CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

5000143152 Purchase of Firefighting Hose for the East Bank Consolidated Fire Department
Jefferson Parish Government

Jefferson Parish
State of Louisiana

Bid Number 50-00143152

Purchase of Fire Fighting Hose for the East Bank Consolidated Fire Department

Bid Due: August 31, 2023 AT 2:00 PM

ATTENTION VENDORS!!!

Please review all pages and respond accordingly, complying with all provisions in the technical specifications and Jefferson Parish Instructions for Bidders and General Terms and Conditions. All bids must be received on the Purchasing Department's eProcurement site, www.jeffparishbids.net, by the bid due date and time. Late bids will not be accepted.

Jefferson Parish Purchasing Department
200 Derbigny Street
General Government Building, Suite 4400
Gretna, LA 70053
Purchasing Specialist II, Mark Buttery
Email: MButtery@jeffparish.net
Phone: 504-364-2810

Eastbank Consolidated Fire Department
Fire Hose Specification
These bid specifications must be completed by selecting Compliance or Exception to each item and included with your bid submission

Item #1 - 4" Double Jacket Attack Hose: (110) – 100 ft lengths, (14) – 50 ft lengths, (20) – 25 ft lengths

1.0 Scope

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the usage of front-line firefighting. Lengths shall be available up to100 feet. Due to lack of verification of adherence to NFPA 1961, the Eastbank Consolidated Fire Department will only accept hose that is manufactured, coupled, and tested in the U.S.A. The hose must be manufactured, coupled, and tested in the same facility. This allows the manufacturer to oversee the entire hose manufacturing process to assure an unmatchable and reliable quality from procurement of premium quality raw materials, through twisting and weaving of yarns, liner and cover extrusion, jacket impregnation, hose assembly, curing/vulcanization, and coupling attachment process. The Manufacturer is defined for this specification as the one creating the hose by using all of these processes.

☒ Compliance ☐ Exception

1.2 The Eastbank Consolidated Fire Department will not accept hose that is purchased from one manufacturer and coupled by a second party. **(No Exception)**

☒ Compliance

1.3 The hose will carry a 10-year warranty on the assembly with an additional lifetime liner delamination warranty. **(No Exception)**

☒ Compliance

1.4 A copy of the manufacture's hose specification, testing procedure and warranty must be submitted with the formal quote. **(No Exception)**

☒ Compliance

1.5 A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

☒ Compliance ☐ Exception

1.6 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

☒ Compliance

2.0 Jacket Construction

2.1 Double jacket hose manufactured to this specification shall be tightly woven with filament polyester yarn in the filler, and ring spun polyester yarn in the warp of both the inside and outside jackets. Inside jackets manufactured from 100% filament polyester do not meet this specification. The inside and outside jackets shall be manufactured with a minimum pick count of 11 picks per inch for increased strength and abrasion resistance. The inside jacket shall be manufactured using a reverse twill process to reduce friction loss. The inside jacket shall be manufactured on a circular loom in a clockwise direction and the outside jacket in a counterclockwise direction. The outer jacket shall be woven with a double tracer stripe for ease in identification and twist.

☒ Compliance ☐ Exception

3.0 Abrasion

The outer jacket must be coated with a polyurethane base impregnation and be highly abrasion resistant. Impregnated hose shall meet the current requirements of MIL-H-24606B latest edition for abrasion resistance.

☒ Compliance ☐ Exception

4.0 Lining

The rubber lining shall be a single-ply extruded tube of synthetic high tensile EPDM compounded to resist ozone. The finished form shall be free of pits or other imperfections and have a smooth finish for better flow characteristics. Polyurethane tubes, SBR and/or PVC tubes that sacrifice durability of the hose life for the sake of weight are not acceptable. The tube thickness shall be a minimum of .020". The adhesion between the tube and jacket shall meet a minimum requirement of 12 pounds on a 1 1/2" strip when tested in accordance to UL-19 standards. The minimum tensile strength requirements for the finished tube requirement shall be 1800 PSI.

☒ Compliance ☐ Exception

5.0 Colors

The color for the attack hose shall be offered in Clear (White), Red, Yellow, Blue, Green, Orange, Purple, Tan, and Black.

☒ Compliance ☐ Exception

6.0 Couplings

The couplings shall be manufactured in the USA with quick connect storz connections. (Imported couplings will not be accepted.)

☒ Compliance ☐ Exception

7.0 Performance

7.1 The minimum burst test pressure, when tested in accordance with NFPA 1961, for 4" diameter shall be 900 PSI/62 Bar.

☒ Compliance ☐ Exception

7.2 Each vendor and or manufacturer must submit the coefficient of the hose they are bidding. The testing procedure that was used to determine the co-efficient must also be submitted by the hose manufacturer if requested. **(No Exception)**

☒ Compliance

8.0 Thermal Resistance Safety Factor:

This hose shall meet the safety factors for heat resistance without exceeding the normal fire hose weight. Thermal testing shall comply with the UL-19 Standard for lined fire hose and hose assemblies and shall have an **Underwriter's Laboratories® Certificate of Compliance** for Radiant heat test #37 and Conductive heat test #38, fourteenth edition. The test results shall be provided by the hose manufactures to hose purchaser upon request. **(No Exception)**

☒ Compliance

9.0 Standards

9.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961. A valid UL/ULC Underwriters Laboratories® inspection procedure shall be in force. Service test pressure of 300 PSI shall be stenciled on the hose and shall be in accordance with current minimum requirements of NFPA 1962.

☒ Compliance ☐ Exception

9.2 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the Eastbank Consolidated Fire Department. **(No Exception)**

☒ Compliance

10.0 Service Capability

Hose manufacturer must have an authorized service center within 75 miles of the Eastbank Consolidated Fire Department.

☒ Compliance ☐ Exception

Item #2 – Double Jacket 2 ½" Attack Hose – (176) – 50 ft lengths

1.0 Scope:

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the rough usage of front line firefighting. Lengths shall be available up to 100 feet.

Comply: YES Exception: _____

1.2 The hose must be manufactured, coupled and tested in the same facility, with a 10-Year Warranty. **(No Exception)**

Comply: YES Exception: _____

1.3 EBC Fire Department will only accept hose that is manufactured, tested and coupled in the U.S.A.

Comply: YES Exception: _____

1.4 EBC Fire Department will not accept hose that is purchased from one manufacture and coupled by a second party. **(No Exception)**

Comply: YES Exception: _____

1.5 A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

Comply: YES Exception: _____

1.6 A copy of the manufactures testing procedure and warranty must be submitted in writing with their formal quote. **(No Exception)**

Comply: YES Exception: _____

1.7 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

Comply: YES Exception: _____

2.0 Jacket Construction:

2.1 Double jacket hose manufactured to this specification shall be tightly woven with filament polyester yarn in the filler, and ring spun polyester yarn in the warp of both the inside and outside jackets.

Comply: YES Exception: _____

2.2 Inside jackets manufactured from 100% filament polyester do not meet this specification.

Comply: YES Exception: _____

2.3 The inside and outside jackets shall be manufactured with a minimum pick count of 11 picks per inch for increased strength and abrasion resistance.

Comply: YES Exception: _____

2.4 The inside jacket shall be manufactured using a reverse twill process to reduce friction loss.

Comply: YES Exception: _____

2.5 The inside jacket shall be manufactured on a circular loom in a clockwise direction and the outside jacket in a counter-clockwise direction.

Comply: YES Exception: _____

2.6 The outside jacket shall be woven with a double tracer stripe for ease in identification and twist.

Comply: YES Exception: _____

2.7 The hose must be of sufficient body and weight to meet the demands of heavy-duty firefighting usage.

Comply: YES Exception: _____

2.8 The outer jacket must be coated with a polyurethane base impregnation and be highly abrasion resistant. Impregnated hose shall meet the current requirements of MIL-H-24606B for abrasion resistance.

Comply: YES Exception: _____

3.0 Colors:

3.1 The color for the attack hose shall be offered in Blue, Red, Green, Yellow, White, Tan, Orange and Black.

Comply: YES Exception: _____

4.0 Lining:

4.1 The rubber lining shall be a single-ply extruded tube of synthetic high tensile EPDM compounded to resist ozone.

Comply: YES Exception: _____

4.2 The finished form shall be free of pits or other imperfections and have a smooth finish for better flow characteristics.

Comply: YES Exception: _____

4.3 Polyurethane tubes, SBR and/or PVC tubes that sacrifice durability of the hose life for the sake of weight are not acceptable.

Comply: YES Exception: _____

4.4 The tube thickness shall be a minimum of .020". The adhesion between the tube and jacket shall meet a minimum requirement of 12 pounds on a 1 1/2" strip when tested in accordance to UL-19 standards.

Comply: YES Exception: _____

4.5 Minimum tensile strength requirements for the finished tube requirement shall be 1800 PSI.

Comply: YES Exception: _____

5.0 Couplings:
5.1 Lightweight aluminum threaded couplings with 2 ½" NST threads. All couplings shall be made in the USA. **(No Exception)**

Comply: YES Exception: _____

5.2 Each vendor must submit the bowl size of the coupling that they are using on the 2 ½" hose that they are bidding. **(No Exception)**

Comply: YES Exception: _____

6.0 Performance:
6.1 The minimum burst test pressure, when tested in accordance to NFPA 1961, shall be 1200 PSI/82 Bar.

Comply: YES Exception: _____

6.2 Service test pressures stenciled on the hose shall be in accordance with current minimum requirements of NFPA 1962.

Comply: YES Exception: _____

6.3 A valid USA/ULC Underwriters 800 PSI/55 Bar listing shall be in force.

Comply: YES Exception: _____

6.4 The hose shall be resistant to most chemicals and petrol products, and resist deterioration due to exposure to UV-rays and ozone.

Comply: YES Exception: _____

6.5 The hose shall not be affected by rot or mildew.

Comply: YES Exception: _____

7.0 Standards:
7.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961 and Underwriter's Laboratories.

Comply: YES Exception: _____

7.2 A valid USA/ULC Underwriters inspection procedure shall be in force.

Comply: YES Exception: _____

8.0 Note: If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the EBC Fire Department. **(No Exception)**

Comply: YES Exception: _____

Item #3 – Double Jacket 1 ¾" Attack Hose – (152) – 50 ft lengths

1.0 Scope:
1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the rough usage of front line firefighting. Lengths available up to 75 feet.

Comply: YES Exception: _____

1.2 The hose must be manufactured, coupled and tested in the same facility. **(No Exception)**

Comply: YES Exception: _____

1.3 EBC Fire Department will only accept hose that is manufactured, tested and coupled in the U.S.A.

Comply: YES Exception: _____

1.4 EBC Fire Department will not accept hose that is purchased from one manufacture and coupled by a second party. **(No Exception)**

Comply: YES Exception: _____

1.5 A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

Comply: YES Exception: _____

1.6 A copy of the manufactures testing procedure and warranty must be submitted in writing with their formal quote. **(No Exception)**

Comply: YES Exception: _____

1.7 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

Comply: YES Exception: _____

1.8 The inside diameter of the 1 ¾" hose shall be **1.88". (No exception)**

Comply: YES Exception: _____

1.9 A list of at least (50) Metropolitan Fire Departments in the United States with current contact names and phone numbers shall be submitted with the vendor's proposal.

Comply: YES Exception: _____

1.10 Hose shall carry a 10 year written warranty, plus a 1-year wear/tear warranty.

Comply: YES Exception: _____

2.0 Hose Construction:

2.1 This hose is designed specifically for aggressive fire attack operations. The outer jacket is woven from ring spun staple polyester yarns over an inner liner consisting of a one-piece extruded through-the-weave nitrile/PVC tube. Double dip color or clear coat abrasion resistant process as a standard on the outer jacket.

Comply: YES Exception: _____

3.0 Inner Liner Properties:

3.1 When the hose is tested in accordance with NFPA 1961, the liner or cover shall have the following properties:

a. Ultimate Tensile Strength shall not be less than 1200 PSI

Comply: YES Exception: _____

b. Ultimate Elongation shall not be less than 400%

Comply: YES Exception: _____

c. Accelerated Aging Test shall meet requirements of UL19 for accelerated aging.

Comply: YES Exception: _____

d. Adhesion between reinforcement and liner shall be a minimum of 20 pounds.

Comply: YES Exception: _____

4.0 Ozone Resistance: The liner shall show no signs of visible cracking of the cover of liner when tested in accordance with ASTM D1149-91 and ASTM D518-86 (R91), Procedure B.

Comply: YES Exception: _____

5.0 Chemical Resistance:

Exposure to seawater and contamination by most chemicals shall have no effect on the short or long term performance of the hose.

Comply: YES Exception: _____

6.0 Safety Factors:

6.1 Flashover Resistance Safety Factor:

6.1a Heat resistance is of the utmost importance when evaluating interior attack hose. This hose shall meet the safety factors for heat resistance without exceeding the normal fire hose weight. The hose shall be subjected to a static pressure of 100 PSI and be capable of withstanding a surface temperature of 1200 degrees F for a minimum of 30 seconds without bursting.

Comply: YES Exception: _____

7.0 Abrasion Resistance:

7.1 A direct relationship to the safe performance of the fire hose. The UL abrasion test most closely resembles the fire ground use of fire hose and as such, is considered of prime importance. The hose shall pass a burst test after 5000 cycles on a reciprocating abrasion tester as specified in UL Standard 19.

Comply: YES Exception: _____

8.0 Cold Resistance Safety Factor:

8.1 Hose shall be capable of safe use down to –50 degrees F. The hose shall have no apparent damage to cover reinforcement or lining when subjected to the following cold bending test: A 50 ft. length of dry hose is coiled and placed in a cold box at –50 degrees for 24 hours. The hose shall not show any damage to the reinforcement when subjected to hydrostatic acceptance test pressure.

