

**CITY OF URBANA REQUEST FOR BIDS**

September 3, 2013

**"Notice to Bidders"**

**INVITATION TO BID**

Sealed bids will be received by the City of Urbana until **2:00 p.m., local time, on September 18, 2013**, in the Office of the Fire Chief, 400 South Vine Street, Urbana, Illinois, and then publicly opened and read for furnishing the following:

**PROTECTIVE CLOTHING FOR STRUCTURAL FIREFIGHTING COATS AND PANTS**

Bid specifications are attached. The City of Urbana is requiring bid prices on new equipment. Please direct any questions to Captain Joel S. Neal at 217.840.6201 or [jsneal@urbanainllinois.us](mailto:jsneal@urbanainllinois.us).

Bids must be submitted in a sealed envelope addressed:

**Proposal for: Protective Clothing for Structural Firefighting Coat and Pants  
To: City of Urbana  
c/o Interim Fire Chief  
400 South Vine Street  
Urbana, Illinois 61801**

Sincerely,

Joel S. Neal, Captain  
Urbana Fire Department  
ph# 217-384-2420  
fax# 217-384-2449  
[jsneal@urbanainllinois.us](mailto:jsneal@urbanainllinois.us)

# Urbana Fire Department Protective Clothing Specifications

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## GENERAL BID SPECIFICATIONS

### PROTECTIVE CLOTHING FOR STRUCTURAL FIREFIGHTING COATS AND PANTS

#### INSTRUCTIONS TO BIDDERS

1. All items contained in the "Instructions to Bidders" are applicable to this call for bids.
2. Each bid shall be in writing and shall include completion of the bid form included herein.
3. Each bid must be signed in the firm or corporate name and must bear an original longhand signature of a principal duly authorized to make contracts for the bidding party. The Bidder's name must be fully stated where proposals are signed by an agent of the Bidder; evidence of their authority to act as the Bidder's agent shall accompany the proposal. The name of each person signing the proposal shall be typed or printed below their signature.
4. Bids must be submitted in sealed envelopes to the addressee below not later than the time set forth in "Notice to Bidders" addressed as follows:

**Proposal for: Protective Clothing for Structural Firefighting Coat and Pants**  
**To: City of Urbana**  
**c/o Interim Fire Chief**  
**400 South Vine Street**  
**Urbana, Illinois 61801**

5. Bids will be opened publicly by the City as soon as practicable after the required time and date of submission. The City Owner reserves the right to reject any or all bids, or any part thereof where such bids are not responsible bids or where any such bid fails to meet or exceed the bid specifications provided herein. The City reserves the right to waive any informalities in any bid where such waiver is deemed to be for the best interests of the City.
6. In accepting any particular bid, if any, the Bidder's reputation and the amount of the bid will be considered. The City reserves the right to accept the bid deemed most favorable in terms of meeting or exceeding the specifications provided herein and the amount of any such bid after all bids have been examined and evaluated.
7. The Bidder's attention is directed to the fact that all applicable Federal and State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over the bid shall apply and these will be deemed to be included in any purchase order entered into upon acceptance of any such bid.
8. All bids shall include all taxes, if any, that are applicable to the City of Urbana. The City and State of Illinois sales tax and Federal excise taxes are not applicable to sales made to the City of Urbana and must be excluded. The City Clerk, upon request, will execute the exemption certificates in connection with all orders when Federal excise tax would otherwise be due.

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9. No member, officer, or employee of the City of Urbana, Illinois, or its designees or agents, and no member of the governing body of the City of Urbana, Illinois, who exercises any functions or responsibilities with respect to the City of Urbana during their tenure or for one year thereafter, shall have any interest, direct or indirect, in any bid or contract for the equipment described herein.
10. Any exceptions to the bid specification contained herein must be specifically identified or described by the bidder and failure to do so shall automatically disqualify the bid and bidder.
11. To qualify as a bidder, the bidder must be either the manufacturer of the equipment subject to this request for bids or a sales distributor which is authorized by the manufacturer to sell that manufacturer's equipment.
12. Any and all questions regarding this request for bids should be directed to the Urbana Fire Department Administrative Assistant at 217.384.2429 or at 400 South Vine Street, Urbana, IL 61801.
13. By submitting a bid in response to this request for bids, the bidder shall be deemed to have knowingly submitted him/her/its self to the jurisdiction of the State of Illinois and, as such, any dispute arising out of any bid or part thereof shall be resolved in the Circuit Court for the Sixth Judicial Circuit, Champaign County, Illinois.
14. If selected, vendor will be required to sign the City of Urbana Purchasing Certification Form. This form states that the vendor agrees to comply with the City of Urbana's Drug-Free Workplace Act (required by Illinois Revised Statutes, Chapter 127, Section 132.311), Certification of Compliance (required by Illinois Revised Statutes, Chapter 38, Section 33-E and 34-E and Chapter 24, Section 11-42.1-1), Delinquent Taxpayers Act (required by 65 ILCS, 5/11-41.1-1) and the City of Urbana's Affirmative Action Ordinance and may be required to submit written evidence of the firm's employment practices, policies, goals, and statistical data concerning employee composition on race, color, job description and compensation.

