

SPECIFICATIONS **and Bid Form**

Sealed Bids will be received by St. John the Baptist Parish Council until:

2:45 P.M. on November 27, 2018

for

2019 Structural Firefighting Bunker Gear

This bid will establish pricing for the purchase of Structural Firefighting Bunker Gear for 24 months from date of award. Award will be made to one vendor based on the total price for a full set of all items. Purchase orders will be issued for each purchase.

Bids are to be addressed to the St. John the Baptist Parish Council, 1801 W. Airline Hwy, LaPlace, LA, 70068 or delivered to the Parish President's Reception Desk at the same address. Envelopes displaying the bidders name and address must be sealed and clearly marked on the outside of the envelope: "**BID – 2019 Structural Firefighting Bunker Gear**"

All bid documents may be viewed and electronic bids may be submitted at www.centralbidding.com. Details are also available to be viewed on www.sjbparish.com.

Bidders are to use the attached Specifications and Bid Form to identify the Brand and Price on the items for which you are bidding and attach specifications. Bidders shall complete the specification compliance information after each item's description and note any exceptions to compliance in the space provided.

Notes:

Sizing – Vendor must be able to provide onsite sizing of personnel with bunker sizing kit in 2" increments.

Brand, Make, and Manufacture is used only to denote the quality standard of the product desired and that equivalent products will be acceptable.

St. John the Baptist Parish Council, being a government agency, is exempt from all sales tax; therefore, the amount you bid should not contain sales tax.

For any additional information about this bid, contact [Jean Stewart](mailto:j.stewart@stjohn-la.gov) at j.stewart@stjohn-la.gov or [Janice Gauthier](mailto:j.gauthier@stjohn-la.gov) at j.gauthier@stjohn-la.gov of the Purchasing & Procurement office at 985-652-9569.

SPECIFICATIONS
GENERAL SPECIFICATIONS
INNOTEX ENERGY

SCOPE

This document specifies the design and materials used to manufacture coats and pants to be worn during STRUCTURAL FIREFIGHTING as covered by NFPA 1971. The protection offered by the garment covers the lower and upper section of the body excluding head, hands or feet. Garment sizing shall be done in accordance with NFPA 1500 and available for male and female firefighters. Generalized sizing such as small, medium, large, etc... shall be considered unacceptable.

COMPLY _____ **EXCEPTION** _____

CERTIFICATION

The design, materials, workmanship, construction and performance shall meet or exceed all National Fire Protection Association (NFPA) requirements as specified in NFPA 1971, Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, 2018 edition. The manufacturer shall supply the Certificates of Compliance from Underwriters Laboratories showing compliance to the standard.

COMPLY _____ **EXCEPTION** _____

ISO 9001

The manufacturer shall be ISO 9001:2008 certified, thus assuring quality control procedures in the manufacturing of bunker gear. A copy of this certification shall be supplied.

COMPLY _____ **EXCEPTION** _____

EXCEPTION

Bidder shall clearly state in this document if he complies with the section requirements or takes an exception. Any section that is not clearly identified as compliant will be considered as an exception. All alternative proposals for each exceptions shall be described and listed on a separate document and attached to this bid. No exceptions to this paragraph shall be accepted.

COMPLY _____ **EXCEPTION** _____

THL RATING

The composite of outer shell, thermal barrier and moisture barrier shall meet or exceed the minimum THL requirement of the latest edition of NFPA 1971. Manufacturer shall state on his bid the THL value of the proposed composite. Minimum Acceptable THL shall be no less than 42.7.

THL: _____

COMPLY _____ **EXCEPTION** _____

TPP RATING

The composite of outer shell, thermal barrier and moisture barrier shall meet or exceed the minimum TPP requirement of the latest edition of NFPA 1971. Manufacturer shall state on his bid the TPP value of the proposed composite. Minimum Acceptable TPP shall be no less than 235.3.

TPP: _____

COMPLY _____ **EXCEPTION** _____

LABELING

The coats and pants shall be labeled according to the applicable standards and regulations. A warning label shall be applied about use and protection of the garment. A human readable unique serial number shall be assigned to the coats and pants. The unique serial number shall also be translated into bar code so it can be read by care and maintenance facilities.

COMPLY _____ **EXCEPTION** _____

PACKAGING

The garments shall be individually put in a bag that protects them from external elements including UV RAYS on ALL sides before being placed in a transportation box. The individual bags shall have a label that includes the garment identification. The same label shall also be affixed to the transportation box for easier processing by the department.