Comply: YES Exception: _____

9.0 Color:

9.1 The hose must be available in the following colors, Red, Yellow, Green, Blue, Orange and White with a red & blue colored stripe woven into the outer jacket.

Comply: YES Exception: _____

10.0 Couplings:
10.1 Lightweight aluminum threaded couplings with 1 ½" NST threads. All couplings shall be made in the USA. **(No Exception)**

Comply: YES Exception: _____

10.2 Lightweight aluminum couplings shall have a bowl size of 2 ¼". **(No Exception)**

Comply: YES Exception: _____

11.0 Performance:
11.1 The service test pressure of hose made to this specification shall be 500 PSI. The proof test pressure shall be 1000 PSI, and the burst test pressure of a 3ft. sample shall be at least 1500 PSI. At 600 PSI pressure, a 50 ft. hose shall not elongate more than 30 inches. The twist of the hose shall not exceed 2 right hand turns per 50 ft. nor shall it rise up from the test surface. The hose must resist kinking and be flexible at temperatures as low as –65F°.

Comply: YES Exception: _____

11.2 The tendency for a hose to absorb water while in a wet environment can create significant handling difficulties. When tested against the procedure listed in MIL-H-24606B, the maximum weight gain shall not exceed 3 lbs. per 50 foot length.

Comply: YES Exception: _____

11.3 The hose shall not be affected by rot or mildew. The hose must be of sufficient body and weight to meet the demands of heavy-duty firefighting usage.

Comply: YES Exception: _____

11.4 A letter from the hose manufacture stating the current co-efficient for their 1 ¾" hose that they are bidding must be submitted on company letterhead with each vendor's bid. The testing procedure that was used to determine the co-efficient and all relevant documentation must also be submitted by the manufacture of the hose. **(No Exception)**

Comply: YES Exception: _____

11.5 The following friction loss guidelines will be strictly adhered to in this specification.

150 G.P.M. NO MORE THAN 18 LBS. PER 100' COUPLED

185 G.P.M. NO MORE THAN 25 LBS. PER 100' COUPLED

210 G.P.M. NO MORE THAN 32 LBS. PER 100' COUPLED

Comply: YES Exception: _____

12.0 Standards:
12.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961, Underwriter's Laboratories and MIL-H-24606B.

Comply: YES Exception: _____

13.0 Notes:
13.1 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the EBC Fire Department. **(No Exceptions)**

Comply: YES Exception: _____

Item #4 – Rubber Covered 1 ¾" Attack Hose – (28) – 50 ft lengths and (14) – 10 ft Lengths

1.0 Scope
1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the usage of front-line firefighting. Lengths shall be available up to100 feet. Due to lack of verification of adherence to NFPA 1961, the Fire Department will only accept hose that is coupled and tested in the U.S.A. Hose furnished under these specifications will have a potential service life and warranty of 10 years, barring mistreatment that would render it unfit for service. Upon delivery the hose shall be free from defects in workmanship and materials. A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

☒ Compliance ☐ Exception

1.2 A copy of the manufacturer's testing procedure and warranty must be submitted with the formal quote. **(No Exception)**

☒ Compliance

1.3 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

☒ Compliance

2.0 Hose Construction
Hose shall be made from 100% high tenacity synthetic polyester yarn, circularly woven and completely protected by a through-the-weave extruded PVC/Nitrile rubber, forming a single homogeneous construction without the use of glues or adhesives of any type. This hose features a raised thick rib construction to aid abrasion resistance.

☒ Compliance ☐ Exception

3.0 Abrasion

Hose shall withstand 10,000 cycles on the Taber Abrasion Machine (H-22 Wheel: 0.5 kg), without exposing the liner. Key Hose, on request, will supply written certification that hose being provided meets a minimum 10.000 cycles.

☒ Compliance ☐ Exception

4.0 Chemical Resistance

Exposure to sea water and contamination by most chemical substances, hydrocarbons, oils, alkalis, acids, and greases must have no effect on the short- or long-term performance of the hose.

☒ Compliance ☐ Exception

5.0 Lining

Ultimate Tensile Strength – Tensile strength of the lining and cover shall not be less than 1200 psi.
Ultimate Elongation – 400% minimum
Accelerated Aging Test – The tensile strength and ultimate elongation of the vulcanized rubber compound which has been subjected to the action of oxygen at a pressure of 300 psi (± 10 psi) and a temperature of 158° F (± 18° F) for a period of 96 hours shall retain 60% of its originally stated properties.

☒ Compliance ☐ Exception

6.0 Couplings

As required by the purchaser, couplings must be expansion ring threaded. Couplings must be manufactured in North America.

☒ Compliance ☐ Exception

7.0 Performance

The minimum burst test pressure, when tested in accordance with NFPA 1961, for rubber covered attack hose shall be 900 PSI. Service test pressure of 300 shall be stenciled on the hose and shall be in accordance with current minimum requirements of NFPA 1962

☒ Compliance ☐ Exception

8.0 Thermal Resistance Safety Factor:

This hose shall meet the safety factors for heat resistance without exceeding the normal fire hose weight. Thermal testing shall comply with the UL-19 Standard for lined fire hose and hose assemblies and shall have an **Underwriter's Laboratories® Certificate of Compliance** for Radiant heat test #37 and Conductive heat test #38, fourteenth edition. The test results shall be provided by the hose manufactures to hose purchaser upon request. **(No Exception)**

☒ Compliance ☐ Exception

9.0 Standards

9.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961 and Underwriters Laboratories® Standards. A valid UL/ULC Underwriters Laboratories® inspection procedure shall be in force.

☒ Compliance ☐ Exception

9.2 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the City of or Fire Department. **(No Exception)**

☒ Compliance

10.0 Colors

The colors shall be offered in Red, and Yellow. Other colors are available upon special request.

☒ Compliance ☐ Exception

11.0 Service Capability

Hose manufacturer must have an authorized service center within 75 miles of EBC Fire Department.

☒ Compliance ☐ Exception

DATE: 8/16/2023

BID NO.: 50-00143152

INVITATION TO BID
THIS IS NOT AN ORDER

JEFFERSON PARISH

PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

BUYER: MBUTTERY@jeffparish.net

BIDS WILL BE RECEIVED ONLINE VIA WWW.JEFFPARISHBIDS.NET UNTIL 2:00 PM, 8/31/2023 AND PUBLICLY OPENED THEREAFTER IN THE WEST BANK PURCHASING DEPT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053. At no charge, bidders are to submit via Jefferson Parish's electronic procurement page by visiting www.jeffparishbids.net to register for this free site. Additional instructions are included in the text box highlighting electronic procurement.

LATE BIDS WILL NOT BE ACCEPTED

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES SHALL RESULT IN BID REJECTION. HOWEVER, ELECTRONIC SIGNATURES AS DEFINED IN LSA - R.S. 9:2620(8) ARE ACCEPTABLE. SIGNATURE MUST BE A SECURED DIGITAL SIGNATURE.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647 as amended.

Jefferson Parish adheres to the Louisiana Code of Governmental Ethics, contained in Louisiana Revised Statutes Annotated, R.S. 42:1101, et seq. Vendor/Proposer by this submission, warrants that there are no "conflicts of interest" related to this procurement that would violate applicable Louisiana Law. Violation of the Louisiana Code of Governmental Ethics may result in rescission of contract, permit or licenses, and the imposition of fines and/or penalties, without contractual liability to the public in accordance with applicable law.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from http://purchasing.jeffparish.net and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Vendors may experience a delay in payment if your company is not a registered vendor with Jefferson Parish.

All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department. This provision does not apply to public works projects

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alterations from the specifications must be indicated and/or supporting documentation supplied with bid submission.

Bidders should submit all questions in writing via email to the buyer's email address as indicated above, no later than Five (5) working days prior to the bid opening. Bid numbers should be mentioned in all requests. If submitting online, vendors may send questions via the E-Procurement site no later than Five (5) working days prior to the bid opening.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum. Please note that all official communication will be expressed in the form of an addendum.

All formal Addenda require written acknowledgement on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected. JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. Vendors must not alter the bid forms. Doing so will cause the bid to be rejected.

A corporate resolution or written evidence of the individual signing the bid having such authority must be submitted with the bid. Failure to comply will cause bid to be rejected. For corporate entities, such written evidence may be a printout of the Louisiana Secretary of State's website listing the signatory as an officer. Such printout shall be included with the bid submission. Bids submitted by Owners or Sole Proprietorships must include certification that he or she owns the entity for which the bid is signed. This documentation must be submitted with the bid. Failure to do so will result in bid rejection.

NOTE: A sample corporate resolution can be downloaded from our website http://purchasing.jeffparish.net or you may provide your own document. A sample certification of sole proprietorship can also be downloaded from our website http://purchasing.jeffparish.net or you may provide your own document.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

A. AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE. SPLIT AWARDS MADE TO SEVERAL VENDORS WILL ONLY BE GRANTED TO THOSE DEEMED RESPONSIVE AND RESPONSIBLE.

All bid prices shall remain valid for 45 days. Jefferson Parish and the lowest responsive and responsible bidder(s) by mutual written consent may mutually agree to extend the deadline for award by one (1) or more extensions of thirty (30) calendar days.

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

PREFERENCE: Unless federal funding is directly spent by Jefferson Parish for this purchase, preference is hereby given to materials, supplies, and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA – R.S. 38:2251-2261"

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

C. CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit of measure specified and unless otherwise specified, shall be exclusive of state and local taxes. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit price shall prevail.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A17.1-1961).

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications.

Advertised bids will be tabulated and a copy of the tabulation will be forwarded to each responding bidder.

IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at www.jeffparishbids.net to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at http://purchasing.jeffparish.net.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 113646 or 113647 as amended. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at http://purchasing.jeffparish.net and clicking on Online Forms.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

13, 15

1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.

2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.

3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid electronic envelope. Failure to comply will cause the bid to be rejected. When submitting the bid electronically, the license number must be entered in the appropriate field in the electronic procurement system. Failure to comply will cause the bid to be rejected.

5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.

6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precaution must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

7. PUBLIC WORKS BIDS: All awards for public works in excess of $5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of $25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.

8. NON-PUBLIC WORKS BIDS: A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.

9. NON-PUBLIC WORKS BIDS: A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.

10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Failure to comply with this instruction will result in bid rejection.

11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. All sureties must be in original format (no copies) When submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.

12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.

13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.

14. PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required; This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

15. NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

17. For this project, the Contractor shall not pay any state or local sales or use taxes on materials and equipment which are affixed and made part of the immovable property of the project or which is permanently incorporated in the project (hereinafter referred to as "applicable materials and equipment."). All purchases of applicable materials or equipment shall be made by the contractor on behalf of and as the agent of Jefferson Parish (Owner), a political subdivision of the State of Louisiana. No state and local sales and use taxes are owed on applicable materials and equipment under the provisions of Act 1029 of the 1991 Regular Session - Louisiana Revised Statute 47:301(8)(c). Owner will furnish to contractor a certificate form which certifies that Owner is not required to pay such state or local sales and use taxes, and contractor shall furnish a copy of such certificate to all vendors or suppliers of the applicable materials and equipment, and report to Owner the amount of taxes not incurred.

See Page 1 for Conflicts of Interest Statement

BID FORM
Non Public Works

All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES _____ NO XXXX

MAXIMUM ESCALATION PERCENTAGE REQUESTED _____%

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF 10/30/2023.

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed,for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES 24-30 Weeks ARO

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) N/A

THIS SECTION MUST BE COMPLETED BY BIDDER:

FIRM NAME: Bulldog Fire Apparatus

ADDRESS: 16049 South Bud Broussard Road

CITY, STATE: Prairieville, Louisiana ZIP: 70769

TELEPHONE: (225) 622-2505 FAX: (N/A)

EMAIL ADDRESS: lchambers@bulldogfa.com

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form.Bidder must acknowledge receipt of an addendum on the bid form by placing the addendum number as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: #1

NUMBER: _____

NUMBER: _____

NUMBER: _____

TOTAL PRICE OF ALL BID ITEMS: $ 167,415.00

AUTHORIZED SIGNATURE: _____ Donald Bert McCutcheon
Printed Name

TITLE: Chief Operating Officer

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the BID NUMBER and BID OPENING DATE indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00143152

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
			Purchase of Fire Fighting Hose for the East Bank Consolidated Fire Department		
1	28.00	EA	0001 KEY, 1.75" X 50' DURA FLOW, RUBBER COVERED ATTACK HOSE, RED PART #RC17-600-RED	$ 196.00	$5,488.00
2	14.00	EA	0002 KEY, 1.75" X 10' DURA FLOW, RUBBER COVERED ATTACK HOSE, RED PART #RC17-600-RED	$ 120.00	$1,680.00
3	110.00	EA	0003 KEY, 4" X 100' HY FLOW, LIGHTWEIGHT DJ RUBBER-LINED ATTACK HOSE, YELLOW PART #DP-40-600-YELLOW	$ 680.00	$74,800.00
4	14.00	EA	0004 KEY, 4" X 50' HY FLOW, LIGHTWEIGHT DJ RUBBER-LINED ATTACK HOSE, YELLOW PART #DP-40-600-YELLOW	$ 465.00	$6,510.00
5	20.00	EA	0005 KEY, 4" X 25' HY FLOW, LIGHTWEIGHT DJ RUBBER-LINED ATTACK HOSE, YELLOW PART #DP-40-600-YELLOW	$ 360.00	$ 7,200.00
6	88.00	EA	0006 KEY, 2.5" X 50', ECO-10 LIGHTWEIGHT DJ RUBBER-LINED ATTACK HOSE, YELLOW PART #DP25-800-ECO-YELLOW	$ 196.00	$17,248.00
7	88.00	EA	0007 KEY, 2.5" X 50', ECO-10 LIGHTWEIGHT DJ RUBBER-LINED ATTACK HOSE, WHITE PART #DP25-800-ECO-WHITE	$ 196.00	$ 17,248.00
8	76.00	EA	0008 KEY, 1.75" X 50' COMBAT SNIPER ATTACK HOSE DJ THROUGH THE WEAVE HOSE, YELLOW PART #DP17-100S-YELLOW	$ 245.00	$ 18,620.00
9	76.00	EA	0009 KEY, 1.75" X 50' COMBAT SNIPER ATTACK HOSE DJ THROUGH THE WEAVE HOSE, WHITE PART #DP17-100S-WHITE	$ 245.00	$ 18,620.00

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF Bulldog Fire Apparatus of LA, Inc,
INCORPORATED.

