETS

Ladder mounting brackets will be designed to accommodate the roof ladder nested internally of the extension ladder on vertically adjustable, aluminum brackets. The brackets will be mounted on unistrut tracking on the right side body side panel with spring actuated holders. Bottom of ladders shall not be more than 68" above ground in the stowed position.

4.12 RUNNING BOARDS, AND REAR STEP

4.12.1 RUNNING BOARD

The side running boards will be fabricated of 3/16" polished aluminum diamondette. The outside edge on each step will be fabricated with a double break, return flange to match the body rub rail. Each step will be rigidly reinforced with a heavy-duty support structure. Running boards will not form any part of the compartment design, and will be bolted into place with a minimum 1 1/2" clearance gap between the body, pump and cab to facilitate water runoff.

Gripstrut/Bustin grating will be installed in the left and right side running boards and all other walking or stepping surfaces.

4.12.2 REAR STEP

Rear step, largest size possible in depth, made of 3/16" polished aluminum diamondette, and rigidly reinforced. The rear edge is designed to mount rear clearance lights, recessed for protection in the rear channel, and will be bolted into place with a minimum 1/2" clearance gap between step and body panels.

The rear step will be extended to the full width of the body to act as rear corner access steps with the step area to the outside of the body securely braced to the perpendicular surface of the rear body corner panels. Gripstrut will be installed in the lower rear step.

4.12.3 AUXILIARY STEPS

Four (4) South Park model LFS46C large folding steps, made of high strength die cast aluminum, with a textured chrome plate finish, minimum of 42 square inch surface, conforming to NFPA requirements, will be provided at the rear of the apparatus. The steps will be mounted to accommodate access to the body hose bed area with a maximum of 18" height between each step.

4.13 BODY PROTECTION PANELS

MUST BE FILLED IN
FIRM (VENDORS) NAME _____

BID NUMBER _____

The front face of the side compartments, next to the left and right pump panels will be overlaid with 1/8" stainless steel full height protection. This trim will be rolled around the vertical outside radius to the forward compartment door openings on each side of the body.

4.14 HANDRAILS

4.14.1 GENERAL

All handrails will be 1-1/4" outer diameter, polished aluminum with replaceable rubber insert grip design, for non-slip grip, designed to meet NFPA 1901 requirements.

4.14.2 HANDRAIL LOCATIONS AND GASKETS

Molded gaskets will be installed between the handrail stanchion castings and body surfaces to prevent electrolytic reaction between dissimilar metals and to protect paint.

Two (2) vertical rails will be mounted on the rear edge of the body, one (1) each side.

Two (2) handrails will be provided at the top rear of the apparatus for access to the hose bed, one (1) each side.

Four (4) 8" handrails will be supplied and placed at locations to be determined by the Fire Department.

One (1) horizontal, full width handrail will be installed on the rear, below the level of the hose bed.

5.0 CAB AND BODY EQUIPMENT

5.1.1 HEATER, DEFROSTER AND AIR CONDITIONING

Two (2) heavy duty 6" diameter defogger fans with metal blade and protective metal guards will be installed on the cab ceiling, one (1) on each side of the windshield center post area. The fans will be installed on swivel style base assemblies, which allow rotation of the fan. A three-position switch on the fan's base will control each fan, the switch will allow for "Low", "High" and "Off" settings.

The chassis will be equipped with a dual function heavy-duty heater/defroster unit rated at a minimum of 57,000 BTU/hr. and a rated airflow of 430 cfm. The unit will be equipped to re-circulate interior cab air for quick cab warm-up and defrost, or to draw outside fresh air. Provisions will be made to provide and position heating/defrosting vents to adequately defrost the window areas as well as to evenly distribute heat throughout the cab including the front and rear foot well

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

areas. Must be able to maintain a minimum of 60 degrees at all time w/doors closed

Underseat heaters are allowed to meet heat requirements at footwell areas in both front and rear sections. A distribution manifold shall be provided to feed all heaters. A loop system is unacceptable.

Integral dash mounted heater controls will be provided and located in front of and to the right of the driver within easy reach. The controls will consist of a three-position blower control switch with high, low and off positions, a heat/defrost selector switch and an infinite temperature control switch with a range from hot to cold.

Automatic cab ventilation must be provided. If not available then powered ventilation must be provided.

The air conditioning system will provide a minimum cooling capacity of 66,000 BTU/hr. and a rated airflow of 650 cfm. An adequate number of vents will be provided and located to evenly cool the cab area. The controls for the rear unit will be accessible to the rear cab occupants, and be installed in a manner that will prevent damage to the control unit. Controls for the front unit will be dash-mounted, next to the heat/defrost controls. Rear HVAC switches should be installed overhead to protect from damage. Must be able to maintain a minimum of 72 degrees at all time w/doors closed

5.1.2 DRIVER AND OFFICER INSTRUMENTS CONTROLS

These instruments and warning lights shall be installed in the dashboard, driver’s side. Gauges and warning lights shall be of the backlit design and labeled.

- Electric speedometer with odometer, (non recording when in pump)
- Electric tachometer with hour meter
- Oil Pressure gauge with warning light and alarm
- Engine Coolant temperature with warning light and alarm
- Voltmeter with warning light and alarm
- Transmission temperature gauge with warning light and alarm
- Transmission “check trans” light (electronic trans indicator)
- Dual needle air pressure gauge with low air warning light and alarm
- ABS and ATC warning lights, retarder warning light when specified
- Jake Brake controls (2 switches one on/off and a second for low/med/high)
- An electronic fuel gauge shall be provided
- Low fuel level and water in fuel/water separator warning lights
- Cab unlatched warning light
- Alternator warning light
- Low coolant warning light
- Turn signal indicators
- High beam indicator

MUST BE FILLED IN
 FIRM (VENDORS) NAME _____ BID NUMBER _____

- Engine air filter restriction indicator light
- Stop engine warning light
- Check engine warning light
- Engine hour meter (Hobbs)
- Two (2) 12 volt power point plug-in with cover
- Generator Switch and indicator light
- Battery switch ON/OFF
- Ignition switch, engine START/RUN/OFF

Vehicle height signage indicating maximum height clearance also to include Gross Vehicle Weight must be dash mounted in view of both driver and officer.

- 5.1.3 The chassis shall have dual heavy-duty bus pantograph type wet arm windshield wipers, driven by dual electric motors. The wipers shall have a dash-mounted switch, which provides for a delay function on the wipers in the event of light rain, fog or mist. Provide electric windshield washers.
- 5.1.4 Two (2) padded sun visors will be mounted on the cab ceiling, forward of the driver's and officer's seat positions, one (1) each side. Visors must cover entire windshield space across cab.

5.1.5 INTERIOR CAB LIGHTING

There shall be six (6) overhead dome light clusters, each consisting of one (1) red and one (1) white flush mounted lamp or combination thereof. Each white lamp shall illuminate upon opening any cab door and each white or red lamp shall be operable from the seat positions when the doors are closed.

Two (2) high intensity, adjustable swivel map lights will be located in the cab ceiling above the center of the dash, one (1) for the driver and one (1) for the officer.

A red courtesy light mounted under the dash at the driver and officer positions shall be controlled by a rocker switch mounted on the driver's instrument panel.

Each cab door shall be equipped with two (2) lamps, located on the inner door trim panel. Both lamps shall illuminate whenever the cab doors are opened. The lamp closest to the outer door edge shall be red to warn approaching traffic of an opened door. The lamp closest to the door hinge shall be white with a 12-candlepower bulb, which shall provide ground illumination and cab entrance step illumination in accordance with the requirements of NFPA 1901, latest edition. A door-activated switch shall control both lights.

MUST BE FILLED IN
 FIRM (VENDORS) NAME _____ BID NUMBER _____

5.1.7 CAB GRAB HANDLES

Three (3) interior grab rails will be provided to assist in cab entry. One (1) will be mounted on the forward door post on the officer's side and one (1) will be mounted on each rear crew cab door.

5.1.8 OCCUPANT SEAT BELTS AND EXTENDERS

All seating positions shall be equipped with three-point seat belts. Driver and Officer seats shall have 7" travel vertical adjusters. Provide all seats with extend stalk for seatbelt clasp on mounted end.

5.1.9 CAB MIRRORS

Two (2) side mounted "West Coast" type rear view mirrors shall be approx. 15.5" x 7", including a 5.5" x 7" integral parabolic lower section within one housing. The mirrors shall be remotely adjustable by the driver.

The mirrors shall be aerodynamically designed to reduce wind buffeting and resultant vibration. Mirrors shall have the minimum possible profile to reduce overall width. The housings shall either be bright metal or be painted to match the cab. Ref Mekra Model . One (1) cab-over mirror with an 8" wide view convex lens shall be mounted on the front right cab roof.

5.1.10 RUSTPROOFING

The entire unit will be thoroughly rust proofed utilizing rustproof and sound deadening materials developed and field tested by Corrosion Consultants, Inc. and applied to all of the manufacturer recommended application procedures.

The rust proofing application will provide the unit with a ten-year anti-corrosion warranty (underwritten by a third party insurance company) licensed in all 50 states.

Rust proofing will be applied during the assembly process and upon completion to insure proper coverage in all critical areas on the unit.

The following areas on the unit will be thoroughly rust proofed as a minimum:

- A. The entire underside area of the cab
- B. Internal areas of the cab support structure
- C. Internal areas of cab sheet metal reinforcements
- D. Internal areas of cab doors
- E. Entire underside of fire body

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

- F. All internal body areas, which are not finished painted
- G. Between overlaid dissimilar metals
- H. Special attention to internal body and cab fender areas
- I. Underside of rear step and side running boards

5.1.11 EXTERIOR GRAB HANDLES

There shall be four (4) exterior grab handles, one (1) at each door opening. The grab handles shall be approx. 18” to 23-1/4" long, bright aluminum extrusion with rubber insert. The grab handles shall be in compliance with NFPA 1901, latest Edition.

5.1.12 AUXILIARY 12 VOLT OUTLETS

There shall be two (2) automotive type 12 volt auxiliary electrical outlets with covers mounted on the central dash panel for accessory items. Automatic self-resetting circuit breakers shall also be provided.

5.1.13 FLUID LEVELS

A permanent plate must be mounted in the driver’s compartment, which specifies the quantity and type of fluids required including engine oil, engine coolant, transmission fluid, drive axle oil, power steering fluid and hydraulic fluid.

6.0 FRAME

Crossmembers shall be formed steel, channel type and reinforced, Cross-member spacing shall sustain the chosen Gross Vehicle Weight Rating, permit properly engineered installation of chosen chassis components and support a lifetime warranty against cracking of either rail in emergency vehicle service. RBM MINIMUM OF 1,399,300 in lbs

The chassis frame shall be assembled with huck-spin round collar chassis fasteners or grade 8 Body bound type bolts. The fasteners shall be installed with constant uniform torque, shall not loosen from vibration and shall not require re-torquing.

6.2 FRONT TOW EYES

Two (2) chrome plated forged eyes shall be mounted to the front frame rail extension by the chassis manufacturer at a position which maintains an angle of approach compliant to NFPA 1901, 2009 edition, 12-3.2.3.

REAR TOW EYES

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Two (2) painted tow eyes with 3” diameter holes will be furnished on the rear of the vehicle. The tow eyes will be made from plate steel and will be bolted directly to the chassis frame rails with grade 8 bolts. The tow eyes will be painted red. Stainless steel trim plates will be installed around the rear tow eyes.

6.3 FRAME LINER

A full frame liner "C" channel inner frame reinforcement shall be provided and installed for all frames. The inner liner shall be formed to a "C" channel shape to fit the contours of the mainframe rail without exceeding the flange width.

Combined, the section modulus for the frame shall be 17.63 cubic inches, per rail, and the RBM shall be approximately 3,400,000 pounds/foot per inch, per rail, with a minimum yield strength of 110,000 psi, per rail.

6.4 FRONT BUMPER

A heavy duty, polished stainless steel wraparound front bumper will be provided for the full width of the cab and will be attached to the frame with chrome plated carriage bolts.

7.0 AXLES AND SUSPENSION SYSTEM

7.1 FRONT SUSPENSION WITH SHOCK ABSORBERS

The front suspension shall have a minimum capacity of 20,000 pounds using tapered leaf springs. Front spring bushings shall be graphite impregnated bronze spring pin with grease seals.

REAR SUSPENSION

The rear suspension shall be air ride. The suspension system shall have a capacity of up to 27,000 pounds. Reyco or NuWay for reference only

7.2 SHOCK ABSORBERS

Heavy duty, double acting shock absorbers shall be provided for front and rear. KONI for reference

7.3 As per 41-V-20M:86

7.4 FRONT AXLE

The front axle shall be a Meritor model MFS 133A with a maximum beam and spindle with a minimum capacity of 20,000 pounds. It shall be provided with grease packed wheel bearings and seals. The axle shall provide a 45-degree cramp angle.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

7.4.1 FRONT AXLE HUBS

The front axle shall be equipped with Meritor cast iron hubs with grease packed bearings

7.5 REAR AXLE

The rear axle shall be a Meritor model RS-23-186 with a fire emergency rating of 24,000 pounds, **minimum**. The axle set shall include single reduction hypoid gearing and oil lubricated wheel bearings. Provide cast iron hub, hub piloted drums and wheels. Provide synthetic gear lube 80W140.

7.5.1 REAR AXLE SEALS

The rear axle shall be equipped with an extended life oil seal. Ref, Chicago Rawhide or City approved equal

7.5.2 REAR AXLE RATIO

A gear ratio shall be selected for the specified drive train components to provide a road speed of 60 miles per hour (+/- 2 mph

7.6 ROLL OVER STABILITY

The apparatus as delivered must meet either the criteria defined in section 4.13.1.1 or the criteria defined in 4.13.1.2 of NFPA 1901, 2009 edition

Bidder must state which criteria the apparatus shall meet below.

_____ -

8.0 BRAKES

8.3 AIR BRAKE SYSTEM

A dual circuit, air operated braking system, meeting the design and performance requirements of FMVSS-121 and the operating test requirements of NFPA 1901, 1996 edition shall be installed. A minimum of 4,400 cubic capacity shall be provided. The system shall be powered by an engine mounted, gear driven air compressor protected by a heated air dryer.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

The air system shall be plumbed with reinforced, color coded nylon air brake tubing in conformance to SAE J844-94, Type B and U.S.D.O.T. standards. The compressor discharge shall be plumbed with stainless steel braided hose lines with a Teflon lining.

Nylon air lines shall be enclosed in high temperature convoluted loom run along the inside frame rails, secured with non-conductive, corrosion resistant strapping mounted with stand-off fasteners. Cord reinforced rubber hose lines with brass fittings shall be installed from frame rail to axle mounted air connections.

The air system shall provide a rapid air build-up feature and low pressure protection valve with light and buzzer, designed to meet the requirements of N.F.P.A. 1901, 12.3.1.2 , 2009 edition

8.3.1 AIR TANK DRAIN VALVES

A Berg DV-2 heated automatic drain valve shall be installed on the wet tank. All other tanks shall be equipped with a centrally plumbed drain panel with ¼ turn brass valves. Location TBD at preconstruction.

8.4 AIR DRYER

A Bendix model AD-IP air dryer with spin-on cartridge and heater shall be installed for accessibility on the frame rails under the cab.

8.5 ABS BRAKING SYSTEM

A Meritor Wabco, 4-channel Anti-Lock Braking System, Automatic Tracking Control, with four (4) wheel sensors and four (4) modulators to control and compensate braking force at each wheel shall be installed. A dash-mounted diagnostic light shall be installed. The system shall prevent wheel lock-up during braking thereby allowing the vehicle to accomplish a controlled stop while remaining substantially in the direction of travel at the time of brake application.

Air pressure loss in the system with the parking brake applied and the engine not running will not exceed 10 PSI per hour.

Spring actuated emergency / parking brakes will be installed on the rear axle. The parking brake system must be capable of holding the fully loaded apparatus on a 20 percent grade.

The parking brake release point will be set at 60-65 PSI.

All airlines in the frame will be color-coded, reinforced nylon tubing that terminate in brass fittings.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

A provision for an air inlet will be provided in the driver's doorstep well to facilitate the charging of the vehicle air system. A 3/8" N.P.T. female bulkhead fitting will be provided for the installation of a customer-supplied quick disconnect fitting. The port will be properly labeled as to its function. A shut-off valve will be provided for the air inlet. The valve will be properly labeled.

8.6 REAR BRAKES

Drum Type cam brakes shall be supplied, Provide Meritor Cam Master air activated drum Q-Plus type 8.62X16.5

SLACK ADJUSTERS FOR REAR BRAKES

The rear brakes shall be equipped with axle OEM automatic slack adjusters.

REAR BRAKE CHAMBERS

The rear brake chambers shall be "30/36" spring brake chambers mounted on the forward side of the single drive rear axle or forward axle of dual drive.

8.7 FRONT BRAKES

SLACK ADJUSTERS FOR FRONT BRAKES

The front brakes as provided below will not need automatic slack adjusters

FRONT BRAKES, DISC

The front brakes shall be Meritor "EX225-17" Disk type with Ferodo or equal fire & emergency severe service caliper pads

8.8 ACCESSORY AIR SYSTEM

An accessory air tank of aluminum construction will be supplied for use with the air horns and other vehicle accessories. The accessory tank will be charged through a pressure protection valve to protect the air brake system from being drained below 80 psi by the accessories.

A provision for an air outlet will be provided in the driver's door step well to facilitate the use of the vehicle's air system to supply air to accessories outside the apparatus. The air outlet will be plumbed through a pressure protection valve to eliminate the chance of undesired air pressure loss to the air brake system. A 3/8" N.P.T. female bulkhead fitting will be provided for the installation of a quick disconnect fitting. The port will be properly labeled as to its function.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

8.9 AIR COMPRESSOR

The engine driven air compressor shall be a Wabco model, standard on Cummins engine rated at 18.9 cfm airflow. The air compressor discharge line shall be stainless steel braid reinforced Teflon hose.

A pressure protection valve shall be installed to prevent the use of air horns or other air operated devices should the air system pressure drop below 80 psi (552 kPa).

The chassis air system shall meet NFPA 1901, 1996 Edition for rapid air pressure build-up within thirty (30) seconds from a completely discharged air system. This system shall provide sufficient air pressure so that the apparatus has no brake drag and is able to stop under the intended operating conditions following the thirty (30) seconds build-up time.