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## **BID SPECIFICATIONS AND REQUIREMENTS**

**EQUIPMENT SUBJECT TO BID:** The following pieces of equipment are to be the subject of each bidder's bid:

Quantities:

18 Bunker Coats, plus additional coats as needed – Bid should provide per unit pricing.

18 Bunker Pants, plus additional pants as needed – Bid should provide per unit pricing.

Optional Equipment:

Coat:

Radio Pocket with antenna notch - 8 x 3 x 2, 7 oz. Armor Twill Golden Brown – Bid should provide cost of inclusion per unit.

Flashlight Holder - Snap Hook above strap with hook and loop closure, 7 oz. Armor Twill Golden Brown – Bid should provide cost of inclusion per unit.

Mic Tab - 0.5 x 2.5, 7 oz. Armor Twill Golden Brown – Bid should provide cost of inclusion per unit.

Divided Half Hi Bellow Pockets, 7 oz. Armor Twill Golden Brown – Bid should provide cost of inclusion per unit.

Coat Closure Options:

1. Hook & Loop closure on the inside, Hook & Dee Rings on Storm Flap – Bid should provide cost of inclusion per unit.
2. Zipper on the inside, Hook & Dee Ring on the Storm Flap – Bid should provide cost of inclusion per unit.
3. Hook and Dee Ring on the inside, Hook & Loop on extra wide 6" Storm Flap – Bid should provide cost of inclusion per unit.
4. Zipper on the inside, Hook & Loop on the Storm Flap – Bid should provide cost of inclusion per unit.

Pants:

Divided X-Large Bellows Pockets, 7 oz. Armor Twill Golden Brown – Bid should provide cost of inclusion per unit.

**CERTIFICATION OF EQUIPMENT:** The bidder must certify in writing or provide some other form of written certification that each piece of equipment which is the subject to the bidder's bid meets or exceeds all requirements provided in NFPA 1971, 2013 Edition. The bidder must also list and label each

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piece of equipment as having met the specifications or requirements, after testing, of Underwriters Laboratory (UL) or the Safety Equipment Institute (SEI) as third party certification organizations prescribed in NFPA 1971. All certification testing and test preconditioning must have been performed by an ISO 17025-certified laboratory. UL, SEI or a UL Authorized Client Test Data Program laboratory will fulfill this requirement.

**WARRANTY:** The bidder must provide a lifetime warranty against defects in materials and workmanship for each piece of equipment which is subject to the bid as specified by NFPA 1971, 2013 Edition.

**CONTRACT DURATION AND DELIVERY:** The duration of the contract to the winning bidder, if any, shall be two years from the time the winning bid is accepted. During that period of time, the City may order one or more pieces of such equipment as described in this request for bids. The contract price for the pieces of equipment contained in the bidder's bid shall not increase by more than five percent (5%) during the life of the contract. The successful bidder, if any, shall agree to ship or otherwise cause delivery to the City any and all such pieces of equipment as the City orders and such shipment or other delivery shall be within sixty (60) days of the said bidder's receipt of any such order.

**ADDITIONAL REQUIREMENTS:** If the bidder is a sales distributor for the manufacturer, then the bidder must supply a writing signed by a duly authorized officer of the manufacturer that said sales distributor is in fact authorized to sell or distribute that manufacturer's equipment as specified herein.

**BID ACCEPTANCE/REJECTION:** The City reserves the right to reject any and all bids or portions thereof and waive all technicalities deemed in the best interest of the Urbana Fire Department. The City is not bound to accept the lowest bid submitted if the Urbana Fire Department determines that the bid (i) is not a responsible bid (as set forth in Section 2-115 of the Urbana City Code or as provided in Section 7.3 of the City of Urbana Policies and Procedures Manual); (ii) fails in whole or in any part to meet the specifications contained in these specifications; or (iii) amount, in relation to the pieces of equipment to be supplied per the bid, is unreasonable or otherwise unacceptable. The City reserves the right to accept the bid which the Urbana Fire Department deems is in its best interest taking into consideration the cost and quality of the pieces of equipment to be supplied and the safety of the City's firefighters who will use the pieces of equipment. Further, when considering any bid the City reserves the right to consider such intangible factors as, but not limited to, the bidder's reputation, past performance, past experience in supplying goods and/or services to the City, access of service, parts availability, and Urbana Fire Department's operator performance evaluation.

