The Millersville Fire Department is accepting bids for personal protective equipment to be purchased in the current fiscal year. Bid specs are available at www.cityofmillersville.com at the bottom of the City's home page. Sealed bids must be received at 1246 Louisville Hwy, Millersville, TN by 2:00 P.M. on April 16, 2020.

INVITATION TO BID

City of Millersville Fire Department

1246 Louisville Highway

Millersville, TN 37072

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including Advertisement, Instructions to Bidders, Bid Forms, Detailed Specifications, and understands them. The Bidder also declares that it has extensive experience in supplying personal protective firefighting equipment.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Millersville, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

In accordance with these bid documents, the undersigned, as Bidder, proposes to supply personal protective firefighting equipment following the specification included herein for the amounts set forth in the Bid Forms.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, to make the award in any manner the City believes to be in its best interest, and to reduce or eliminate this purchase agreement without prior notice.

The undersigned agrees that if the bid is accepted by the City of Millersville a binding contract will be in effect for the delivery of the goods in accordance with the bid.

_____

Bidder’s Name

_____

_____ _____

Official Address Authorized Signature of Bidder

_____ _____

Telephone Number (Print Name of Signer Above)

Legal Status of Bidder

Bidder declares that it is:

*A corporation organized and doing business under the laws of the state of, for whom, bearing the office title of, whose signature is affixed to this Bid, is authorized to execute contracts.

*A partnership, list all members and the street and mailing address of each:

*Also identify the County and State where partnership papers are filed: County of, State of

*An individual, whose signature with address, is affixed to this Bid:

Prices

The undersigned hereby declares that the instructions and specifications have been carefully examined and that PERSONAL PROTECTIVE FIREFIGHTING TURNOUT GEAR will be furnished for the prices set forth in this bid. It is understood and agreed that the instructions, specifications, compliance questions, answers, and additional responses are an integral part of the bid submission from the undersigned (detailed specifications). It is understood that all bids include charges for on-site measuring for the department's volunteer members and this might take place after normal work hours or on weekends, products, services, packing, delivery, warranty, etc. unless otherwise stated in the bid document. Time of delivery shall be stated as the number of calendar days following receipt of the order by the vendor to receipt of the goods or services by the City. It is understood that the Bid prices submitted by the successful bidder should remain firm for the length of a one (1) calendar year from date of award. The undersigned bidder further agrees and understands that the City of Millersville reserves the right to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, to make the award in any manner the City believes to be in its best interest, and to reduce or eliminate this purchase agreement without prior notice. Unit Prices must be firm for the entire year as quotes.

Description Quantity - Item Per Unit Price Quantity

Description

Quantity-	**Items**	**Per Unit Price**
01 to 5	Structural Helmets	$_____
01 to 5	Structural Boots	$_____
01 to 5	Structural Coats	$_____
01 to 5	Structural Pants	$_____

Delivery time after receipt of
PO:_____
_____
_____
_____
_____

Warranty
Explanation:_____
_____
_____
_____

How did you receive notification of this bid? _____

_____

How did you obtain the bid specifications?_____

If bid documents were downloaded from a website, please
list:_____

PLEASE PRINT:

CONTRACTOR NAME_____

AUTHORIZED REPRESENTATIVE_____

SIGNATURE _____

CONTRACTOR ADDRESS_____

E-MAIL _____

PHONE_____

WITNESS _____

DATE _____

This form must be completed and returned with your BID FORM. REFERENCES CONTRACTOR TO COMPLETE ALL BLANKS IN THIS DOCUMENT LIST AT LEAST THREE REFERENCES WITH WHOM YOU HAVE HAD SIMILAR CONTRACTS DURING THE PAST THREE YEARS. THESE REFERENCES MUST BE INCLUDED WITH YOUR BID.

1. Company or City Contact Name
2. Company or City Contact Name Telephone Number E-mail
3. Company or City Contact Name Telephone Number E-mail

Contractor's Signature Date Company This form must be completed and returned with your bid.

Reference 1

Company or City Name_____

Company or City Contact Name _____

Telephone Number or E-mail _____

Reference 2

Company or City Name_____

Company or City Contact Name _____

Telephone Number or E-mail _____

Reference 3

Company or City Name_____

Company or City Contact Name _____

Telephone Number or E-mail _____

Telephone Number or E-mail _____

Contractors Signature _____

Name (Printed) _____

Date_____

Millersville Fire Dept.