8.10 AIR COMPRESSOR, 120 VOLT

The chassis shall be equipped with a Kussmaul " Pump Plus" air compressor.

The air compressor shall be a 120VAC model #091-9HP with output of .30 scfm at 80 psi and .35 scfm at 60 psi.

The Pump Plus together with the auto charger shall be installed behind the drivers' seat. They are not to be hard wired. Install a duplex receptacle connected to shoreline power and plug in. Do cut off plug.

9.0 ENGINE

9.2 The engine shall be an electronically controlled, turbocharged, six (6) cylinder, four-cycle, Cummins ISL engine developing 425 bhp at 2200 rpm. Engine torque shall be 1200 lb-ft at 1300 RPM. Shall not exceed the maximum torque allowed for Allison 3000 EVS transmission. .

The engine Electronic Controls shall be compatible with any electronic throttle control (vernier knob)

10.0 ENGINE EQUIPMENT

10.1 FULL FLOW OIL FILTERS

Engine oil filters shall be engine manufacturer branded or approved. Engine oil filters shall be accessible and easily serviced or replaced.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

10.4 ENGINE GOVERNOR

Top governed speed will be 60 MPH in fifth gear.

10.5 AIR CLEANER

The engine air cleaner shall be the size recommended by the engine manufacturer and shall be manufactured by Donaldson OR EQUAL. The air cleaner element shall be dry type, with ember separator, and easily replaced by tilting the cab. The air cleaner shall be mounted on the right hand side of the engine above frame level.

It shall have a sealed system designed to prevent water from entering the intake pipe or air cleaner, especially standing water as a result of street flooding. The air intake pipe shall include a moisture evacuator to allow discharge of condensation from the intake system.

A mechanical air inlet restriction gauge shall be visible through the service access door and it shall trigger a dash mounted warning light in the event of an air inlet restriction.

10.6 ENGINE PROTECTION ALARMS

The engine shall be equipped with an alarm system for low oil pressure, high coolant temperature, and low coolant level. The system shall warn the driver or pump operator of a potentially damaging engine operating condition. This warning system shall not shut down the engine or reduce power under any conditions. The protection system must be integral with the engine electronics and not an external system.

10.7 ENGINE BLOCK HEATER

Provide Engine block heater, 1,000 watts minimum. Location of electrical receptacle shall be discussed at pre-build conference. .

10.8 FAST IDLE

A preset fast idle set at 1400 rpm (or as otherwise required) shall be included with the electronic engine. A control switch mounted in the central dash panel shall activate the high idle feature. The high idle system will provide interlocks to prevent its activation when the apparatus is in Road gear or Parking brake is not applied.

10.9 ENGINE COMPARTMENT LIGHTS

Two (2) engine work lights shall be installed in the engine enclosure.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

10.10 ENGINE STARTER

The engine starter shall be a Cummins standard component supplied on the ISL engine with over crank protection (OCP) and thermal protection, controlled by a dash mounted switches. The dash switches shall be as follows, one switch for battery “ON or OFF” and a second switch for Engine START and Engine OFF”.

10.11 ENGINE BRAKE

A **Jacobs Engine Brake** will be provided. A two-lever switch with On / Off and Low / Medium / High positions will be provided on the dash to control the engine brake. All stages of the engine brake will be activated upon let-up on the accelerator pedal. The engine brake will be interlocked to the vehicle parking brake so that it is automatically inhibited from engagement when the vehicle is in non-road operation. The engine brake will be wired in such a manner so as to illuminate the chassis brake lights when the engine brake is engaged and operating. The engine brake will interface with the ABS system to be disabled if wheel lock-up is detected. Jake to be programmed to start in third gear.

10.12 MAGNETIC FILL/DRAIN PLUGS

The engine oil drain shall be equipped with magnetic plugs.

10.13 ENGINE STOP CONTROL

The vehicle shall be equipped with an ignition switch controlled engine stop.

10.14 EXHAUST

Provide the manufacturers EPA approved exhaust system in compliance with the new clean engine requirements. Exhaust to exit forward of rear tires on officers side. Provide a chrome exhaust shield or air diffuser as needed.

All flex tubing, if utilized, will be constructed of stainless steel.

Proper insulation will be provided between the muffler, tailpipe, hydraulic hoses, wiring harnesses and body.

All exhaust piping shall be protected against damage from vibration, torque and frame flexing.

10.14.1 EXHAUST HEAT SHIELD

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

A heat shield shall be provided in an effort to minimize engine compartment temperatures.

10.15 FUEL COMPATABILITY

Engine must be approved to utilize Bio-Diesel fuel B5 to B20 blends that meet the current or latest ASTM specification for Bio-diesel blended fuels.

11.0 TRANSMISSION

TRANSMISSION, ALLISON 3000EVS

The chassis shall be equipped with an Allison 3000EVS, five (5) speed automatic transmission, factory filled with Transynd fluid. It shall be equipped with ATEC operating controls and programmed for Fire Apparatus vocation, in concert with the specified engine.

An electronic oil level indicator shall be provided as well as a diagnostic reader port connection. A water to oil transmission cooler shall be provided. The transmission shall be geared to provide one-to-one ratio in fourth gear, which shall also be the fire pump drive gear. A dedicated lock-up circuit shall be provided for pump operation, if applicable. The "D" drive button shall equal 4th gear. The transmission's fifth gear shall be an overdrive ratio, activated through a mode button, permitting the vehicle to reach its top speed at the engine's governed speed.

11.1 MAGNETIC DRAIN PLUGS

The engine, transmission and rear axle(s) fill and drain shall be equipped with magnetic plugs.

11.2 TRANSMISSION PROGRAMMING

The transmission shall be equipped with WTEC III software or latest version and shall be programmed for five (5) speed Fire & Emergency #1 pumper application.

11.3 TRANSMISSION SHIFTER

An Allison "Touch Pad" electronic shift selector shall be located on the forward left side of the engine enclosure in close proximity to the power on/off, start switch and the park brake control.

The automatic transmission push-button control will be illuminated for night operation and will be located on the dashboard to the right of the driver.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

11.4 DRIVELINE

A Meritor model 18T drive line assembly utilizing half round yokes and retained needle bearings shall be dynamically balanced and installed between the transmission and rear axle.

The chassis will be provided with a drive line guard, the guard will be of the design that encircles the main drive line to the rear axle and shall attach to the frame, to contain the drive line in the event of a failure.

12.0 STEERING

12.1 STEERING GEAR

The steering gear shall be a TRW / Ross or Sheppard, rated up to a 21,500-pound capacity maximum. Steering geometry shall be capable of 45 degree cramp angle, minimum, in both directions with the specified tires and wheels

12.2 STEERING COLUMN

The steering column shall be a tilting and telescoping type, designed to collapse under impact. The steering column shall be capable of telescoping 2 90". It shall have infinite adjustment within its range of operation. The steering column shall have a self-canceling turn signal switch with a headlamp dimmer switch, windshield washer switch and hazard flasher controls located in the control stalk. A steering wheel minimum of 18 inches in diameter shall be provided.

12.3 POWER STEERING PUMP

The power steering pump shall be a EATON A 26, or approved equal.

12.3 POWER STEERING RESERVOIR

The power steering reservoir shall have a minimum capacity of four (4) quarts of power steering fluid.

13.0 COOLING SYSTEM

The vehicle's cooling system will be specifically designed for a fire-service, high performance diesel engine. It will be able to provide adequate cooling during extended periods of full load operation in local ambient temperatures of -5⁰ F to 105⁰ F. It shall be extended life coolant with organic components with a typical life of 300,000 miles and can be extended to 600,000 miles with an extender.

13.1 RADIATOR

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Provide a heavy duty radiator that meets or exceeds the cooling requirements as stated by the engine manufacturer’s performance requirements for the 2007 and newer clean engine installations. The core shall be made of copper and brass. The radiator top and bottom tanks shall be bolt on or solder tanks, non-corrosive high temperature composite not acceptable.

Provide low coolant sight glass, if available and an electronically controlled low coolant display mounted on the instrument panel.

The engine cooling system shall be capable of maintaining engine manufacturers recommended engine operating temperature during all load conditions.

13.1.1 RADIATOR DRAINCOCK

The radiator plumbing shall provide a draincock for coolant evacuation.

13.2 ENGINE COOLANT

Engine coolant shall be heavy-duty Extended Life Coolant and meet manufacturers’ requirements for HD Diesel engine. Engine coolant shall provide anti-freeze protection to -30 degrees Fahrenheit.

13.3 FAN DRIVE

The radiator-cooling fan shall be a Horton with System Sentry feature fan clutch configuration. The fan drive shall be rear aired. An automatic fan control shall be provided. The fan shall engage when the air conditioner system is on and for pumper vocations, when fire pump shift occurs. As head pressure builds up, the RMS will cycle the fan on and off.

13.4 COOLANT HOSES

The chassis shall be equipped with Gates "Blue Stripe" EPDM coolant hoses. Hose construction shall provide a rubber outer wall combined with a silicone inner wall. The silicone inner wall shall prevent hose deterioration due to coolant contaminants and coolant cavitation. The rubber outer wall shall provide a superior durometer-clamping surface to prevent cold seepage. Constant torque hose clamps shall be provided for all coolant hoses of 1/4" diameter and greater.

13.5 HEATER HOSES

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

The chassis shall be equipped with flexible and formed hard line heater hoses to provide flow of coolant water to the front and rear heater cores. The heater hoses shall be insulated. Any heater type hose shall be of similar type as above.

13.6 AUXILIARY COOLER

A supplementary heat exchanger cooling system, properly valved, shall be installed as to permit water from the discharge side of the firepump for the cooling of water circulating through the engine. The cooling will be done without mixing engine and firepump water. The heat exchanger shall be capable of withstanding high pressure encountered in actual service. A check valve shall be installed in the return line to the pump.

Pump cooler must be made by the pump manufacturer. No exception!

14.0 ELECTRICAL SYSTEM

MULTI-PLEX WIRING SHALL BE SUPPLIED

14.1 VEHICLE WIRING INTERFACE

The chassis manufacturer shall supply and install a vehicle-wiring interface for body builder wiring connections. The interface shall be mounted on the firewall. All wiring for the body must go through the interface.

The apparatus shall be equipped with a heavy-duty 12 volt wiring system. The system shall include all parts, components, switches, relays, and wiring to insure complete operation. All body module electrical equipment shall be served by circuits, separate and distinct from the vehicle chassis circuits.

The electrical system will provide ease of service with simple access to components for troubleshooting and repair. The cab design will incorporate wire runways for installation and protection of chassis and body manufacturer installed wiring harness and will provide removable panels for access.

All 12 volt wiring from the cab to the body shall be joined at a main terminal box in the body module. This box must be mounted above the frame and away from water spray of the tires and cannot be mounted inside the pump module. This panel shall allow the split of the cab and body wiring so the body module could be removed. See section 14.10

The panel board will provide DC electric to the electrical circuits associated with the apparatus body wiring. All body electrical circuits will be protected by correctly sized thermal circuit breakers located as close as possible to the power source.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

All chassis wiring will be multi-conductor copper of a gauge rated to carry a minimum of 125 percent of the maximum current for which the circuit is protected, and will have SXL cross-linked high temperature (302 degrees F) insulation. Circuit number and function will be marked on the insulation in increments of no greater than 6 inches.

All cables and harnesses will be neatly installed, covered with 250 degrees F (min.) flame retardant loom in chafing areas and clipped with rubber protected steel clips. An independent braided sheath wiring harness enclosed in split loom plastic insulation will be provided for all electrical circuits on the body.

All wiring shall be color or number coded and include circuit labeling throughout. All chassis-to-body wiring shall be of the **DIN / WEATHERPACK** type connections. All wiring connections shall be crimped and soldered and covered with heat shrink tube in any location determined to be not weatherproof. Crimp style shall be of the type that provides stress relief to the wire and insulation. Crimp tools Thomas Betts, Comfort Grip crimper T&B tool # ERG-2001 or AMP Pro Crimper III shall be used for all apparatus built for the City. **No Exceptions**

Automatic remote thermal reset type circuit breakers will be used on all circuits. The headlight circuit breaker will be automatic reset FRYER type. The circuit protection will be located as close as possible to the power source in order to minimize unprotected runs of wiring. Each circuit breaker will be removable without having to remove brackets, buss bar, or other breaker structures.

All large terminals which have no insulation crimp will be soldered and include heat shrink tubing with sealant applied to relieve strain. To prevent short-circuiting, no metallic identification will be allowed. All terminal strips will be provided with a cover unless fully enclosed by other means.

All junction blocks will be No. 10 stud type. Printed schematic layout will be installed to identify each circuit studs function.

An amp draw report for the proposed vehicle will be provided with the bid. A detailed wiring diagram, which is specific to this vehicle as built, will be provided with the service manual.

A ten (10) place, constantly hot fuse panel and ground for chargers shall be provided at the electrical distribution area. Radio suppression shall be sufficient to allow radio equipment operation without interference.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

All electrical equipment switches will be mounted on a switch panel mounted in the cab, convenient to the driver. Light switches will be of the rocker type with integral indicator light to show when lights are energized. All switches will be appropriately identified by back-lighted panel mounted legend inserts.

The body wiring harness will be provided with two extra wires.

14.2 ELECTRICAL LOAD MANAGEMENT SYSTEM

A total system load manager will be installed. A LED indicator light will be installed in the console to indicate when the load shedding sequence is active. The Fire Department shall coordinate the programming of the shedding of electrical loads with the installer in accordance with NFPA requirements. An enclosed and protected power distribution relay board with selectable input polarity and load management input for the use of any load manager shall be provided. This relay board shall have visual diagnostic for negative and positive input as well as relay output. All connection terminals shall have protective covers where necessary.

The electrical package shall include: An indicating interlock module; a programmable load management device; A warning light power distribution module and an information display with system diagnostic capabilities. Low voltage warning must be audible as well as visual to warn of impending electrical system failure or excessive discharge of battery.

14.3 ICC APPARATUS LIGHTING

Dual halogen rectangular headlights will be provided on the front of the cab, two each side, in a common bezel – one high beam the other low beam. The headlights will be equipped with an electronic “wig-wag” feature. A rocker switch in the control switch panel will activate the flashing system. All lights will be of the rubber shock mounted type where available.

All lights on the apparatus body will be **Whelan Module LED with LED wiring harness** brand or approved equal, activated by the headlight switch. City reserves right to approve all lighting packages.

Two (2) amber directional turn signal arrows will be mounted on the front of the cab.

Two (2) round amber directional signals will be mounted one on each side of the cab.

Five (5) ICC amber marker lights will be provided above the windshield across the forward radius of the cab.

Two (2) amber clearance lights will be mounted on the lower body, one (1) each side.

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

Two (2) red clearance lights and two (2) red reflectors will be mounted at each lower rear side corner of the body, one (1) each per side.

Five (5) red clearance lights and two (2) red reflectors will be mounted on the lower rear surface of the apparatus. Lights to be recessed for protection from breakage.

Polished bezels will be installed on the rear of the apparatus to group the following lights in a group of three (3) and to provide a pleasing appearance:
(final approval on rear lighting to be made by OFM and Fire Department)

- a) Two (2) surface mounted largest possible diameter back-up lights will be provided on the rear of the apparatus, one (1) on each side.
- b) Two (2) surface mounted largest possible diameter combination stop/tail lights will be provided on the rear of the apparatus, one (1) on each side.
- c) Two (2) surface mounted largest possible diameter directional signals with amber arrow lenses will be provided on the rear of the apparatus, one (1) on each side.

14.4 INTERLOCK CONTROL AND MONITORING MODULE

The electrical package shall be equipped with an interlock module and monitoring system, which can be readily configured to meet the interlock requirements of various PTO and pump configurations, without wiring modifications from the pre-engineered harness and interconnect system. The module shall consolidate all interlock signals, relays and indicators and shall attach to the harness system through connectors. Independent relays dispersed about the apparatus for the purpose of pump and throttle interlocks shall not be utilized.

The interlock module shall also control and indicate the following functions: Transmission lockup command, high idle control logic, engine run/starter lockout relay, select switch for foot throttle inhibit during pump operation, and cab and body "door ajar" indication with relay for "door open" alarm.

14.5 DOOR AJAR/OPEN

A warning light in full vision of the driver and officer, shall indicate the alarm status for any cab door and / or compartment that is open or ajar.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

14.6 ALTERNATOR

The alternator shall be a Leece-Neville 320 amp, pad mounted on engine driven via belt and tensioned by a threaded rod or a belt tensioner. The alternator shall meet all applicable NFPA 1901, 1996 Edition requirements for performance.

14.7 BATTERIES

The battery system shall be a single system consisting of six (6) group 31, 12-volt DC heavy duty high cycle automotive batteries. The battery bank batteries shall have a group rating of 6450 cold cranking amperes (CCA) at zero. Do not isolate any batteries.

The battery group shall be either transverse mounted across the frame rails in a rigid cross-braced tray, or side rail. Battery installation shall provide drainage for accumulated fluids and shall meet TMC (Truck Maintenance Council - American Trucking Association) recommended practice RP-125, for battery mounting.

A hinged access door will be installed in each canopy step rear riser for access to the batteries in case of an electrical failure to the tilt cab system.

Each battery storage tray assembly and adjacent metal parts, which may be subject to corrosion from battery leakage will be stainless steel with a flooring of dry-deck, no plywood. Ample battery ventilation and drainage will be provided.

Cables will be protected from abrasion wherever they pass through a metal compartment wall by means of looms and rubber grommets.

Provide green light on dash for battery on.

14.7.1 BATTERY CHARGER

The chassis shall be equipped with a Kussmaul "Auto Charge" battery charger with battery saver. The charger shall charge the entire battery bank.

The charger output shall be rated for a minimum of 40 amps 12 volts DC for the battery bank.

The charger shall operate on 120 volts DC, 50/60 Hz and draw a maximum of 8 amps. The charger shall have a dual cab mounted bar graph charge level indicator to indicate the charger state of each battery circuit.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

The charger and air pump assembly as described in Section 8.10 shall be mounted behind the driver seat and connected to duplex receptacle. DO NOT HARD WIRE

14.8 SUPER AUTO EJECT RECEPTACLE

Two Kussmaul "Super Auto Eject" 20 amp shoreline receptacles, one each side, shall be provided. The auto eject receptacles shall be completely sealed preventing road dirt contamination and shall be mounted in the driver and officer step well below the door

The electrical shoreline shall be automatically ejected when the engine starter circuit is engaged. A yellow spring-loaded weatherproof cover shall protect the receptacle.