AT THE MEETING OF DIRECTORS OF Bulldog Fire Apparatus of LA, Inc,
INCORPORATED, DULY NOTICED AND HELD ON November 8, 2022
A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT WAS:

RESOLVED THAT Donald Bert McCutcheon, BE AND IS HEREBY APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES, DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES, CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-FACT.

I HEREBY CERTIFY THE FOREGOING TO BE A TRUE AND CORRECT COPY OF AN EXCERPT OF THE MINUTES OF THE ABOVE DATED MEETING OF THE BOARD OF DIRECTORS OF SAID CORPORATION, AND THE SAME HAS NOT BEEN REVOKED OR RESCINDED.

SECRETARY-TREASURER

8-23-23

DATE

Non-Public Works Bid
Affidavit Instructions

- **Affidavit is supplied as a courtesy to Affiants, but it is the responsibility of the affiant to insure the affidavit they submit to Jefferson Parish complies, in both form and content, with federal, state and parish laws.**
- **Affidavit must be signed by an authorized representative of the entity or the affidavit will not be accepted.**
- **Affidavit must be notarized or the affidavit will not be accepted.**
- **Notary must sign name, print name, and include bar/notary number, or the affidavit will not be accepted.**
- **Affiant MUST select either A or B when required or the affidavit will not be accepted.**
- **Affiants who select choice A must include an attachment or the affidavit will not be accepted.**
- **If both choice A and B are selected, the affidavit will not be accepted.**
- **Affidavit marked N/A will not be accepted.**
- **It is the responsibility of the Affiant to submit a new affidavit if any additional campaign contributions are made after the affidavit is executed but prior to the time the council acts on the matter.**

Instruction sheet may be omitted when submitting the affidavit

Non-Public Works Bid

AFFIDAVIT

STATE OF Louisiana

PARISH/COUNTY OF Livingston

BEFORE ME, the undersigned authority, personally came and appeared: Donald Bert McCutcheon _____, (Affiant) who after being by me duly sworn, deposed and said that he/she is the fully authorized Chief Operating Officer of Bulldog Fire Apparatus (Entity), the party who submitted a bid in response to Bid Number 50-00143152, to the Parish of Jefferson.

Affiant further said:

Campaign Contribution Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all campaign contributions, including the date and amount of each contribution, made to current or former elected officials of the Parish of Jefferson by Entity, Affiant, and/or officers, directors and owners, including employees, owning 25% or more of the Entity during the two-year period immediately preceding the date of this affidavit or the current term of the elected official, whichever is greater. Further, Entity, Affiant, and/or Entity Owners have not made any contributions to or in support of current or former members of the Jefferson Parish Council or the Jefferson Parish President through or in the name of another person or legal entity, either directly or indirectly.

Choice B X there are **NO** campaign contributions made which would require disclosure under Choice A of this section.

Debt Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the Parish to the Affiant.

Choice B X There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

[*The remainder of this page is intentionally left blank.*]

That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.

Signature of Affiant

Donald Bert McCutcheon
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME
ON THE 23 DAY OF August, 2023

Renee S
Notary Public

Renee Stubbs
Printed Name of Notary

138975
Notary/Bar Roll Number

My commission expires With Life.

R. Kyle Ardoin
SECRETARY OF STATE

State of Louisiana
Secretary of State

COMMERCIAL DIVISION
225.925.4704

Administrative Services
225.932.5317 Fax
Corporations
225.932.5314 Fax
Uniform Commercial Code
225.932.5318 Fax

11/03/2022

ONLINE FILING
rreaman@bulldogfa.com

BULLDOG FIRE APPARATUS OF LA, INC.

It has been a pleasure to approve and place on file your articles of incorporation. The appropriate evidence is attached for your files.

Payment of the filing fee is acknowledged by this letter.

In addition to email and text notifications, business owners now have the option to enroll in our secured business filings (SBF) service. This service is available online, at no charge, by filing a notarized affidavit. Upon enrollment, an amendment cannot be made to your entity without approval using your personal identification number. This is another way to protect your business from fraud and identity theft.

Please note that as of January 1, 2018, business owners in the following parishes will be required to file all available business documents online through geauxBIZ: Ascension, Bossier, Caddo, Calcasieu, East Baton Rouge, Jefferson, Lafayette, Livingston, Orleans, Ouachita, Rapides, St. Tammany, Tangipahoa and Terrebonne.

Online filing options are available if changes are necessary to your registration or if you need to file an annual report. Please visit our website at **GeauxBiz.com** for your future business needs.

Sincerely,

The Commercial Division
WEB

UNITED STATES OF AMERICA

State of Louisiana

R. Kyle Ardoin

SECRETARY OF STATE

As Secretary of State of the State of Louisiana, I do hereby Certify that

a copy of the Articles of Incorporation of

BULLDOG FIRE APPARATUS OF LA, INC.

Domiciled at PRAIRIEVILLE, LOUISIANA,

Was filed and recorded in this Office on November 03, 2022,

And all fees having been paid as required by law, the corporation is authorized to transact business in this State, subject to the restrictions imposed by law, including the provisions of R.S. Title 12, Chapter 1.

In testimony whereof, I have hereunto set my hand and caused the Seal of my Office to be affixed at the City of Baton Rouge on,

November 3, 2022

STATE OF LOUISIANA · UNION · JUSTICE · CONFIDENCE · SECRETARY OF STATE

Secretary of State

WEB 45146954D

Certificate ID: 11646734#3PK73

To validate this certificate, visit the following web site, go to **Business Services**, **Search for Louisiana Business Filings**, **Validate a Certificate**, then follow the instructions displayed.
www.sos.la.gov

UNITED STATES OF AMERICA

State of Louisiana

R. Kyle Ardoin

SECRETARY OF STATE

As Secretary of State of the State of Louisiana, I do hereby Certify that

the attached document(s) of

BULLDOG FIRE APPARATUS OF LA, INC.

are true and correct and are filed in the Louisiana Secretary of State's Office.

ORIGF 11/03/2022 3 pages

In testimony whereof, I have hereunto set my hand and caused the Seal of my Office to be affixed at the City of Baton Rouge on,

November 3, 2022

Secretary of State

WEB 45146954D

STATE OF LOUISIANA · UNION · JUSTICE · CONFIDENCE · SECRETARY OF STATE

Certificate ID: 11646735#BRK73

To validate this certificate, visit the following web site, go to **Business Services**, **Search for Louisiana Business Filings**, **Validate a Certificate**, then follow the instructions displayed.

www.sos.la.gov

STATE OF LOUISIANA

ARTICLES OF INCORPORATION

(R.S. 12:1-202)

1. The name of this corporation is:
BULLDOG FIRE APPARATUS OF LA, INC.

2. This corporation is formed for the purpose of:
ENGAGING IN ANY LAWFUL ACTIVITY FOR WHICH CORPORATIONS MAY BE FORMED

3. The duration of this corporation is (may be perpetual):
PERPETUAL

4. The aggregate number of shares which the corporation shall have authority to issue is:
100000

5. The name and address of each incorporator of this corporation is:
JEFFREY MAZZA
251 UPTON STREET
GRAFTON, MA, 01519

6. The street address (not a P.O. Box only) of the corporation's initial registered office is:
16049 SOUTH BUD BROUSSARD ROAD
PRAIRIEVILLE, LA, 70769

7. The street address (not a P.O. Box) of the corporation's initial principal office is:
16049 SOUTH BUD BROUSSARD BLVD.
PRAIRIEVILLE, LA, 70769

8. Mailing Address:
16049 SOUTH BUD BROUSSARD BLVD.
PRAIRIEVILLE, LA, 70769

9. The name and street address (not a P.O. Box only) of the corporation's initial registered agent(s) is/are:
BERT MCCUTCHEON
16049 SOUTH BUD BROUSSARD BLVD.
PRAIRIEVILLE, LA, 70769

10. The name and street addresses of the corporation's initial directors are:
JEFFREY MAZZA (PRESIDENT, DIRECTOR, TRUSTEE)
251 UPTON STREET
GRAFTON, MA, 01519

11. The protection against liability of directors and officers as provided in R.S. 12: 1-832 is accepted, unless rejected or limited as stated below:

Other provisions:

The filing of a false public record, with the knowledge of its falsity, is a crime, subjecting the filer to fine or imprisonment or both under R.S. 14:133.

I HEREBY CERTIFY THAT I AM THE INCORPORATOR AND HAVE THE AUTHORITY TO SIGN ON BEHALF OF ANY OTHER INCORPORATOR LISTED.

ELECTRONIC SIGNATURE: JEFFREY R MAZZA (11/3/2022)
TITLE: OWNER/PRESIDENT

SECRETARY OF STATE

Written Consent to Appointment

Charter Number: 45146954D

Charter Name: BULLDOG FIRE APPARATUS OF LA, INC.

The agent / agents listed below accept the appointment of registered agent for and on behalf of the Charter Name above.

Date Responded	Agent(s)	Agent(s) Electronic Signature
11/03/2022	BERT MCCUTCHEON	BERT MCCUTCHEON

JEFFERSON PARISH
DEPARTMENT OF PURCHASING

CYNTHIA LEE SHENG
PARISH PRESIDENT

RENNY SIMNO
DIRECTOR

August 24, 2023

ADDENDUM # 1

Bid Number: 50-00143152 **Bid Opening Date: August 31, 2023**

For: Purchase of Fire Fighting Hose for the East Bank Consolidated Fire Department

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Revision:

1. Correction of Specifications for Item #3.
2. Correction of Part Numbers on bid form for Item #8 and #9

Please use the Corrected Specifications and Bid Form attached to this addendum which states "Revised Per Addendum #1".

Sincerely,

Mark Buttery
Purchasing Specialist II

Bidders must acknowledge all addenda on the bid form. Bidder acknowledges receipt of this addendum on the bid form by indicating the addendum number listed above. Failure to list each addenda number on the bid form will result in bid rejection.

This addendum is a part of the contract documents and modifies the original bidding documents and specifications. The contents of this addendum shall be included in the contract documents. Changes made by this addendum shall take precedence over the documents of earlier date.

JOSEPH S. YENNI BUILDING - 1221 ELMWOOD PARK BLVD - SUITE 404 - JEFFERSON, LA 70123 - PO BOX 10242 JEFFERSON, LA 70181-0242
OFFICE 504.364.2678

GENERAL GOVERNMENT BUILDING - 200 DERBIGNY ST – SUITE 4400 – GRETNA, LA 70053 - PO BOX 9 – GRETNA – LA 70054
OFFICE 504.364.2678
EMAIL: PURCHASING@JEFFPARISH.NET WEBSITE: WWW.JEFFPARISH.NET

Bid No. 50-00143152
Revised Per Addendum #1

Eastbank Consolidated Fire Department
Fire Hose Specification
Each Bid Specification is to be Completed by Selecting Compliance or Exception to Each Item by the Bidding Vendor and Must Be Included with your Bid Submission

Item #1 - 4" Double Jacket Attack Hose: (110) – 100 ft lengths, (14) – 50 ft lengths, (20) – 25 ft lengths

1.0 Scope

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the usage of front-line firefighting. Lengths shall be available up to100 feet. Due to lack of verification of adherence to NFPA 1961, the Eastbank Consolidated Fire Department will only accept hose that is manufactured, coupled, and tested in the U.S.A. The hose must be manufactured, coupled, and tested in the same facility. This allows the manufacturer to oversee the entire hose manufacturing process to assure an unmatchable and reliable quality from procurement of premium quality raw materials, through twisting and weaving of yarns, liner and cover extrusion, jacket impregnation, hose assembly, curing/vulcanization, and coupling attachment process. The Manufacturer is defined for this specification as the one creating the hose by using all of these processes.

☒ **Compliance** ☐ **Exception**

1.2 The Eastbank Consolidated Fire Department will not accept hose that is purchased from one manufacturer and coupled by a second party. **(No Exception)**

☒ **Compliance**

1.3 The hose will carry a 10-year warranty on the assembly with an additional lifetime liner delamination warranty. **(No Exception)**

☒ **Compliance**

1.4 A copy of the manufacture's hose specification, testing procedure and warranty must be submitted with the formal quote. **(No Exception)**

☒ **Compliance**

1.5 A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

☒ **Compliance** ☐ **Exception**

1.6 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

☒ **Compliance**

2.0 Jacket Construction

2.1 Double jacket hose manufactured to this specification shall be tightly woven with filament polyester yarn in the filler, and ring spun polyester yarn in the warp of both the inside and outside jackets. Inside jackets manufactured from 100% filament polyester do not meet this specification. The inside and outside jackets shall be manufactured with a minimum pick count of 11 picks per inch for increased strength and abrasion resistance. The inside jacket shall be manufactured using a reverse twill process to reduce friction loss. The inside jacket shall be manufactured on a circular loom in a clockwise direction and the outside jacket in a counterclockwise direction. The outer jacket shall be woven with a double tracer stripe for ease in identification and twist.