COMPLY _____ **EXCEPTION** _____

COAT OUTER SHELL ZONE 1

Armor AP - The outer shell shall be approximately 6.5 oz/yd², constructed of a proprietary blend of 80% Nomex® / Kevlar® spun yarns with 20% 400 denier Kevlar® filament. The outer shell shall be constructed in a comfort-twill weave and shall have the DuPont™ Teflon® F-PPE durable water-repellent finish.

The outer shell color shall be black.

COMPLY _____ **EXCEPTION** _____

PANT OUTER SHELL ZONE 1

Armor AP - The outer shell shall be approximately 6.5 oz/yd², constructed of a proprietary blend of 80% Nomex® / Kevlar® spun yarns with 20% 400 denier Kevlar® filament. The outer shell shall be constructed in a comfort-twill weave and shall have the DuPont™ Teflon® F-PPE durable water-repellent finish.

The outer shell color shall be black.

COMPLY _____ **EXCEPTION** _____

MOISTURE BARRIER

The moisture barrier material shall be two-layer CROSSTECH® black moisture barrier – Type 2F, which is comprised of a CROSSTECH™ membrane laminated to a 3.3 oz/yd² woven fabric constructed of 93% Meta-Aramid / 5% Para-Aramid / 2% Anti-Stat. The CROSSTECH™ membrane is an enhanced bicomponent membrane comprised of an expanded PTFE (polytetrafluoroethylene, for

example Teflon®) matrix having a continuous hydrophilic (i.e., water-loving) and oleophobic (i.e., oil-hating) coating that is impregnated into the matrix.

All moisture barrier seams shall be stitched and seams shall be sealed with a minimum one (1) inch GORE-SEAM® tape to afford comparable viral penetration resistance performance. Any seam tape narrower than one (1) inch shall be unacceptable because of the liquid penetration risk associated with narrower seam tape.

Double rows of stitching shall not be acceptable as it reduces the surface area of the sealing tape on both sides of the seam.

The total weight of the moisture barrier shall be approximately 4.7 oz/yd².

COMPLY _____ EXCEPTION _____

THERMAL BARRIER

Glide Gold Pure - The thermal barrier shall consist of a Kevlar®/Nomex® twill weave face cloth constructed of 86% Aramid /14% FR Viscose containing at least 60% of filament Kevlar®. The facecloth shall weigh approximately 3.6 oz/yd² and be quilted with meta-aramid threads to a 50% Meta-Aramid/50% Para-Aramid Needle-punch Batting weighing approximately 4.0 oz/yd². The thermal barrier shall have a total weight of approximately 7.6 oz/yd². Bids offering other fiber blends or less than 60% filament Kevlar® shall not be considered.

COMPLY _____ EXCEPTION _____

POLYMER COATED ARAMID REINFORCEMENT COLOR

All polymer coated aramid reinforcements, where specified, shall be black in color.

COMPLY _____ EXCEPTION _____

HARDWARE

All zippers, snaps, or hook and loop shall be supplied by YKK. Snaps shall be prong type. Stitching of all long pieces of hook and loop shall be done with a triple row of lock stitching. Stitching of all short pieces of hook and loop shall be done with a single row of lock stitching around the edges with an "X" in the center.

COMPLY _____ EXCEPTION _____

COAT SPECIFICATIONS

OUTER SHELL CONSTRUCTION

All "Major A" tl seams shall be made of seam type LSbm-4, including stitch types #504, 401 and 301. The seaming process starts by aligning two pieces of fabric together and stitching them together with what is commonly referred to as a "5 thread overlock", using stitch type #516, consisting of stitch type 504 and 401. The seam is then folded over and top stitched with two (2) rows of lock stitch # 301. All seams shall be stitched with Nomex® thread and sewn to prevent stitches from coming apart by themselves if cut or worn. Stress points such as pockets, pocket flaps, collar, storm flap shall be bar-tacked for increased durability. The base jacket shall be approximately 32 inches (grading) and cut to assure increased overlap with the pants. The collar line, the collar, the sleeve lengths and the gussets shall be cut in proportion with the chest size of the jacket. The coat design shall include a tapered fit, through an athletic cut and shall be 4 inches shorter in the front

than back. The coat shall be constructed of 14 panels in order to provide optimal comfort and fit.