14.9 12 VOLT BODY ELECTRICAL SYSTEM

All electrical lines in the body will be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy-duty solenoids and other major electrical controls will be located in a central area near the circuit breakers.

All lines will be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. A complete wiring diagram will be supplied with the apparatus.

Wiring will be carefully protected from weather elements and snagging. Heavy-duty loom will be used in chaff areas and those requested by the City. Grommets will be utilized where wiring passes through panels.

In order to minimize the risk of heat damage, wires run in the engine compartment area will be carefully installed and suitably protected by the installation of heat resistant shielded loom.

All electrical equipment will be installed to conform to the latest federal standards as outlined in **NFPA-1901**.

14.10 BODY ELECTRICAL JUNCTION COMPARTMENT

A weathertight electric junction compartment will be provided in the left side front compartment. This compartment will be recessed through the inside rear wall of the compartment to provide an easily accessible enclosure to house all of the body wiring junction points, terminal strips, solenoids, etc. This electrical connection box shall be mounted higher than the frame rail.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

The design of this compartment will not decrease the storage capacity area of the compartment in which it is located. A removable panel will be provided for access to this compartment.

14.11 COMPARTMENT LIGHTS

Each exterior compartment shall be equipped with AMDOR Luma bar light fixture mounted on the forward (or rear facing) vertical door frame. Each light will come on automatically when the respective door is opened and the master battery switch is on.

14.12 STEP LIGHTS

Chrome plated, shielded step lights will be provided and controlled with LED marker light actuation. Step lights will be located to properly illuminate all body and chassis access steps and walkway areas. DIALIGHT CORP for reference

14.13 PUMP ENCLOSURE WORK LIGHTS

Two (2) LED work lights will be mounted in the pump enclosure, one (1) each side individually switched on the light. DIALIGHT CORP for reference

14.14 DECK LIGHTS

Two (2) 6" Unity model AG chrome plated deck lights will be provided and mounted on rear stanchions, one (1) each side. Individual switches will be provided on each light. See section 4.4.5.

14.15 AUXILIARY 12 VOLT OUTLETS

There shall be two (2) automotive type 12 volt auxiliary electrical outlets with covers mounted on the central dash panel for accessory items. Automatic self-resetting circuit breakers shall also be provided.

14.16 ADDITIONAL SWITCH

Two additional dash mounted rocker switch(s) shall be installed for additional electrical requirements, by the chassis manufacturer.

14.17 HAND-LIGHTS

Two (2) **SL-90X Streamlight Survivor hand lights, Model 90225**, Philadelphia specs only, yellow in color, and Two (2) **Streamlight Survivor DC#2 Fast Charger, Model 90013** battery chargers will be installed as determined at pre-construction conference.

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

14.18 NON-WARNING LIGHTS - CAB

Two Recessed 150 Watt HID floodlights shall be installed one each side of the apparatus cab. The housing shall incorporate heat dissipation fins and have a cutout dimension not to exceed 3 3/16" deep by 3 1/4" high by 8 11/16" wide. The lamphead shall protrude no more than 3 3/4" from the housing flange. Wiring shall extend from the bottom of the housing and be connected with a quick disconnect type plug. Fire Research Optimum model OPA230-H15 for reference

14.19 WARNING LIGHTS AND DEVICES - APPARATUS

A Whelan D12L-PFDPA2 LED light bar, or approved equal, will be installed on the cab roof. All other warning lights will be configured to comply with the NFPA 1901 lighting standard. Exact placement locations shall be discussed at Pre-construction.

Dual red LED rectangular lights will be provided on the front of the cab above the headlights, two (2) each side in a common bezel matching the headlight bezel. They shall be of the flashing type with lexan lens.

The light bar will be installed on the cab roof, and will be controlled by a properly labeled switch in the cab. The color of the lenses will be 4 red and 3 white.

Two Whelan L 360 Series Super LED Beacon lights will be installed on the upper rear stanchions of body, one each side with one amber lens, right side and red lens left side.

Each side of the front bumper shall have a Whelan # 52. or approved equal, LED light with a white or clear lens recessed mounted. These lights shall be activated by the turn signal to illuminate passage though a turn.

A directional warning light (ref.: Whelan Model TAL 65 Traffic Advisor) will be installed on the rear of the apparatus below hose bed. This light will be controlled by a control box in the cab.

A heavy-duty solid-state automatic sequencing system will be installed. The Fire Department will be consulted about the order of the sequencing.

15.0 TIRES & WHEELS

15.2 FRONT TIRES

The front tires shall be Goodyear radial tires with highway tread G 291. The tires shall be 315/80R 22.5 - L/R-L 20 ply.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Two (2) Front Wheels shall be 10 bolt, hub piloted Alcoa Aluminum disc, 22.5" x 9", rated to equal engineering requirement of front axle provided.

15.3 REAR TIRES

Four (4) rear tires shall be Goodyear radial tires with mud and snow tread G 124. The tires shall be 12R 22.5 L/R-H 16 ply.

15.3.1 REAR WHEELS

Four (4) rear wheels shall be 10-bolt, hub piloted Alcoa Aluminum disc,, 22.5" x 8.25".

15.5 OPTIONAL SPARE TIRE(S)

One additional front aluminum wheel with a mounted tire and one additional aluminum rear wheel with mounted tire will be supplied per apparatus. Both wheels shall be polished as stated below.

15.7 POLISHED FRONT WHEELS

Each outer front wheel, outer surface, shall be polished.

15.8 POLISHED REAR WHEELS

All wheels, inner and outer surface, shall be polished.

Chrome-plated hub, Mini Moon, Phoenix USA Q1401 and nut covers will be provided on each axle.

15.9 Two complete sets of single tire chains, "Z" type, will be provided.

15.10 TIRE MONITORING SYSTEM

Each tire shall be equipped with a visual indicator that will indicate tire air pressure. Rear inside dual tires shall be provided with metal chrome valve extension installed to readily add or visually read indicator. All vehicle tires shall have correct tire pressure at vehicle delivery.

15.11 WHEEL CHOCKS

Two (2) **Ziamatic** SAC-44 folding aluminum wheel chocks will be installed beneath the left / street side of the body utilizing QCH-2 zinc-plated 16 gauge steel horizontal holders.

15.12 MUD GUARDS

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Heavy-duty black rubber mud guards will be provided behind the front and rear wheels, sufficiently overlapping each side of the tires

16.0 FUEL SYSTEM

The fuel tank will be constructed of steel alloy with anti-surge baffle and will conform to Federal Highway Administration Title 49 No. 393.67 for liquid fuel tanks. **Must be compatible with BIO-Diesel fuels B5 to B20 blends.**

16.1 FUEL TANK

The chassis shall be equipped with a 50-gallon rear mounted rectangular fuel tank that shall be constructed steel alloy with stamped heads. It shall provide a minimum 50-gallon (189 liter) "draw" capacity on an incline in any direction up to 8 degrees. The fuel tank shall be certified to meet FMCSR 393.67 tests.

Dual pick-up, dual return ports and dual fuel level sender ports with a single 3/4" tank drawtube shall be provided for possible future requirements. A .25" atmosphere vent line shall be included. The bottom of the fuel tank shall provide a sump area containing a .75" magnetic drain plug that shall be recessed to prevent the plug from protruding from the bottom of the fuel tank. The tank shall be spring mounted to the frame aft of the rear axle.

16.2 FUEL FILL

The fuel tank shall be equipped with a 2.5" filler neck assembly with a .75" vent located on the left hand side of the tank. A fuel fill cap attached with a lanyard shall be supplied. Fuel fill shall be located on left rear side of wheel well. A cast products heavy duty cast aluminum type spring loaded hinged door shall be provided.

16.3 FUEL COOLER

The chassis shall be equipped with a Hayden air-to-fuel cooler to prevent loss of engine horsepower from rising fuel temperature.

16.4 REINFORCED FUEL LINES

The fuel lines shall be wire braid reinforced fuel hose with crimped brass fittings. The lines shall be carefully routed along the inside of the frame rails, protected against chaffing by non-conductive frame mounted stand off fasteners.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

16.5 FUEL PRIMER PUMP

Single suction and return fuel lines shall be provided with an auxiliary 12-volt electric fuel re-primer pump. The fuel pump shall have an oil pressure inhibit switch to prevent the pump from operating when there is no engine oil pressure. A momentary rocker switch, mounted on the cab dash, shall activate the system.

16.6 FUEL/WATER SEPARATOR

A **FUEL PRO 384**, from DAVCO, fuel / water separator filter with thermostatically controlled heat and spin-on filter element with manual primer pump shall be installed in fuel system in place of the primary fuel filter supplied with the engine. Final installation shall allow for total access. Must be compatible with Bio-diesel fuel.

17.0 SAFETY EQUIPMENT**17.2 BACK-UP ALARM**

An automatic self-adjusting electronic back-up alarm producing 87 - 112 db shall be installed at the rear between the frame rails. It shall operate whenever the transmission's reverse gear is selected.

REF: ECCO 907, PRECCO 1040 or approved equal.

17.3 Omit**17.4 DUAL ELECTRIC HORNS**

Dual electric horns rated at 400hz/500hz shall be installed under the cab. Controlled through the horn ring on the center of the steering column and wired through a dash mounted selector switch allowing control of either the electric horn or siren.

17.5 AIR HORNS

Two (2) bright finish, 21" air horns shall be mounted through the center of the front bumper. Horns are to be activated by two foot switches located one on both the drivers and the Officers side. Foot pedal must be placed on right hand side of Officers' position

17.6 SIREN

A Federal Q2B mechanical siren will be mounted recessed in the center of the front bumper extension. The siren will be controlled with one (1) foot switch on the officer's side. There will also be a horn/siren selector switch located on the dashboard, allowing the driver to select either chassis horn, or siren activation through the steering wheel horn button. An electric siren brake switch shall be located

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

on the switch panel. This will only be active when the Master switch is on. Foot pedal must be placed on right hand side of Officers' position. Shield to be provided to direct siren sound forward.

17.7 OPERATOR INSTRUCTION, CAUTION, AND WARNING SIGNS

The manufacturer will supply and affix various operator instructions, caution, and warning signs to the front, sides, rear and inside of the apparatus. They will be in general compliance with ANSI Z35.1 (Provide branch shield. Specification for Accident Prevent Signs).

Caution and warning signs will include, but not be limited to, the following:

- Electrocution Hazard
- Personnel seated/belted while vehicle in motion
- Vehicle equipped with seat belts
- Hazardous Voltage
- Vertical Clearance

A warning label will be installed at each seating position stating the following:

"Occupant must be seated and belted when apparatus is in motion"

WARNING DECALS

Warning decals will be provided in appropriate locations to alert the operator of potential hazards and operating instructions. All warning labels will be in general compliance with A.N.S.I. Z34.1 recommendations.

17.8 VEHICLE DATA RECORDER

17.8.1 Apparatus shall be equipped with an on-board vehicle data recorder capable of recording the data table below in that specific order once per second.

DATA	UNIT OF MEASURE
Vehicle Speed	MPH
Acceleration (from speedometer)	MPH/Sec
Deceleration (from speedometer)	MPH/Sec

MUST BE FILLED IN
 FIRM (VENDORS) NAME _____ BID NUMBER _____

Engine Speed	RPM
Engine Throttle Position	% of full throttle
ABS Event	On/Off
Seat Occupied Status	Occupied Yes/No by position
Seat Belt status	Buckled Yes/No by position
Master Optical Warning Device Switch	On/Off
Time	24 hour time
Date	Year/Month/Day

17.8.2 Data shall be stored at the sampling rate in a 48 hour loop. Memory shall be sufficient to record 100 engine hours worth of minute by minute summary data showing the following data in the table below

DATA	UNIT OF MEASURE
Maximum vehicle speed	MPH
Maximum acceleration (from speedometer)	MPH/Sec
Maximum deceleration (from speedometer)	MPH/Sec
Maximum Engine Speed	RPM
Maximum Engine Throttle Position	% of full throttle
ABS Event	On/Off
Seat occupied with seat belt unbuckled	Yes/No by position at 30 sec. into minute
Master Optical Warning Device Switch	On/Off at 30 sec. into minute
Time	24 hour time
Date	Year/Month/Day

17.8.3 When memory capacity is reached, the system shall erase the oldest data first. All data in the VDR shall be uploadable by the user to a computer and importable into a data-management software package. All data shall be password protected with access controlled by the City designee. Software will be provided with the apparatus that will run on both Windows and Apple operating systems and produce the following formatted reports from the uploaded data.

- Daily log for the time the engine is running for a given date (minute by minute output of all values.**
- Weekly summary (maximum values each hour for each day of the week)**
- Monthly summary (maximum values each day for each day of the month.)**

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

17.9 HEADSET (HEARING PROTECTION)

Provide a total of five head sets. The system shall have the capability to interface with existing PFD radio system with Intercom capability. Driver and Officer to have hands free operation with for intercom with jump seats to have momentary on off button on ear piece. Firecom 210 Apparatus Intercom System, for reference

ADDITIONAL ITEMS SUPPLIED WITH THE VEHICLE

- 1 - Pint of touch up paint for each color
- 1 -Bag of assorted stainless steel nuts and bolts

18.0 Warranties (100% parts, Labor, and Travel Time with No deductible)

Engine	5 years	150,000 miles
Transmission and Differential	5 years	150,000 miles
Complete Drive Train	5 years	100,000 miles
Cab & Chassis	2 years	Unlimited miles

All components i.e.: utilized in starting, charging, accessory systems including harness, sensors, modules cranking motors, alternator, regulators etc.

Cab & Chassis Structural	10 years	Unlimited miles
Fire Pump and attachments (valves, piping, electric,etc.)	5/10 years	Unlimited miles
Warning Devices (Electronic lights, sirens)	5 years	Unlimited miles
Paint	7 years	Unlimited miles
Water Tank	Lifetime	Unlimited miles

NOTE: All minor repairs (less than four (4) labor hours) shall be performed within 1 working day, Sundays excluded.

All minor repairs (over four (4) labor hours) shall be performed within 2 working days, Sundays excluded.

All major repairs shall be performed within 7 working days, Sundays excluded.

If the time intervals for minor and major repairs are exceeded, **the City of Philadelphia reserves the right to perform warranty work with direct invoicing to the successful bidder not the manufacturer.**

MUST BE FILLED IN
 FIRM (VENDORS) NAME _____ BID NUMBER _____

All warranty work performed by City forces will be billed at the rate of \$52.00/hour

Transportation to and from the vendor's site, if required, is the successful bidders responsibility. Transportation to and from the vendor's site, performed by City forces it will be billed at a rate of \$52.00 plus the cost of equipment, if needed.

Copies of Warranty Repair Orders shall be forwarded to the Office of Fleet Management within ten (10) days after completion of each repair. Repair orders shall be complete with all parts and labor cost.

18.1 CAB STRUCTURE AND SHEET METAL WARRANTY

A ten (10) year warranty shall be provided for the cab structural components and sheet metal panels, including doors.

CAB CORROSION WARRANTY

A ten (10) year warranty shall be provided for cab perforation due to corrosion from within. It shall exclude surface rust caused by chips or scratches in the paint.

The chassis manufacturer shall warrant the cab, all features and options, exclusive of maintenance items, against defective materials and workmanship for ten (10) years from the in-service date.

The cab structure shall be warranted by the manufacturer against cracking and corrosion damage, as evidenced by perforation, for a period of ten (10) years from the in-service date.

All warranty coverage's shall include parts and labor required only by the manufacturer's authorized repair facility to perform the repair as directed by the manufacturer; and at the location necessary to properly perform the repair as determined by the manufacturer.

18.2 WARNING EQUIPMENT WARRANTY

A five (5) year warranty shall be provided for all chassis manufacturer installed components, including air horns, electric horns, mechanical siren and speaker(s) (except consumable parts) and electric load management system.

All LED lighting shall be warranted for ten years (10), including contoured light bar, emergency lights, DOT lighting, from the Whelan corporation.

Two (2) highly detailed and comprehensive manuals, each depicting chassis component operating procedures, maintenance requirements, maintenance intervals

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

and procedures, warranty registration with the manufacturer, warranty coverage and claim procedures, shall be presented and reviewed with the Fire Department acceptance authority prior to vehicle acceptance. These manuals shall be delivered with each vehicle.

18.3 CROSSMEMBERS WARRANTY

A ten (10) year warranty shall be provided for all crossmembers, including gussets, due to breaking or cracking.

18.4 FRAME RAILS WARRANTY

A lifetime warranty shall be provided for chassis frame rails due to breaking or cracking. Any modification to the rail or body application must receive written permission from the builder before it is performed to validate warranty.

18.5 AXLES WARRANTY

A five (5) year parts and labor warranty shall be provided on the drive axle(s) (differential assemblies, axle shafts and axle housings) and for the steering axle (beam, spindles, kingpins and kingpin bearings and steering arm).

18.6 ALLISON TRANSMISSION WARRANTY

An Allison Transmissions, Inc. five (5) year warranty shall be provided for the heavy-duty transmission.

18.7 PAINT WARRANTY

The apparatus manufacturer (not a third party paint manufacturer) shall warrant the paint coatings for a period of seven (7) years from delivery and acceptance of the complete vehicle.

The warranty shall include adhesion, peeling, delamination, cracking, clouding or loss of gloss. Paint chipping and surface fracturing caused by an object striking the paint surfaces are not warrantable.

18.8 ENGINE WARRANTY

Engine warranty will include but not be limited to the complete fuel system, complete cooling system and all electronic engine controls, wiring and accessories as well as the engine itself.

18.9 FIRE PUMPS, VALVES AND ELECTRONIC CONTROLS

A five (5) year warranty shall be provided for all fire pumps, attaching pipes and valves and electronic components.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

18.10 WATER TANK WARRANTY

Lifetime Warranty; see Section 40.1.

19.0 PRE-PRODUCTION INSPECTION

- 19.1** Provide a **pre-construction** conference, for four (4) people, at the manufacturer's factory prior to any metal being cut, or the acquisition of any major components being locked-in. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way).
- 19.2** Provide Inspection trip for (4) four people to inspect **completed chassis** prior to leaving the chassis manufacturer. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way). If the chassis, or apparatus body is constructed at a different facility than the plant where the apparatus will be completed, an inspection trip for four (4) persons will be made to that facility upon installation of the apparatus body to the chassis.
- 19.3** Provide a **pre-paint** inspection trip for body & pump configuration, for four (4) people, to the facility where construction of the unit is to be completed, upon completion of the prototype unit. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way).
- 19.4** Provide Inspection trips for four (4) people, to the local dealer upon **final completion** of the finished unit, prior to delivery. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way).