☒ **Compliance** ☐ **Exception**

3.0 Abrasion

The outer jacket must be coated with a polyurethane base impregnation and be highly abrasion resistant. Impregnated hose shall meet the current requirements of MIL-H-24606B latest edition for abrasion resistance.

☒ **Compliance** ☐ **Exception**

4.0 Lining

The rubber lining shall be a single-ply extruded tube of synthetic high tensile EPDM compounded to resist ozone. The finished form shall be free of pits or other imperfections and have a smooth finish for better flow characteristics. Polyurethane tubes, SBR and/or PVC tubes that sacrifice durability of the hose life for the sake of weight are not acceptable. The tube thickness shall be a minimum of .020". The adhesion between the tube and jacket shall meet a minimum requirement of 12 pounds on a 1 1/2" strip when tested in accordance to UL-19 standards. The minimum tensile strength requirements for the finished tube requirement shall be 1800 PSI.

☒ **Compliance** ☐ **Exception**

5.0 Colors

The color for the attack hose shall be offered in Clear (White), Red, Yellow, Blue, Green, Orange, Purple, Tan, and Black.

☒ **Compliance** ☐ **Exception**

6.0 Couplings

The couplings shall be manufactured in the USA with quick connect Storz connections. (Imported couplings will not be accepted.)

☒ **Compliance** ☐ **Exception**

7.0 Performance

7.1 The minimum burst test pressure, when tested in accordance with NFPA 1961, for 4" diameter shall be 900 PSI/62 Bar.

☒ **Compliance** ☐ **Exception**

7.2 Each vendor and or manufacturer must submit the coefficient of the hose they are bidding. The testing procedure that was used to determine the co-efficient must also be submitted by the hose manufacturer if requested. **(No Exception)**

☒ **Compliance**

8.0 Thermal Resistance Safety Factor:

This hose shall meet the safety factors for heat resistance without exceeding the normal fire hose weight. Thermal testing shall comply with the UL-19 Standard for lined fire hose and hose assemblies and shall have an **Underwriter's Laboratories® Certificate of Compliance** for Radiant heat test #37 and Conductive heat test #38, fourteenth edition. The test results shall be provided by the hose manufactures to hose purchaser upon request. **(No Exception)**

☒ **Compliance**

9.0 Standards

9.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961. A valid UL/ULC Underwriters Laboratories® inspection procedure shall be in force. Service test pressure of 300 PSI shall be stenciled on the hose and shall be in accordance with current minimum requirements of NFPA 1962.

☒ **Compliance** ☐ **Exception**

9.2 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the Eastbank Consolidated Fire Department. **(No Exception)**

☒ **Compliance**

10.0 Service Capability

Hose manufacturer must have an authorized service center within 75 miles of the Eastbank Consolidated Fire Department.

☒ **Compliance** ☐ **Exception**

Item #2 – Double Jacket 2 ½" Attack Hose – (176) – 50 ft lengths

1.0 Scope:

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the rough usage of front line fire fighting. Lengths shall be available up to 100 feet.

☒ **Compliance** ☐ **Exception**

1.2 The hose must be manufactured, coupled, and tested in the same facility, with a 10-Year Warranty. **(No Exception)**

☒ **Compliance**

1.3 EBC Fire Department will only accept hose that is manufactured, tested, and coupled in the U.S.A.

☒ **Compliance** ☐ **Exception**

1.4 EBC Fire Department will not accept hose that is purchased from one manufacture and coupled by a second party. **(No Exception)**

☒ **Compliance**

1.5 A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

☒ **Compliance** ☐ **Exception**

1.6 A copy of the manufactures testing procedure and warranty must be submitted in writing with their formal quote. **(No Exception)**

☒ **Compliance**

1.7 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

☒ **Compliance**

2.0 Jacket Construction:

2.1 Double jacket hose manufactured to this specification shall be tightly woven with filament polyester yarn in the filler, and ring spun polyester yarn in the warp of both the inside and outside jackets.

☒ Compliance ☐ Exception

2.2 Inside jackets manufactured from 100% filament polyester do not meet this specification.

☒ Compliance ☐ Exception

2.3 The inside and outside jackets shall be manufactured with a minimum pick count of 11 picks per inch for increased strength and abrasion resistance.

☒ Compliance ☐ Exception

2.4 The inside jacket shall be manufactured using a reverse twill process to reduce friction loss.

☒ Compliance ☐ Exception

2.5 The inside jacket shall be manufactured on a circular loom in a clockwise direction and the outside jacket in a counter-clockwise direction.

☒ Compliance ☐ Exception

2.6 The outside jacket shall be woven with a double tracer stripe for ease in identification and twist.

☒ Compliance ☐ Exception

2.7 The hose must be of sufficient body and weight to meet the demands of heavy-duty firefighting usage.

☒ Compliance ☐ Exception

2.8 The outer jacket must be coated with a polyurethane base impregnation and be highly abrasion resistant. Impregnated hose shall meet the current requirements of MIL-H-24606B for abrasion resistance.

☒ Compliance ☐ Exception

3.0 Colors:

3.1 The color for the attack hose shall be offered in Blue, Red, Green, Yellow, White, Tan, Orange and Black.

☒ Compliance ☐ Exception

4.0 Lining:

4.1 The rubber lining shall be a single-ply extruded tube of synthetic high tensile EPDM compounded to resist ozone.

☒ Compliance ☐ Exception

4.2 The finished form shall be free of pits or other imperfections and have a smooth finish for better flow characteristics.

☒ **Compliance** ☐ **Exception**

4.3 Polyurethane tubes, SBR and/or PVC tubes that sacrifice durability of the hose life for the sake of weight are not acceptable.

☒ **Compliance** ☐ **Exception**

4.4 The tube thickness shall be a minimum of .020". The adhesion between the tube and jacket shall meet a minimum requirement of 12 pounds on a 1 1/2" strip when tested in accordance to UL-19 standards.

☒ **Compliance** ☐ **Exception**

4.5 Minimum tensile strength requirements for the finished tube requirement shall be 1800 PSI.

☒ **Compliance** ☐ **Exception**

5.0 Couplings:

5.1 Lightweight aluminum threaded couplings with 2 ½" NST threads. All couplings shall be made in the USA. **(No Exception)**

☒ **Compliance**

5.2 Each vendor must submit the bowl size of the coupling that they are using on the 2 ½" hose that they are bidding. **(No Exception)**

☒ **Compliance**

6.0 Performance:

6.1 The minimum burst test pressure, when tested in accordance to NFPA 1961, shall be 1200 PSI/82 Bar.

☒ **Compliance** ☐ **Exception**

6.2 Service test pressures stenciled on the hose shall be in accordance with current minimum requirements of NFPA 1962.

☒ **Compliance** ☐ **Exception**

6.3 A valid USA/ULC Underwriters 800 PSI/55 Bar listing shall be in force.

☒ **Compliance** ☐ **Exception**

6.4 The hose shall be resistant to most chemicals and petrol products, and resist deterioration due to exposure to UV-rays and ozone.

☒ Compliance ☐ Exception

6.5 The hose shall not be affected by rot or mildew.

☒ Compliance ☐ Exception

7.0 Standards:
7.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961 and Underwriter's Laboratories.

☒ Compliance ☐ Exception

7.2 A valid USA/ULC Underwriters inspection procedure shall be in force.

☒ Compliance ☐ Exception

8.0 Note: If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the EBC Fire Department. **(No Exception)**

☒ Compliance

Item #3 – Double Jacket 1 ¾" Sniper Attack Hose – (152) – 50 ft lengths

1.0 Scope -

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of *superior quality and workmanship*. The hose will withstand the rough usage of aggressive front-line firefighting. Lengths available up to 75 feet.

☒ Compliance ☐ Exception

1.2 Due to lack of verification of adherence to NFPA 1961, the Fire Department will only accept hose that is manufactured, coupled, and tested in the U.S.A.

☒ Compliance ☐ Exception

1.3 The hose must be manufactured, coupled, and tested in the same facility. This allows the manufacturer to oversee the entire hose manufacturing process to assure an unmatchable and reliable quality from procurement of premium quality raw materials, through twisting and weaving of yarns, jacket impregnation, hose assembly, curing/vulcanization, and coupling attachment process.
The Manufacturer is defined for this specification as the one creating the hose by using all of these processes.

☒ Compliance ☐ Exception

1.4 Fire Department will not accept hose that is purchased from one manufacture and coupled by a second party. **(No Exception)**

☒ Compliance

1.5 The hose will carry a 10-year warranty, plus a 1-year all hazards warranty. **(No Exception)**

☒ Compliance

1.6 A copy of the manufactures hose specification, testing procedure and warranty must be submitted with the formal quote. **(No Exception)**

☒ Compliance

1.7 Each vendor must submit the Manufacturer, Model and Inside Diameter of the hose they are bidding. **(No Exception)**

☒ Compliance

1.8 A letter from the hose manufacturer stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

☒ Compliance ☐ Exception

1.9 The finished inside diameter of the 1 ¾" hose shall be 1.78" plus or minus 1.2% when measured according to UL-19 standards.

☒ Compliance ☐ Exception

1.10 The coupled length for the hose shall be 50-ft. There will be an allowance of length variance per current NFPA 1961 standard of +4% to -2% of desired length of each coupled section.

☒ Compliance ☐ Exception

2.0 Jacket Construction -

2.1 Hose is to be designed specifically for aggressive fire attack operations. The outer jacket is woven from ring spun staple polyester yarns over an inner liner consisting of a one-piece extruded through-the-weave nitrile/PVC tube. Color or clear-coat abrasion resistant process as a standard on the outer jacket.

☒ Compliance ☐ Exception

2.2 The woven outside jacket shall be manufactured with a minimum pick count of 10 picks-per-inch for increased strength and abrasion resistance.

☒ Compliance ☐ Exception

3.0 Inner Liner Properties -

3.1 When the hose is tested in accordance with NFPA 1961, the liner or cover shall have the following properties:

3.1.1 Ultimate Tensile Strength: Shall not be less than 1200 PSI

☒ Compliance ☐ Exception

3.1.2 Ultimate Elongation: shall not be less than 400%

☒ Compliance ☐ Exception

3.1.3 Accelerated Aging Test: Shall meet requirements of UL-19 for accelerated aging.

☒ Compliance ☐ Exception

3.1.4 Adhesion: Adhesion between reinforcement and liner shall be a minimum of 20 pounds.

☒ Compliance ☐ Exception

3.1.5 Ozone Resistance: Liner shall show no signs of visible cracking of the cover or liner when tested in accordance with ASTM D1149-91 and ASTM D518-86 (R91), Procedure B.

☒ Compliance ☐ Exception

3.1.6 Chemical Resistance: Liner exposure to seawater and contamination by most chemicals shall have no effect on the short or long-term performance of the hose.

☒ Compliance ☐ Exception

3.1.7 Weight: The hose must be of sufficient body and weight to meet the demands of heavy-duty firefighting usage. The 1 ¾" hose shall weigh a minimum of .40 lbs. per foot and a maximum of .45 lbs. per ft., uncoupled.

☒ Compliance ☐ Exception

4.0 Color -

4.1 The outer jacket must be treated with a force-applied, polyurethane-based impregnation and be highly abrasion resistant. Impregnated hose shall meet the current requirements of MIL-H-24606B for abrasion resistance. The hose must also be available in the following colors: Red, Yellow, Green, Blue, Tan, Orange, Purple, Black and White with four stripes of color-set yarn woven into the outer jacket.

☒ Compliance ☐ Exception

5.0 Couplings -

5.1 Hose assembly shall be coupled with lightweight aluminum threaded couplings with 1 ½" NST threads. All couplings shall be made in the USA. **(No Exceptions)**

☒ Compliance

5.2 Lightweight aluminum couplings shall have a bowl size of 2.125".
(No Exception)

☒ Compliance

6.0 Performance -

6.1 The service test pressure of hose made to this specification shall be 500 PSI. The proof test pressure shall be 1000 PSI. The burst test pressure of a 3ft. sample, when tested in accordance with NFPA 1961, shall be at least 1500 PSI. At 600 PSI pressure, a 50 ft. hose shall not elongate more than 30 inches. The twist of the hose shall not exceed 2 right hand turns per 50 ft. nor shall it rise up-from the test surface. The hose must resist kinking and be flexible at temperatures as low as –35F°.

☒ Compliance ☐ Exception

6.2 The hose shall be resistant to most chemicals and petroleum products, and resist deterioration due to exposure to UV-rays and ozone.

☒ Compliance ☐ Exception

6.3 The hose shall not be affected by rot or mildew.

☒ Compliance ☐ Exception

6.4 A letter from the hose manufacture stating the current co-efficient for their 1 ¾" hose must be submitted on company letterhead with each vendor's bid. The testing procedure that was used to determine the co-efficient and all relevant documentation must also be submitted by the manufacture of the hose. **(No Exception)**

☒ Compliance

6.5 The following friction loss guidelines will be strictly adhered to in this specification:

6.5.1 - 145 *G.P.M.* NO MORE THAN *23 LBS.* PER 100' COUPLED

6.5.2 - 160 *G.P.M.* NO MORE THAN *29 LBS.* PER 100' COUPLED

6.5.3 - 175 *G.P.M.* NO MORE THAN *35 LBS.* PER 100' COUPLED

☒ Compliance ☐ Exception

6.6 Abrasion Resistance: A direct relationship to the safe performance of the fire hose, the UL abrasion test most closely resembles the fire ground use of fire hose and as such, is considered of prime importance. The hose shall pass a burst test after 500 cycles on a reciprocating abrasion tester as specified in UL Standard 19.