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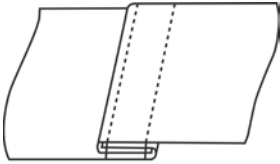
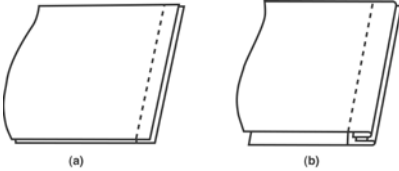
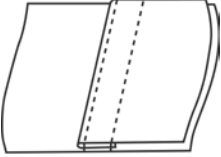
Approvals	Product:		
	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> <li> <b>Product Country of Origin</b>                      For liability reasons, garments must be manufactured in the United States of America or Canada by companies with their assets and incorporation within the United States of America or Canada.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <b>Labeling Requirements</b>                      Labels shall be permanently and integrally printed onto materials that meet all the requirements for labels of NFPA 1971. The garment shall be clearly labeled to fully identify the material content of all three layers: outer shell, moisture barrier and thermal liner.                       In addition, each separable outer shell component shall be labeled in an obvious location including the size, date of manufacturer and an individualized serial number and bar code that matches the corresponding garment liner.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <b>Care Instructions</b>                      The manufacturer shall provide a user information guide for the garments, which complies with user information requirements of NFPA 1971. Topics shall include, but not necessarily be limited to: pre-use information, preparation for use, inspection frequency and details, don/doff, use consistent with NFPA 1500, maintenance and cleaning, and retirement and disposal criteria and considerations.                       This document shall be packaged with each garment along with a specification summary sheet describing garment custom options, sizing and production details. This written information shall be in complete compliance with NFPA 1971 requirements, and shall reference same.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <b>Sizing</b>                      To ensure a perfect fit, sizing shall be determined by actual measurements taken of the firefighter by a trained measurement specialist, or sizing try-ons, or both. Sizing measurements shall be taken according to a schedule and location(s) mutually agreed                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<p>between the manufacturer and the department. Garments shall be available in custom sizing as follows: coat chest in 2-inch (5.1 cm) increments, coat sleeve in 0.5-inch (1.3 cm) increments, coat back length in 1-inch (2.5 cm) increments, pant waist in 2-inch (5.1 cm) increments and pant inseam in 1-inch (2.5 cm) increments. A full range of women’s sizing, on women’s patterns, must also be available. Each sleeve and inseam length shall provide 100% gradation from shoulder to wrist, and from hip to ankle, to provide proper fit for individual arm and leg lengths. Pattern tailoring to custom-fit neck, bicep, hip/seat and thigh circumferences must also be provided, when needed, at no additional charge. Neither Small-Medium-Large-Extra Large sizing nor women’s garments cut to men’s patterning are considered acceptable, since proper fit facilitates mobility and minimizes stress.</p>			
<ul style="list-style-type: none"> <li>• <b>Self-Binding</b> Liner and moisture barrier shall be stitched together and turned, then topstitched, to create a self binding edge. The extra bulk of separate binding material is specifically prohibited.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• <b>Thread</b> All thread used in structural seams shall be Nomex® of minimum Tex size T 70. Light colored garments and trim areas shall feature yellow thread. Black and dark garments shall feature black thread. Tan or bronze colored garments shall feature tan thread.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• <b>Stitching</b> <b>MAJOR A &amp; B SEAMS</b> Except for the collar Major A seam, which is single-needle lock stitched three times, all Major A &amp; B seams (as defined by NFPA 1971) shall be double stitched, double feld throughout all three layers (outer shell, moisture barrier and thermal liner), and shall be made with Nomex® thread, minimum Tex size T 90. Detailed stitch and seam type requirements are shown below. Also, all moisture barrier seams shall be tape-sealed to meet all requirements of the NFPA 1971 Liquid Penetration Resistance Test.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