GENERAL SPECIFICATIONS

FOR STRUCTURAL FIRE FIGHTING HELMET

Helmets for Structural Firefighting shall meet or exceed NFPA 1971, *Standard on Protective Ensemble for Structural Fire Fighting and Proximity Fire Fighting*, (Pertaining to Structural Fire Helmets). Certification/verification shall be furnished by written documentation supplied by a recognized independent third party test laboratory.

A sample helmet meeting the requirements of this specification shall be supplied upon request for inspection and verification of compliance within 10 working days.
The authority having jurisdiction reserves the right to accept bids submitted per their evaluation based upon compliance to the standard performance and any other applicable requirements concerning fit and function. The authority having jurisdiction reserves the right to accept the most appropriate helmet based on the above stated criteria without regard to lowest price offerings.
Once awarded, successful bidders shall ship helmets from the manufacturer within 14 working days of manufacturer's receipt of order from the distributor.

General
Helmets conforming to this specification are designed to help protect the firefighter from head and neck injuries related to structural firefighting activities. The helmet manufacturer shall be a certified ISO 9001 company to assure quality procedures and production capabilities.

Physical Configuration
The basic helmet shall be a flared, rear-brim design with a length of 15-5/8", a width of 12" and a height of 7".

☐ Compliant ☐ Exception

Shell

The shell shall be comprised of a composite fiberglass with a thermoset fire retardant resin. Color pigment shall be added to the resin as part of the manufacturing process that molds the helmet to maintain appearance by masking chips and scratches
that might occur in daily wear and tear.
Hard coat gloss-finish fire retardant polyester powder shall also be applied during the molding process to the outer finish of the helmet, which produces a
homogenous material, further reducing scratches and marring.
The shell finish shall be available in white, yellow, red, black, blue, orange, lime-yellow, pink and green.
The edge of the composite shell shall have an aluminum reinforced, elastomeric edge beading that is secured at the rear of the brim by a brass clip and D-ring
fastened by a brass rivet. The edge beading shall not melt, drip, or ignite when tested to NFPA 1971 Section 8.6 Heat Resistance requirement.

☐ Compliant ☐ Exception

Leather Front & Holders

A stamped, embossed, brass sheet front shall be provided in the form of an eagle to be attached by two solid brass bolts and nuts. The beak of the eagle shall
be formed to hold the top of a leather identification shield. Two brass support arms shall fork and extend downward from the eagle head 3-1/2" from the tip
of the eagle beak to form the lower supports for attachment of the leather identification shield. An arched brass bar shall be attached to the two lower support
arms of the eagle to form a cross bar support. An 8-32 threaded hole shall be provided at the lower support arms of the eagle to accept the two brass screws
which hold both the cross bar support and the leather identification shield.

☐ Compliant ☐ Exception

Impact Liner System

The impact liner shall consist of a urethane foam liner glued to a black high-heat resistant inner shell with a heat deflection temperature > 220° F @ 264 psi.
The urethane foam liner shall be formed without the use of CFCs to eliminate the potential for additional expansion when subjected to heat during actual use.
The black inner shell shall have four 1" x 3" pieces of adhesive-backed hook material attached, two to each side, to secure the ear/neck protector at the sides
of the inner shell.

☐ Compliant ☐ Exception

Crown Strap Suspension System
The crown strap suspension system shall be three 3/4" nylon web straps attached to six nylon keys. The keys shall be locked into the lip of the inner shell
against the urethane impact liner.

☐ Compliant ☐ Exception

Ratchet Headband
The helmet shall have a quick-adjustment sizing capability by means of a ratchet adjustment system attached to a heat-resistant nylon headband. The headband shall be attached
to the inner shell by four black acetal buttons (two front, two rear). The headband shall have the ability to be raised or lowered inside of the inner shell by location points on the headband. This adjustment shall not affect the height of the helmet on the firefighter's head. The ratchet portion of the headband shall have a ratchet height adjuster located at the rear of the headband, inside of the inner shell, to permit the ratchet to be positioned
for comfort on the nape of the firefighter's head. This ratchet height adjuster shall permit at least 1" of travel by means of three height adjustment keys for proper fit. This independent adjustment component shall have a 3/4" piece of adhesive-backed Velcro® hook material attached at the center rear of this component to secure the rear portion
of the ear/neck protector.

☐ Compliant ☐ Exception

Millersville Fire Dept.

GENERAL SPECIFICATIONS

PROTECTIVE JACKET AND TROUSER

FOR STRUCTURAL FIRE FIGHTING

1. SCOPE

This specification details design and material criteria to afford protection to the upper and lower body , excluding head, hands, and feet, against advise environmental effects during structural fire fighting. All materials and construction will meet or exceed NFPA Standard #1971-2018 Revision for structural fire fighters protective clothing.