☒ Compliance ☐ Exception

6.7 Cold Resistance: Hose shall be capable of safe use down to –50 degrees F. The hose shall have no apparent damage to cover reinforcement or lining when subjected to the following cold flexibility test: A 50 ft. length of dry hose is coiled and placed in a cold box at –50 degrees for 24 hours. Immediately upon removal from the cold box the hose will be uncoiled and laid out by one operator.

☒ Compliance ☐ Exception

6.8 Water absorption: The tendency for a hose to absorb water while in a wet environment can create significant handling difficulties. When tested against the procedure listed in MIL-H-24606 B, the maximum weight gain shall not exceed 3 lbs. per 50-foot length.

☒ Compliance ☐ Exception

7.0 Standards:

7.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961 and MIL-H-24606B.

☒ Compliance ☐ Exception

7.2 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the Eastbank Consolidated Fire Department. **(No Exceptions)**

☒ Compliance

8.0 Service Capability -

8.1 Hose manufacturer must have an authorized service center within 75 miles of the Eastbank Consolidated Fire Department.

☒ Compliance ☐ Exception

Item #4 – Rubber Covered 1 ¾" Attack Hose – (28) – 50 ft lengths and (14) – 10 ft Lengths

1.0 Scope

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the usage of front-line firefighting. Lengths shall be available up to100 feet. Due to lack of verification of adherence to NFPA 1961, the Fire Department will only accept hose that is coupled and tested in the U.S.A. Hose furnished under these specifications will have a potential service life and warranty of 10 years, barring mistreatment that would render it unfit for service. Upon delivery the hose shall be free from defects in workmanship and materials. A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

☒ Compliance ☐ Exception

1.2 A copy of the manufacturer's testing procedure and warranty must be submitted with the formal quote. **(No Exception)**

☒ **Compliance**

1.3 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

☒ **Compliance**

2.0 Hose Construction

Hose shall be made from 100% high tenacity synthetic polyester yarn, circularly woven and completely protected by a through-the-weave extruded PVC/Nitrile rubber, forming a single homogeneous construction without the use of glues or adhesives of any type. This hose features a raised thick rib construction to aid abrasion resistance.

☒ **Compliance** ☐ **Exception**

3.0 Abrasion

Hose shall withstand 10,000 cycles on the Taber Abrasion Machine (H-22 Wheel: 0.5 kg), without exposing the liner. Key Hose, on request, will supply written certification that hose being provided meets a minimum 10.000 cycles.

☒ **Compliance** ☐ **Exception**

4.0 Chemical Resistance

Exposure to sea water and contamination by most chemical substances, hydrocarbons, oils, alkalis, acids, and greases must have no effect on the short- or long-term performance of the hose.

☒ **Compliance** ☐ **Exception**

5.0 Lining

Ultimate Tensile Strength – Tensile strength of the lining and cover shall not be less than 1200 psi.
Ultimate Elongation – 400% minimum
Accelerated Aging Test – The tensile strength and ultimate elongation of the vulcanized rubber compound which has been subjected to the action of oxygen at a pressure of 300 psi (± 10 psi) and a temperature of 158° F (± 18° F) for a period of 96 hours shall retain 60% of its originally stated properties.

☒ **Compliance** ☐ **Exception**

6.0 Couplings

As required by the purchaser, couplings must be expansion ring threaded. Couplings must be manufactured in North America.

☒ **Compliance** ☐ **Exception**

7.0 Performance
The minimum burst test pressure, when tested in accordance with NFPA 1961, for rubber covered attack hose shall be 900 PSI. Service test pressure of 300 shall be stenciled on the hose and shall be in accordance with current minimum requirements of NFPA 1962.

☒ **Compliance** ☐ **Exception**

8.0 Thermal Resistance Safety Factor:
This hose shall meet the safety factors for heat resistance without exceeding the normal fire hose weight. Thermal testing shall comply with the UL-19 Standard for lined fire hose and hose assemblies and shall have an **Underwriter's Laboratories® Certificate of Compliance** for Radiant heat test #37 and Conductive heat test #38, fourteenth edition. The test results shall be provided by the hose manufactures to hose purchaser upon request. **(No Exception)**

☒ **Compliance**

9.0 Standards
9.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961 and Underwriters Laboratories® Standards. A valid UL/ULC Underwriters Laboratories® inspection procedure shall be in force.

☒ **Compliance** ☐ **Exception**

9.2 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the city of or Fire Department. **(No Exception)**

☒ **Compliance**

10.0 Colors
The colors shall be offered in Red, and Yellow. Other colors are available upon special request.

☒ **Compliance** ☐ **Exception**

11.0 Service Capability
Hose manufacturer must have an authorized service center within 75 miles of EBC Fire Department.

☒ **Compliance** ☐ **Exception**

KEY HOSE

"The Hose Company"

22Aug23

To: Bulldog Fire & Emergency Apparatus
16049 South Bud Broussard Road
Prairieville, LA 70769
225-622-2505

Reference: Jefferson Parish Bid No. 50-00143152

This letter certifies that the hose product quoted to Bulldog Fire & Emergency for the Jefferson Parish 50-00143152 solicitation meets the specifications set forth by same. All hose is tested according to NFPA 1961 latest edition standards for manufacturing fire hose with a valid UL inspection process in force.

Friction loss coefficients have been extrapolated from the following formula using actual flow testing data performed and collected onsite:

$$FL = C \times (Q/100)^2 \times L/100$$

Average coefficients:

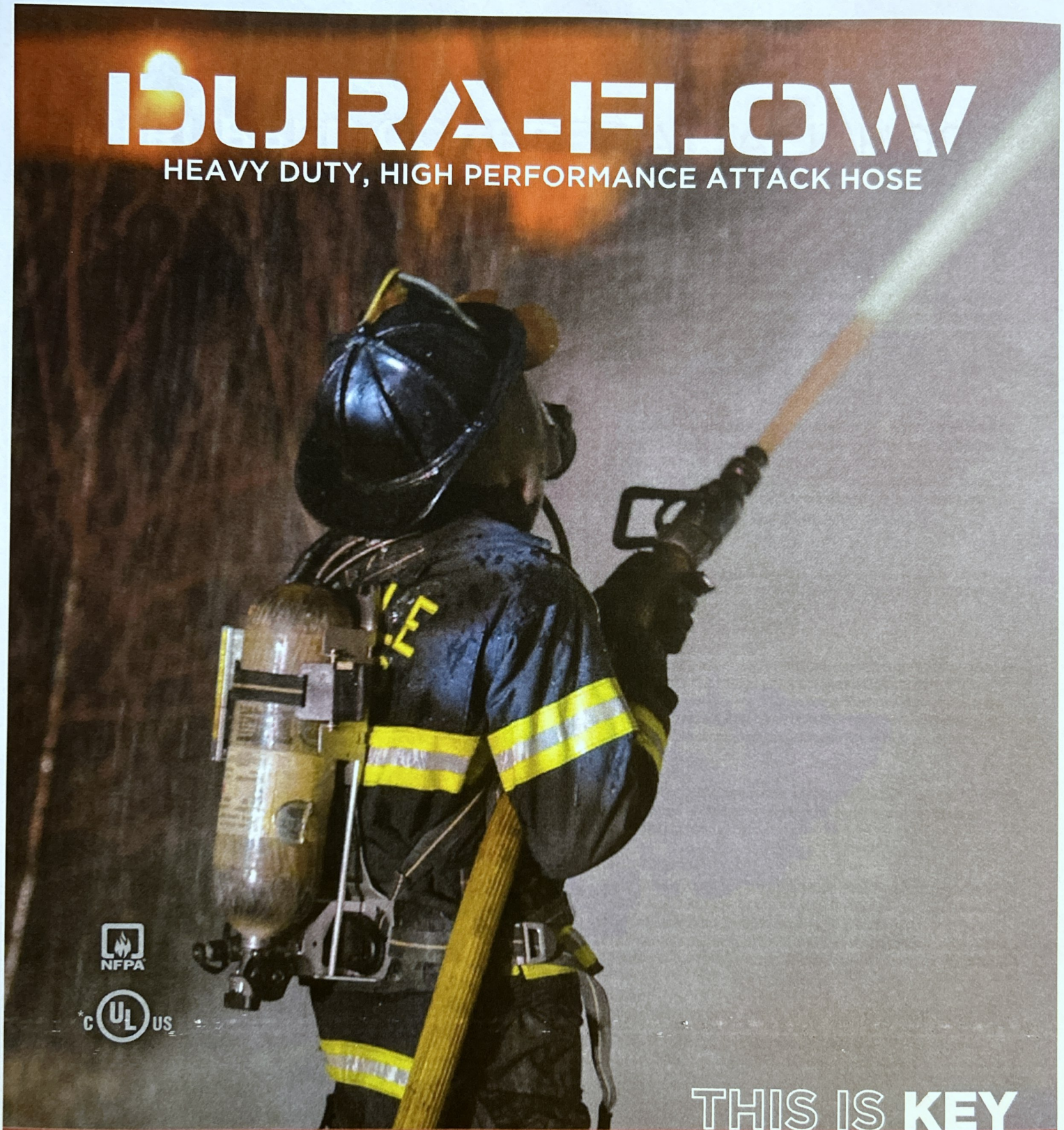
Key	Key	Key	Key
4" Hy-Flow	2.50" Eco-10	1.75" Sniper	1.75 Dura Flow
ID: 4.10"	ID: 2.64"	ID: 1.78"	ID: 1.78
Avg Coef. - .148	Avg Coef. – 1.879	Avg. Coef. – 11.4	Avg. Coef – 10.09
Shank	Bowl Size 3.00	Bowl Size 2.125	Bowl Size 1.9375

Note: Key Hose will take exception to the specification request documentation in Item #3 Double Jacket 1.75 Hose. The specification is calling out our Combat Ready product.

The above information provides information for Sniper which is requested on Page 7 of the Invitation to Bid Document Item and Quantity List rather than Combat Ready.

Sincerely,

Mark Lighthill
VP National Sales
KFH Industries
Dothan, Ala 36303



The lightweight, small diameter, rubber covered attack hose that packs a big punch. The heat and chemical resistant, nitrile/PVC through-the-weave design provides peak performance and maximum flow. With a test pressure of 600 psi, Dura-Flow clearly outperforms conventional rubber covered attack lines. A rugged, thick ribbed outer jacket construction makes the hose highly resistant to kink, impact, punctures, cuts and abrasion. Ozone resistant, maintenance-free and no drying required, make Dura-Flow a reliable weapon in a firefighter's arsenal. NFPA compliant and UL Listed*.

KEY HOSE

RUBBER COVERED ATTACK HOSE/HANDLINE

RUBBER COVERED ATTACK HOSE

DURA-FLOW

RUBBER COVERED ATTACK HOSE

Diameter	Part No.	Service Test	Proof Test	Burst Test	Bowl Size	Weight Uncoupled
1"	RC10-600	300 psi	600 psi	900 psi	1 3/16"	0.15 lbs/ft
1½"	**RC15-600**	**300 psi**	**600 psi**	**900 psi**	**1 13/16"**	**0.24 lbs/ft**
*1¾"	RC17-600	300 psi	600 psi	900 psi	1 15/16"	0.28 lbs/ft
2"	**RC20-600**	**300 psi**	**600 psi**	**900 psi**	**2¼"**	**0.32 lbs/ft**
*2½"	RC25-600	300 psi	600 psi	900 psi	2 13/16"	0.48 lbs/ft

***UL Listed to 250 psi**

Hose Construction

Hose shall be made from 100% high tenacity synthetic polyester yarn, circularly woven and completely protected by a through-the-weave extruded PVC/Nitrile rubber, forming a single homogeneous construction without the use of glues or adhesives of any type. Dura-Flow features a raised thick rib construction to aid abrasion resistance. Dura-Flow meets or exceeds all requirements of NFPA 1961 for attack hose. Dura-Flow shall carry a 10-year written warranty against defects in materials and workmanship.

Lining Properties

Ultimate Tensile Strength - Tensile strength of the lining and cover shall not be less than 1200 psi.

Ultimate Elongation - 400% minimum.

Accelerated Aging Test - The tensile strength and ultimate elongation of the vulcanized rubber compound which has been subjected to the action of oxygen at a pressure of 300 psi (±10 psi) and a temperature of 158 °F (±18 °F) for a period of 96 hours shall retain 60% of its originally stated properties.

Abrasion Resistance

Hose shall withstand 10,000 cycles on the Taber Abrasion Machine (H-22 Wheel: 0.5 kg), without exposing the liner. Key Hose, on request, will supply written warranties that Dura-Flow hose meets a minimum 10,000 cycles. Other abrasion test results (UL, DIN, etc.) can be supplied on request of purchaser.

Cold Resistance

Hose shall have a capability of use down to -35 °F. Hose shall have no apparent damage to cover, reinforcement or lining when subjected to the following cold flexibility test: a 50' length of dry hose is to be firmly coiled and placed in a cold box at -35 °F for a duration of 24 hours. Immediately after removal of the hose from the box, hose should be uncoiled and laid out by one operator.

Ozone Resistance

Hose shall show no visible signs of cracking to the lining or cover when tested in accordance to ASTM D518 Procedure B (100 pphm / 118 °F / 70 hours).

Chemical Resistance

Exposure to sea water and contamination by most chemical substances, hydrocarbons, oils, alkalis, acids and greases must have no effect on the short or long term performance of the hose. A chemical resistance chart is available and Key Hose will supply specific chemical resistance data on request of purchaser for unique applications.

Couplings

Dura-Flow coupling options are as required by purchaser, expansion ring threaded, Storz clamp ring, etc. Barcode recess available at additional charge.

Performance

The minimum burst test pressure, when tested in accordance to NFPA 1961, on all Dura-Flow diameters shall be 900 psi / 62 bar. Service test pressures stenciled on the hose shall be in accordance with current minimum requirements of NFPA 1962. *A valid UL/ULC Underwriters 500 psi / 34 bar listing shall be in force. Lengths available up to 300'.