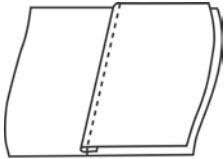
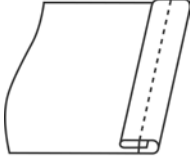
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<div style="text-align: center;">  <p style="font-size: small;">Seam Type LSc-2 (Modified)</p> <p><b>Modified Seam Type LSc-2</b></p> <p><i>Double fold seam, modified only to ensure that both stitch lines penetrate all layers of cloth at joining, otherwise as defined by ASTM D 6193-97</i></p> </div>			
<p>• <b>MINOR SEAMS</b></p> <p>Most Minor seams, such as storm shields and mated hems, shall also be stitched with the specified Nomex thread. Detailed stitch and seam type requirements are shown below.</p> <div style="text-align: center;">  <p style="font-size: x-small;">(a) (b)</p> <p style="font-size: x-small;">Seam Type SSae-2</p> <p><b>Seam Type SSae-2</b></p> <p><i>As defined by ASTM D 6193-97, shown (a) before and (b) after required turning</i></p> </div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>• <b>POCKETS</b></p> <p>Flat garment pockets shall be stitched with the specified Nomex® thread. Detailed stitch and seam type requirements are shown below.</p> <div style="text-align: center;">  <p style="font-size: x-small;">Seam Type LSd-2</p> <p>3-Dimensional pocketing shall feature these same construction details, but the reinforced single stitch Seam Type LSd-1 may be substituted for LSd-2. Detailed seam type requirements are shown below.</p> </div>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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 <p style="font-size: small;">Seam Type LSd-1</p> <p><i>Seam Type LSd-1</i></p> <p><i>As defined by ASTM D 6193-97</i></p>			
<ul style="list-style-type: none"> <li> <p><b>• SINGLE LAYER HEMMING AND FINISHING</b></p> <p>Single layer hemming and finishing shall be stitched with the specified Nomex® thread. Detailed stitch and seam type requirements are shown below.</p> <div style="text-align: center;">  <p style="font-size: x-small;">Stitch Type EFb-1</p> <p><i>Seam Type EFb-1</i></p> <p><i>As defined by ASTM D 6193-97</i></p> </div> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Pockets</b></p> <p>When exterior pockets are specified, the following requirements shall apply to all such custom option specified exterior pockets:</p> <p>All pockets and flaps shall be reinforced at the top corners with bar tack stitching.</p> <p>All pockets shall be Kevlar lined with an extra layer of NFPA-certified reinforcement material, such as Arashield, on the outside of the pocket for extra durability. The exact location of the reinforcements shall be identified in the custom options section(s).</p> <p>All pockets shall have a means to drain water and shall have a means of closure.</p> <p>All pocket closures shall be made either with hook <b>and</b> loop fastener tape a minimum of 1.5 inches (3.8 cm) wide, with a flap, or with snaps. The specific</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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placement of the closure system shall be outlined in the custom options sections.			
<ul style="list-style-type: none"> <li> <b>• Tailored Grading of Garment Linings</b>                      All garment layers and Cold Weather Accessory Linings shall be graduated in size to fit within in each other in the overall composite without causing bunching or binding when the garment is worn.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <b>• Points of Stress</b>                      All points of stress shall be reinforced with sturdy bartacks. Rivets are not acceptable because of their potential for rust and electrical or heat conduction.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <b>• Seam Protection</b>                      At the coat and pant cuff Major A seams, the reflective trim shall stop just before the folding of the full fold seam and for additional abrasion protection be covered by a sewn on strip of polymer coated Kevlar material laid on top of the Major A seam and covering each end of the trim.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <b>• Repairs and Alterations</b>                      The manufacturer shall provide on call at no charge, during normal business hours, a liaison for the repair department to assist the Fire Department on a telephone consultation basis, on all maintenance or repair questions that might arise. Additionally, the manufacturer shall agree to expedite, at its own cost, all repairs to seams and closures, including Velcro, which must be performed at the manufacturer's plant or certified repair facility over the life of the garment.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Required Components	Product:		
Coat	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> <li> <b>• Design</b>                      The standard coat design shall be 6-inches (15.2 cm) longer at the rear hem than at the front hem and provide continuous and unbroken moisture barrier and thermal liner protection from the collar seam to the hem at the bottom of the coat tail. Each coat length shall be determined by each individual's torso length to provide the coat-to-pant interface as defined by NFPA 1500. Coat design must interface properly                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<p>with standard waist high bunker pants. To facilitate various body types the front to rear length differential shall be made available in 3-inch (7.5cm), 4-inch (10.0cm), 5-inch (12.5cm and 6-inch (15.0cm) "Tail Drops".</p>			
<ul style="list-style-type: none"> <li>• <b>Patterning</b>  Garments shall feature a tailored three-piece body (with one-piece back) and one-piece, set-in sleeve construction throughout the outer shell, moisture barrier and thermal liner layers. One-piece garment body (either all layers or some layers) will not be considered acceptable since they cannot be tailored to hard-to-fit personnel. Similarly, garments with seams in mid-back are not considered acceptable because of backbone irritation that can occur with SCBA use. To facilitate individual tailoring needs, the major A &amp; B seams joining the one-piece back to the right and the left front body panels (outer shell and all interior layers) shall be located at the most lateral position when the coat is laid flat for inspection.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• <b>Patterning Requirements</b>  To assure maximum freedom of movement and reduce kinetic resistance with minimum garment weight and bulk, coat patterning shall include the following features: <ul style="list-style-type: none"> <li>• Degree of slope on shoulders shall be no more than 20%.</li> <li>• Sleeve patterning having built-in underarm bellow shall be provided to minimize coat hem rise.</li> <li>• Sleeve attachment shall minimize shoulder lift and allow a full 360 degrees freedom of movement.</li> <li>• Coat hem rise with overhead reach of both arms not to exceed 4-inch (10.2-cm) maximal extension on properly fitted garments.</li> <li>• Shell-and-liner retraction at the cuff shall not exceed 1 inch (2.5 cm) when both arms are raised overhead. This helps eliminate wrist exposure.</li> <li>• 10-inch (25.4-cm) chest over-sizing shall be provided.</li> <li>• Coat sweep measurements must be consistent with the chest over-size at the hem.</li> <li>• Reach when measured from cuff to cuff, with coat lying flat, and standard length sleeves extended to each side, shall be provided as detailed below.</li> <li>• An alteration point at the hem that during manufacture allows the sweep dimension to be adjustable in two-inch (5.0cm) increments</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<p style="margin: 0;">Chest Size      Standard Reach</p> <p style="margin: 0;">40 in (101.6 cm)    66 in (167.6 cm)</p> <p style="margin: 0;">42 in (106.7 cm)    67 in (170.2 cm)</p> <p style="margin: 0;">44 in (111.8 cm)    68 in (172.7 cm)</p> <p style="margin: 0;">46 in (116.8 cm)    68 in (172.7 cm)</p>			
<ul style="list-style-type: none"> <li> <p><b>• Drag Rescue Device (DRD)</b></p> <p>Manufacturer shall supply an NFPA required and certified Drag Rescue Device with each coat. Each strap will be properly labeled with the chest size(s) the Rescue Strap is designed to fit.</p> <p>Rescue Strap shall be designed in a fashion that it functionally provides a dynamic and articulated action and to eliminate excess strapping material hanging down the back when installed between the garment's liner and outer shell.</p> <p>The grab loop shall extend upward and pass through a tunnel of outer shell and pass out through a reinforced slot in the coat outer shell just below the center rear of the collar seam. . The protruding grab loop shall then fold back down and be stored by hook and loop fastener.</p> <p>The end of the grab loop shall be covered with an outer shell flap sewn below the collar and held in place with hook &amp; loop fastener to reduce the chances of snagging the grab loop by accident.</p> <p>Rescue Strap shall be sewn with Kevlar thread.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Liner Attachment</b></p> <p>The completed liner-moisture barrier assembly shall attach by means of four (4) evenly spaced glove snaps to each outer shell front facing to reduce weight, bulk and stiffness. To provide continuous moisture and pathogen protection at the front, the liner shall be positioned so it is sandwiched between the coat front facing and a breathable pathogen shield. The use of zippers or hook and loop fasteners in this area is not allowed due to their added weight, bulk and stiffness.</p> <p>Liner sleeves shall be attached at the cuff by means of snaps on two (2) sets of Nomex tabbing per liner cuff. The male and female snap parts shall both be located on Nomex tabbing that is sewn to the liner at the cuff. A separate piece of Nomex tabbing shall be sewn to</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<p>the shell cuff and fashioned as a loop without any snap hardware.</p> <p>To provide continuous moisture protection and pathogen protection at the neck, the liner shall be positioned so that it is sandwiched between an outer-facing pathogen shield and an inside facing of the specified outer shell material.</p> <p>Attachment at the neck shall be by means of four (4) glove straps that penetrate only the layer of the attachment strip facing towards the liner, so that metal contact at a wearer's neckline is completely eliminated or equivalent attachment means.</p>			
<ul style="list-style-type: none"> <li> <p><b>Collar</b></p> <p>The collar shall be of layered construction, consisting of a layer of waterproof moisture barrier and a layer of NFPA 1971-certified insulating material, sandwiched between two (2) layers of specified outer shell material. NFPA compliant collars shall be at least 3 inches (7.6 cm) high while CGSB compliant collars shall be at least 4 inches (10.2 cm) high. The design shall incorporate in its patterning a natural contour that will allow proper fit and performance in the standing (upright) or stowed position.</p> <p>There shall be no vertical or horizontal seams or stitching in the body of the collar. The left outside of the collar shall have a sewn piece of 2-inch x 2-inch (5.0-cm x 5.0-cm) hook fastener tape for chinstrap-to-collar closure. The fastener tape shall be located rearward far enough to allow for the location of a forward mounted microphone tab if so desired. Each collar shall be graded to individual coat sizes.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>Chin Strap</b></p> <p>The chinstrap shall be of layered construction identical to that of the collar configuration described in the previous paragraphs. Chinstrap shall be of a crescent shaped design with minimum dimensions of: 9 inches (22.5 cm) long across the top corners, 10.5 inches (26 cm) long across the bottom corners, and 3.5 inches (8.75 cm) in vertical height, measured at the center. The leading underside edge of the chinstrap shall have a 4.0-inch-wide (3.8 cm-wide) horizontal strip of loop fastener tape to ensure an adequately adjustable closure and to ensure passage of the Whole Garment Liquid Penetration Test.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<ul style="list-style-type: none"> <li> <p><b>• Hang-up Loop</b>                      An 80-pound (36.3 kg) tear strength hang-up loop shall be provided at the interior collar seam. The loop shall be constructed of triple layers of the specified outer shell material, lock-stitched to the coat. Webbing is not acceptable.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Sleeves</b>                      To prevent stove-piping the sleeves shall be individually graded by coat size and sleeve length. For maximum freedom, the sleeve design shall feature extra full cut one-piece set-in sleeves with built-in bellows. To reduce the chances of possible top seam failure in that high thermal exposure area, the sleeve Major seams shall follow the underside of the arm and shall not cross over the outside of the elbow joint. Sleeve seam and sleeve attachment to coat body in all layers shall be 100% double fold and double stitched for maximum.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Inner Wristlet &amp; Waterwell</b>                      Every coat shall feature a minimum 4.5-inch (11.4-cm) long, double-layer knit inner wristlets protected by a flame-resistant and moisture-resistant inner waterwell. The inner wristlet shall be sewn to the thermal liner sleeve end (not to the outer shell). The specified moisture barrier shall form an inner waterwell with an elastic gather sewn to the moisture barrier sleeve end.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• External Wristlet</b>                      Every coat shall feature a 2.5-inch (6.4 cm) long knit outer wristlet, which shall be mounted to the end of each outer shell sleeve to prevent liquid and debris movement up the sleeve between the outer shell and the moisture barrier/ thermal liner assembly.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Front Closure Protective Overlap</b>                      Two-inch-wide (5.1 cm-wide) panels of breathable moisture/ pathogen barrier and specified thermal liner materials shall be provided at coat front closure facings to preclude any type of break in the protective envelope. The entire circumference of a closed coat shall consist of specified shell, moisture barrier and thermal liner materials.</p> <p>An additional layer of breathable moisture/ pathogen barrier material shall be sewn between the 2-inch-wide (5.1 cm-wide) panels and outer shell coat body for the entire length of coat front in a fashion to prevent liquid entry during the NFPA 1971 Whole Garment Liquid Penetration Test.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Urbana Fire Department Protective Clothing Specifications