☐ Compliant ☐ Exception

2. OUTER SHELL MATERIAL - JACKET & TROUSERS

The Outer Shell will be constructed of Agility with an approximate weight of 6.6 oz. per square yard in a rip stop weave, and shall have a super shelltite finish. Color of garments to be Gold.

☐ Compliant ☐ Exception

3. MOISTURE BARRIER - JACKET AND TROUSERS

The Stedair 3000 moisture barrier shall be 4.8 osy. per square yard. The moisture barrier shall be sewn to the thermal liner at the edges only and bound along the edges with a 2" flame retardant binding, secured with a lock stitch.

☐ Compliant ☐ Exception

4. SEALED MOISTURE BARRIER SEAMS

All moisture seams shall be sealed with a minimum 7/8 inch wide sealing tape. One side of the tape shall be coated with a heat activated glue adhesive and the adhesive side of the tape shall be oriented toward the moisture barrier seams. The adhesive shall be activated by heat and the sealing tape shall be applied to the moisture barrier seems by means of pressure exerted by rollers for that purpose.

☐ Compliant ☐ Exception

5. THERMAL INSULATING LINER - JACKET AND TROUSERS

The thermal liner shall be constructed of 7.3 oz. per square yard of Caldura SLi. A 7 1/2 x 9 1/2 inch pocket constructed of self material shall be affixed to the inside of the jacket thermal liner on the left side by means of lock stitch. A 10 x 5 inch shoulder pad constructed of self material shall be affixed to the shoulders of the thermal lining by means of lock stitch. A 16 x 12 1/2 inch back pad constructed of self material shall be affixed to the back thermal liner by means of lock stitch. For extra protection a 10 x 10 inch knee pad constructed of self material and 2 layers of moisture shall be affixed to the knee of the trouser lining by means of lock stitch. The thermal liner shall be sewn to the moisture barrier as described under the moisture barrier section.

☐ Compliant ☐ Exception

6. METHOD OF THERMAL LINER/ MOISTURE BARRIER ATTACHMENT FOR JACKETS AND TROUSERS

The thermal liner and moisture barrier will be completely removable from the jacket shell. A strip of flame retardant hook and pile (e.g. Velcro) fastener tape shall secure the thermal liner/ moisture barrier to the outer shell along the length of the neck line on the collar facing. The remainder of the thermal liner/ moisture barrier shall be secured with a minimum of five snap fasteners appropriately spaced on each jacket facing and two snap fasteners at each sleeve end.

The thermal liner and moisture barrier will be completely removable from the high back trouser shells. Seven snap fasteners shall be spaced along the waistband to secure the thermal liner/ moisture barrier to the shell. The legs of the thermal liner/ moisture barrier shall be secured by means of two snap fasteners per leg.

☐ Compliant ☐ Exception

7. THERMAL PROTECTIVE PERFORMANCE

The assembled garment, consisting of an outer shell, moisture barrier, and thermal liner shall exhibit a TPP (thermal protective performance) rating of no less than 40.

☐ Compliant ☐ Exception

8. STITCHING

The outer shell shall be assembled using stitch type #301 and #514. The thermal liners and moisture barriers shall be assembled using stitch type #401, #504, #514, and #516. Stitching in all major seams shall be continuous. There shall be no joined stitching in midseam. All outer shell structural seams, structural liner seams, and minor seams including but not limited to pockets, flaps, and material reinforcements, shall have a minimum of 6 to 8 stitches per inch.

☐ Compliant ☐ Exception

9. STRESS POINTS

All outer shell stress points of coat and pants, including top and bottom pocket corners, pocket flap corners, top and bottom storm flap/fly shall be reinforced using a 42 stitch minimum bartack.

☐ Compliant ☐ Exception

10. JACKET CONSTUCTION

a. BODY

The body of the shell shall be constructed of three separate body panels consisting of two front panels and one back panel. The body panels shall be shaped so as to provide a tailored fit thereby enhancing body movement and shall be joined together by stitching with Nomex thread. Coat moisture barrier/thermal liner design shall be compatible with the outer shell so that the liner does not buckle, pull, or otherwise restrict body motion. The left and right fronts of the moisture barrier/thermal liner shall be attached to the facings at the front closure of the outer shell.