A drag harness shall be installed in the jacket between the outer shell and the liner. The drag harness shall be made of 1" wide supple Kevlar® webbing to limit the abrasion on the moisture barrier. The webbing shall loop around the shoulders starting horizontally below the shoulders at the back, wrap around both shoulders at the front and exit through the outer shell at the back of the neck, below the collar seam. This design increases comfort and reduces the overall coat weight by reducing the amount of webbing between the outer shell and the liner. A flap made of outer shell shall be installed on the back of the jacket at the collar seam. The flap shall be shaped like an irregular pentagon with a rectangular base of six (6) inches wide by one inch and a half (1-1/2) long ending in a triangle. The length of the flap shall be three (3) inches. The flap shall open to give access to the strap of the drag harness. The flap shall be secured in closed position with the use of a hook and loop fastener two (2) inches by one inch and a quarter (1-1/4) with rounded corners and a box and cross stitching. A piece of silver reflective trim shall be heat applied vertically on the center of drag rescue device flap to clearly identify the drag rescue device handle. The letters DRD shall be etched with a laser in the silver reflective material. The harness shall be held in place between the outer shell and the inner liner by strategically positioned loops under the arm, along the path of the harness to keep it in the optimal position.

COMPLY _____ **EXCEPTION** _____

DUAL COLOR OUTER SHELL

The coat outer shell shall be made of two colors with the above specified outer shell in ZONE 1 (torso, shoulders and exterior of sleeves) and a different color of the same outer shell, specified below in ZONE 2 (inside of the sleeves and sides of torso).

Coats without Dual Color outer shells are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

COAT OUTER SHELL ZONE 2

The outer shell shall be approximately 6.5 oz/yd², constructed of a proprietary blend of 80% Nomex® /Kevlar® spun yarns with 20% 400 denier Kevlar® filament. The outer shell shall be constructed in a comfort-twill weave and shall have the DuPont™ Teflon® F-PPE durable water-repellent finish.

The outer shell color shall be gold.

COMPLY _____ **EXCEPTION** _____

LINER CONSTRUCTION

All "Major B" seams shall be made of seam type SSa-2, including stitch types #504 and #401. The seaming process shall start by aligning two pieces of fabric together and stitching them together with what is commonly referred to as a "5 thread overlock", using stitch type #516, consisting of stitch types #504 and #401. In addition, the moisture barrier seams shall be sealed according to the section entitled SEALED MOISTURE BARRIER SEAMS. The moisture barrier and thermal barrier component of the liner shall be sewn together at the edges using a piece of bias-cut neoprene and sewn together with one row of lock stitch, consisting of stitch type 301. All moisture barrier seams shall be stitched with Nomex® thread using 12 ± 1 stitches per inch. All thermal barrier seams shall be stitched with Nomex® thread using 10 ± 1 stitches per inch. All seams shall be oriented so that

the edges of the thermal barrier and the moisture barrier sealing tape are inside the inner liner.

The liner shall be cut a maximum of three (3) inches shorter for the jacket and one (1) inch shorter for the sleeves. The liner shall be attached to the outer shell by one zipper running along the front closure of the jacket and shall be protected with a breathable moisture barrier facing. The liner shall also be attached by two (2) color coded tabs with snaps at each sleeve end.

Two additional layers of thermal barrier shall be sewn in the shoulder area for increased CCHR protection. Should the manufacturer include a nonporous elbow reinforcement, the area under the elbow reinforcement shall also have a layer of neoprene sewn to the thermal barrier, to meet the Stored and Thermal Energy requirement.

The liner shall be equipped with an inspection port allowing for visual inspection of all sealed seams of the moisture barrier. The inspection port shall use a zipper closure of minimally sixteen (16) inches long.

COMPLY _____ **EXCEPTION** _____

AIRFLOW BACK

The coats shall be equipped with a system allowing air circulation on the back while wearing an SCBA. The Airflow system shall consist of a three-dimensional padding system of heavy-duty and precisely shaped closed-cell foam pads. The pads shall be distributed in a pattern optimized for air circulation and increased thermal protection. The pads shall also have 1/2" diameter holes to enable breathability. An aramid blend mesh shall be used to secure the pads on the thermal barrier. The padding shall extend from below the neck line to the low back and shall help cushioning the SCBA while creating Airflow channels.