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<ul style="list-style-type: none"> <li> <p><b>• Composite Materials</b>                      The specifier has determined the ONLY acceptable combination of materials. Any substitution of materials shall be grounds for immediate disqualification of bid without further consideration.</p> <p style="margin-left: 40px;"><b><u>Outer Shell</u></b>                      7 oz Armor Twill – Golden Brown</p> <p style="margin-left: 40px;"><b><u>Thermal Lining</u></b>                      7.4 oz – 86% Kevlar Filament, 14% Nomex /FR Rayon Spun Yarn; 2 Layers E89 –Glide 2 Layer</p> <p style="margin-left: 40px;"><b><u>Moisture Barrier</u></b>                      3.2 oz/yd<sup>2</sup> woven Nomex containing 2% carbon fibers, laminated to a PTFE membrane-Stedair 4000.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• CUSTOM SPECIFICATIONS</b>                      Instructions in this custom options section that contradict earlier specifications or statements supersede those earlier specifications or statements as long as the required certifications are not compromised.</p> <p>Standard Chinstrap                      **NO FOLD CHINSTRAP**</p> <p>Trim- Projects Fire 1 -Lime 2-Tone Scotchlite                      Trim- Double stitched</p> <p>Back Patch –Armor Twill- Black</p> <p style="text-align: center;"><b>URBANA</b></p> <p style="text-align: center;"><b>FD</b></p> <p>No Periods 8 -3" sewn letters -lime Scotchlite                      Hem Patch – Armor Twill - Black</p> <p>LAST NAME or 1st INITIAL + LAST NAME - Avg. 7 letters                      - Ok to use 2" to fit 7 -3" sewn letters -lime Scotchlite</p> <p>Embroidered American Flag - Stars towards front - right sleeve</p> <p>Dead Air Panels - Coat</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Urbana Fire Department Protective Clothing Specifications