☐ Compliant ☐ Exception

b. SLEEVES

The sleeves shall be of two panel construction, contoured , and of set design. The outer and under sleeve panels shall be double stitched together with Nomex thread. The sleeves shall be contoured (curved) to follow the natural shape of the human arm unlike straight, tubular sleeve configurations. An underarm gusset shall be incorporated between the underside of the sleeve and the body of the jacket giving better fit and allowing for freedom of movement. The underarm gusset shall measure approximately 5 1/2 inches wide by 16 inches long.

☐ Compliant ☐ Exception

c. SLEEVE CUFF REINFORCEMENTS

The sleeve cuffs shall be reinforced with black Ara-Shield. The cuff reinforcements shall be no less than 2 inches in width and folded in half, approximately one half inside and one half outside the sleeve end for greater strength and abrasion resistance.

☐ Compliant ☐ Exception

d. ELBOW REINFORCEMENTS

A black Ara-Shield reinforcement patch, approximately 5 inches wide and 7 inches high will be stitched to the elbow area, centered over the seam that joins top and bottom

sleeve. This will fully cover the seam at the elbow, thereby offering more protection against abrasion.

☐ Compliant ☐ Exception

e. PADDED ELBOWS

Padding for the elbows shall be accomplished with one layer of thermal barrier stitched to the elbow area of the top and under sleeves of the thermal liner.

☐ Compliant ☐ Exception

f. WRISTLETS

There shall be knit wristlets of Kevlar and spandex, folded and doubled to give two ply thickness of no less than 4 inches in length. The wristlets with thumb holes shall be sewn to flame resistant Stedair 4000, which in turn shall be sewn to the inside of the Thermal. This sleeve well configuration serves to prevent water and other hazardous elements from entering the sleeves when the arms are raised. The neoprene moisture barrier material shall also line the inside of the sleeve. Four Advance tabs will be sewn into the juncture of the sleeve well and wristlet. The tabs will be sewn equidistant from each other and shall be fitted with female snap fasteners to accommodate corresponding male snaps in the liner sleeves. This configuration will ensure there is no interruption in protection between the sleeve liner and wristlet.

☐ Compliant ☐ Exception

g. COLLAR

The collar shall consist of four layer construction and be of two piece design. The four layers shall consist of two layers of outer shell material, with two center plies of breathable moisture barrier material sandwiched between the outer shell layers. The moisture barrier material shall be sewn to the inside of the collar at the edges only, and shall extend down into the exterior extension panel. The multi-layered configuration shall provide protection from water and other hazardous elements. The collar shall be of two piece design with the left and right halves of all component materials joined together, thereby permitting the collar to retain its proper shape and roll. The collar shall be a uniform 3 inches high and graded to size. The leading edges of the collar shall extend up evenly from the leading edges of the jacket front body panels so that no gap occurs at the throat area. The collar shall be joined to the body panels on the outside by an extension panel. The extension panel shall be constructed of outer shell material and lined on the inside with a layer of breathable moisture barrier material that extends down from the collar. A collar facing extension shall be affixed to the bottom of the collar on the inside. It shall serve to eliminate potential gaping between the collar and liner interface, while securing the liner to the neck area of the coat. The facing shall measure approximately 3 inches wide and run the length of the collar. A strip of flame resistant pile fastener tape(e.g. velcro) shall be sewn to the underside of the collar facing, and shall engage a corresponding piece of flame resistant hook fastener tape at the neck area of the liner.

The collar and facing shall have a piece of breathable moisture barrier sewn to the end of the collar to prevent moisture from entering at the neck line. The collar closure strap shall be constructed of two plies of outer shell material with one center ply of breathable moisture barrier material, and shall measure no less than 3 1/2 inches wide by 13 inches long. The collar closure strap shall be secured in the closed and stowed position flame resistant hook and pile (e.g. Velcro) fastener tape. A two inch by three inch piece of FR pile fastener tape shall be sewn vertically to the inside of the end of the closure strap. A corresponding piece of FR hook fastener tape measuring 2 x 3 inches shall be sewn horizontally to the outside of the collar on the opposite side, thereby providing a high degree of collar strap adjustment when wearing a breathing apparatus mask. In order to provide a means of storage for the closure strap when not in use, a 2 x 3 inch piece of FR hook fastener tape shall be sewn to the collar immediately in front of the closure strap. An NFPA compliant fabric hanger loop shall be sewn to the inside of the coat at the neckline.