Colors

Red Yellow

Other colors available upon special request

KEY HOSE

Key Hose reserves the right to modify any specification without prior notice to meet or exceed changing standards. For more information please contact a Key Hose authorized distributor. 06/20

Dura Flow Rubber Covered Attack Hose

1.0 Scope

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the usage of front-line firefighting. Lengths shall be available up to100 feet. Due to lack of verification of adherence to NFPA 1961, the Fire Department will only accept hose that is coupled and tested in the U.S.A. Hose furnished under these specifications will have a potential service life and warranty of 10 years, barring mistreatment that would render it unfit for service. Upon delivery the hose shall be free from defects in workmanship and materials. A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

1.2 A copy of the manufacturer's testing procedure and warranty must be submitted with the formal quote. **(No Exception)**

1.3 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

2.0 Hose Construction

Hose shall be made from 100% high tenacity synthetic polyester yarn, circularly woven and completely protected by a through-the-weave extruded PVC/Nitrile rubber, forming a single homogeneous construction without the use of glues or adhesives of any type. This hose features a raised thick rib construction to aid abrasion resistance.

3.0 Abrasion

Hose shall withstand 10,000 cycles on the Taber Abrasion Machine (H-22 Wheel: 0.5 kg), without exposing the liner. Key Hose, on request, will supply written certification that hose being provided meets a minimum 10.000 cycles.

4.0 Chemical Resistance

Exposure to sea water and contamination by most chemical substances, hydrocarbons, oils, alkalis, acids, and greases must have no effect on the short- or long-term performance of the hose.

5.0 Lining

Ultimate Tensile Strength – Tensile strength of the lining and cover shall not be less than 1200 psi.
Ultimate Elongation – 400% minimum
Accelerated Aging Test – The tensile strength and ultimate elongation of the vulcanized rubber compound which has been subjected to the action of oxygen at a pressure of 300 psi (± 10 psi) and a temperature of 158° F (± 18° F) for a period of 96 hours shall retain 60% of its originally stated properties.

6.0 Couplings

As required by the purchaser, expansion ring threaded, aluminum Storz clamp ring, etc. Couplings must be manufactured in North America.

7.0 Performance
The minimum burst test pressure, when tested in accordance with NFPA 1961, for rubber covered attack hose shall be 900 PSI. Service test pressure of 300 shall be stenciled on the hose and shall be in accordance with current minimum requirements of NFPA 1962.

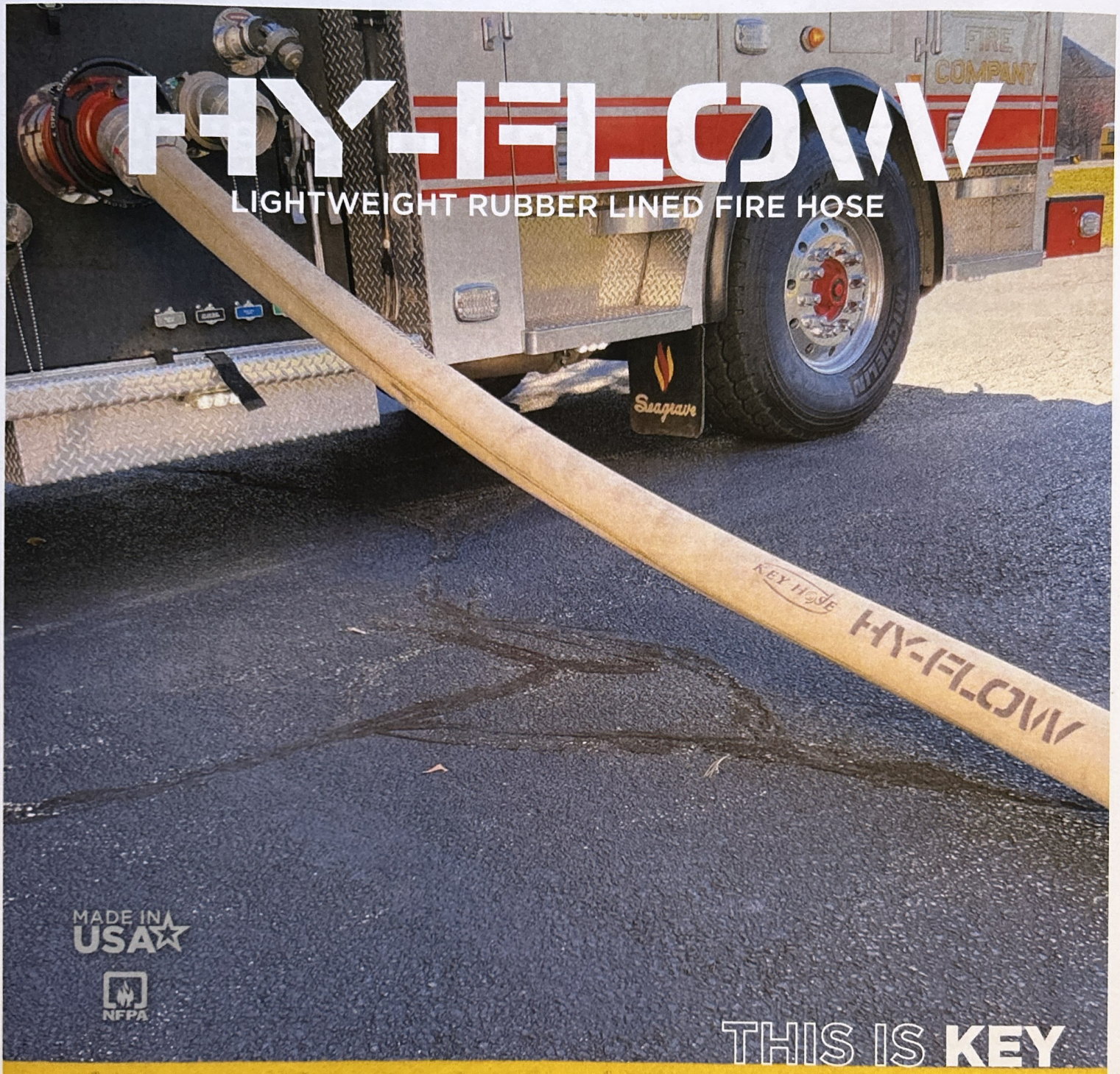
8.0 Thermal Resistance Safety Factor:
This hose shall meet the safety factors for heat resistance without exceeding the normal fire hose weight. Thermal testing shall comply with the UL-19 Standard for lined fire hose and hose assemblies and shall have an **Underwriter's Laboratories® Certificate of Compliance** for Radiant heat test #37 and Conductive heat test #38, fourteenth edition. The test results shall be provided by the hose manufactures to hose purchaser upon request.**(No Exception)**

9.0 Standards
9.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961 and Underwriters Laboratories® Standards. A valid UL/ULC Underwriters Laboratories® inspection procedure shall be in force.

9.2 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the City of or Fire Department. **(No Exception)**

10.0 Colors
The colors shall be offered in Red, and Yellow. Other colors are available upon special request.

11.0 Service Capability
Hose manufacturer must have an authorized service center within ___ miles of Fire Department.



HY-FLOW

LIGHTWEIGHT RUBBER LINED FIRE HOSE

MADE IN USA

NFPA

THIS IS **KEY**

Lightweight, double jacket construction, combining 100% premium ring spun staple and filament polyester fibers over a thin wall, high tensile, EPDM rubber liner. The outer jacket is mildew resistant and available with double dip "Key-Lok" polyurethane based polymer impregnation for abrasion and moisture resistance. A proprietary reverse twill weave construction reduces friction loss, while engineered yarn selections lighten the hose compared to competitive offerings. This reliable, double jacket fire hose with Key-Lok treatment is tested to 600 psi and meets MIL-H-24606 latest edition for abrasion resistance. Features a 10-year warranty and lifetime liner delamination guarantee.

KEY HOSE

DOUBLE JACKET ATTACK/SUPPLY HOSE

FIRE HOSE

HY-FLOW

LIGHTWEIGHT DOUBLE JACKET RUBBER LINED HOSE

Diameter	Part No.	Service Test	Proof Test	Burst Test	Bowl Size	Weight Uncoupled
4"	DP40-600	300 psi	600 psi	900 psi	4½"	0.82 lbs/ft
5"	**DP50-600**	**300 psi**	**600 psi**	**900 psi**	**5½"**	**1.14 lbs/ft**

Scope
Hose manufactured to this specification shall be of superior quality and workmanship. The hose shall withstand the rough usage of front line fire fighting. Hose specified shall meet NFPA 1961 standards. Hose furnished under these specifications will have a potential service life and warranty of 10 years with a lifetime warranty against liner delamination, barring mistreatment that would render it unfit for service. Upon delivery, the hose shall be free from defects in materials and workmanship.

Jacket Construction
Double jacket hose manufactured to this specification shall be tightly woven with filament polyester yarn in the filler and ring spun polyester yarn in the warp of both the inside and outside jackets. Inside jackets manufactured from 100% filament polyester would not meet Hy-Flow minimum standards. The hose shall be resistant to most chemicals and petrol products, and resist deterioration due to exposure to UV rays and ozone. It shall not be affected by rot or mildew. Hy-Flow double jacket hose may be woven with a double tracer stripe for ease in identification and twist. The inside and outside jackets shall be manufactured with a minimum pick count of 11 picks per inch for increased strength and abrasion resistance. The inside jacket shall be manufactured using a reverse twill process to reduce friction loss. The inside jacket shall be manufactured on a circular loom in a clockwise direction and the outside jacket in a counter-clockwise direction. The hose must be of sufficient body and weight to meet the demands of fire fighting usage.

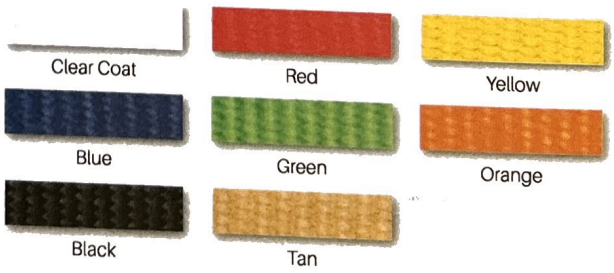
Abrasion
Hose assemblies shall be available with the special "Key-Lok" polyurethane based polymer impregnation for added abrasion resistance and ease in identification purposes. Impregnated hose shall meet the requirements of MIL-H-24606 latest edition for abrasion resistance. NFPA colors may be specified by the end-user. A double dip process for twice the abrasion resistance is available upon request.

Lining
The rubber lining shall be a single-ply extruded tube of synthetic high tensile EPDM compounded to resist ozone. The finished form shall be free of pits or other imperfections and have a smooth finish for better flow characteristics. Polyurethane tubes, SBR and/or PVC tubes that sacrifice durability of the hose life for the sake of weight are not acceptable. The tube thickness shall be a minimum of .023". The adhesion between the tube and jacket shall meet a minimum requirement of 12 pounds on a 1½" strip when tested in accordance to UL-19 standards. Minimum tensile strength requirements for the finished tube requirement shall be 1800 psi.

Couplings
Hy-Flow coupling options are as required by purchaser, expansion ring threaded, Storz clamp ring, etc.

Performance
The minimum burst test pressure, when tested in accordance to NFPA 1961, on all Hy-Flow diameters up to 5" shall be 900 psi / 62 bar. Service test pressures stenciled on the hose shall be in accordance with current minimum requirements of NFPA 1962. Lengths available up to 100'.

Standards
Fire hose manufactured to this specification shall meet all performance requirements of NFPA 1961 and MIL-H-24606 latest edition for abrasion resistance.

Colors


NFPA colors available

KEY HOSE

Key Hose reserves the right to modify any specification without prior notice to meet or exceed changing standards. For more information please contact a Key Hose authorized distributor. 09/21

Hy Flow 4" Double Jacket Attack Hose

1.0 Scope

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the usage of front-line firefighting. Lengths shall be available up to100 feet. Due to lack of verification of adherence to NFPA 1961, the Fire Department will only accept hose that is manufactured, coupled, and tested in the U.S.A. The hose must be manufactured, coupled, and tested in the same facility. This allows the manufacturer to oversee the entire hose manufacturing process to assure an unmatchable and reliable quality from procurement of premium quality raw materials, through twisting and weaving of yarns, liner and cover extrusion, jacket impregnation, hose assembly, curing/vulcanization, and coupling attachment process. The Manufacturer is defined for this specification as the one creating the hose by using all of these processes.

1.2 The Fire Department will not accept hose that is purchased from one manufacturer and coupled by a second party. **(No Exception)**

1.3 The hose will carry a 10-year warranty on the assembly with an additional lifetime liner delamination warranty. **(No Exception)**

1.4 A copy of the manufacture's hose specification, testing procedure and warranty must be submitted with the formal quote. **(No Exception)**

1.5 A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

1.6 Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

2.0 Jacket Construction

2.1 Double jacket hose manufactured to this specification shall be tightly woven with filament polyester yarn in the filler, and ring spun polyester yarn in the warp of both the inside and outside jackets. Inside jackets manufactured from 100% filament polyester do not meet this specification. The inside and outside jackets shall be manufactured with a minimum pick count of 11 picks per inch for increased strength and abrasion resistance. The inside jacket shall be manufactured using a reverse twill process to reduce friction loss. The inside jacket shall be manufactured on a circular loom in a clockwise direction and the outside jacket in a counterclockwise direction. The outer jacket shall be woven with a double tracer stripe for ease in identification and twist.

3.0 Abrasion

The outer jacket must be coated with a polyurethane base impregnation and be highly abrasion resistant. Impregnated hose shall meet the current requirements of MIL-H-24606B latest edition for abrasion resistance.