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

20.0 Bidder's Questionnaire

- | | | | |
|-----|--|-----|-----|
| 1. | The unit offered is manufactured entirely in the United States? | () | () |
| 2. | The apparatus offered is not a prototype; and there are at least five (5) apparatus of similar design in service in the United States? | () | () |
| 3. | The capacity and performance tests will be satisfactorily performed in compliance with the information contained in this package? | () | () |
| 4. | The manufacturer fabricates and assembles the fire apparatus chassis, and body, entirely in the same factory complex? If no, attach explanation. | () | () |
| 5. | A full-time local representative of the manufacturer is maintained:

Name: _____

Address: _____

Phone: _____ | () | () |
| 6. | Said representative maintains factory trained and certified mechanics? | () | () |
| 7. | The manufacturer maintains a Factory Service School at the factory? | () | () |
| 8. | All pages of the General Instructions, Requirements, and Specifications have been received and reviewed? | () | () |
| 9. | Has the Bidder completed all the questions and filled in the blanks in the specifications? | () | () |
| 10. | Is the Bid Security attached? | () | () |
| 11. | Does the Bidder comply with Purchaser's specifications without exception? | () | () |
| 12. | Are all requested engineering diagrams and drawings included with the proposal? | () | () |
| 13. | Does the proposed apparatus comply with dimensional requirements of the specifications? | () | () |
| 14. | Does the manufacturer maintain a Service Center and Parts Depot? | () | () |

MUST BE FILLED IN
 FIRM (VENDORS) NAME _____ BID NUMBER _____

15. Does the manufacturer provide a program of Factory training for the Fire Department's mechanics? () ()
16. Are all specified warranties in compliance with the specifications? () ()
17. Are all proposed warranties in compliance with the specifications? () ()
18. Will the apparatus body be covered by a five year warranty? () ()
19. Will the foam system be covered by a five year warranty? () ()
20. Will the entire apparatus be manufactured in the United States? () ()
21. Has a list of ten (10) in-service vehicles similar design been included with the proposal? () ()
22. Are the proposed apparatus and equipment new in all respects? () ()
23. Have you provided an accurate statement of apparatus dimensions? () ()
24. Have you included a copy of your own detailed Bidder's specifications? () ()
25. Have you included a separate list of exceptions? () ()
26. Are you taking total exception? () ()
27. Are you proposing component substitutions which you feel exceed the specification? () ()
28. Does weight distribution comply with the recommendations of the NFPA? () ()
29. Does the apparatus comply with the appropriate requirements of the Federal Motor Vehicle Safety Standards? () ()
30. Will the apparatus have a certified GVWR sticker? () ()
31. Does the manufacturer meet all specified criteria and code conformance? () ()
32. Will the local representative's Field Service Technician deliver the apparatus? () ()

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

- 33. Will the local representative's Field Service Technician train the Fire Department in the use and maintenance of the chassis, and body, for a four (4) day period?
- 34. State the dimensions of your proposed apparatus?
 - a. Overall Height:
 - b. Overall Length:
 - c. Overall Width:
- 35. Delivery of the apparatus shall take place within 300 calendar days after the execution of the contract.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

21.0 Questions Regarding Bid

Any Bidder who does not understand any of the specifications and/or requirements, or who wishes to present a question on the same, will do so in writing to the Purchaser. Verbal answers will not be binding.

22.0 Engineering Drawings

Three approximate scale drawing of the proposed apparatus will be submitted with each bid.

The scaled drawings submitted with the bid will include the following:

- a. Overall height to the highest point of the apparatus from the ground.
- b. Sizes of all compartments; width, height, and depth, including clear opening dimensions.
- c. Overhang front and rear.
- d. Wheelbase, Overall Length, and Overall Width of apparatus.
- e. Angles of approach and departure.
- f. Turning radius.

The drawing must show, but not be limited to, such items as the chassis being utilized, lights, horns, sirens, all compartment locations and dimensions, etc. In actuality, this blueprint will be a visual interpretation of the unit as it is to be supplied.

A blueprint must be approved by the Purchaser prior to any metal being sheared or cut for the unit. The Purchaser, the Manufacturer's Representative and the Apparatus Manufacturer will each have a copy of this blueprint. This blueprint will then become a part of the total contract.

23.0 Parts and Service

Service Center and Parts Depot

Each Bidder must be able to display that they have in recent times and are currently maintaining an established service center and a parts depot capable of satisfying the warranty service requirements and parts requirements for the model and quantity of vehicles bid. Service Center must have supplied parts to at least ten (10) fire departments and serviced at least twenty (20) fire trucks within the past year.

The Bidder must state the location of an authorized service center, with a staff of factory-trained mechanics, well versed in all aspects of service for all major components, of the apparatus within a reasonable distance of the Purchaser. This service center must be not more than 60 (sixty) miles away from the delivery point. In addition, the successful Bidder must maintain a separate service facility at the manufacturing site, in order to satisfy the need for possible major emergency service work.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Local Representation

In order to assure the Purchaser that prompt, knowledgeable, professional representation is made on behalf of the manufacturer, the manufacturer must maintain a representative within a reasonable distance from the Purchaser. This representative must be competent and knowledgeable with respect to the sale and service of fire apparatus and emergency vehicles. The representative must make available factory-trained mechanics who are completely trained in the servicing and maintenance of the product offered and must be equipped to offer prompt service on the product in the Purchaser's in-service location. These mechanics must hold current and valid certifications from the manufacturer.

29.0 Quality of Workmanship

Quality and Workmanship

The design of the apparatus must embody the latest approved automotive engineering practices.

The workmanship must be of the highest quality in its respective field. Special consideration will be given to the following points: accessibility of the various components, which require periodic maintenance, ease of operation, drive-ability, turning radius, pumper operations, and symmetrical proportions.

Construction must be rugged, and ample safety factors must be provided to carry loads as specified and to meet both on and off road requirements and speed conditions as set forth under "Performance Tests and Requirements."

Welding will not be employed in the assembly of the apparatus in a manner that will prevent the ready removal of any component part for service and/or repair.

All wiring will be loomed, braided, bundled as necessary, and grommeted to prevent wear and deterioration

General Construction

The complete apparatus, assemblies, subassemblies, component parts, etc., will be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subjected when placed in service. All parts of the apparatus will be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in firefighting service. All parts of the apparatus will be strong enough to withstand general service under full loads. The apparatus will be so designed that the various parts are readily accessible for lubrication, inspection, adjustment and repair. Bidders' specifications must meet minimum requirements of N.F.P.A. Pamphlet #1901, third party testers standards certifications and all State and Federal Department of Transportation vehicle regulations at the time of the sale of the unit.

The apparatus will be designed and constructed, and the equipment mounted, with due consideration to proper distribution of the load between front and rear axles that all specified

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

equipment, including a full complement of specified ground ladders, loose equipment, and firefighters will be carried without overloading or injuring the apparatus.

30.0 Delivery Responsibility

Delivery of the apparatus will be completed within 270 calendar days after the award of the contract. All pricing will be net and will include delivery of new apparatus per Purchaser's instructions.

Delivery will be made by the manufacturer's representative, who will employ a factory trained and certified Field Service Technician who will drive the truck under its own power from manufacturers' facility to the in-service location and provide at least four (4) days of on-site training to the members of the Fire Department and Fleet Management in the use and maintenance of the vehicle.

30.1 Delivery Information - Final Delivery shall be made between the hours of 8:00 AM and 3:30 PM, Monday through Friday, except City Holidays. Each unit shall be accompanied by a Delivery Slip, which will contain the City's Bid Number, Item Number, Purchase Order Number, and Serial Number of the Unit.

VENDOR MUST NOTIFY OFM THIRTY (30) DAYS PRIOR TO MAKING ANY DELIVERY.

DELIVERY CONTACT PERSON:

OFFICE OF FLEET MANAGEMENT
100 S. BROAD STREET, 3RD FLOOR
PHILADELPHIA, PA 19110
215-686-1877 (VOICE MAIL)

DELIVERY LOCATION:

OFFICE OF FLEET MANAGEMENT
SHOP134
100 East HuntingPark Avenue
PHILADELPHIA, PA 19124
PHONE (215) 685 - 9100

31.0 INSPECTION

31.1 Pennsylvania State Inspection – Each vehicle shall pass the Vehicle Code Examination of the Department of Transportation, Commonwealth of Pennsylvania; when delivered, chassis vendor shall have affixed current State Inspection Stickers in the proper location.

31.2 Exhaust Emissions Inspection – All vehicles with GVW's subject to the provisions of the Pennsylvania Department of Transportation exhaust emissions regulations must meet said requirements and have the appropriate sticker affixed to the windshield, along with the State Vehicle Inspection Sticker, when the vehicle is delivered to the City.

31.3 City Acceptance Inspection – Inspection of the delivered vehicles will be conducted at the specified delivery point. It will be conditioned upon the satisfaction of all o the requirements of this specification and the Invitation to Bid.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Upon **final delivery to the City**, any vehicle(s) not meeting the requirements of the specification and the Invitation to Bid will be rejected. All rejected vehicles must be removed from the City's equipment delivery location within 48 hours of notification to the bidder.

BIDDER INITIALS _____

Upon **final delivery to the City**, in addition to liquidated damages (if applicable), the City at its sole discretion will charge the vendor / success bidder a re-inspection fee of \$150.00 for each occasion a vehicle(s) / equipment not meeting the requirements of the specification and the invitation. This re-inspection fee will be accessed each occasion a unit must be re-inspected.

This re-inspection fee will be deducted from the invoice for unit(s) not meeting the requirements of the specification and the Invitation to Bid.

BIDDER INITIALS _____

31.4 OFM, Bureau of Quality Assurance, shall be notified when the pilot or first production model is available for inspection.

32.0 CERTIFICATIONS & MANUALS (PER ORDER)

32.2 Provide the **necessary documents** for the City to take Title to the vehicle in accordance with the Pennsylvania Motor Vehicle Code. **ALL THE ITEMS, INVOICE (STATE ORIGINAL), MSO, MV-1, ETC) ARE TO BE HAND DELIVERED FOURTEEN (14) DAYS PRIOR TO DELIVERY TO:**

**CITY OF PHILADELPHIA
OFFICE OF FLEET MANAGEMENT
BUREAU OF QUALITY ASSURANCE
100 S. BROAD STREET, 3RD FLOOR
PHILADELPHIA, PA 19110**

32.3 OPERATION, MAINTENANCE AND REPAIR DATA

Prior to the delivery of the first units, the vendor shall forward directly to the Office of Fleet Management, Maintenance, Operating and Repair manuals and Parts Lists as specified below. The manuals shall be shipped separately to OFM 100 S. Broad Street 3rd Floor, Phila, Pa. 19110 and not with the units. All manuals shall be in the form of neatly bound books, with durable covers, and shall be properly identified with the manufacturer's name, model and serial number of the equipment.

The operating and maintenance or shop manuals shall be the latest manufacturer's handbook, covering in detail the recommended operating, maintenance and service procedures.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Where components or equipment of several manufacturers have been used in manufacturing the unit, the manuals shall include operating, maintenance and repair information and parts lists of all manufacturers covering all of the components used. Where the vendor or manufacturer uses components manufactured by other in building equipment which he sells under his own trade name, he shall furnish the parts numbers and full data of the original manufacturers of all components used, where possible, as well as the part numbers he may assign to these components as being parts of his product.

32.3.1 MANUALS

One (1) set of manuals shall be furnished for each unit delivered.

Each manual shall cover chassis, superstructure, engine, transmission, differential, hydraulic system and all other added equipment. Operating Instructions and schematics including:

- | | |
|----------------------------|--------------------------|
| Maintenance Instructions | Emission Diagrams |
| Repair Instruction | Electric Wiring Diagrams |
| Parts Information | Collision |
| Provide Diagnostic Manuals | |

Provide the above listed manuals on CD if available.

Provide an eight-year subscription to all manufacturers issued Service Bulletins (two for each vehicle supplied under this order)

NOTE: Provide two (2) additional sets of operators manuals, these manuals are to be delivered one month prior to delivery.

32.3.2 PREVENTIVE MAINTENANCE INSTRUCTIONS

In addition to the manuals specified above, the vendor shall furnish an equal number of condensed Preventive Maintenance Instructions for all parts of the unit. These instructions shall consist of manufacturers' recommendations for periodic lubrication, cleaning and other preventive maintenance services, and shall be made up in a compact form covering the particular unit delivered.

32.3.3 RECOMMENDED SPARE PARTS

The vendor shall furnish with each service manual a list of recommended spare parts. The list shall include all necessary data for ordering the parts, even if originally furnished by other manufacturers.

The vendor warrants that they shall maintain or have maintained a stock of repair parts within the Philadelphia Metropolitan area at inventory levels for the period described hereafter:

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

The manufacturer shall supply, through a dealer, a published price list for spare parts required to support the units to be manufactured hereunder for ten (10) years from the date of delivery of the last unit.

The vendor, if necessary shall provide technical and field service support. This support shall be by personnel qualified to advise on training, repair and maintenance of the equipment. The technical representatives shall be available in the Philadelphia Metropolitan area when required by the City. The repair or shop manuals shall include but not be limited to detailed drawings, electric, pneumatic and/or hydraulic schematics, piping diagrams and other pertinent information.

32.3.4 SERVICE

Due to the importance of keeping this vital piece of firefighting apparatus in service with a minimum of downtime, the manufacturer of the apparatus device will maintain a network of service centers with factory trained personnel.

The apparatus manufacturer will also have a separate facility for service of units so they do not conflict with production units. The service facility will carry an inventory of parts, separate from production parts.

34.0 INSTRUCTIONS & TRAINING

The vendor shall furnish three (3) video training films, VHS 1/2 inch, covering the following subjects (if available):

- Operator Training
- Routine Maintenance
- Preventive Maintenance

In addition, the vendor shall instruct City employees in the operation, servicing and maintenance of the units or equipment delivered at the following City facilities and at such times as the Engineer may designate, all within thirty days after final acceptance of the first unit.

TRAINING PROGRAM

To instruct OFM and Fire Department personnel in the operation, preventative maintenance and repair and care of the apparatus device, this training program shall be oriented towards a hands-on approach utilizing the new apparatus.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

1. Review personnel training level and determine specific training requirements.
2. Explain operations of the entire pumper device. Each participant shall actually use the pumper and be taught the necessary steps of safe operation.
3. Troubleshooting will be emphasized and reinforced continually throughout the training period.
4. Preventative maintenance procedures shall be setup and definite schedules developed to assure proper maintenance of the apparatus device.
5. Instruction in the use of tools and how to replace minor assemblies, as applicable. Equally important in this training will be when to call appropriate personnel for assistance.
6. How to order parts through the local service center by utilizing parts manual.

ON-SITE PREVENTATIVE MAINTENANCE & OPERATIONAL TRAINING PROGRAM

PROGRAM OUTLINE

An on-site program for training for OFM and Fire Department personnel shall be provided. This program shall be designed to assure complete understanding of all aspects of the apparatus device in the operating environment.

After the unit has been accepted, a factory trained, qualified Field Service Technician shall be provided for a minimum of four (4) days of training.

The training program shall be designed to train each of the four which will use this apparatus. The individuals will be thoroughly taught the operating systems of the pump, including emergency operation. Introductory service skills utilizing the vehicle shall also be taught.

35.0 ENGINEERING RESPONSIBILITY & CHRONIC COMPLAINTS/FAILURES

The term **CHRONIC COMPLAINTS/FAILURES**, as used herein, shall mean that the same component, sub-component, assembly or part, such as an engine, transmission, differentials, hydraulic system, pumps, etc. including valves, controls, water pumps, high pressure water systems, etc. develops repeated defects, breakdowns, and/or malfunctions.

The responsibility for the design of this equipment shall rest upon the successful vendor, and they shall consider all elements of operation for which the warranty shall apply. The successful vendor shall be responsible for the compliance and performance of each subcontractor, including all suppliers.

Where the equipment, units and/or sub-components develop **CHRONIC COMPLAINTS /FAILURES** during service operations, the successful vendor will be required to make any engineering design changes, repairs, alterations, retrofits or to make an adequate heavy duty redesign of any component so as to properly correct and continue to render continuous, durable and safe performance. Warranty periods shall be for an additional one year, measured from the completion date of any corrective measures.

MUST BE FILLED IN
 FIRM (VENDORS) NAME _____ BID NUMBER _____

This additional warranty shall not expire at the end of the initial warranty period even when the correction is performed in the last days of the original, stated, warranty period.

In the event the successful vendor fails to address, or make the proper changes, repairs, modifications, retrofits, or does not render field service after written notice, or unnecessarily delays any actions, the Office of Fleet Management shall have the option of seeking appropriate restitution for loss of production.

The successful vendor shall also be subject for Loss of Use, in the form of rental, lease payments, or a \$200.00 per day fee, while a vehicle is rendered unserviceable or out-of-service.

36.0 COMMUNICATION EQUIPMENT SPECIFICATIONS

Each vehicle will be outfitted by the City with an 800 MHz digital mobile radio.

The vendor shall provide power supply protected by circuit breaker as follows:

At center console on dash:

- one constant battery hot 10 amp
- one battery switched hot 10 amp
- one ground

At box under officer’s seat:

- one constant battery hot 40 amp
- one ground
- one coax cable terminated at this point and attached to base of antenna on cab roof
- Provide and install the cables (2) to connect front radio head center dash and the rear radio head at pump panel from under officer’s seat location. Provide and install front radio head cable #HKN4356B and rear radio head cable #YKN4242.

The vendor shall provide and install an 800 MHz antenna base with whip antenna on the cab roof. Cable shall be routed from antenna base to Officers seat area.

37.0 PUMPING SYSTEM SPECIFICATION

37.1 PUMPING SYSTEM CONSTRUCTION REQUIREMENTS

The pump shall be of two-stage construction and shall comply with all applicable requirements of the latest standards for automotive fire apparatus of the NFPA 1901, 2009 , and shall have a rated capacity of 1,500 gallons per minute. The pump shall be free from objectionable pulsation and vibration under all operating conditions.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

37.2 PIPING AND FITTINGS:

Extra heavy-duty pump mounting brackets will be furnished. These will be bolted to the frame rails in such a position to perfectly align the pump so that the angular velocity of the driveline joints will be the same on each end of the drive shaft. This will assure full capacity performance with a minimum of vibration. Mounting hardware will utilize Grade 8 bolts.