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<p>Coat Cuffs - Black Arashield</p> <p>Half Hi Bellows Pockets - 7 x 9 x 1.5 7 oz Armor Twill Golden Brown, lined with Kevlar on the inside, covered with Black Arashield on the outside</p> <p>Hand warmers behind Bellows Pockets -Fleece</p> <p>Sub Wristlets- Long Hybrid with tabs -Nomex black</p> <p>Mic Tab - 0.5 x 2.5 7 oz. Armor Twill Golden Brown</p>			
<p>• <b>USER SPECIFIC OPTIONS</b></p> <p>Radio Pocket with antenna notch - 8 x 3 x 2, 7 oz. Armor Twill Golden Brown *PLACEMENT TO BE SPECIFIED*</p> <p>Flashlight Holder - Snap Hook above strap with hook and loop closure 7 oz. Armor Twill Golden Brown *PLACEMENT TO BE SPECIFIED*</p> <p>Mic Tab - 0.5 x 2.5 7 oz. Armor Twill Golden Brown *PLACEMENT TO BE SPECIFIED*</p> <p>Divided Half Hi Bellow Pockets 7 oz. Armor Twill Golden Brown</p> <p><b>Coat Closure Options</b></p> <ol style="list-style-type: none"> <li>1. Hook &amp; Loop closure on the inside, Hook &amp; Dee Rings on Storm Flap.</li> <li>2. Zipper on the inside, Hook &amp; Dee Ring on the Storm Flap.</li> <li>3. Hook and Dee Ring on the inside, Hook &amp; Loop on extra wide 6" Storm Flap.</li> <li>4. Zipper on the inside, Hook &amp; Loop on the Storm Flap.</li> </ol>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