4.0 Lining

The rubber lining shall be a single-ply extruded tube of synthetic high tensile EPDM compounded to resist ozone. The finished form shall be free of pits or other imperfections and have a smooth finish for better flow characteristics. Polyurethane tubes, SBR and/or PVC tubes that sacrifice durability of the hose life for the sake of weight are not acceptable. The tube thickness shall be a minimum of .020". The adhesion between the tube and jacket shall meet a minimum requirement of 12 pounds on a 1 1/2" strip when tested in accordance to UL-19 standards. The minimum tensile strength requirements for the finished tube requirement shall be 1800 PSI.

5.0 Colors

The color for the attack hose shall be offered in Clear (White), Red, Yellow, Blue, Green, Orange, Purple, Tan, and Black.

6.0 Couplings

The couplings shall be manufactured in the USA. (Imported couplings will not be accepted.)

7.0 Performance

7.1 The minimum burst test pressure, when tested in accordance with NFPA 1961, for 4" diameter shall be 900 PSI/62 Bar.

7.2 Each vendor and or manufacturer must submit the coefficient of the hose they are bidding. The testing procedure that was used to determine the co-efficient must also be submitted by the hose manufacturer if requested. **(No Exception)**

8.0 Thermal Resistance Safety Factor:

This hose shall meet the safety factors for heat resistance without exceeding the normal fire hose weight. Thermal testing shall comply with the UL-19 Standard for lined fire hose and hose assemblies and shall have an **Underwriter's Laboratories® Certificate of Compliance** for Radiant heat test #37 and Conductive heat test #38, fourteenth edition. The test results shall be provided by the hose manufactures to hose purchaser upon request.**(No Exception)**

9.0 Standards

9.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961. A valid UL/ULC Underwriters Laboratories® inspection procedure shall be in force. Service test pressure of 300 PSI shall be stenciled on the hose and shall be in accordance with current minimum requirements of NFPA 1962.

9.2 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the City of or Fire Department. **(No Exception)**

10.0 Service Capability

Hose manufacturer must have an authorized service center within ___ miles of Fire Department.

ECO-10

LIGHTWEIGHT RUBBER LINED FIRE HOSE

THIS IS KEY

Lightweight, double jacket construction, combining 100% premium ring spun staple and filament polyester fibers over a thin wall, high tensile, EPDM rubber liner. The outer jacket is mildew resistant and available with double dip "Key-Lok" polyurethane based polymer impregnation for abrasion and moisture resistance. A proprietary reverse twill weave construction reduces friction loss, while engineered yarn selections lighten the hose up to 25% compared to competitive offerings. This reliable, double jacket fire hose with Key-Lok treatment is tested to 600 and 800 psi, meets MIL-H-24606 latest edition for abrasion resistance and is UL Listed*. Features a 10-year warranty and lifetime liner delamination guarantee.

KEY HOSE

DOUBLE JACKET ATTACK/SUPPLY HOSE

RUBBER LINED FIRE HOSE

ECO-10

LIGHTWEIGHT DOUBLE JACKET RUBBER LINED HOSE

Diameter	Part No.	Service Test	Proof Test	Burst Test	Bowl Size	Weight Uncoupled
1"	DP10-800	400 psi	800 psi	1200 psi	1 3/8"	0.14 lbs/ft
**"1½"	**DP15-800-ECO**	**400 psi**	**800 psi**	**1200 psi**	**1 15/16"**	**0.23 lbs/ft**
*1¾"	DP17-800-ECO	400 psi	800 psi	1200 psi	2 1/16"	0.28 lbs/ft
*2"	**DP20-800**	**400 psi**	**800 psi**	**1200 psi**	**2 2/5"**	**0.31 lbs/ft**
**2½"	DP25-800-ECO	400 psi	800 psi	1200 psi	3"	0.42 lbs/ft
*3"	**DP30-800-ECO**	**400 psi**	**800 psi**	**1200 psi**	**3 3/8"**	**0.56 lbs/ft**
4"	DP40-600	300 psi	600 psi	900 psi	4 1/2"	0.82 lbs/ft
5"	**DP50-600**	**300 psi**	**600 psi**	**900 psi**	**5 1/2"**	**1.14 lbs/ft**

***UL Listed to 400 psi | **UL Listed to 400 psi and FM Approved**

Scope

Hose manufactured to this specification shall be of superior quality and workmanship. The hose shall withstand the rough usage of front line fire fighting. Hose specified shall meet NFPA 1961 standards. Hose furnished under these specifications will have a potential service life and warranty of 10 years with a lifetime warranty against liner delamination, barring mistreatment that would render it unfit for service. Upon delivery, the hose shall be free from defects in materials and workmanship.

Jacket Construction

Double jacket hose manufactured to this specification shall be tightly woven with filament polyester yarn in the filler and ring spun polyester yarn in the warp of both the inside and outside jackets. Inside jackets manufactured from 100% filament polyester would not meet Eco-10 minimum standards. The hose shall be resistant to most chemicals and petrol products, and resist deterioration due to exposure to UV rays and ozone. It shall not be affected by rot or mildew. Eco-10 double jacket hose may be woven with a double tracer stripe for ease in identification and twist. The inside and outside jackets shall be manufactured with a minimum pick count of 11 picks per inch for increased strength and abrasion resistance. The inside jacket shall be manufactured using a reverse twill process to reduce friction loss. The inside jacket shall be manufactured on a circular loom in a clockwise direction and the outside jacket in a counter-clockwise direction. The hose must be of sufficient body and weight to meet the demands of fire fighting usage.

Abrasion

Hose assemblies shall be available with the special "Key-Lok" polyurethane based polymer impregnation for added abrasion resistance and ease in identification purposes. Impregnated hose shall meet the requirements of MIL-H-24606 latest edition for abrasion resistance. NFPA colors may be specified by the end-user. A double dip process for twice the abrasion resistance is available upon request.

Lining

The rubber lining shall be a single-ply extruded tube of synthetic high tensile EPDM compounded to resist ozone. The finished form shall be free of pits or other imperfections and have a smooth finish for better flow characteristics. Polyurethane tubes, SBR and/or PVC tubes that sacrifice durability of the hose life for the sake of weight are not acceptable. The tube thickness shall be a minimum of .020". The adhesion between the tube and jacket shall meet a minimum requirement of 12 pounds on a 1½" strip when tested in accordance to UL-19 standards. Minimum tensile strength requirements for the finished tube requirement shall be 1800 psi. A valid UL/ULC Underwriters inspection procedure shall be in force.

Couplings

Eco-10 can be coupled with 6061-T6 aluminum threaded couplings or forged Storz. Brass, special threads or other custom features available upon request. Barcode recess available at additional charge.

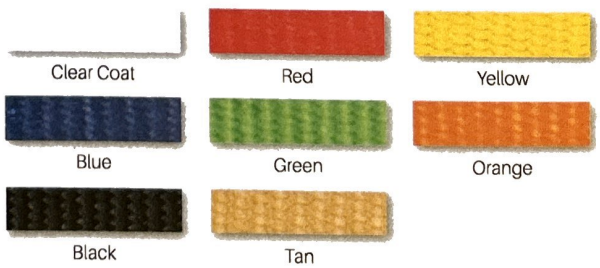
Performance

The minimum burst test pressure, when tested in accordance to NFPA 1961, on all Eco-10 diameters up to 3" shall be 1200 psi / 82 bar. Minimum burst test requirements for 4" and 5" diameters shall be 900 psi / 62 bar. Service test pressures stenciled on the hose shall be in accordance with current minimum requirements of NFPA 1962. *A valid UL/ULC Underwriters 800 psi / 55 bar listing shall be in force. Lengths available up to 100'.

Standards

Fire hose manufactured to this specification shall meet all performance requirements of NFPA 1961 and Underwriters Laboratories standards.

Colors



NFPA colors available

KEY HOSE

Key Hose reserves the right to modify any specification without prior notice to meet or exceed changing standards. For more information please contact a Key Hose authorized distributor. 04/21

P.O. Box 7107, Dothan, Alabama 36302 | 800.447.5666 | Fax: 800.447.5664 | keyhose.com

ECO-10 Double Jacket 2 ½" Attack Hose

Scope:
Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of superior quality and workmanship. The hose will withstand the rough usage of front line fire fighting. Lengths shall be available up to 100 feet.

The hose must be manufactured, coupled and tested in the same facility, with a 10-Year Warranty. **(No Exception)**

Fire Department will only accept hose that is manufactured, tested and coupled in the U.S.A.

Fire Department will not accept hose that is purchased from one manufacture and coupled by a second party. **(No Exception)**

A letter from the hose manufacture stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

A copy of the manufactures testing procedure and warranty must be submitted in writing with their formal quote. **(No Exception)**

Each vendor must submit the Manufacture, Model and inside diameter of the hose they are bidding. **(No Exception)**

Jacket Construction:

Double jacket hose manufactured to this specification shall be tightly woven with filament polyester yarn in the filler, and ring spun polyester yarn in the warp of both the inside and outside jackets.

Inside jackets manufactured from 100% filament polyester do not meet this specification.

The inside and outside jackets shall be manufactured with a minimum pick count of 11 picks per inch for increased strength and abrasion resistance.

The inside jacket shall be manufactured using a reverse twill process to reduce friction loss.

The inside jacket shall be manufactured on a circular loom in a clockwise direction and the outside jacket in a counter-clockwise direction.

The outside jacket shall be woven with a double tracer stripe for ease in identification and twist.

The hose must be of sufficient body and weight to meet the demands of heavy-duty firefighting usage.

The outer jacket must be coated with a polyurethane base impregnation and be highly abrasion resistant. Impregnated hose shall meet the current requirements of MIL-H-24606B for abrasion resistance.

Colors:
The color for the attack hose shall be offered in Blue, Red, Green, Yellow, White, Tan, Orange and Black.

Lining:
The rubber lining shall be a single-ply extruded tube of synthetic high tensile EPDM compounded to resist ozone.

The finished form shall be free of pits or other imperfections and have a smooth finish for better flow characteristics.

Polyurethane tubes, SBR and/or PVC tubes that sacrifice durability of the hose life for the sake of weight are not acceptable.

The tube thickness shall be a minimum of .020". The adhesion between the tube and jacket shall meet a minimum requirement of 12 pounds on a 1 1/2" strip when tested in accordance to UL-19 standards.

Minimum tensile strength requirements for the finished tube requirement shall be 1800 PSI.

Couplings:
Lightweight aluminum threaded couplings with 2 ½" NST threads. All couplings shall be made in the USA. **(No Exception)**

Each vendor must submit the bowl size of the coupling that they are using on the 2 ½" hose that they are bidding. **(No Exception)**

Performance:
The minimum burst test pressure, when tested in accordance to NFPA 1961, shall be 1200 PSI/82 Bar.

Service test pressures stenciled on the hose shall be in accordance with current minimum requirements of NFPA 1962.

A valid USA/ULC Underwriters 800 PSI/55 Bar listing shall be in force.

The hose shall be resistant to most chemicals and petrol products, and resist deterioration due to exposure to UV-rays and ozone.

The hose shall not be affected by rot or mildew.

Standards:
The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961 and Underwriter's Laboratories.

A valid USA/ULC Underwriters inspection procedure shall be in force.


THIS IS KEY
PUSHING FIRE HOSE TECHNOLOGY FORWARD
COMBAT SNIPER
Higher Flows. Faster Targeting. Increased Handling.
An operational game-changing attack line with legendary, double jacketed, extruded through-the-weave nitrile/PVC tube construction and true 1.78" diameter. Combat Sniper is engineered for low pressure nozzle applications with targeted flow ranges of 145-175 gpm. This innovative design provides premium kink resistance that allows for precise handling during the push for tight controlled water mapping. Packs on the shoulder as well as it does in the hose bed. Combat Sniper, exclusively from the hose experts at Key.
HANDLING
FLOW
FRICTION LOSS
KINK RESISTANCE
DURABILITY
NOZZLE PRESSURE
100
75
50
psi
KEY HOSE

TARGETED FLOW WITH PRECISE HANDLING

COMBAT SNIPER

DOUBLE JACKET ATTACK HOSE

Diameter	Part No.	Service Test	Proof Test	Burst Test	Bowl Size	Weight Uncoupled
1.78"	DP17-100S	500 psi	1000 psi	1500 psi	2.125"	0.40 lbs/ft

Targeted Flow Rates: 145-175 gpm (1.78")

Hose Construction

This hose is designed specifically for aggressive fire attack operations and is recommended for low pressure nozzle applications. The outer jacket is woven from ring spun staple polyester yarns over an inner liner consisting of a one-piece extruded through-the-weave nitrile/PVC tube. Color or clear coat abrasion resistant "Key-Lok" process is standard. Combat Sniper is manufactured in a high-visibility fashion with four black and green stripes running the length of the hose. This heat, abrasion and kink resistant hose shall have superior friction loss characteristics. Lengths available up to 75'. Warranty: Hose shall carry a 10-year written warranty, which includes a 1-year all hazards warranty.

Inner Hose Properties

When the hose is tested in accordance with NFPA 1961, the liner shall have the following properties:

Ultimate Tensile Strength - Shall not be less than 1200 psi.

Ultimate Elongation - Shall not be less than 200%.

Accelerated Aging Test - Shall meet requirements of UL19 for accelerated aging.

Adhesion - Between reinforcement and liner shall be a minimum of 20 pounds.

Ozone Resistance - Shall show no signs of visible cracking of the cover of liner when tested in accordance with ASTM D1149-91 and ASTM D518-86 (R91), Procedure B.

Chemical Resistance - Exposure to seawater and contamination by most chemicals will have no effect on the short or long term performance of the hose.

Safety Factors

Abrasion Resistance - A direct relationship to the safe performance of the fire hose. The UL abrasion test most closely resembles the fire ground use of fire hose and as such, is considered of prime importance. Hose meeting all of the abrasion resistance safety factors below shall do so without exceeding average weights.