Coats without Airflow channels are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

AIRFLOW SHOULDERS

The coats shall be equipped with a system allowing air circulation on the shoulders while wearing an SCBA. The Airflow system shall consist of a three-dimensional padding system of heavy-duty and precisely shaped closed-cell foam pads. The pads shall be distributed in a pattern optimized for air circulation and increased thermal protection. The pads shall also have 1/2" diameter holes to enable breathability. An aramid blend mesh shall be used to secure the pads on the thermal barrier. The padding shall be positioned on top of the shoulder and shall help cushioning the SCBA while creating Airflow channels.

Coats without Airflow channels are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

COLLAR

The collar shall be of variable height design with a four (4) layers construction consisting of two (2) layers of outer shell, one (1) layer of thermal barrier and one (1) layer of breathable moisture barrier. The collar shall afford the full protection of a four (4) inch collar at the back and the comfort of a three (3) inch collar at the front for integration with the SCBA face piece. The collar throat closure shall be a continuation of the coat storm flap to prevent any gaps in the throat area.

The collar shall have an internal hanging loop made of the specified outer shell. The loop shall measure a half inch (1/2) wide and have a usable width of three (3) inches.

Collars with separate throat tabs are not considered acceptable to this department.

Collars of single height are not considered acceptable to this department.

COMPLY _____ **EXCEPTION** _____

NO SEAM SHOULDER CONSTRUCTION

The coat shoulder shall be constructed such that there are no seams on top of the shoulder to prevent coat rise and unnecessary abrasion and pressure points. This pattern shall be duplicated in the moisture barrier and thermal barrier.

Coat designs with seams on top of the shoulder are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

SLEEVES

The sleeves shall be cut full length in proportion with the chest sizes. The sleeve pattern shall include the top of the shoulder in order to avoid having a seam on top of the shoulder and limit coat rise. The sleeve shall consist of four (4) pieces, including one (1) single piece on the side of the body and three (3) on the opposite side. The elbow seams shall incorporate retro-reflective piping for additional night time and confined space visibility. The sleeve seams shall be positioned so that they do not come in contact with the coat body when the arms are on the sides.

Coat designs with sleeve seams that come in contact with the coat body and without retro-reflective piping are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

WATER WELL

The wristlets shall be sewn to a water well which in turn shall be sewn the outer shell to avoid water penetration in the sleeve. The wristlet shall include a WRISTLET WATER EVACUATION SYSTEM, with a very shallow water well and two (2) water evacuation eyelets installed on each sleeve. The eyelets shall be positioned so that liquids draining from the eyelets are aiming away from the firefighter's face. This simple design is very light and allows liquids to drain quickly, helping to lower the risks associated with water infiltration and steam burn.

Coat designs with deep water wells and without eyelets are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

ANGLED CUFFS

The sleeve cuffs shall be cut at an angle so that the top of the cuff is longer than the bottom to provide additional overlap of the cuff over the glove interface and provide additional protection while providing unrestricted range of motion.

Coat designs without angled cuffs are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

CUFF REINFORCEMENT

The sleeve cuffs shall be reinforced with polymer coated aramid. The reinforcement shall include a Nomex® cording to prevent stress points on the reinforcement material and reduce abrasion and repairs. The reinforcement material shall be sewn between the sleeve outer shell and water well to prevent thread abrasion and repairs. The reinforcement material shall be sewn with two (2) rows of locked stitches.

Coat designs with cuff reinforcements on top of the sleeve outer shell are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

ACTION BACK

The coat shall have two (2) extensible gusset installed in the center of the back. These gussets shall measure a minimum of eighteen (18) inches long and offer an extension of approximately (4) inches. The liner shall also include pleats that work together with the outer shell gussets to increase range of motion. The outer shell gussets shall have an elastic to ensure that the action back retracts when the arms are in the natural position. This feature is essential to help prevent accidentally getting caught in by the gusset. The extremities of these gussets shall be bartacked.

Coat designs with action backs that are not retractable are not considered acceptable by this department.