☐ Compliant ☐ Exception

h. ACTION BACK

The jackets shall include inverted pleats to afford enhanced mobility and freedom of movement in addition to that provided by the underarm gussets. The outer shell shall have two inverted pleats (one on each side) installed at the juncture of the front and back body panels. The inverted pleats shall begin in the back of each shoulder and extend down the sides of the jacket to approximately 2 inches below the armhole. Maximum expansion of the pleats shall occur at the shoulder area.

☐ Compliant ☐ Exception

i. CARGO POCKETS

Each jacket will be equipped with two combination pockets; one on the left and one on the right side. The pockets shall be located at the bottom of the jacket near the stormflap and be stitched to the respective body panels. The pockets shall measure 9 inches wide by 8 3/4 inches high and both pockets shall be lined with neoprene moisture barrier material. The pocket flaps shall be rectangular in shape, constructed of two layers of outer shell material, and one layer of neoprene moisture barrier material. The upper pocket corners and pocket flaps shall be reinforced with bartacks. A 2 x 2 inch flame resistant hook and pile fastener tape shall be sewn to the pocket and flap. All pockets are lined with Neoprene.

☐ Compliant ☐ Exception

j. RADIO POCKET

Each jacket shall have a pocket designed for the storage of a portable radio. This pocket shall be of box type construction, stitched to the coat, and shall have one drainage

eyelet in the bottom of the pocket. The pocket flap shall be constructed of two layers of outer shell material and one layer of neoprene. Pocket flap measuring approximately 6 1/2 inches in length with 2 inch x 3 inch flame resistant hook and pile fastener tape (e.g. velcro) closure. The pocket shall be constructed of one layer of outer shell material and one layer of neoprene material measuring approximately 6 3/4 inches high and 3 1/2 inches wide. A 2 inch by 2 inch flame resistant hook and pile fastener tape (e.g. velcro) shall secure the pocket in a closed position. The upper pocket corners and pocket flaps shall be reinforced with bartacks. All pockets are lined with Neoprene.

☐ Compliant ☐ Exception

k. JACKET FRONT

The jacket shall incorporate separate Arafill facings were there is no interruption in thermal or moisture protection in the front closure are. The facings shall measure 2 3/4 inches wide, extend from collar to hem, and be sewn to the underside of the outer shell at the leading edges of the front body panels. The thermal liner and moisture barrier assembly shall be attached to the jacket facing by means of snap fasteners.

☐ Compliant ☐ Exception

l. STORM FLAP

A rectangular storm flap measuring 5 inches wide and 23 inches long shall be centered over the left and right body panels to ensure there is no interruption in thermal or moisture protection in the front of the jacket. The outside storm flap shall be constructed of two plies of outer shell material with one ply of breathable moisture barrier material and one layer of thermal material. The outside storm flap shall be double stitched to the right side body panel and shall be reinforced at the top and bottom with bartacks.

☐ Compliant ☐ Exception

m. STORM FLAP AND JACKET FRONT CLOSURE SYSTEM

The jacket shall be closed by means of a steel 22” zipper, and flame resistant hook and pile (e.g. velcro) fastener tape on the storm flap. The storm flap shall close over the left jacket body panels and shall be secured with flame resistant hook and pile fastener tape. A 2 inch by 22 1/2 inch piece of Fr pile fastener tape shall be installed along the leading edge of the storm flap on the underside. A corresponding 2 inch by 22 1/2 inch piece of FR hook fastener tape shall be sewn to the front body panel and positioned to engage the pile fastener tape when the storm flap is closed over the front of the jacket.

☐ Compliant ☐ Exception

n. HANG UP LOOP

A hang up loop constructed of outer shell material shall be provided and attached to the interior collar area sandwiched between collar and facing. The installed loop shall be designed to provide long service and shall not separate from the coat when the coat is hung by the hanger loop for long periods of time.

☐ Compliant ☐ Exception

o. RETROREFLECTIVE FLOURESCENT TRIM

The retroreflective fluorescent trim shall be yellow/lime Scotchlite. Each jacket shall have an adequate amount of retroreflective fluorescent trim affixed to the outside of the outer shell to meet the requirements of NFPA #2007. The trim shall be in the following widths; one stripe of 3 inch wide trim around each sleeve below the elbow, a 3 inch wide stripe around the bottom of the jacket within approximately 1 inch of the hem, a 3 inch wide stripe horizontally across the chest area approximately 3 inches below the armpit, a 3 inch wide stripe across the middle of the back. All trim shall be attached with 4 rolls of stitching.