UL Abrasion - The hose shall pass a burst test after 500 cycles on a reciprocating abrasion tester - as specified in UL Standard 19.

Cold Resistance Safety Factor - Hose shall be capable of safe use down to -35 °F. The hose shall have no apparent damage to cover reinforcement or lining when subjected to the following cold flexibility test: a 50' length of dry hose is coiled and placed in a cold box at -65 °F for a duration of 24 hours. Immediately after removal of the hose from the box, hose should be uncoiled and laid out by one operator.

Flashover Resistance Safety Factor - Heat resistance is of the utmost importance when evaluating interior attack hose. This hose shall meet the safety factors for heat resistance without exceeding the normal fire hose weight.

Water Pick-up Weight - The tendency for a hose to absorb water while in a wet environment can create significant handling difficulties. When tested against the procedure listed in MIL-H-24606 latest edition, the maximum weight gain shall not exceed 3 pounds per 50' length.

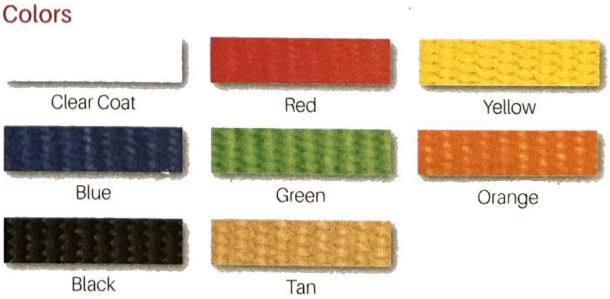
Inside Diameter

The finished inside diameter of Combat Sniper hose shall be 1.78" respectively, with a tolerance of 1.2% when measured according to UL-19 standards.

Couplings

Combat Sniper shall be supplied with aluminum 6061-T6 USA manufactured couplings. Knurled couplings and other custom features available upon special request. Barcode recess available at additional charge.

Colors



NFPA colors available

KEY HOSE

Key Hose reserves the right to modify any specification without prior notice to meet or exceed changing standards. For more information please contact a Key Hose authorized distributor. *07/23*

1 ¾" Sniper Attack Hose - Low Pressure Operations

1.0 Scope -

1.1 Hose bid must meet current NFPA 1961 Standards. Hose manufactured to this specification shall be of *superior quality and workmanship*. The hose will withstand the rough usage of aggressive front-line firefighting. Lengths available up to 75 feet.

1.2 Due to lack of verification of adherence to NFPA 1961, the Fire Department will only accept hose that is manufactured, coupled and tested in the U.S.A.

1.3 The hose must be manufactured, coupled and tested in the same facility. This allows the manufacturer to oversee the entire hose manufacturing process to assure an unmatchable and reliable quality from procurement of premium quality raw materials, through twisting and weaving of yarns, jacket impregnation, hose assembly, curing/vulcanization, and coupling attachment process.
The Manufacturer is defined for this specification as the one creating the hose by using all of these processes.

1.4 Fire Department will not accept hose that is purchased from one manufacture and coupled by a second party. **(No Exception)**

1.5 The hose will carry a 10-year warranty, plus a 1-year all hazards warranty.

(No Exception)

1.6 A copy of the manufactures hose specification, testing procedure and warranty must be submitted with the formal quote. **(No Exception)**

1.7 Each vendor must submit the Manufacturer, Model and Inside Diameter of the hose they are bidding. **(No Exception)**

1.8 A letter from the hose manufacturer stating that their hose meets this specification must be submitted on company letterhead with each vendor's bid.

1.9 The finished inside diameter of the 1 ¾" hose shall be 1.78" plus or minus 1.2% when measured according to UL-19 standards.

1.10 The coupled length for the hose shall be 50-ft. There will be an allowance of length variance per current NFPA 1961 standard of +4% to -2% of desired length of each coupled section.

2.0 Jacket Construction -

2.1 Hose is to be designed specifically for aggressive fire attack operations. The outer jacket is woven from ring spun staple polyester yarns over an inner liner consisting of a one-piece extruded through-the-weave nitrile/PVC tube. Color or clear-coat abrasion resistant process as a standard on the outer jacket.

2.2 The woven outside jacket shall be manufactured with a minimum pick count of 10 picks-per-inch for increased strength and abrasion resistance.

3.0 Inner Liner Properties -

3.1 When the hose is tested in accordance with NFPA 1961, the liner or cover shall have the following properties:

3.1.1 Ultimate Tensile Strength: Shall not be less than 1200 PSI

3.1.2 Ultimate Elongation: shall not be less than 400%

3.1.3 Accelerated Aging Test: Shall meet requirements of UL-19 for accelerated aging.

3.1.4 Adhesion: Adhesion between reinforcement and liner shall be a minimum of 20 pounds.

3.1.5 Ozone Resistance: Liner shall show no signs of visible cracking of the cover or liner when tested in accordance with ASTM D1149-91 and ASTM D518-86 (R91), Procedure B.

3.1.6 Chemical Resistance: Liner exposure to seawater and contamination by most chemicals shall have no effect on the short or long-term performance of the hose.

3.1.7 Weight: The hose must be of sufficient body and weight to meet the demands of heavy-duty firefighting usage. The 1 ¾" hose shall weigh a minimum of .40 lbs. per foot and a maximum of .45 lbs. per ft., uncoupled.

4.0 Color -

4.1 The outer jacket must be treated with a force-applied, polyurethane-based impregnation and be highly abrasion resistant. Impregnated hose shall meet the current requirements of MIL-H-24606B for abrasion resistance. The hose must also be available in the following colors: Red, Yellow, Green, Blue, Tan, Orange, Purple, Black and White with four stripes of color-set yarn woven into the outer jacket.

5.0 Couplings -

5.1 Hose assembly shall be coupled with lightweight aluminum threaded couplings with 1 ½" NST threads. All couplings shall be made in the USA. **(No Exceptions)**

5.2 Lightweight aluminum couplings shall have a bowl size of 2.125".
(No Exception)

6.0 Performance -

6.1 The service test pressure of hose made to this specification shall be 500 PSI. The proof test pressure shall be 1000 PSI. The burst test pressure of a 3ft. sample, when tested in accordance with NFPA 1961, shall be at least 1500 PSI. At 600 PSI pressure,

a 50 ft. hose shall not elongate more than 30 inches. The twist of the hose shall not exceed 2 right hand turns per 50 ft. nor shall it rise up-from the test surface. The hose must resist kinking and be flexible at temperatures as low as –35F°.

6.2 The hose shall be resistant to most chemicals and petroleum products, and resist deterioration due to exposure to UV-rays and ozone.

6.3 The hose shall not be affected by rot or mildew.

6.4 A letter from the hose manufacture stating the current co-efficient for their 1 ¾" hose must be submitted on company letterhead with each vendor's bid. The testing procedure that was used to determine the co-efficient and all relevant documentation must also be submitted by the manufacture of the hose.

(No Exception)

6.5 The following friction loss guidelines will be strictly adhered to in this specification:

6.5.1 *145 G.P.M.* NO MORE THAN *23 LBS.* PER 100' COUPLED

6.5.2 *160 G.P.M.* NO MORE THAN *29 LBS.* PER 100' COUPLED

6.5.3 *175 G.P.M.* NO MORE THAN *35 LBS.* PER 100' COUPLED

6.6 Abrasion Resistance: A direct relationship to the safe performance of the fire hose, the UL abrasion test most closely resembles the fire ground use of fire hose and as such, is considered of prime importance. The hose shall pass a burst test after 500 cycles on a reciprocating abrasion tester as specified in UL Standard 19.

6.7 Cold Resistance: Hose shall be capable of safe use down to –50 degrees F. The hose shall have no apparent damage to cover reinforcement or lining when subjected to the following cold flexibility test: A 50 ft. length of dry hose is coiled

and placed in a cold box at –50 degrees for 24 hours. Immediately upon removal from the cold box the hose will be uncoiled and laid out by one operator.

6.8 Water absorption: The tendency for a hose to absorb water while in a wet environment can create significant handling difficulties. When tested against the procedure listed in MIL-H-24606 B, the maximum weight gain shall not exceed 3 lbs. per 50-foot length.

7.0 Standards:

7.1 The fire hose manufactured to this specification shall meet and exceed all performance requirements of NFPA 1961 and MIL-H-24606B.

7.2 If the hose that has been delivered by the manufacture & vendor fails to meet these specifications, it will be the responsibility of that manufacture / vendor to pay for all shipping costs back to the hose manufacturing facility at no cost to the City or Town of, or the Fire Department. **(No Exceptions)**

8.0 Service Capability -

8.1 Hose manufacturer must have an authorized service center within _ miles of the Fire Department.

CERTIFICATE OF COMPLIANCE

Certificate Number EX4211
Report Reference EX4211-19900328
Issue Date 2020-MAY-01

DP25-800, DP25-800-ECO

Hose Size (in.)	Service Test Pressure (psig)	Hose Type	Ratings	Comments
2-1/2	400	Double-jacketed		EPDM Lining, Synthetic polyester Jacket Cover

Conductive Heat Exposure: Steel Block at 400°C (752°F)

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
2-1/2	12.47 sec	≥20 GPM	≥20 GPM

Radiant Heat Exposure: 30 kw/m^2

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
Size 2-1/2			
Clear with Stripe	1 min 58 sec	≥20 GPM	≥20 GPM
Red with Stripe	1 min 23 sec	≥20 GPM	≥20 GPM
Yellow with Stripe	2 min 40 sec	≥20 GPM	≥20 GPM
Blue with Stripe	1 min 33 sec	≥20 GPM	≥20 GPM
Green with Stripe	1 min 44 sec	7.68 GPM	≥20 GPM
Orange with Stripe	2 min 35 sec	≥20 GPM	≥20 GPM
Black with Stripe	1 min 29 sec	13.85 GPM	17.00 GPM
Tan with Stripe	1 min 25 sec	≥20 GPM	≥20 GPM

Bruce Mahrenholz, Director North American Certification Program

UL LLC

APPENDIX B - RADIANT AND CONDUCTIVE HEAT TEST RESULTS

Eco 10

Model	Hose Size (in.)	Service Pressure (psig)	Hose Type	Ratings	Comments
DP50-600	5	300	Double-Jacketed	N/A	EPDM Lining, Synthetic Polyester jacket and cover

Radiant Heat Exposure: 30 kw/m²

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
5			
Orange	1 min 34 sec	>20 gpm	>20 gpm

Conductive Heat Exposure: Steel Block at 400°C (752°F)

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
5			
Orange	9 sec	>20 gpm	>20 gpm

APPENDIX B - RADIANT AND CONDUCTIVE HEAT TEST RESULTS

1-1/2			
Red	10 min 39 sec	<1 gpm	<1 gpm
2			
Red	>15 min	0 gpm	0 gpm

FDNY

Model	Hose Size (in.)	Service Pressure (psig)	Hose Type	Ratings	Comments
DP18-800	1-3/4	400	Double-Jacketed	N/A	EPDM lining, Synthetic polyester Jacket and cover cover

Radiant Heat Exposure: 30 kw/m^2

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
1-3/4			
Orange	2 min 26 sec	>20 gpm	>20 gpm

Conductive Heat Exposure: Steel Block at 400°C (752°F)

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
1-3/4			
Orange	17 sec	>20 gpm	>20 gpm

Sniper

Model	Hose Size (in.)	Service Pressure (psig)	Hose Type	Ratings	Comments
DP17-100S	1-3/4	500	Double-Jacketed	N/A	Ring spun polyester, one piece extruded through-the-weave nitrile/PVC tube

Radiant Heat Exposure: 30 kw/m²

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
1-3/4			
Orange	2 min 5 sec	0 gpm	0 gpm

Conductive Heat Exposure: Steel Block at 400°C (752°F)

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
1-3/4			
Orange	31 SEC	>20 gpm	>20 gpm

APPENDIX B - RADIANT AND CONDUCTIVE HEAT TEST RESULTS

1-1/2			
Red	10 min 39 sec	<1 gpm	<1 gpm
2			
Red	>15 min	0 gpm	0 gpm

Model DuraFlo

Hose Size (in.)	Service Test Pressure (psig)	Hose Type	Ratings	Comments
1-3/4	250	Single-jacketed		Nitrile rubber/polyvinyl chloride hose having a reinforcement of polyester filament synthetic warp threads and Polyamide nylon filament filler threads and nitrile/polyvinyl chloride cover

Conductive Heat Exposure: Steel Block at 400°C (752°F)

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
1-3/4	2 min 21sec	⩾20 GPM	⩾20 GPM

Radiant Heat Exposure: 30 kw/m^2

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150psi	Max Leakage Rate @ 150 psi
Size 1-3/4			
Red	1 min 34 sec	3.43 GPM	8.25 GPM
Yellow	2 min 50 sec	⩾20 GPM	⩾20 GPM

Model DuraFlo

Hose Size (in.)	Service Test Pressure (psig)	Hose Type	Ratings	Comments
2-1/2	250	Single-jacketed		Nitrile rubber/polyvinyl chloride hose having a reinforcement of polyester filament synthetic warp threads and Polyamide nylon filament filler threads and nitrile/polyvinyl chloride cover

Conductive Heat Exposure: Steel Block at 400°C (752°F)

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
2-1/2	15 min	0 GPM	0 GPM

Radiant Heat Exposure: 30 kw/m^2

Hose Size (in.)	Exposure Duration	Avg Leakage Rate @ 150 psi	Max Leakage Rate @ 150 psi
Size 2-1/2			
Red	2 min 22 sec	≥20 GPM	≥20 GPM
Yellow	2 min 58 sec	≥20 GPM	≥20 GPM