# Urbana Fire Department Protective Clothing Specifications

Bunker Pants	Product:		
	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> <li> <b>Design</b>                      The pant shall be of a traditional waist-high-only design to facilitate full torso ventilation of front, rear and sides of trunk for maximum body cooling effect to help minimize firefighter heat stress. For this reason, other than waist-high pants shall not be considered acceptable or “equal,” since additional trunk wrapping traps heat and moisture, increasing heat stress buildup while also creating mechanical resistance when covering the natural torso flexion point of the waist.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <b>Patterning Concept</b>                      Garments shall feature a tailored four-piece body plus a one-piece, over-sized crotch diamond pattern in the outer shell, moisture barrier and thermal liner.                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <b>Patterning Requirements</b>                      To assure maximum freedom of movement and reduced kinetic resistance with minimum garment weight and bulk, the pants patterning shall:                     <ul style="list-style-type: none"> <li>Incorporate hydraulic, swivel action leg-to-torso interfaces.</li> <li>Incorporate an oversized diamond-shaped crotch insert, graded according to size, for maximum action stride, optimum stepping reach and no “in-crotch” seaming.</li> <li>In the outer seam hip area, in all three layers shall, incorporate convex seam technology to provide for generous seat expansion when squatting and crawling without creating unsightly bagginess.</li> <li>That the diamond is to extend from just above the left knee to just above the right knee, and be centered equally from front to rear. Width of diamond at top of crotch shall be approximately proportionally graded to waist size and inseam length.</li> <li>Ensure that pants rest in normal body line balance of 22 inches (55.9 cm) center distance at the cuff for 42 waist, 30 inseam pants.</li> <li>Provide for an alteration point at the hips so that during manufacturing the hip dimension can be adjusted in two-inch (5.0cm) increments</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Urbana Fire Department Protective Clothing Specifications

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<ul style="list-style-type: none"> <li> <p><b>• Knee Pads</b></p> <p>The knee area shall be provided with increased thermal protection consisting of one (1) layer of reinforcing material covering multiple horizontal layers of batting insulating and cushioning material. Pads shall measure approximately 10" wide x 12" high. The knee reinforcements shall provide a minimum CCHR rating of 100 in dry conditions. When requested the manufacturer must provide ISO 17025 certified lab results and samples of designs they intend to submit. Trained Fire Department personnel will determine the acceptability of the design based on lab results, comfort, mobility, weight, durability, heat resistance and flexibility.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Suspenders</b></p> <p>Tab Style Suspender Attachment Points: At the top of the outer shell pant waist provide eight, horizontal triple layer (minimum) outer shell tabs measuring at least 0.5"H x 2.0"W. Tabs shall be bar tacked to the inward facing side of the shell with two tabs located on either side of the fly and four tabs evenly spaced at the center rear.</p> <p><b>Suspender Snap Attachments:</b> Suspenders shall attach to the bunker pants at eight locations and utilizing 2.0-inch wide, heavy-duty elastic webbing. At each of the eight attachment points, the end of the elastic webbing shall be folded over to create a triple layer through which two extra heavy-duty female snaps will be applied. Two corresponding extra heavy-duty male snaps shall be set further up on the elastic webbing to allow the webbing to be fed through a bunker pant suspender mounting tab and folding the elastic webbing over itself snapped into place.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Angle or Notched Cuff</b></p> <p>The rear portion of each leg hem shall be notched or angled in an area of approximately 8" wide x 1 ½" high to help prevent the hem from catching on the heels of the firefighters boots or dragging on the ground. All three layers of the leg materials (outer shell, moisture barrier and thermal liner) must angled so as to prevent</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Urbana Fire Department Protective Clothing Specifications

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<p>the moisture barrier/thermal liner from being compromised due to exposure.</p> <p>Each hem will be reinforced with one layer of Black Arashield to reduce ripping of the hem during use.</p>			
<ul style="list-style-type: none"> <li> <p><b>• Liner Attachment</b></p> <p>The moisture barrier and thermal liner assembly shall be attached to the outer shell at the waistband with at least seven (7) evenly-spaced glove snaps. Liners shall be attached at the cuff by means of snaps on two (2) sets of Nomex tabbing per liner cuff. The male and female snap parts shall both be located on Nomex tabbing that is sewn to the liner at the cuff. A separate piece of Nomex tabbing shall be sewn to the shell cuff and fashioned as a loop without any snap hardware.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Fly Front</b></p> <p>The outer shell fly shall be lock-stitched on the front opening and shall be in proportion to waist size and crotch rise in both length and width. Fly inner lining shall extend at least 2 inches (5.1 cm) past the outer shell fly attachment seam and shall be constructed of certified breathable moisture barrier and thermal liner. The front pant opening shall have an internal facing extending at least 2 inches (5.1 cm) past crotch opening and constructed of specified fabric. In combination with the liner, the system shall offer 360 degree protection without gaps during movement of the outer shell moisture barrier and thermal liner. Closure shall be by means of a minimum 1.5-inch-wide (3.8-cm-wide) hook and loop fastener, and all construction techniques used shall provide liquid penetration protection under the NFPA 1971 Whole Garment Liquid Penetration Test. The fly shall be graded to the waist size of garments and crotch rise.</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>• Ladder Escape Harness /Belt</b></p> <p>Harness or belt shall be of an internal or external construction. Belt/Harness shall be comprised of the following components:</p> <ul style="list-style-type: none"> <li>• Should contain two forged sliding D-Rings with the flat sides facing inward; the D-Rings provide attachment points for Ladder belt tethers and various other tools and equipment.</li> <li>• Waist closure shall be provided by a Hook &amp;</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Urbana Fire Department Protective Clothing Specifications