☐ Compliant ☐ Exception

p. SIZING

The jacket length shall measure from the juncture of the collar and back panels to the hem of the jacket and shall measure 32 inches long. The jacket shall be available in even size chest measurements of 2 inch increments, shall range from a small size of 34 to a large size of 70. (Generalized sizing, such as small, medium, large, etc., will not be considered acceptable; sizing specifically for women shall also be available.)

☐ Compliant ☐ Exception

q. RDD

Rescue Drag Device is designed to provide a quick deployment. The RDD is located at the base of the collar with a protective flap over the opening though the coat. Reflective trim is sewn over the flap.

☐ Compliant ☐ Exception

11. TROUSER CONSTRUCTION

a. WAIST CUT PANTS

The body shall be constructed of four separate body panels consisting of two front panels and two back panels. The body panels shall be shaped so as to provide a tailored fit, thereby enhancing body movement, and shall be joined together by triple stitching with Nomex thread.

☐ Compliant ☐ Exception

b. SUSPENDER AND SUSPENDER BUTTONS

Two suspender Loops shall be installed on the uppermost portion of the back panel and two suspender loops shall be installed in the front of the trousers on the waistband. The main body of the suspenders shall be constructed of 2 inch wide non-elasticized cotton webbing, and shall be equipped non-slip stainless steel slide fasteners for adjustment. The non-elasticized sections of the suspenders shall run over each shoulder to a point approximately shoulder blade high on the back, and just above the waistline in the front. On the back, 2 acetal loops shall be stitched on the non-elasticized webbing, and shall extend to the top of the back bib panel. On the front, 2 inch wide elasticized webbing measuring approximately 9 inches long, shall be threaded through and folded over an acetal loop attached to the non-elasticized portion on each side, providing 4-way suspension on the front. This will provide flexibility for movement, since webbing slides through the loop.

☐ Compliant ☐ Exception

c. WAISTBAND

The waist area of the trousers shall be reinforced on the inside with a separate piece of outer shell material no less than 2 inches in width. The top edge of the waistband reinforcement shall be stitched to the outer shell at the top of the trousers. The lower edge of the waistband shall be unattached to the shell to accept the thermal liner and moisture barrier. The top of the thermal liner and moisture barrier shall be secured to the underside of the waistband reinforcement so as to be sandwiched between the waistband reinforcement and outer shell to reduce the possibility of liner detachment while donning and to avoid pass through of snaps from the outer shell to the inner liner. An inward facing snap hook shall be riveted to the right front body panel in the waist area. A dee ring shall be riveted to the leading edge of the fly flap near the top. The snap hook shall engage the dee ring located in the fly flap.

☐ Compliant ☐ Exception

d. TAKE UP STRAPS

The trousers shall be equipped with two take up straps. The straps shall be constructed of double thickness outer shell material and be positioned in the waist area on the outside of the garment; one on each side. Each take-up strap shall be comprised of two subcomponent straps. The strap component shall be 1 inch wide and 5 inches long and shall be stitched and bar tacked to the trousers. The strap shall hold a nickel plated take up. The take up shall point toward the front . The strap component shall be inserted through the back of the take up, and back through the front of the take up. The take up strap pull tabs shall pull toward the back to tighten (this shall allow for approximately 2” of adjustment per strap, being 4” overall.)

☐ Compliant ☐ Exception

e. EXTERNAL FLY FLAP AND INTERNAL FLY FLAP

Both external fly flap and internal fly flap shall be constructed with moisture and thermal barrier for better protection of the groin area. The external fly flap shall be

constructed of one piece of outer shell material, one piece of moisture material, and one piece of thermal material. The fly flap shall be stitched to the left front body panel beginning at the waist and extending down to a depth of approximately 11". The fly flap shall be approximately 7 inches wide at the top, tapering to approximately 2 inches in width at the crotch. A dee ring shall be riveted to the leading edge of the fly flap at the top and shall be positioned to engage the safety hook when the fly flap is in the closed position.

The internal fly flap constructed of one piece of moisture material and one piece of thermal material. Fly measuring approximately 7 inches wide by 11 inches long, shall be sewn to the leading edge of the right front body panel in the fly area. (The action of external fly flap overlapping the internal fly flap will ensure there is no interruption in thermal or moisture protection.)

☐ Compliant ☐ Exception

f. TROUSERS CLOSURE SYSTEM

The exterior primary positive locking closure shall be an inward facing safety hook and dee ring. The safety hook shall be attached to the right front body panel in the waist area and shall engage the dee ring located on the leading edge of the external fly flap.