All piping will be heavy duty, minimum of Schedule 40, stainless steel type. Also, in order to minimize friction loss, only sweep type elbows will be used. Where vibration or chassis flexing may damage or loosen piping, all plumbing exiting the pump enclosure area will be equipped with victaulic or rubber couplings as necessary.

Wherever threaded joints are used, the sealing compound will be of the non-hardening type to insure ease of removal for repair or replacement or couplings.

All piping will be subjected to hydrostatic test consisting of pressurizing the entire pump and valves, including suction lines. Following the pressure test, a vacuum test will be applied to the entire pump and valves. This test consists of developing 24 inches of vacuum and holding that vacuum for 5 minutes while not losing in excess of 10 inches of vacuum.

37.3 PUMP BODY

The pump body shall be close-grained, gray iron and must be horizontally split in two sections for easy removal of the entire impeller shaft assembly, and designed for complete servicing from the bottom of the truck without disturbing setting of the pump in the chassis or apparatus piping which is connected to the pump. Pump body halves shall be bolted together on a single horizontal face to minimize leakage and facilitate reassembly.

37.4 DISCHARGE MANIFOLD

The discharge manifold shall be cast as an integral part of the pump body assembly and shall provide at least three full 3 ½ inch openings for ultimate flexibility in providing various discharge outlets for maximum efficiency, and shall be located as follows:

- One outlet on the right side of the pump body
- One outlet on the left side of the pump body
- One outlet directly on top of the pump discharge manifold

37.5 IMPELLER

Impellers shall be bronze, accurately balanced (mechanically and hydraulically), of mixed flow design with reverse flow labyrinth type, wear rings that resist water bypass and loss of efficiency due to wear. The impellers shall have flame plated hubs to assure maximum pump life and efficiency despite the presence of abrasive particles, such as fine sand, in the water being pumped.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

37.6 WEAR RINGS

The wear rings shall be bronze, and shall be easily replaceable to restore original pump efficiency and eliminate the need for replacing the entire pump casing due to wear.

37.7 IMPELLER SHAFT

The impeller shaft shall be stainless steel, accurately ground to size. The impeller shaft shall be of two-piece construction separable between the pump transmission to allow true separation of the transmission from the pump without disassembly of either component.

37.8 ANTI-FRICTION BEARINGS

The impeller shaft shall be supported at each end by oil or grease lubricated anti-friction ball bearings for rigid and precise support. Bearings shall be protected from water and sediment by suitable seal housings, flinger rings, and oil seals. No sleeve type bearing shall be used.

37.9 SEAL HOUSINGS

The seal housings shall be equipped with two-piece glands to permit adjustment or replacement of packing without disturbing pump. Lantern rings shall be located at inner ends of seal housings so that all rings of packing can be removed without removal of the lantern rings. Water shall be fed into seal housing lantern rings for proper lubrication and cooling when the pump is operating.

37.10 TRANSFER VALVE

The transfer valve design shall be of the latest ball type, of all bronze constructions and incorporate a hydraulically balanced seal assembly to minimize leakage around the ball and assure maximum pump efficiency. The transfer valve shall operate smoothly and without sticking even when exposed to sandy or dirty water. The transfer valve actuator shall be operated electrically, by means of a control switch mounted on the operator's panel complete with two indicator lights indicating PRESSURE or VOLUME without shutting down, at any discharge pressure up to 250 PSIG. Capable of switching from one pumping mode to the other with two and one-half turns of the transfer valve control Handwheel (CONT). The transfer valve will be equipped with a positive mechanical indicator to register the position of the transfer valve at all times.

37.11 PUMP TRANSMISSION

The pump transmission shall be rigidly attached to the pump body assembly and be of the latest design incorporating a high strength, involute tooth form Morse HV chain drive capable of operating at high speeds to provide smooth, quiet transfer of power. The shift engagement shall be accomplished by a free-sliding collar and shall incorporate an internal locking mechanism to insure that collar will be maintained in ROAD or PUMP position.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

37.12 PRIMING SYSTEM

The priming system shall include an oil-free rotary vane priming pump rigidly attached to the pump transmission and activated by a vacuum-activated priming (VAP) valve with a single push-button switch. Valve actuation may be accomplished while the main pump is in operation, if necessary to ensure complete prime. Provide a lubrication system for the primer including a tank for lubricant.

37.13 PRESSURE CONTROL SYSTEM

The relief valve system shall be appositive and quick acting, and shall have a control valve to provide instantaneous hydraulic lock-out which does not require the operator to cancel out or disturb the pressure rating. Relief valve control (pilot valve) shall be protected from malfunction due to sand or other sediment in the water by a strainer which can be removed, cleaned, and replaced from the operator’s panel while pump is operating. Relief valve indicator lights shall be provided and mounted on the panel adjacent to the pilot valve assembly. The indicator lights are to be amber marked OPEN to indicate the relief valve is bypassing and “green” marked CLOSED to indicate the relief valve is closed.

37.13.1 Discharge Relief Valve

The discharge relief valve system shall incorporate two separate units, a panel mounted pilot valve which controls the operation of the relief valve proper, and the relief valve which is normally mounted on the pump. The relief valve shall be mounted on the pump or in the piping between the intake and discharge sides of the pump. It shall modulate flow between the discharge and intake by ranging between the fully open and fully closed position in response from signals from the pilot valve. A four inch relief valve shall be used.

37.13.2 Intake Relief Valve

The intake relief valve shall be a pilot-operated intake relieve valve and shall be provided by the pump manufacturer. The pilot valve mounting shall be determined during Preconstruction meeting. The valve will allow adjustment from 50 P.S.I.G. to 250 P.S.I.G. A pilot-operated intake relief valve will allow full opening of the relief valve with a very small rise in intake pressure above set pressure.

37.14 MANIFOLD DRAIN VALVE ASSEMBLY

The manifold drain valve assembly shall consist of a stainless steel plunger in a bronze body with multiple ports. The valve shall be designed so that the pump discharge pressure prevents it from opening accidentally. The drain valve control shall be panel mounted, and controlled by a cable and identified PUMP DRAIN. The water shall be drained / directed away from any electrical wiring and pump panel operator.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

37.14.1 Individual Bleeders and Drains

All lines will drain through either the master drain valve or will be equipped with individual drain valves, easily accessible and labeled.

One (1) individual "CLASS ONE" quarter turn drain valve will be furnished for each 2-1/2" or larger discharge port.

One (1) individual hose bleeder valve will be installed for each gated suction. Bleeder valves will be located at the side pump module panels. All drains and bleeders will discharge below the running boards.

37.15 TANK TO PUMP VALVE

The tank to pump valve shall be a full-flow, 3 1/2 inch diameter ball valve that is attached directly to the pump. The valve shall be a 90 degree spring detent remote control handle.

37.16 DISCHARGE VALVES

The discharge valve shall be bronze-fitted, ball type, with a self adjusting seal for wear. All discharge valves shall be capable of being locked or unlocked at the valve from the control panel at any position between OPEN and CLOSED, and shall operate freely up to maximum pump discharge pressure. Valve seal shall be between the pump and the valve stem mechanism to minimize air leaks and facilitate draining. One valve shall be furnished for every 250 gallon GPM of rated capacity.

37.16.1 Discharges

The main pump side discharges will be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges. These valves will be equipped with 30 degree, chrome plated "droop snoot" 2-1/2" NST male outlets. All discharges will have chrome-plated caps and retaining chains.

All discharge valve control rods must be of sufficient strength and be properly braced and adjusted so as not to flex when operated. Guides for discharge controls will be of chrome plated casting with a nylon bushing, securely attached to the fire pump panel. Discharge rods will be equipped with universal joints to eliminate binding.

The only two (2) valves to be operated by a "push-pull" rod are the tank to pump and the booster line discharge. All others shall be operated by a slide lever type valve. Final discussion of valve actuators/controls with Pump Panel layout will be discussed at Pre-Construction.

37.16.2 Discharge size and locations

- Two (2) 2 1/2" valves, ref. Elkhart 2930 G-90 on the left side pump panel.
Designated as # 1 & # 2 with 30 degree snoop droop and 2 1/2" cap

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

- One (1) 2 1/2" valve, ref. Elkhart 2930 G-90, on the right side pump panel.

Designated as # 5 with 2 1/2" cap

- One (1) 4" right side pump panel with 4" slow close valve with indicator lights and 5" Storz adapter ref. Elkhart 2940 G-92. **Designated as # 6** with 30 degree adaptor

- One (1) 2-1/2" valve, ref Elkhart 2896 01 01 D at the left side rear body panel.

Designated as # 3 with an adaptor 2 1/2" to 1 3/4"

- One (1) 2-1/2" valve, ref Elkhart 2896 01 01 D at the right side rear body.

Designated as # 4

37.16.3 Valves (GENERAL)

All in-line valves on the apparatus shall be of the quarter turn, ball type design. The valve shall be designed so that the entire valve may be serviced without disturbing the piping.

37.17 Suction Inlets

Two (2) 6" N.S.T. suction inlets will be provided one on the left pump panel and one on the right pump panel. A removable strainer and a chrome plated long handle cap will be installed on each. Inlets must protrude through pump panel giving adequate space or access on the connection. Spacing will be discussed at Pre-construction.

37.17.1 Monarch Intake Valve

The Waterous Monarch Intake valve shall include an extra short intake fitting, an intake butterfly valve and an intake nipple with integral relief valve mounting pad, all designed to fit behind the pump panel. The Waterous Monarch shall feature a Jamesbury Wafer Sphere high performance butterfly valve. The Monarch valve shall also feature a provision for a pre-valve relief valve controlled by a manual worm gear.

37.17.2 Side Suctions - 2-1/2" Auxiliary

All 2-1/2" auxiliary suction valves will be slow close valves with indicator lights; Reference Elkhart 2930 G-90, will have a removable strainer, chrome plated, 2-1/2" NST female swivel, with a chrome plated plug and retaining chain. All side 2-1/2" gated inlet valves will be recess mounted behind the side pump panels. (No exceptions)

2-1/2" auxiliary suction will be located as follows:

- One (1) left side pump panel, to the rear of the main inlet and controlled at the pump operator's panel

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

- One (1) right side pump panel, to the front of the main inlet and controlled at the valve.

37.18 AUTO TANK FILL SYSTEM

The Auto Tank fill System shall maintain tank water level between 50 and 80% of capacity. The system shall be calibrated for water tank provided, shall allow operator interaction while Auto Tank Fill System is in operation, operator shall have the ability to open or close the electric activated ball valve using the electric valve position control. The Auto Tank Fill System shall be equipped with the following items:

- pressure transducer
- tank level display
- electric valve position control
- Auto tank fill selector switch (green LED indicates auto tank fill mode)
- Cables
- Electric-actuated ball valve

37.19 PUMP-TO-TANK CONNECTIONS

Tank-to-Pump Line:

One (1) 4" gated tank to pump line, piped through the front bulkhead of the tank. This line will be plumbed directly into the rear of the pump suction manifold for maximum efficiency. A 3" full flow in-line ball valve and a check valve will be provided to prevent accidental pressurization of the water tank through the pump connection. Connection from valve to tank will be made using a non-collapsible flexible rubber hose. Discuss at pre-construction the means of operating this valve.

A control handle will be located on the operator's panel with function plate.

Pump-to-Tank Fill-Line:

One (1) 2" gated full flow pump to tank refill line controlled at the pump panel will be provided. A deflector shield inside the tank will be furnished. Tank fill plumbing will utilize 2" Aeroquip hose for tank connection to accommodate flexing between components.

Discuss at pre-construction the utilization of a 2" line under pressure off pump manifold into tank. Possibly use smaller ID.

37.20 PUMP-TO-BOOSTER HOSE REEL CONNECTION

One (1) Hannay, stainless steel, super booster, electric rewind booster reel will be furnished. The reel will be equipped with a water lubricated, self flushing, bronze swivel joint and an adjustable brake for free wheeling, drag or full lock operation. The booster reel will have an electric rewind system with momentary push button controls.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

There will be one rewind button supplied; in the rear where reel will be installed. Location to be discussed at pre-construction.

A removable hand crank will be supplied.

The booster reel will be mounted in the lower rear step compartment. The feed/supply line for the booster reel shall be of one-inch diameter straight run through water tank from pump house to rear booster connection.

The reel will be equipped with 300' of 3/4" booster hose in 50' sections. Each length will be fitted with 1" NST couplings.

Two (2) additional, vertical stainless steel hose rollers with guide spools will be located as necessary to protect hose and rear of body during deployment.

37.21 Portable Monitor

Prove the following:

AKRON MERCURY MONITOR W/(2) 2.5" NST INLET, #344600011

AKRON TRIPLE STACKED TIPS, # 24980003

37.22 OVERHEAT PROTECTION MANAGER (OPM)

The Waterous Overheat protection manager (OPM) shall act as a safety device by releasing hot water from the discharge area of the pump to the ground. The OPM shall consist of a valve that opens when the water in the pump reaches 140 degrees F and a warning light on the pump panel that is triggered by a thermal switch when the water in the pump reaches 180 degrees F.

37.23 PUMP INTAKE STRAINERS and ANODES

The pump intake strainers shall be removable, die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump. Anodes are normally mounted on the pump intake piping, and also in the discharge piping . Mounting of the anodes shall be via a NPT tap or bolt-on flange.

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FIRM (VENDORS) NAME _____ BID NUMBER _____

37.24 OPERATING CONTROLS, DEVICES, AND ACCESSORIES

37.24.1 Pump Shift

The drive unit will be equipped with a power shift. The shifting mechanism will be a heat-treated, hard-anodized aluminum power cylinder with stainless steel shaft. An electric over air operated in-cab control for rapid shift will be provided that locks in road or pump. The activation switch shall have a hard yellow guard surrounding it for clear identification and prevent accidental activation. A manual override activated at the pump panel shall be provided. The emergency brake must be engaged for the pump shift to operate. The location of shift is to be approved by the fire Department.

37.24.2 Pump Shift Indicator Lights

Two (2)-warning lights will be provided to alert the operator when the drive unit has fully shifted from road to pump operation. One (1) to be located on truck cab instrument panel and the other to be located on the truck pump panel adjacent to the throttle, both with appropriate warning plates.

37.24.3 Transmission Lock

As an automatic transmission is furnished in the chassis, a lock-up assembly will be installed to prevent the transmission from shifting gears while in the pumping mode.

37.24.4 Braking System

A positive braking system will be provided to prevent vehicle movement during pumping operations. As air brakes are furnished, the air activated parking brakes will prevent vehicle movement. Parking brake must be engaged before apparatus can be shifted into pump gear.

38.0 Pump - General Description and Capacity

38.1 Pump Access Panels

Two (2) removable pump access panels will be furnished at the forward area of the pump enclosure to allow access one cab is tilted. Each access panel will be fabricated from 1/8" aluminum treadplate with a D-ring, two point latch mechanism to ensure secure latching and ease of access.

38.2 Pump Drafting Capability - Response Time

When dry, the pump will be capable of taking suction and discharge water with a lift of 10 feet in not more than 30 seconds through 20 feet of appropriate size suction hose.

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FIRM (VENDORS) NAME _____ BID NUMBER _____

38.3 Rated Capability

The pump must deliver the percentage of rated capacity at the pressure listed below:

- 100% of rated capacity at 150 P.S.I. net pump pressure
- 100% of rated capacity at 165 P.S.I. net pump pressure
- 70% of rated capacity at 200 P.S.I. net pump pressure
- 50% of rated capacity at 250 P.S.I. net pump pressure

Ref. WATEROUS TWO STAGE CENTRIFUGAL FIRE PUMP.

39.0 Pump Operator's Panel

Panel Location

39.1 Pump Panel - Side Mount

The pump operator's control panel will be located on the left side of the apparatus. Both side panels will be hinged on one side, piano style, and designed for easy access and servicing.

Scale drawings of the pump panel will be submitted to the Fire department for approval.

39.2 Pump Panel Material

The left side operator's panel, gauge panel, right side pump panel and right side access door will be fabricated from 14 gauge 304L stainless steel with a #4, (150/180 grit), standard polished finish.

39.3 Hinged Pump Access Door

A 16" high by a minimum of 30" wide pump enclosure access door will be provided above the right side pump panel. This door will have a "D" ring, two-point latch mechanism and two (2) gas shock stay arms for ease of access.

39.4 Panel Fasteners

Stainless steel machine screws will be used to hold these panels in position. The panels will be easily removable to provide complete access to the pump for major service.

39.5 Pump Panel Trim Plates

A high polish trim plate will be provided around each discharge port and suction inlet opening to allow accessibility to the respective valve for service and repairs.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

39.6 Pump Panel Running Board, Step and Storage Tray

A running board will be installed on each side of the pump enclosure. The running boards will be constructed of an open, non-skid surface (Ref: Bustin) that must be approved by the Fire Department. Each running board will be capable of holding 500 lbs. without flexing.

39.7 Gauges, Instruments, and Controls

39.7.1 Gauge Panel and Gauges

A hooded gauge panel will be provided above the fire pump panel on the left side of the apparatus. The gauge panel will be constructed of 14 gauge 304L stainless steel with a #4, (150/180 grit), standard polished finish.

The gauge panel hood will cover the full width of the gauge panel.

The compound, master pressure and individual pressure gauges will have the following features Class 1, LFP Series) 6” in size

- Fluid: Liquid filled
- Dial 10-psi increments with accent on 50 and 100-psi increments
- Dial Face: White with black lettering
- Range: 30 in hg. To +600 psi
- Accuracy: Plus/minus 1%

39.8 Pump Panel Arrangement

Particular attention is to be given to functionally arranging all controls. The pump operator's panel will accommodate the following. **All electronic gauges must be weather proof not weather resistant.**

- Hinged gauge panel
- Water tank fill valve
- Auxiliary suction valve control
- All discharge valve controls
- Auxiliary engine cooler
- Water tank suction control valve
- Pump primer valve
- Electronic Throttle control – vernier knob
- Relief valve with indicator light
- Master compound vacuum gauge
- Master pressure gauge
- Individual discharge gauges
- Pump engaged indicator light
- Water tank water level indicator, ref. TankVision
- Engine tachometer

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Engine oil pressure gauge with audible alarm
 Engine water temperature gauge with audible alarm
 Pump panel light switch
 Vacuum & pressure test plugs (Underwriters)
 Air Horn control
 Pump performance plate (Underwriters)
 Underwriters UL plate
 Pump serial No. Plate
 Master pump drain valve
 Individual drains
 Relief valve drains
 Chassis fuel gauge
 3/8" Pump cooler (bypass Line).
 Transfer valve control (2- stage pump)

Individual 3 1/2" line gauges for each discharge will be supplied and mounted directly above the discharge valve control wheel (Ref. Class 1, LFP 310). Each gauge will be clearly identified.