Coat designs with action backs that are not in the center of the back are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

COAT CLOSURE SYSTEM

The positive closure system shall consist of a heavy-duty Vislon® zipper of approximately twenty (20) inches long graded to the size of the jacket. The positive closure shall be covered by a ONE PIECE storm flap extending from the bottom of the jacket to the top of the collar, to prevent any gaps in the throat area. The one piece flap shall measure approximately four inches and three quarters (4-3/4) wide and twenty four inches and three quarters (24-3/4) long. The storm flap and throat closure shall be constructed of three (3) layers: two (2) layers of outer shell and one (1) layer of moisture barrier. The storm flap shall have a special grabber made of outer shell material and closed cell foam padding to help opening the flap with a gloved hand. The grabber shall be approximately one and a quarter (1-1/4) inch high by four (4) inches wide at the widest point and

shall be cut at an angle on the bottom. The grabber shall be located at the top of the storm flap. The flap shall be fastened to the front of the jacket by means of FR hook and loop fastener one and a half (1-1/2) inches wide for the full length of the flap and one and a half (1-1/2) inches on the front panel of the outer shell. The hook and loop fastener shall be sewn so that seams are at most 1" apart from one another in order to prevent damage with opening and closing the flap.

The moisture barrier in storm flap shall be the SAME as the moisture barrier selected in the MOISTURE BARRIER section of this specification. Use of moisture barrier other than that specified in the MOISTURE BARRIER section are not considered acceptable by this department.

Closures with separate throat tabs are not considered acceptable to this department.

COMPLY _____ **EXCEPTION** _____

PROFILED POCKETS WITH BUILT-IN HAND-WARMER

The coat shall be equipped with two profiled pockets to reduce bulk when bending and crawling; and eliminate possible snagging. The pockets shall be between the outer shell and liner and accessible through an angled opening for easy access, even when wearing an SCBA. The pockets shall be made of Kevlar® mesh for greater breathability with a woven Kevlar® on the bottom. The pockets shall close with a Vislon® zipper. The zipper shall have a Nomex® tab for ease of opening and closing. The pockets shall also have a hand-warmer compartment lined with Nomex® fleece.

The pockets shall be equipped with be a D-ring permanently riveted to one end of a strap of black Nomex® material of a minimum 5" long folded in half and positioned so that the D-ring can hang just outside the closed pocket. The other end of the black Nomex® material strap shall be permanently attached to the inside of the coat pocket with a bartack.

Coats without profiled pockets are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

RADIO POCKET FLAP

The radio pocket flap shall measure approximately four (4) inches high by three (3) inches wide. The radio pocket flap shall have a special grabber made of outer shell material and closed cell foam padding to help opening the pockets with a gloved hand. The grabber shall be approximately one and a quarter (1-1/4) inch high by three and a half (3-1/2) inches wide at the widest point and shall be cut at an angle on both sides. The grabber shall be located on the bottom edge of the flap. The flap shall close with the use of FR hook and loop fastener of three (3) inches high by two (2) inches wide and two (2) inches by two (2) inches on the face of the radio pocket. The radio pocket flap shall have a padded Grabber tab. The radio pocket flap shall have one (1) bartack on each side for a total of two (2) bartacks. The bottom of the radio pocket shall be reinforced with one (1) layer of neoprene.

COMPLY _____ **EXCEPTION** _____

INSIDE POCKET WITH HOOK AND LOOP

The coat shall be provided with an inside pocket measuring approximately seven and a half (7-1/2) inches wide by eight (8) inches high, constructed of outer shell material. The pocket shall be closed with a one (1) inch by three (3) inches of hook and loop fastener. The hook and loop fasteners shall be sewn with locks stitching in a box & cross pattern.

COMPLY _____ **EXCEPTION** _____

REFLECTIVE TRIM PATTERN

The trim shall be "PROJECT FIRES" style; one band around the lower portion of the jacket, one band on the front of the jacket at the chest area below the armpit, two vertical bands from the lower back trim, one band around each sleeve below the elbow.

COMPLY _____ **EXCEPTION** _____

REFLECTIVE TRIM TYPE

The retro-reflective trim shall be the three (3) inch wide Scotchlite™ Reflective Material - 5687, lime-yellow with silver center, from 3M™. This material is also commonly referred to as segmented triple trim.

COMPLY _____ **EXCEPTION** _____

Outer Shell removable patch with Hook & loop (4"X17")

A patch for lettering constructed of shell fabric shall be installed on the back portion of the jacket and secured to the jacket with the use of hook and loop fastener. This patch shall measure approximately four (4) inches high by seventeen (17) inches wide. Hook fastener shall be sewn to the outer shell of the jacket to receive the removable patch.

COMPLY _____ **EXCEPTION** _____

LETTERING ON SLEEVE

Lettering shall be installed on the Right Sleeve of the jacket, Sewn on Shell Vertically. (SJFD)

COMPLY _____ **EXCEPTION** _____

FLAG

Nomex American Flag shall be installed on the Left Sleeve of the jacket, Sewn on Shell.