The internal fly flap closure shall consist of 2 inch wide by full length flame resistant hook and pile (e.g. velcro) fastener tape. The FR pile portion shall be sewn to the inside of the leading edge of the external fly flap. The corresponding portion of FR hook fastener tape shall be sewn to the right front body panel positioned to engage the pile portion when the external fly flap is in the closed position.

☐ Compliant ☐ Exception

g. EXPANSION (BELLOWS) POCKETS

An expansion pocket, measuring approximately 2 inches deep by 9 inches wide by 10 inches high shall be constructed of one layer of outer shell material and one layer of neoprene moisture barrier material. The pocket shall be stitched to the side of the leg straddling the out seam above the knee and positioned to provide accessibility. Two rust resistant metal drain eyelets shall be installed on the underside of each expansion pocket to facilitate drainage of water. The pocket flap shall be rectangular in shape, constructed of two layers of outer shell material, one layer of neoprene moisture barrier material and shall measure approximately 9 1/2 inches by 4 inches wide. The pocket flaps shall be closed by means of flame resistant hook and pile (e.g. velcro) fastener tape and measuring 2 inches x 2inches. All pockets are lined with Neoprene.

☐ Compliant ☐ Exception

h. TROUSER CUFF REINFORCEMENTS

The cuff area of the trousers shall be reinforced with black Ara-Shield material. The cuff reinforcement shall not be less than 2 inches in width and folded in half, approximately one half inside and one half outside the end of the leg. The cuff reinforcement shall be stitched to the outer shell. Two Nomex snap tabs (one on each side), measuring approximately 4 inches long shall be sewn to the inside of each leg of the outer shell. A female snap fastener half shall be installed at the end of each tab and shall align with the male snap fastener halves installed at the bottom of the trouser thermal liner/moisture barrier. The tab mounted snap fasteners shall secure the trouser thermal liner/moisture barrier to the outer shell.

☐ Compliant ☐ Exception

i. KNEE REINFORCEMENTS

The knee area shall be reinforced with black Ara-Shield material. The knee reinforcements shall measure approximately 10” wide by 12 inches high and shall be stitched to the outside of the outer shell.

☐ Compliant ☐ Exception

j. PADDING UNDER KNEE REINFORCEMENTS

Padding for the knee shall be accomplished with three layers of padding material sewn to the knee area of the trousers lining.

☐ Compliant ☐ Exception

k. RETROREFLECTIVE FLUORESCENT TRIM

The trousers shall have a stripe of retroreflective fluorescent trim encircling each leg below the knee to comply with the requirements of NFPA #1971-2007 Revision, in 3-inch lime-yellow/silver Scotchlite.

☐ Compliant ☐ Exception

l. SIZING

The trousers shall be available in even size measurements of two increments and shall be available in a range of sizes from 26 to 70. The trouser inseam measurement shall be

available in two inch increments. (Generalized sizing, such as small, medium, large, etc. will not be considered acceptable. Sizing specifically for women shall also be available.

☐ Compliant ☐ Exception

12. THIRD PARTY TESTING AND LISTING PROGRAM

All components used in the construction of these garments will meet standard testing for compliance to the NFPA Standard #1971 (2018 Revision) by Underwriters Laboratory (UL). Underwriters Laboratories shall certify and list compliance to that standard. Such certification shall be denoted by the Underwriters Laboratories certification label.

☐ Compliant ☐ Exception

13. LABELS

Appropriate warning label(s) shall be permanently affixed to each garment. Additionally, the label(s) shall include the following information.

Underwriters Laboratories classified mark

Manufacturers' name

Manufacturers' address

Manufacturers garment identification number

Date of manufacture

Size

Fiber contents

☐ Compliant ☐ Exception

14. EXCEPTIONS TO SPECIFICATIONS

Any and all exceptions to the above specifications must be clearly stated for each heading. Use additional pages for exceptions, if necessary.

15. OPTIONS

1. Department name patch (Millersville) in 3 inch letter sewn to a self material patch by a zig-zag stitch. The patch is then sewn to the back of the coat.

2. A flashlight tab and strap shall be sewn to the right side of the chest of the coat.

3. Hang down name patches with snaps and hook & loop.

4. NY trim upper arm and down outside of each leg.

5. Belt and 4 belt loops.

6. Hand warmer pockets on coat.

Millersville Fire Dept.

GENERAL SPECIFICATIONS

FOR

STRUCTURAL FIRE FIGHTING BOOTS

BOOT SPECIFICATIONS 11" STRUCTURAL BOOT

These specifications are intended to define the minimum requirements for Structural Firefighting Protective Footwear as well as Liquid Splash Protective Footwear for Hazardous Materials Emergencies.