39.9 Labels - Identification Plates Fire Pump and Gauge Panels

Identification plates will be provided for all gauges, controls, connections, valves, switches, inlets, outlets and drains. Plates will be engraved and color-coded polymer material for durability and accurate identification of controls. They will be fastened to the body surfaces using threaded studs and/or industrial grade adhesive backing. Labels shall indicate the information to be gained from a display, not its name (e.g., use RPM, not tachometer).

The color-coding scheme will be as follows:

- No. 1 Discharge: Orange (DSPP Front 2 ½)
- No. 2 Discharge: Red (DSPP Rear 2 ½)
- No. 3 Discharge: Yellow (DSR label to include DSR and #3)
- No. 4 Discharge: White (Officers rear discharge #4)
- No. 5 Discharge: Blue (OSPP rear 2 ½)
- No. 6 Discharge: Black (OSPP Front 4")
- Booster Line: Grey
- Deck Gun: Purple

Color-coding will conform with NFPA 1901

39.10 Master Gauges

One (1) 6" diameter pressure gauge 30"-0-600 P.S.I. (labeled: "PRESSURE") and one (1) 6" diameter compound vacuum gauge 30"-0-600 P.S.I. (labeled: "INTAKE") will be provided.

MUST BE FILLED IN
 FIRM (VENDORS) NAME _____ BID NUMBER _____

39.11 Pressure Gauges

Each 1-1/2" or larger discharge will be equipped with an individual, 3-1/2" diameter, 30"-0-600 P.S.I. pressure gauge.

39.12 Engine Gauges and Warning System

A VDO, for reference only, gauge system incorporating engine tachometer, oil pressure and water temperature will be provided on the pump operator's panel.

A red flashing indicator light with an audible alarm will be furnished on the pump operator's panel to alert the operator of low engine oil pressure.

A red flashing indicator light with an audible alarm will be furnished on the pump operator's panel to alert the operator of high engine temperature.

39.13 Panel Illumination

39.13.1 Side Mount Operator's Panel Lighting

Using a minimum of four (4) LED lights, DIALIGHT CORP for reference, clear lens lights under a polished stainless steel light shield will illuminate the operator's panel. The shield will full width of control panel, and will be positioned to cover the lights and prevent glare on operator.

Two (2) shielded step lights mounted on the side panel and activated with the pump panel lights will illuminate the right side pump panel and running board. Under body work lights will be provided at step area of right and left side pump panels. DIALIGHT CORP for reference

39.13.2 Visual Displays

Panel lights used to convey information shall be constructed to prevent sunlight from making them appear illuminated or extinguished when the opposite is true.

39.14 Auditory Alarms

Auditory alarm systems shall be provided with a test feature to assure that they are in working order.

39.15 Microphone Box/Speaker Grille

A 12" wide x 6" high x 6" deep microphone box with an integral speaker grille will be provided, recess-mounted into the side blank above the pump gauge panel. A spring-loaded door will be provided. Cable installed see section 36.

**40. Water Tank
General**

The booster tank will have a capacity of 500 gallons, constructed of welded polymerized plastic with an unlimited time warranty.

40.1 Tank Warranty

The water tank will be furnished with an unlimited lifetime warranty upon delivery.

To assure the Purchaser is receiving a legitimate water tank warranty, the tank manufacturer will compensate the apparatus owner (end user), \$200.00 per day, while out of service, for every day the valid warranty causes down-time on the fire apparatus. This statement will be included in the bidder's proposal.

40.2 Tank Materials and Construction

40.2.1 Water Tank

The booster tank will have a capacity of 500 gallons and be constructed of 1/2" black UV stabilized copolymer polypropylene. The tank will be constructed using the latest thermo plastic welding technology. A clean, hot air controlled temperature process will ensure that the weld reaches its plasticized state without cold or hot spots.

40.2.2 Tank Mounting

The tank will be mounted on hard rubber cushions to isolate the tank from road shock. The tank will be mounted in such a manner, utilizing cross members or other stabilizing devices, that shifting of the tank is not possible. The tank will be completely removable without disturbing or dismantling the apparatus body structure.

40.2.3 Tank Access

The tank will be limited to access to repair of tank water level gauge. The lid will be watertight and will be sealed with neoprene or other suitable material. Hose bed shall be sectioned at this area to allow access without removal of entire hose bed flooring.

40.2.4 Tank Baffles

The tank will be equipped with longitudinal and transverse baffles. The baffles will be interlocking to minimize water surge during travel. Openings in the baffles will be

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

positioned to allow water flow to meet or exceed NFPA standards during filling or pumping operations.

40.2.5 Tank Fill Tower

The tank will be equipped with a 12” square fill tower, in an accessible location, with a hinged, spring loaded lid and removable 1/4” thick polypropylene screen.

40.2.6 Overflow and Vent Pipe

The fill tower will be fitted with an integral 4” diameter overflow/vent pipe which will enable overflow to dump behind the rear wheels. Flow of water must not contact rear housing or fuel tank. Discharge pipe must be installed.

40.2.7 Tank Sump and Connections

There will be one (1) sump standard per tank. The sump is a minimum of 10” wide, 10” long and 3” deep with a 3/4” bottom and is located in the left front quarter of the tank, unless otherwise specified under special provisions. On all tanks with a bulkhead suction inlet there will be a 4” schedule 80 PVC pipe sweep from the front of the tank to sump location. The sump will have a 3” threaded plug located at the bottom for a tank drain. An anti-swirl plate will be mounted inside the sump approximately 1” off the floor of the sump.

40.2.8 Tank Outlets

There will be two (2) standard tank outlets, one for a tank to pump suction line, which will be a minimum of a 2” N.P.T. coupling. All tank fill couplings will be backed with flow deflectors to break up the stream of water entering the tank.

40.3 Water Level Gauge

The water level gauge will be a Tankvision model # WL2000, or approved equal, The gauge will be mounted on the left side of the pump panel and have LEDs displaying the exact level of water in tank. The gauge will measure 3” x 4 3/8” x 2 1/2” The gauge will be made of waterproof cast aluminum and use a pressure sensor to determine the exact amount of water in the tank.

CITY OF PHILADELPHIA



BID BOND

FOR CITY OF PHILADELPHIA BID NUMBER: _____
(Please Fill In)

KNOW ALL MEN BY THESE PRESENTS, THAT WE _____
_____ as Principal
(hereinafter called the "Principal Obligor"), and

_____ (as Surety) are jointly and severally held and firmly bound unto The City of Philadelphia, in the sum of **TEN PERCENT (10%) OF THE GROSS AMOUNT OF THE BID** lawful money of the United States of America, to be paid to the said City of Philadelphia, its successors and assigns; to which payment, well and truly to be made we do bind ourselves and each of us, our and each of our successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated the _____ day of _____ two-thousand and eight (2008).

WHEREAS the above bounded Principal Obligor, submitted a bid pursuant to the above-referenced bid number to provide certain goods, services, or equipment to the City of Philadelphia.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, That if the City of Philadelphia shall accept the bid of the Principal Obligor and the Principal Obligor shall enter into a contract with the City in accordance with the terms of such bid, and furnish such bond or bonds as are specified in the bid documents with good and sufficient surety, for the faithful performance of the contract; or in the event of the failure or refusal of the Principal Obligor to enter into such contract and give such bond or bonds, if the Principal Obligor shall pay to the City the difference between the amount specified in said bid and such larger amount for which the City may legally contract with another party to provide the goods, services, or equipment required by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

And for the doing of these acts this instrument or a copy thereof attested as aforesaid shall be full warrant and authority.

CORPORATE SEAL:

PRINCIPAL OBLIGOR:

President/Vice-President (SEAL)

Secretary/Treasurer (SEAL)

SURETY SEAL:

SURETY:

Attorney-In-Fact (SEAL)

INSTRUCTIONS:

- (1) ALL VENDORS MUST UTILIZE THIS BID BOND FORM WHEN SUBMITTING A BID TO THE CITY.
- (2) IF PRINCIPAL OBLIGOR IS AN INDIVIDUAL OR PARTNERSHIP, BID BOND SHOULD BE SIGNED BY OWNER OR AUTHORIZED GENERAL PARTNER. PLEASE IDENTIFY ON THE BID BOND THE TYPE OF BUSINESS (E.G. INDIVIDUAL PROPRIETORSHIP OR PARTNERSHIP) AND TITLE OF PARTY EXECUTING THE BID BOND.
- (3) BID BOND MUST BE EXECUTED BY A SURETY COMPANY DULY AUTHORIZED AND LICENSED TO ACT AS SURETY BY THE PENNSYLVANIA INSURANCE COMMISSIONER PURSUANT TO THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA.

Attention Bidder:

This bid document may not contain all of the documents that you will need to complete the bid submission. On occasion, it is not possible to include the following:

Exhibits

Drawings

Attached specifications

Attached documents

If you have not received a corresponding attachment, drawing or exhibit that is referenced in the bid document you may obtain it by contacting the Public Information Unit at 215-686-4720.



CITY OF PHILADELPHIA

INSTRUCTIONS FOR GETTING PAID

BY THE CITY OF PHILADELPHIA

The City attempts to process invoices in a timely manner. Delays can occur because of incomplete or inaccurate invoicing information. Please make sure that all your invoices contain the following information to help the City in paying you as quickly as possible.

- 1. AFTER THE DELIVERY OR SERVICES HAS BEEN COMPLETED YOU MUST SUBMIT THREE (3) COPIES OF AN INVOICE FOR PAYMENT TO THE RECEIVING DEPARTMENT LISTED ON THE PURCHASE ORDER.**
- 2. THE INVOICE MUST CORRECTLY REFERENCE THE PURCHASE ORDER NUMBER, THE VENDOR NAME, ADDRESS AND FEDERAL EMPLOYER IDENTIFICATION NUMBER.**
- 3. CHECKS WILL ONLY BE MADE PAYABLE TO THE COMPANY NAME AS SHOWN ON THE PURCHASE ORDER; THE INVOICE MUST REFLECT THIS SAME COMPANY NAME AS THE "PAY TO".**
- 4. THE INVOICE MUST SHOW THE QUANTITY AND TYPE OF ITEM OR SERVICE AND THE PRICE.**
- 5. THE UNIT OF PURCHASE ON THE INVOICE MUST AGREE WITH THE UNIT CITED ON THE PURCHASE ORDER. REFERENCE TO THE SPECIFIC LINE ITEM IS HELPFUL.**

Paying vendors is the responsibility of the *receiving* City Department(s), not the Procurement Department. Vendors should bring any problems concerning payments to the attention of the appropriate City receiving department. The name and number of the contact person can generally be found on the purchase order. If all necessary paperwork has been submitted to the department and questions still remain, vendors should contact:

**City of Philadelphia
Accounting Verification
Room 1340 Municipal Services Building
1401 J.F.K. Blvd.
Philadelphia, PA 19102
Tel. 215 686 6365**

VENDORS INTERESTED IN RECEIVING PAYMENTS ELECTRONICALLY MUST COMPLETE AN ACH VENDOR ENROLLMENT AND CHANGE FORM. THIS FORM CAN BE DOWNLOADED FROM WWW.PHILA.GOV/BIDS.

BIDDERS GUIDELINES*

The following list will assist you in the preparation of your bid.

- Read the entire bid so that you fully understand all the requirements.
- All bids must be submitted to the City no later than the time and date stated as the bid opening.
- Note the City Anti-Discrimination Policy. If Minority Business Council Participation is required be sure to fill out all appropriate forms. If you have questions call MBEC at (215) 686-6232.
- Make sure you submit the appropriate Bid Security and Bid Submission Fee with your bid. Refer to Section 1 of the bid and the Conditions of Bidding sheet.
- Bidder must meet **all** qualifications.
- If an alternate to any item is being offered, you must follow the instructions in paragraph 2 of the Conditions of Bidding sheet.
- Does the bid require a site inspection, attendance at a Pre-Bid Meeting, samples, financial information or other data you must provide?
- Have you signed and returned all Addenda?
- If the bid is going to be awarded as a whole, you must bid on all items. See Section 3 of the bid: Bid Evaluation and Award.
- Bidders' attention is directed to the Conditions of Bidding sheet regarding the Master Performance Bond.
- Bids and pricing must be written in ink or typed. FAXed bids will not be accepted.
- **Do not** submit counter terms or conditions. **Your bid will be rejected**.
- Have you signed the Contract Page and affixed your Corporate Seal as required?
- **Do not** combine check amounts: All checks should be individual and specific.
- Please double check all mathematical calculations for errors.

If you have questions call Public Information at (215) 686-4720.

*This information is provided for guidance only and does not preclude your responsibility to read fully and respond to all portions of this bid.



**CITY OF PHILADELPHIA
PROCUREMENT DEPARTMENT
Public Information Unit**

ATTENTION VENDORS

If your company would like to receive the results of a particular bid, the Public Information Unit of the Procurement Department will forward this information to you at a **fee of \$10.00** for **each** bid number requested. Please be advised that bid tabulations **are not available** by telephone. If you have any questions, Please call 215-686-4755 or 215-686-4756.

BID RESULTS REQUEST FORM

Please complete form below. Only one (1) request per form.

PLEASE NOTE INCREASED FEE Date of Request: _____

Bid Number Requested: _____ Opening Date: _____

Company Name: _____

Company Representative: _____

Address: _____

Telephone No.: _____ Fax No.: _____

Mail this Request to the address below and enclose the following items:

- Check or Money Order payable to “**City of Philadelphia**”
- A self-addressed stamped envelope which is at least 9 ½ ” x 12 ½ ” or larger for each Bid requested.

Failure to send either of the above items, will void your request.

Mail Request To:
The Procurement Department Public Information Unit
Attention: Bid Results
1401 JFK Blvd.
Room 170B
Philadelphia, PA 19102

DO NOT SEND CASH



CITY OF PHILADELPHIA

Procurement Department
120 Municipal Services Building
Philadelphia, PA 19102-1685
(215) 686-4720
(215) 686-4716 Fax

Hugh Ortman
Procurement Commissioner

Master Bid Security Program for Service, Supplies and Equipment Bids Period of Coverage: July 1, 2007 – June 30, 2008

(Bids for Professional Consulting Services, Public Works, Construction and Demolition [wrecking and building removal] are not covered under the Master Bid Security Program)

Dear Vendor:

The Philadelphia City Charter requires that each bid submission over \$25,000 be accompanied by a certified check in the amount specified in the bid invitation. This requirement can be met for most bids if the Bidder is covered under the City's Master Bid Security Program. This program provides bid security coverage for Service, Supply and Equipment bids that have a total dollar value of over \$25,000 up to \$500,000.

To file for coverage under the Bid Security Program, for the period **July 1, 2007 to June 30, 2008**, complete the enclosed application and return it with a check for **\$120.00**. Make the check payable to "City of Philadelphia". It is **non-refundable**. To clarify the precise use of the check, enter the words "**Bid Security Program**" 2007 – 2008 on the face of the check.

If you do not become a participant in the program at this time, you may still submit bids. However, they must be accompanied by a certified check in the amount specified in the Terms and Conditions of Bidding.

For additional information or inquiries regarding this program, please contact: The Public Information Unit at (215) 686-4719, (215) 686-4720 or (215) 686-4721.

IF A RECEIPT IS REQUESTED, PLEASE ENCLOSE A SELF-ADDRESSED STAMPED ENVELOPE.

Forward Check with Application to
CITY OF PHILADELPHIA
MASTER BID SECURITY PROGRAM
170A Municipal Services Building
Philadelphia, PA 19102-1685

Company Name: _____

Fed EIN/SSN: _____

Street Address _____

City, State, Zip: _____

Contact Person: _____

Telephone No: (____) _____ Fax No: (____) _____

A. Check payable to the City of Philadelphia in the amount of \$120.00 for 7/1/07 to 6/30/08
(NO PERSONAL CHECKS)

Internal Use Only

Rcvd. ___/___/___ Pymt. Type _____ Ck. Amt. \$ _____ Ck.# _____



CITY OF PHILADELPHIA

Office of the Director of Finance
Room 1330, Municipal Services Bldg.
1401 John F. Kennedy Boulevard
Philadelphia, Pa 19102-1685

Rob Dubow
Director of Finance

The City of Philadelphia is pleased to announce a **Vendor Information Payment System (VIPS)** which will allow businesses such as yours to inquire about the status of invoices billed against purchase orders and professional services contracts. The only requirement is that your invoices utilize a unique number – either alpha, numeric or a combination of the two.

This system will be operational twenty four hours a day, seven days a week. All you have to do is dial **215-686-5968**, and follow the prompts to get an up-to-date status on your payments.

Enclosed for your convenience is an easy to use reference guide which provides a brief overview of what you can expect. I urge you to give it a try and see for yourself how easy it is to use. If you should happen to experience any problems, or if you would like to comment on this system, please call the **Office of the Director of Finance** at **215-686-6167**.

I believe that you will find this way of obtaining payment information convenient and easy to use.

Vendor Information Payment Reference Guide

- 1- Call 215-686-5968.
- 2- After the prompts, enter the 8 numeric characters that uniquely identifies your purchase order.
- 3- Select one of the three inquiry options:
 - ▶ a) by your purchase order.
 - ▶ b) by your company.
 - ▶ c) by your specific invoice number.
 - (Numeric invoice numbers only)

TERMS AND CONDITIONS OF BIDDING AND CONTRACT

BID SUBMISSION

1. PREPARATION AND SUBMISSION OF BID.

All bids must be written in ink or typewritten and made on the forms issued and signed in ink by a person with legal authority to bind the bidder. The contract awarded hereunder shall consist of the Invitation and Bid, all addenda thereto issued by the City, all exhibits and attachments issued and/or accepted by the City and these Terms and Conditions of Bidding and Contract (the "Contract"). It is the sole responsibility of the bidder to ensure that it has received any and all addenda and the Procurement Commissioner may in his/her sole discretion reject any bid for which all addenda have not been executed and returned in accordance with the instructions provided therein. No bid may be considered if received after the date and time for the opening of bids established by the Invitation and Bid, nor may any bid be modified after that date and time. The time of bid opening shall be the time displayed on the City's official bid clock located at the bid room. In the event of any discrepancy between actual time and the City's official bid clock, the latter shall determine the time of bid opening.