COMPLY _____ **EXCEPTION** _____

WATER WELL

The coat sleeve shall have a neoprene water well sewn to the outer shell. The water well shall be approximately two (2) inches deep and prevent debris from entering the sleeve when the arms are raised. The water well shall be sewn into the cuff reinforcement and shall also be sewn to the outer shell approximately two (2) inches from the sleeve end. The water well shall also have two (2) drainage eyelets to prevent accumulation of water when the arms are raised.

COMPLY _____ **EXCEPTION** _____

GLOVE INTERFACE

A regular shaped Nomex® knit wristlet with a thumb loop shall be attached to the water well.

COMPLY _____ **EXCEPTION** _____

MICROPHONE / P.A.S.S. LOOP

A loop for a microphone or P.A.S.S. alarm shall be installed above the radio pocket. The loop shall be one (1) inch high and have an opening of approximately one inch and three quarters (1-3/4) of usable space and be made of the specified outer shell. The loop shall be bartacked at each end to the front of the jacket.

COMPLY _____ **EXCEPTION** _____

THERMAL LINER ATTACHMENTS (BOTTOM OF COAT)

Two tabs measuring three-quarter (3/4) of an inch by four and a half (4-1/2) inches inserted in the lower hem of the outer shell. Tabs are linked to the lining by snap buttons located on the lining, on the side of the jacket.

COMPLY _____ **EXCEPTION** _____

FLASHLIGHT HOLDER

The coat shall have an adjustable loop made of outer shell. The loop shall measure eleven (11) inches long and be attached to the outer shell with bartacks spaced approximately one inch and a half (1-1/2) apart, leaving an opening. The loop shall close onto itself with the use of hook and loop fastener. The coat shall also have an outer shell tab measuring approximately two (2) inches by three (3) inches installed above the loop with bartacks.

COMPLY _____ **EXCEPTION** _____

PANT SPECIFICATIONS

REGULAR WAIST

The pant shall be of regular waist design. The circumference of the waist shall allow the wearer to pull his pants up without restriction. The front to the pant shall measure between 9-3/4" and 12-7/16" from the "Complete Motion Crotch" seam to the top of the waist line and shall be graded with the waist size to provide appropriate overlap with the coat. The back to the pant shall measure between 15-3/8" and 17-7/8" from the "Complete Motion Crotch" seam to the top of the waist line and shall be graded with the waist size to provide appropriate overlap with the coat.

COMPLY _____ **EXCEPTION** _____

OUTER SHELL CONSTRUCTION

All "Major A" seams shall be made of seam type LSbm-4, including stitch types #504, #401 and #301. The seaming process shall start by aligning two pieces of fabric together and stitching them together with what is commonly referred to as a "5 thread overlock", using stitch type #516, consisting of stitch types #504 and #401. The seam shall then be folded over and top stitched with two (2) rows of lock stitch consisting of stitch type #301. All seams shall be stitched with Nomex® thread using 9 ± 1 stitches per inch and sewn to prevent stitches from coming apart by themselves if cut or worn. Stress points such as pockets and pocket flaps shall be bar-tacked for increased durability.

The pant shall be made of eleven (11) panels to provide complete range of motion. Pant designs with less than eleven panels shall not be considered acceptable for this department

COMPLY _____ EXCEPTION _____

LINER CONSTRUCTION

All "Major B" seams shall be made of seam type SSa-2, including stitch types #504 and #401. The seaming process shall start by aligning two pieces of fabric together and stitching them together with what is commonly referred to as a "5 thread overlock", using stitch type #516, consisting of stitch types #504 and #401. In addition, the moisture barrier seams shall be sealed according to the section entitled SEALED MOISTURE BARRIER SEAMS. The moisture barrier and thermal barrier component of the liner shall be sewn together at the edges using a piece of bias-cut neoprene and sewn together with one row of lock stitch, consisting of stitch type 301. All moisture barrier seams shall be stitched with Nomex® thread using 12 ± 1 stitches per inch. All thermal barrier seams shall be stitched with Nomex® thread using 10 ± 1 stitches per inch. All seams shall be oriented so that the edges of the thermal barrier and the moisture barrier sealing tape are inside the inner liner.