These specifications are to meet or exceed the requirements for NFPA 1971 Standard on Protective Ensembles for Structural Firefighting, latest edition and NFPA 1992 Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies, latest edition.

CONSTRUCTION

Pull on bunker style with boot height measured at 11", measured in accordance with measurement requirements of NFPA 1971, latest edition.

☐ Compliant ☐ Exception

All leather, hydrophobic (water cannot penetrate leather from the outside, but water vapor from foot perspiration can be released through the leather from the interior to the exterior of the boot), breathable, 2.5-2.7 mm thickness. Tested to be hydrophobic in a Penetrometer for a minimum of 120 minutes. Free of PCP, AZO and Chromium VI.

☐ Compliant ☐ Exception

Leather is treated to reduce the heating effect of the upper leather. Sunlight is reflected by the leather, keeping the leather and the feet cooler.

☐ Compliant ☐ Exception

Built in climate system that permits air circulation with every step – moist air is released and fresh air comes in through a minimum of 12 vent holes at the top of the boot.

☐ Compliant ☐ Exception

Waterproof inner liner of CROSSTECH®. Bloodborne pathogen and chemical resistant. Inner liner is firmly secured and sealed along with the upper leather beneath the sole for a liner that will not pull out or wrinkle over time. Inner lining minimally glued to upper to prevent detachment and allow full breathability of the leather.

☐ Compliant ☐ Exception

Two large pull on loops at both sides made from upper leather and reinforced with textile strip.

☐ Compliant ☐ Exception

NOMEX® threads, with a minimum thickness of 30/3, water repellent, yellow in color.

☐ Compliant ☐ Exception

Highly heat resistant rubber nitrile sole. Oil and fuel resistant, non-slip, and non chalky. Self-cleaning round tread groove base. High voltage resistant to 14 KV.

☐ Compliant ☐ Exception

Extremely low weight PU foam injected throughout sole interior for cold/heat insulation, shock absorption.

☐ Compliant ☐ Exception

Ladder shank with a thickness equal to or greater than 1.4 mm, stainless, 3 riffles, deflection at 400 lbs not more than ¼” (6mm).

☐ Compliant ☐ Exception

Steel mid sole with a thickness equal to or greater than .5 mm; stainless. Puncture resistance greater than 1212 N (272 lbf) with a flex cracking resistance greater than 1,500,000 flexes. Meets ASTM F2413 (Class 75), latest edition and CAN Z195 (Grade 1), latest edition.

☐ Compliant ☐ Exception

Anatomically formed abrasion resistant insole. Removable and machine washable.

☐ Compliant ☐ Exception

Fibrous leather heel counter, anatomically formed.

☐ Compliant ☐ Exception

Steel toe cap with rubber transient to avoid damage to the membrane which meets ASTM F2413 (Class 75), latest edition and CAN/CSA Z195 (Grade 1), latest edition.

☐ Compliant ☐ Exception

Profiled exterior rubber toe cap with furrowed seaming at the end to protect from scrubbing.

☐ Compliant ☐ Exception

SIZING

Men's sizes 5-16 whole and half sizes. Women's sizes 5-12 whole and half sizes

☐ Compliant ☐ Exception

Three widths: narrow, medium, and wide

☐ Compliant ☐ Exception

CARE, WARRANTY, AND LABELING

Manufacturer User Guide relating to care and use of NFPA certified footwear should be provided and packaged with each pair of boots.

☐ Compliant ☐ Exception

A minimum of a 1 year warranty covering defect in workmanship and materials, including the CROSSTECH® moisture barrier, as long as boots are used and cared for in accordance with manufacturer instructions. A copy of manufacturer's warranty must be submitted with bid proposal.

☐ Compliant ☐ Exception

Out of warranty footwear can be refurbished with original factory parts which include repair or replacement of stitching, profiled rubber toe caps, soles, and insoles. Footwear can be cleaned and deodorized. Additional option of sole replacement only and profiled rubber toe cap replacement only.

☐ Compliant ☐ Exception

Boots should be tested and certified by Underwriter's Laboratories or Safety Equipment Institute (SEI). A current copy of manufacturer's certification must be submitted with bid proposal.

☐ Compliant ☐ Exception

Boots should be permanently and clearly labeled that boots meet NFPA 1971, current edition and NFPA 1992, current edition.

☐ Compliant ☐ Exception

Boots must be clearly and permanently labeled with manufacturing information, including country of origin and manufacturing date.

☐ Compliant ☐ Exception