2. BID SECURITY. Unless the bidder is enrolled under the City's Annual Master Bid Security Program or an individual bid bond is required in the Invitation and Bid, all bids must be accompanied by a Certified Check, Treasurer's Check, Cashier's Check, Bank Money Order, or United States Postal Money Order made payable to the order of "The City of Philadelphia" in the proper amount as shown below:

AMOUNT OF BID OR ESTIMATED CONTRACT	AMOUNT OF CERTIFIED CHECK
\$ 25,000.00 or less	No Check Required
\$ 25,000.01 - \$ 99,999.99	\$ 500.00
\$100,000.00 - \$249,999.99	\$2,000.00
\$250,000.00 - \$499,999.99	\$4,000.00
\$500,000.00 or more	\$6,000.00

When computing amount of Bid for Certified Check purposes, do NOT deduct for trade-ins.

Any bid in excess of \$500,000 is not covered by the Annual Master Bid Security Program, and bidder must submit a certified check, treasurer's check, cashier's check, bank money order, or United States postal money order made payable to the order of "The City of Philadelphia" in the required amount.

Once the lowest responsive and responsible bidder has been determined all other bidders will receive a refund in the amount of the bid security submitted. Bid security submitted by the lowest responsive and responsible bidder will be refunded after receipt of all duly executed Contract documents, required fees, bonds or other performance security. Funds submitted for the Master Bid Security Program are not refundable.

3. BID PROCESSING FEE. In addition to bid security and any other fee or monies required to be submitted with the bid, the bid shall be accompanied by a non-refundable processing fee in the form of a separate standard check, bank money order or United States postal money order made payable to the order of "City of Philadelphia" in an amount based on the gross amount of the bid in accordance with the formula below. Cash is not acceptable.

AMOUNT OF BID OR ESTIMATED CONTRACT	AMOUNT OF PROCESSING FEE
\$ 25,000.00 or less	No Check Required
\$ 25,000.01 - \$ 100,000.00	\$ 10.00
\$ 100,000.01 - \$ 300,000.00	\$ 30.00
\$ 300,000.01 - \$ 500,000.00	\$ 50.00
\$ 500,000.01 - \$1,000,000.00	\$100.00
\$1,000,000.01 - \$2,000,000.00	\$200.00
\$2,000,000.01 - \$3,000,000.00	\$300.00
\$3,000,000.01 - \$4,000,000.00	\$400.00
\$4,000,000.01 - \$5,000,000.00	\$500.00
\$5,000,000.01 or more	\$600.00

4. SPECIFICATIONS. When a formal, numbered, specification is referred to in the Invitation and Bid, no deviation therefrom will be permitted, except if/as indicated in the Invitation and Bid and the bidder will be required to furnish articles and/or services in conformity with that specification. When catalogues, model numbers, trade names, or cuts are listed in the Invitation and Bid, they are, unless otherwise specified, included for the purposes of furnishing bidders with information concerning the style, type or kind of article and/or service desired. A bidder may offer an article and/or service which he/she certifies to be equal or better in quality, performance and other essential characteristics. If submitting an alternate, the bidder must specify the alternate (e.g., make and model #) in the bid and submit with the bid a complete description of the article (including any technical literature) and/or service proposed to be furnished. Failure to do so will require the bidder to furnish the article and/or service specified in the Invitation and Bid. The Procurement Commissioner reserves the sole right to determine whether alternates offered are equal or better. Unless otherwise provided in the bid specifications, all items offered by the bidder must be new. A "new" item is one which will be used first by the City. This clause shall not be construed to prohibit bidders from offering goods, supplies, equipment, or materials containing recycled materials or printing with recycled content; bidders intending to provide goods made with recycled materials should notify the Procurement Department.

5. PATENTS. The successful bidder shall be solely responsible for all royalties and charges that may be due to any patent holder for or on account of the use of any patented appliance, product or processes. Evidence of such payment shall be submitted upon request of the Procurement Commissioner and failure to submit such evidence may, in the sole discretion of the Procurement Commissioner, result in rejection of the bid or constitute an event of default, entitling the City to all rights and remedies as provided herein in Section 16 and/or 18.

6. LOCAL BIDDING PREFERENCE
In accordance with Chapter 17-109 of the Philadelphia Code relating to Local Bidding Preferences for Procurement Contracts, this bid may be subject to a 5% local bid preference. In order to determine eligibility to receive the 5% preference, if applicable, bidder or subcontractor must be certified at the time of the bid opening and must submit with the bid, the Local Business Entity Certification Number* as issued by the Procurement Department for the prime contractor or the applicable subcontractor.

TERMS AND CONDITIONS OF BIDDING AND CONTRACT

*Note: If you wish to apply for Local Business Entity (LBE) certification, go to www.phila.gov/bids. Please allow sufficient time prior to bidding for processing of the LBE application.

EVALUATION AND AWARD

7. TYPES OF BIDDER RESTRICTED. Bidders must not be a party to more than one bid for the same article or service. A violation of this condition may, in the sole discretion of the Procurement Commissioner, result in rejection of any or all such bids in which the bidder has an interest.

8. RESPONSIVENESS. Subject to the right of the Procurement Commissioner to waive nonresponsiveness as set forth below in this Section, these Terms and Conditions of Bidding and Contract and the specifications and requirements included in the Invitation and Bid are mandatory and must be strictly followed by all bidders in the preparation and submission of their bids. After bids are opened, the Procurement Department, and other City departments or agencies where appropriate or specified, shall review all bids for responsiveness to these Terms and Conditions of Bidding and Contract and the specifications and requirements included in the Invitation and Bid.

Any bid which is incomplete, obscure, conditional, or unbalanced, which contains additions not called for, or irregularities of any kind, including alterations or erasures, or which fails to conform in any respect to these Terms and Conditions of Bidding and Contract and the specifications and requirements included in the Invitation and Bid is nonresponsive and shall be rejected, except where the Procurement Commissioner, in his/her sole discretion, determines that the nonresponsiveness is not material to the Invitation and Bid or that a waiver of the nonresponsiveness is otherwise permitted by the Invitation and Bid, by these Terms and Conditions of Bidding and Contract or by law. The Procurement Department's determination of nonresponsiveness shall be final and any bid rejected as nonresponsive shall not be eligible for contract award.

9. RESPONSIBILITY. Unless otherwise specified, after bids are opened, the Procurement Department, and other City departments or agencies where appropriate or specified, shall review and may investigate the responsibility, including, but not limited to, the qualifications, references, capacity and ability to perform the Contract resulting from the Invitation and Bid in accordance with its terms, and integrity, of the lowest responsive bidder. All determinations of bidder responsibility shall be vested in the sole discretion of the Procurement Commissioner and other City officials. Any bidder who is deemed not responsible shall be ineligible for award of the Contract.

Bidders deemed not responsible will be notified of such determination and the reasons therefore in writing by the Procurement Department, and shall have the right to contest the determination by submitting to the Procurement Department, within forty-eight (48) hours after receipt of its written determination, a written request for reconsideration that includes information relating to the bidder's qualifications and responsibility and demonstrating the insufficiency of the reasons

stated in the written determination finding the bidder not responsible. Any further determination of a contesting bidder's responsibility shall be vested in the sound discretion of the Procurement Commissioner and other City officials.

10. CANCELLATION AND AWARD. The Procurement Commissioner, in his/her sole discretion, may cancel any Invitation and Bid prior to bid opening. After bid opening, the Procurement Commissioner, in his/her sole discretion, may reject all bids, if deemed in the best interest of the City. In all cases where a Contract award is made by the Procurement Department, the bidder is bound by the terms and conditions of the Invitation and Bid upon the submission of its bid. All bids are valid for a period of not less than 60 days, or as otherwise specified in the Invitation and Bid. If the bid has not been awarded within the specified period of time, the bid shall be valid for subsequent award only upon the express consent of the bidder, with no change to the submitted bid. Any price increases/decreases expressly provided for in the Invitation and Bid will be allowed. All Contract awards shall be made by the Procurement Department upon written notice to the bidder that is determined by the Procurement Department to be the lowest responsive and responsible bidder.

11. QUANTITIES AWARDED. For requirements contracts only, the articles and quantities of such articles as set forth in the Invitation and Bid are estimates and the Procurement Commissioner, in his/her sole discretion, may make an award for all or some of the articles bid and in such quantities as the Procurement Commissioner shall deem appropriate. For firm limit contracts, it is the City's intent to award based upon the quantities set forth in the Invitation and Bid, but the City reserves the right to award more or less.

12. DELIVERY, PRICE INCREASES AND TIE BIDS. All articles must be delivered at the price(s) bid, FOB Destination. Bids containing reservations of the right to increase the price(s) bid, including, but not limited to, late payment charges, will not be considered, except where the Procurement Commissioner, in his/her sole discretion, finds it in the City's best interest to do so. In the event of an absolute tie, the award decision will be made in the best interests of the City as determined by the Procurement Commissioner.

CONTRACT EXECUTION AND CONFORMANCE

13. CONTRACTS. Awards of contracts in amounts less than or equal to \$25,000 shall become contracts binding upon the City upon written notice of award by the Procurement Commissioner. Awards of contracts in amounts greater than \$25,000 shall not become contracts binding upon the City until after written notice of award is made and until after all of the following conditions have been satisfied:

- a. Successful bidder posts sufficient performance security, as required in the Invitation and Bid, within the time specified in the written notice of award;
- b. Successful bidder posts a payment bond or other payment security, if and as required by the Invitation and Bid, within the time specified in the written notice of award;

TERMS AND CONDITIONS OF BIDDING AND CONTRACT

c. Approval of the Contract as to form by the City's Law Department;

d. Certification by the Director of Finance and City Controller as to the availability of funds; and

e. Execution of the Contract by the Procurement Commissioner.

The Procurement Commissioner may, in his/her sole discretion, cancel any Contract award if any of the above conditions (a-e) are not satisfied, or if the Procurement Commissioner, in his/her sole discretion, determines cancellation to be in the best interests of the City. The bidder agrees that in the event of such cancellation, it shall not have any claim against the City, including any claim for breach of contract or of any other legal duty, or for lost profits, costs, damages, or expenses of any kind.

14. PERFORMANCE SECURITY. The City of Philadelphia requires performance security for contracts greater than \$25,000. If the amount of the contract to be awarded is greater than \$25,000 but less than or equal to \$500,000, the successful bidder is required to participate in the City's Master Performance Security Program by paying to the City a non-refundable fee of \$5.00 per thousand dollars of the contract amount for firm limit contracts and \$4.00 per thousand dollars of the contract amount for requirements contracts, or as otherwise specified. If the amount of the contract to be awarded is in excess of \$500,000 the successful bidder is required to furnish an individual performance bond, issued by a surety approved by the City on a form prepared by the City's Law Department and in the amount specified in the notice of contract award. The successful bidder is also required to pay a bond preparation fee to the City's Law Department in an amount prescribed by Chapter 17-700 of The Philadelphia Code; a schedule of such fees may be obtained from the Procurement Department's Public Information Office.

15. INSURANCE. Unless otherwise specified, the successful bidder (referred to in this Section as "Contractor") shall, at its sole cost and expense, procure and maintain in full force and effect, during the entire period of the Contract (including any applicable warranty and/or renewal periods), the minimum types of insurance specified below. All insurance shall be procured from reputable insurers authorized to do business in the Commonwealth of Pennsylvania and shall be acceptable to the City. All insurance required herein shall be written on an "occurrence" basis and not a "claims-made" basis. The City of Philadelphia, its officers, employees, and agents are to be named as additional insured on all policies required hereunder, except the Workers' Compensation and Employers' Liability. Also, an endorsement is required stating that the coverage afforded these parties as additional insured will be primary to any other coverage available to them. The City's coverage as an additional insured shall be primary coverage. The insurance shall provide for at least thirty (30) days prior written notice to be given to the City in the event coverage is materially changed, canceled or non-renewed. Certificates of insurance evidencing the required coverages shall be submitted to the City within fifteen (15) days of notice of contract award. The City reserves the right to require the Contractor to furnish certified copies of the original

policies of all insurance required hereunder at any time upon fifteen (15) days prior written notice. The insurance requirements set forth herein are not intended and shall not be construed to modify, limit, or reduce the indemnifications made in this Contract by the Contractor to the City of to limit the Contractor's liability under this Contract to the limits of the policies of insurance required to be maintained by the Contractor hereunder.

(a) WORKERS COMPENSATION AND EMPLOYERS LIABILITY

(1) Workers' Compensation – Statutory limits

(2) Employers Liability - \$100,000 Each Accident – Bodily Injury by Accident; \$100,000 Each Employee – Bodily Injury by Disease; \$500,000 Policy Limit – Bodily Injury by Disease

(3) Other states insurance including Pennsylvania

(b) GENERAL LIABILITY INSURANCE

(1) Limit of Liability: \$1,000,000 per occurrence combined single limit for bodily injury (including death) and property damage liability.

(2) Coverage: Premises operation: Blanket Contractual liability; Personal Injury liability; Products and completed operations; Independent Contractors; Employees as additional insured; Cross liability; Broad form property damage (including loss of use) liability; Asbestos abatement liability coverage (Note: Required for asbestos abatement projects only).

(c) AUTOMOBILE LIABILITY

(1) Limit of Liability: \$1,000,000 per occurrence combined single limit for bodily injury (including death) and property damage liability.

(2) Coverage: owned, non-owned and hired vehicles.

16. INDEMNIFICATION. All bidders shall indemnify, defend and hold harmless the City, its officers, employees and agents from and against any and all losses, costs (including, but not limited to, litigation and settlement costs and counsel fees), claims, suits, actions, damages, liabilities and expenses, occasioned wholly or in part by the bidder's act or omission or fault or negligence or the act or omission or fault or negligence of bidder's agents, subcontractors (including suppliers), employees or servants in connection with the Contract, including, but not limited to, those acts or omissions or faults or negligence in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment, the bidder's default under the Contract, losses incurred by the City's Master Performance Security Program, failure to pay subcontractors and suppliers and any infringement or violation of any proprietary right (including, but not limited to, patent, copyright, trademark, service mark and trade secret). This obligation to indemnify, defend and hold harmless the City, its officers, employees and agents shall survive the termination of the Contract resulting from the Invitation and Bid.

17. FAILURE TO EXECUTE CONTRACT. Any bidder not lawfully released from its bid, who refuses to execute a contract in accordance with its bid or who fails, refuses or is unable to furnish any required payment security, performance security or insurance, as may be required by the Invitation and Bid and/or these Terms and Conditions of Bidding and Contract, shall be liable for the entire amount of its bid security, as liquidated damages to the City; or if bid security is furnished under the Annual Master Bid Security

TERMS AND CONDITIONS OF BIDDING AND CONTRACT

Program, for 10% of the amount of its bid, as liquidated damages to the City; or where the damages are readily ascertainable by the City, for the actual loss, cost or damage incurred by the City as a result of its failure to execute the contract or to furnish such bonds, performance security or insurance.

18. ASSIGNMENT. The successful bidder shall not assign the Contract resulting from the Invitation and Bid, or any part of the Contract, or any right to any monies to be paid under the Contract, or delegate performance of the Contract, without obtaining the prior written consent of the Procurement Commissioner. The decision whether to consent to an assignment is within the Procurement Commissioner's sole discretion. In no case shall the Procurement Commissioner's consent to the assignment of any monies to be paid under the Contract relieve the bidder from faithful performance of any of its obligations under the Contract or change any of the terms and conditions of the Contract. Any purported assignment in violation of this provision shall be of no effect.

19. DEFAULT. All work performed and goods and services rendered by a successful bidder (referred to in this Section as "Contractor") under any Contract resulting from the Invitation and Bid shall strictly conform to these Terms and Conditions of Bidding and Contract and the specifications and requirements contained in the Invitation and Bid. The successful bidder shall comply with all applicable federal, state and local laws, statutes and ordinances and the regulations of all governmental departments, boards, agencies, and commissions. The following shall constitute events of default under any Contract resulting from the Invitation and Bid:

a. Failure by Contractor to comply with any provision or Section of the Contract, including the bid specifications contained in the Invitation and Bid and these Terms and Conditions of Bidding and Contract and/or failure by Contractor to comply with any federal, state and local law, statute, ordinance or regulation of any governmental department, board, agency and commission.

b. Falseness of any representation or warranty made in the Contract or other document(s) submitted to the City by Contractor in connection with the Invitation and Bid.

c. Failure by Contractor to pay its suppliers or subContractors, misappropriation of any funds provided under the Contract or failure to notify City upon discovery of any misappropriation.

d. A violation of law by Contractor which results in its making a guilty plea, a plea of nolo contendere, or conviction of a criminal offense by Contractor, its directors, employees, or agent or indictment or charges, in the sole judgment of the Procurement Commissioner, adversely affect the performance of the Contract.

e. Failure by Contractor to comply with the Mayoral Executive Order establishing the City's antidiscrimination policy relating to the participation of minority, woman and disabled owned disadvantaged business enterprises.

f. The Procurement Department's determination that the Contractor is not a responsible bidder on the

Invitation and Bid, where such determination is made, and is based upon, information received after award of the Contract and/or after execution of the Contract by the Procurement Commissioner and/or after satisfaction of any or all other conditions of a binding Contract set forth in Section 2 above.

g. Any other act or omission identified in these Terms and Conditions of Bidding and Contract or elsewhere in the Invitation and Bid as an event or condition constituting default.