The liner shall be cut a maximum of three (3) inches shorter for the outer shell. A waist band shall be sewn to the inside of the outer shell. A two (2) inch waist band made of thermal barrier and moisture barrier shall be sewn to the inside of the outer shell. The liner shall be attached between the outer shell and the waist band with the use of one (1) full length zipper. The liner shall also be attached to the shell with two (2) tabs with snaps at each leg. The waist band shall be kept in position with the use of five (5) snaps positioned around the waist, further securing the liner to the outer shell.

Two additional layers of thermal barrier shall be sewn in the knee area for increased CCHR protection.

The liner shall be equipped with an inspection port allowing for visual inspection of all sealed seams of the moisture barrier. The inspection port shall use a zipper closure of minimally sixteen (16) inches long.

COMPLY _____ EXCEPTION _____

PANT CLOSURE SYSTEM

The positive closure system shall consist of a heavy duty VISLON® zipper of approximately ten (10) inches long. The storm flap shall be approximately three (3) inches wide and eleven (11) inches long and constructed of two (2) layers of outer shell material. The pant fly flap shall have a special grabber made of outer shell material and closed cell foam padding to help opening the flap with a gloved hand. The grabber shall be approximately one and a quarter (1-1/4) inch high by three (3) inches wide at the widest point and shall be cut at an angle on one side. The grabber shall be located on the top the flap. The flap shall be fastened to the front of the pants by means of FR hook and loop fastener two (2) inches by ten inches and three quarter (10-3/4) on the flap and two (2) inches by ten inches and a half (10-1/2) on the right front panel of the outer shell. 360 degree moisture and thermal protection shall be afforded by overlapping the left and right side of the liner.

The pant shall have a removable Kevlar® belt shall be made of two (2) inch wide webbing. The webbing shall be passed through four (4) belt loops fixed on the pants. The belt shall include an adjustable high-temp plastic buckle. The belt loops shall be made of outer shell and shall be installed at the waist area of the pants. Each belt loop shall have an opening of two and a half (2-1/2) inches and shall be secured to the pant with lock stitching and bartacks.

COMPLY _____ **EXCEPTION** _____

"FULL MOTION" LEG DESIGN

The pant shall be designed with eleven (11) body panels to provide complete range of motion and comfort. There shall be a seam above the knee with retroreflective piping at the front of each leg to increase range of motion as well as additional night time and confined space visibility. There shall be a seam behind the knee of each leg to increase range of motion. The leg inseams shall be positioned so that they do not come into with the opposite leg when walking to prevent abrasion and repairs.

Pant designs with less than eleven (11) body panels are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

COMPLETE MOTION CROTCH

The pant shall be designed with an oversized diamond shape panels to provide complete range of motion and comfort.

Pant designs without an oversized diamond shape panels are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

POCKETS & REINFORCEMENT

The pants shall be provided with two (2) bellow pockets measuring approximately eight (10) inches by ten (10) inches and two (2) inches deep on all sides of the pockets. The pockets shall be fitted with a full width flap measuring approximately three inches and a half (3-1/2) high. The pant pocket flaps shall have a special grabber made of outer shell material and closed cell foam padding to help opening the pockets with a gloved hand. The grabbers shall be approximately one and a quarter (1-1/4) inch high by five and a half (5-1/2) inches wide at the widest point and shall be cut at an angle on both sides. The grabbers shall be located on the bottom edge of the flap in the center of the flap. The pocket flaps shall have two (2) hook fasteners of two (2) inches by two (2) inches. The pockets shall have two (2) loop fasteners measuring two (2) inches wide by one and a half (1-1/2) inch high. The hook and loop fasteners shall be sewn with locks stitching in a box & cross pattern. The bottom of the pockets shall be provided with two (2) evacuation eyelets. Each pocket shall have two (2) bartacks on each lower corner, one (1) bartack on each top corner and one (1) bartack on each side of the pocket flap for a total of eight (8) bartacks.

The bottom of the pockets shall be reinforced with one (1) layer of Kevlar® from the bottom of the pocket extending to the top of the pockets.

COMPLY _____ **EXCEPTION** _____

SEATTLE POCKET FOR FULL BELLOWS POCKETS

6-Tool – 2 rows of 3" wide tool compartments in 10"x10"x2 pocket w/ Kevlar reinforcement installed on Right Side Bellow Pocket.