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<p>Take-up Strap comprised of Kevlar webbing sewn to a Snap Hook with adjuster bar and the loose trailing end of the webbing threaded through the adapter/adjuster end of the Belt.</p>			
<ul style="list-style-type: none"> <li>• <b>External Ladder Escape Harness/ Belt Only</b> <ul style="list-style-type: none"> <li>• The waist provides a total of eight vertical breakaway tabs and two horizontal breakaway tabs as follows:</li> <li>• The back belt shall be mounted using four one-inch wide (2.5 cm) vertical outer shell and Velcro, two-piece breakaway tabs even spaced across the rear of the pant.</li> <li>• The Snap Hook with sliding bar used for belt closure shall install using a one-inch wide (2.5 cm) vertical two-piece and an 1.5 inch (3.75 cm) wide horizontal one-piece outer shell and Velcro breakaway tab located on the left front pant panel.</li> <li>• The closure D-Ring shall install using a one-inch wide (2.5 cm) vertical outer shell and Velcro, two piece break away tab near the leading edge of the fly and a 1.5 inch 3.75 cm) wide horizontal one-piece outer shell and Velcro breakaway tab located on the right front pant panel.</li> <li>• The right side of Belt shall be held in place by two one-inch (2.5 cm) wide vertical outer shell and Velcro, two-piece break away tabs on the right front body panel.</li> </ul> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• <b>Composite Materials</b>                      The specifier has determined the ONLY acceptable combination of materials. Any substitution of materials shall be grounds for immediate disqualification of bid without further consideration.                          <u><b>Outer Shell</b></u>                      7 oz Armor Twill - Golden Brown                          <u><b>Thermal Lining</b></u>                      7.4 oz - 86% Kevlar Filament, 14% Nomex /FR Rayon Spun Yarn; 2 Layers E89-Glide 2 Layer                          <u><b>Moisture Barrier</b></u>                      3.2 oz/yd<sup>2</sup> woven Nomex containing 2% carbon fibers, laminated to a PTFE membrane-Stedair 4000                 </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Urbana Fire Department Protective Clothing Specifications

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<ul style="list-style-type: none"> <li> <p><b>CUSTOM SPECIFICATIONS</b></p> <p>Instructions in this custom options section that contradict earlier specifications or statements supersede those earlier specifications or statements as long as the required certifications are not compromised.</p> <p>Trim- 3" Cuff -Lime 2-Tone Scotchlite Trim- Double stitched</p> <p>Narrow 1.5" Velcro/Zipper Fly - No Hook - 1 Snap or equivalent positive closure</p> <p>Angled Cuffs -Pants - Black Arashield</p> <p>Pants Cuffs – Black Arashield</p> <p>Kneepads -7 oz Armor Twill Golden Brown Horizontal Strips in kneepads to be Black Arashield</p> <p>X-Large Bellows Pockets -Pants 10 x 10 x 2 7 oz Armor Twill Golden Brown - E Z Grip Flaps - Arashield Black Reinforced - 5" Ext. Arashield Black Lined with Kevlar</p> <p>Hook &amp; Loop Belt Loops with Rated Ladder Escape Belt</p> <p>Snap Style Suspender Attachment</p> <p>Suspenders w Snap Attach and Quick Adjust Installed</p> <p>Suspender Padding</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <p><b>USER SPECIFIC OPTIONS</b></p> <p>Divided X-Large Bellows Pockets 7 oz Armor Twill Golden Brown</p> </li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Urbana Fire Department Protective Clothing Specifications

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## PERCENTAGE SPECIFICATION COMPLIANCE CALCULATIONS

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	Total Number "Yes/No" Questions		
	Total Number of <b>Yes</b> Answers		
	Total Number of <b>No</b> Answers		
% Specification Compliance: $[(\text{Total Yes Answers}) \div (\text{Total Answers})] \times 100\%$			%
Each "No" answer requires a full written explanation. Each "Yes/No" question not checked where provided will be considered a "No" answer.			