Upon the occurrence of an event of default, the Procurement Commissioner, in his/her sole discretion, may require Contractor to cure the default within a period of time to be determined by the Procurement Commissioner, or terminate the Contract in whole or in part and exercise any one or more of the following remedies (which remedies may be concurrent and shall be in addition to and not in lieu of the remedies available to the City at law, in equity, under any bond(s) filed in connection with the contract or under other sections of these Terms and Conditions of Bidding and Contract and Contract):

a. Purchase goods and/or services from others in substitution of goods or services that were not furnished or performed by Contractor or that were defective or otherwise in violation of any provision of the Contract; the cost of such substituted goods and services shall be the sole responsibility of Contractor and Contractor agrees to pay immediately, upon receipt of the City's invoice, the difference between the Contract price and the substituted product or service cost, plus any other loss, cost or damages incurred by the City.

b. Appropriate to the payment of the difference between the Contract price and the cost of such substitute goods or services, and the amount of any other loss, cost or damage incurred by the City as a result of the default, any monies which may then be due and payable to Contractor under this Contract or any other Contract that Contractor then has with the City.

The City shall notify Contractor in writing of such termination, which shall be effective as of the date specified in the notice of termination (the "Termination Date"). The Procurement Commissioner may, in his/her sole discretion, require Contractor to continue to furnish all goods and perform all services required under the Contract until the Termination Date, in which case, subject to the remedies enumerated above, the successful bidder shall be paid in accordance with the Contract therefore. If the City requires Contractor to cure the event(s) of default, or to continue to furnish goods or services until the Termination Date, and Contractor refuses or fails to do so, then such failure shall itself be deemed an event of default under this Section, for which the City may exercise any of its rights hereunder.

20. PAYMENT FOR EQUIPMENT. Unless otherwise provided in the bid specifications, when equipment involves installation, (which shall also be interpreted to mean erection and/or setting up or placing in position for service or use) and/or testing, and where such installation or testing is delayed though no fault of the contractor, contractor shall be entitled to a payment equal to 50% of the price bid when such equipment is delivered on site and to a further payment equal to an additional 25% of the price bid when the equipment is

TERMS AND CONDITIONS OF BIDDING AND CONTRACT

installed and ready for test. The balance shall be paid only after the equipment is tested and found to be satisfactory by the City. If the equipment must be tested, but installation is not required to be made by the supplier or if the equipment must be installed but testing is not required, and the installation or testing is delayed through no fault of the contractor, contractor shall be entitled to a payment equal to 75% of the price bid at the time of delivery and the balance shall be paid after satisfactory testing and/or installation, as required.

TAX MATTERS

21. TAX EXEMPTION. The City of Philadelphia is exempt from the payment of any federal excise or transportation taxes and any Pennsylvania sales tax. The price bid must be net, exclusive of taxes. However, when under established trade practice any federal excise tax is included in list prices, bidder may quote the list price and shall show separately the amount of the federal tax, either as a flat sum or as a percentage of the list price, which shall be deducted by the City. In the event bidder pays any sales or use tax, bidder hereby assigns to City, or City's agent, all of its rights, title and interest in any sales or use tax which may be refunded as a result of the purchase of any articles furnished in connection with the Contract and bidder, unless directed by the City, shall not file a claim for any sales or use tax refund subject to this assignment. Bidder authorizes the City, in City's name or the name of bidder, to file a claim for refund of any sales or use tax subject to this assignment.

22. TAX INDEBTEDNESS. The City of Philadelphia does not wish to do business with tax delinquents or other businesses indebted to the City. In furtherance of this policy, the following certifications have been developed and shall form a part of any Contract resulting from the Invitation and Bid. The successful bidder or other entity Contracting with the City is referred to below as the "Contractor".

a. Contractor's Certification of Non-Indebtedness - Contractor hereby certifies and represents that Contractor and Contractor's parent company(ies) and subsidiary(ies) are not currently indebted to the City of Philadelphia (the "City") and will not at any time during the term of this Contract (including any extensions or renewals thereof) be indebted to the City, for or on account of any delinquent taxes (including, but not limited to, taxes collected by the City on behalf of the School District), liens, judgments, fees or other debts for which no written agreement or payment plan satisfactory to the City has been established. In addition to any other rights or remedies available to the City at law or in equity, Contractor acknowledges that any breach or failure to conform to this certification may, at the option of the City, result in the withholding of payments otherwise due to Contractor and, if such breach or failure is not resolved to the City's satisfaction within a reasonable time frame specified by the City in writing, may result in the offset of any such indebtedness against said payments and/or the termination of this Contract for default (in which case Contractor shall be liable for all costs, losses and other damages resulting from the termination).

b. Subcontractor's Certification of Non-Indebtedness - Contractor shall require all subcontractors performing work in connection with this Contract ("subcontractor"

shall also include suppliers providing goods or materials) to be bound by the following provision, and Contractor shall cooperate fully with the City in exercising the rights and remedies described below or otherwise available at law or in equity:

"Subcontractor hereby certifies and represents that subcontractor and subcontractor's parent company(ies) and subsidiary(ies) are not currently indebted to the City of Philadelphia ("City"). and will not at any time during the term of Contractor's Contract with the City (the "Contract"), including any extensions or renewals thereof, be indebted to the City, for or on account of any delinquent taxes (including, but not limited to, taxes collected by the City on behalf of the School District of Philadelphia), liens, judgments, fees or other debts for which no written agreement or payment plan satisfactory to the City has been established. In addition to any other rights or remedies available at law or in equity, subcontractor acknowledges that any breach or failure to conform to this certification may, at the option of the City, result in the withholding of payments otherwise due to subcontractor for services rendered in connection with the Contract and, if such breach or failure is not resolved to the City's satisfaction within a reasonable time frame specified by the City in writing, may result in the offset of any such indebtedness against said payments otherwise due to subcontractor and/or the termination of subcontractor for default (in which case subcontractor shall be liable for all costs, losses and other damages resulting from the termination)."

23. TAX REQUIREMENTS. Any person or entity who bids on and/or is awarded a contract by the City and/or School District of Philadelphia, is subject to Philadelphia's business tax ordinances and regulations. The City Solicitor has determined that anyone who is awarded a contract by the City and/or School District pursuant to a bid has entered into a contract within the City, and the subsequent delivery of goods into the City or performance of services within the City constitutes doing business in the City and subjects the successful bidder, including but not limited to, one or more of the following taxes:

- a. Business Privilege Tax
- b. Net Profits Tax
- c. City Wage Tax

The successful bidder, if not already paying the aforesaid taxes, is required to apply to the Department of Revenue, 1401 John F. Kennedy Blvd., Public Service Concourse, Municipal Services Building, Philadelphia, PA 19102 for a tax identification number and to file appropriate business tax returns as provided by law. Questions should be directed to the Business and Earnings Tax Unit at (215) 686-6600.

GENERAL INFORMATION

24. COMPLIANCE WITH LAWS. All goods and services and all documents and other materials furnished under the Contract shall conform with all applicable federal, state and local laws, statutes and ordinances and the applicable rules, regulations, methods and procedures of all governmental boards, bureaus, offices, commissions and other agencies. Contractor shall maintain during the term of the Contract all licenses, and authorizations required by any

TERMS AND CONDITIONS OF BIDDING AND CONTRACT

applicable federal, state or local law or regulation. Applicable law shall include, without limitation, the laws stated in paragraphs 25 through 29 herein.

25. NONDISCRIMINATION.

a. Any Contract awarded pursuant to the Invitation and Bid is entered into under the terms of the Philadelphia Home Rule Charter and in its performance, Contractor shall not discriminate nor permit discrimination against any person because of race, color, religion, national origin, or sex. Such discrimination shall constitute an event of default under this Contract entitling City to terminate this Contract forthwith. This right of termination shall be in addition to any other rights or remedies as provided herein in Section 19 or otherwise available to the City at law or in equity.

b. In accordance with Chapter 17-400 of The Philadelphia Code, Contractor agrees that its payment or reimbursement of membership fees or other expenses associated with participation by its employees in an exclusionary private organization, insofar as such participation confers an employment advantage or constitutes or results in discrimination with regard to hiring, tenure of employment, promotions, terms, privileges or conditions of employment, on the basis of race, color, sex, sexual orientation, gender identity, religion, national origin or ancestry, shall constitute an event of default under this Contract and shall entitle the City to all rights and remedies as provided herein in Section 19 or otherwise available to the City at law or in equity. Contractor agrees to include the immediately preceding sentence, with appropriate adjustments for the identity of the parties, in all subcontracts which are entered into pursuant to this Contract. Contractor further agrees to cooperate with the Commission on Human Relations of the City of Philadelphia in any manner which the said Commission deems reasonable and necessary for the Commission to carry out its responsibilities under Chapter 17-400 of The Philadelphia Code. Failure to so cooperate shall constitute an event of default under this Contract entitling the City to all rights and remedies as provided herein in Section 19 or otherwise available to the City at law or in equity.

26. ETHICS REQUIREMENTS. To preserve the integrity of City employees and maintain public confidence in the competitive bidding system, the City intends to vigorously enforce the various ethics laws as they relate to City employees in the bidding and execution of City contracts. Such laws are in three categories:

a. Gifts. Executive Order No. 02-04 prohibits City employees from soliciting or accepting anything of value from any person or entity seeking to initiate or maintain a business relationship with the City of Philadelphia, its departments, boards, commissions, and agencies. Bidder understands and agrees that if it offers anything of value to a City official or employee under circumstances where the receipt of such item would violate the provisions of this Executive Order shall be subject to sanctions with respect to future City Contracts. Such sanctions may range from disqualification from participation in a particular Contract to debarment, depending on the nature of the violation. All bidders, agents or intermediaries who are solicited for gifts or gratuities by City employees are urged to report these incidents to the Inspector

General, Aramark Tower, Third Floor, 1101 Market Street, Philadelphia, PA 19107.

b. City Employee Interest in City Contracts. In accordance with Section 10-1112 of The Philadelphia Home Rule Charter, no bid shall be accepted from, or Contract awarded to, any City employee or official, or any firm in which a City employee or official has a direct or indirect financial interest. All bidders are required to disclose any current City employees or officials who are employees or officials of the bidder's firm, or who otherwise would have a financial interest in the Contract.

c. Conflict of Interest. Both the State Ethics Act and the City Ethics Code prohibit a public employee from using his/her public office or any confidential information gained thereby to obtain financial gain for himself/herself a member of his/her immediate family, or a business with which he/she or a member of his/her immediate family is associated. "Use of public office" is avoided by the employee or official publicly disclosing the conflict and disqualifying himself/herself from official action in the matter, as provided in The Philadelphia Code Section 20-608.

27. NORTHERN IRELAND. Section 17-104(2)(b) of The Philadelphia Code prohibits the City from accepting bids from companies that do business in Northern Ireland, unless that business has implemented the fair employment principles embodied in the MacBride Principles. In furtherance of this ordinance, bidder makes the following certification and representations:

a. In accordance with Section 17-104 of the Philadelphia Code, bidder by execution of its bid certifies and represents that (i) bidder (including any parent company, subsidiary, exclusive distributor, or company affiliated with Bidder) does not have, and will not have at any time during the term of any Contract resulting from this bid (including any extensions thereof), any investments, licenses, franchises, management agreements or operations in Northern Ireland, and (ii) no product to be provided to the City under any resulting Contract will originate in Northern Ireland, unless Bidder has implemented the fair employment principles embodied in the MacBride Principles.

b. In the performance of any Contract resulting from this bid, Bidder agrees that it will not utilize any suppliers or subcontractors at any tier (i) who have (or whose parent subsidiary, exclusive distributor of company affiliate have) any investments, licenses, franchises, management agreements or operations in Northern Ireland or (ii) who will provide products originating in Northern Ireland unless said supplier or subcontractor has implemented the fair employment principles embodied in the MacBride Principles. Bidder further agrees to include provisions with this subparagraph (b), with appropriate adjustments for the identity of the parties, in all subcontracts and supply agreements which are entered into in connection with the performance of any resulting Contract.

c. Bidder agrees to cooperate with the City's Director of Finance in any manner which the said Director deems reasonable and necessary to carry out the Director's responsibilities under Section 17-104 of The Philadelphia Code. Bidder expressly understands and agrees that any false certification or representation in

TERMS AND CONDITIONS OF BIDDING AND CONTRACT

connection with this subparagraph (c) and/or any failure to comply with the provisions of this subparagraph (c) shall constitute a substantial breach of any Contract resulting from the Invitation and Bid entitling the City to all rights and remedies provided in this bid or otherwise available in law (including, but not limited to, Section 17-104 of the Philadelphia Code) or at equity. In addition, it is understood that false certification or representation is subject to prosecution under IS Pa.C.S. Section 4904.

28. BUSINESS, CORPORATE AND SLAVERY ERA INSURANCE DISCLOSURE. In accordance with Section 17-104 of The Philadelphia Code, the successful bidder, after award of the Contract, will complete an affidavit certifying and representing that the bidder (including any parent company, subsidiary, exclusive distributor or company affiliated with bidder) has searched any and all records of the bidder or any predecessor business entity regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any slaves or slaveholders described in those records must be disclosed in the affidavit.

The bidder expressly understands and agrees that any false certification or representation in connection with this Paragraph and/or any failure to comply with the provisions of this Paragraph shall constitute a substantial breach of this Contract entitling the City to all rights and remedies provided in this Contract or otherwise available in law (including, but not limited to, Section 17-104 of The Philadelphia Code) or equity and the Contract will be deemed voidable. In addition, it is understood that false certification or representation is subject to prosecution under Title 18 Pa.C.S.A. Section 4904.

29. PHILADELPHIA 21st CENTURY MINIMUM WAGE STANDARD. If Contractor is an Employer, as defined at Philadelphia Code Section 17-1303, Contractor shall comply with the minimum compensation standards by providing its employees with an hourly wage, excluding benefits, at least 150 percent of the federal or state minimum wage, whichever is higher, as more fully set forth at Philadelphia Code Chapter 17-1300. The Contractor shall promptly provide to the City all documents and information verifying its compliance with the requirements of Section 17-1300. Furthermore, Contractor shall notify each affected employee what wages are required to be paid.

The Office of Labor Standards may grant a partial or total waiver of Section 17-1300 based on specific stipulated reasons elaborated in Section 17-1304 of the Philadelphia Code.

**TERMS AND CONDITIONS OF BIDDING AND CONTRACT
SIGNING OF BIDS**

This contract consists of the Invitation and Bid (including exhibits and attachments), any addenda thereto issued by the City and the foregoing Terms and Conditions of Bidding and Contract (collectively, the "contract") and contains all the terms, conditions and requirements agreed upon by the parties. The terms "contract" and "agreement," whether capitalized or uncapitalized, shall have the foregoing meaning wherever they are used in the invitation and Bid, addenda thereto, the Terms and Conditions of Bidding and Contract, and this page. No other contract or agreement, oral or otherwise, regarding the subject matter of the contract shall be deemed to exist or to bind any party hereto or to vary any of the terms contained in the contract.

This contract may not be changed, amended or renewed, in whole or in part, except by a written amendment signed by the parties. No waiver by the City of any breach or noncompliance by the undersigned with any provision of this contract shall relieve the undersigned of any of its obligations or representations made under this contract.

This contract and all disputes arising under this contract shall be governed, construed and decided in accordance with the laws of the Commonwealth of Pennsylvania. The parties agree that any lawsuit, action, claim or legal proceeding involving, directly or indirectly, any matter arising out of or related to this contract or the relationship created or evidenced thereby, shall be brought exclusively in the United States District Court for the Eastern District of Pennsylvania or the Court of Common Pleas of Philadelphia County. It is the express intent of the parties that jurisdiction over any lawsuit, action, claim, or legal proceeding shall lie exclusively in either of these two forums. The parties further agree not to raise any objection to any lawsuit, action, claim or legal proceeding which is brought in either of these two forums and the parties expressly consent to the jurisdiction and venue of these two forums. The parties further agree that service of original process in any such lawsuit, action, claim or legal proceeding may be duly affected by mailing a copy thereof, by certified mail, postage prepaid to the addresses specified in the Invitation and Bid and/or this page.

NOTE: ANY BID THAT IS NOT EXECUTED IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BELOW OR THAT DOES NOT INCLUDE STREET ADDRESS, CITY, STATE AND PHONE NUMBER, MAY, IN THE SOLE DISCRETION OF THE PROCUREMENT COMMISSIONER, BE REJECTED.

SIGNING OF BIDS:

If bid is by an **INDIVIDUAL** or a **PARTNERSHIP**, or if the bid does not exceed \$25,000, date and sign the bid here, with the original signatures, in ink.

This _____ day of _____ 20

(Signature of Owner, Partner)

(Type or Print Name and Title)

(Business Name of Bidder)

(Address, including Zip Code)

(Telephone Number, including Area Code)

If the bid is a **CORPORATION**, date and sign the bid here with original signatures, in ink, by (a) President or Vice President of the Corporation AND (b) Secretary, Assistant Secretary, Treasurer or Assistant Treasurer of the Corporation; and (c) affix the seal of the Corporation. If the form is not signed by the President or a Vice President and Secretary, Assistant Secretary, Treasurer or Assistant Treasurer, attach a duly certified corporate resolution authorizing the person signing in place of such officers to execute this bid for the corporation.

This _____ day of _____ 20

CORPORATE SEAL

(Corporate or Business Name of Bidder)

(Address, including Zip Code)

(Telephone Number, including Area Code)

(Signature of President or Vice President)

(Signature of Secy., Asst. Secy., Treas. or Asst. Treas.)

(Type or Print Name and Title)

(Type or Print Name and Title)

APPROVED AS TO FORM

CONTRACT EXECUTION

(Assistant City Solicitor)

(Procurement Commissioner)



CITY OF PHILADELPHIA

PROCUREMENT DEPARTMENT
120 Municipal Services Building
Philadelphia, Pa 19102-1685

Hugh Ortman
Procurement Commissioner

Dear Valued Vendor,

The City of Philadelphia is pleased to announce a new online **Vendor Invoice Information (VII) Website** which will allow businesses such as yours to inquire about the status of invoices billed against purchase orders and professional services contracts. The only requirement is that your invoices utilize a unique number – alpha, numeric or a combination of the two.

This system will be operational twenty four hours a day, seven days a week. All you have to do is log on to the City of Philadelphia website: www.phila.gov, click on “Vendor Invoice Information” under the “Help Me” section of the home page, enter your Federal Employer Identification Number (FEIN) and a valid active purchase order. Then, agree to a waiver statement and follow the prompts to get an up-to-date status on your payments.

You are urged to give it a try and see for yourself how easy it is to use. If you should happen to experience any problems, or if you would like to comment on this new system, please e-mail us using the question and comment field provided on the site.

We believe that you will find this new way of obtaining payment information convenient and easy to use.