COMPLY _____ **EXCEPTION** _____

KNEE REINFORCEMENT / PADDING

The knee area shall be designed to enhance mobility with the use of darts and pleats in the outer shell. The knee area shall be molded and articulated to better shape the knee in order to increase flexibility, mobility and comfort. The knee area shall be reinforced by a rectangular piece of polymer coated aramid graded in length in proportion with the pant size and shall be double stitched to the outer shell. A padding made of one (1) layer of thermally stable FR closed cell foam shall be inserted between the Ara-shield® (Polymer coated Kevlar® twill) knee reinforcement and the pant outer shell.

COMPLY _____ **EXCEPTION** _____

CUFF REINFORCEMENT

The pant cuffs shall be reinforced with polymer coated aramid. The reinforcement shall include a Nomex® cording to prevent stress points on the reinforcement material and reduce abrasion and repairs. The reinforcement material shall be sewn inside the sleeve outer shell to prevent thread abrasion and repairs. The reinforcement material shall be sewn with two (2) rows of locked stitches.

Pant designs with cuff reinforcements on top of the sleeve outer shell are not considered acceptable by this department.

COMPLY _____ **EXCEPTION** _____

REFLECTIVE TRIM TYPE

The retro-reflective trim shall be the three (3) inch wide Scotchlite™ Reflective Material - 5687, lime-yellow with silver center, from 3M™. This material is also commonly referred to as segmented triple trim.

COMPLY _____ **EXCEPTION** _____

SUSPENDERS

The pants shall be equipped with Deluxe H-style removable suspenders. The suspenders shall be constructed of two (2) inch wide heavy-duty cotton webbing. The horizontal component of the suspenders forming the H back shall be made of elastic material to increase comfort when bending forward. The suspenders shall be attached to the pant by passing the ends through high-temp sliders in the belt loops around the waist of the pant and folding each end over onto itself while securing the Hook and Loop fasteners 1-1/2" x 2" sewn with a box and cross pattern. A quick adjust metal "ladderlock" buckle shall be installed on the front of the suspender to tighten or release the suspenders quickly. In addition, a shoulder padding made of neoprene shall be sewn to the shoulder area of the suspenders. The padding shall measure a minimum of 8 inches long by the width of the webbing. The suspenders shall be cut in proportion to the size of the fire fighter measurements and completely removable for ease of cleaning.

COMPLY _____ **EXCEPTION** _____

SERVICE CENTER

The successful bidder must have an In-house Service Center in Louisiana with the ability to Clean and Repair Gear.

COMPLY _____ **EXCEPTION** _____

MSA Cairns® FIRE HELMET PRODUCT SPECIFICATION

PRODUCT TYPE:

Structural Firefighting Helmet(s) with Proximity Firefighting Option

PRODUCT MODEL(S):

MSA Cairns 1044 Traditional Fire Helmets

PURPOSE:

To supply a uniform, standard product specification for a fiberglass composite structural fire helmet.

SCOPE:

The scope of this product specification encompasses the performance criteria, design, construction and materials deemed necessary for helmets utilized for structural (and proximity as applicable) firefighting.

GENERAL:

Helmets manufactured in accordance with this specification are designed to mitigate adverse environmental effects to the firefighter's head while providing the specifying authority with what are, in their opinion, essential requirements.

PERFORMANCE CRITERIA/STANDARDS:

MSA Cairns 1044 Traditional Fire Helmets shall meet the requirements of NFPA 1971:2018 (or the current edition) for structural firefighting and proximity firefighting when that option is selected; US-OSHA 1910.156, and CAL-OSHA.

All eye/face protection sold as part of the original helmet assembly shall be compliant with the impact requirements of the current editions of ANSI/ISEA Z87.1 and NFPA 1971.

The Bourke Eye Shield option does not interfere with the helmet performance requirements of NFPA 1971:2018; however, it is not compliant with ANSI/ISEA Z87.1 or NFPA 1971:2018.

PERFORMANCE VERIFICATION DATA REQUIREMENT:

Response to this specification shall include a complete and current NFPA 1971 test report from a recognized, accredited test facility detailing all performance data for the helmet(s) and compliant helmet components included in the original assembly. Certificates of conformance and/or letters of certification alone shall not be acceptable. Component testing is not acceptable. Certification testing is conducted every year to a random lot size, as per NFPA requirements.

MANUFACTURER'S WARRANTY:

MSA warrants MSA Cairns Fire Helmets manufactured on or after January 1, 2015, to be free from defects in materials and/or faulty workmanship for a period of ten (10) years from the date of manufacture by MSA. For warranty details, please see "10-Year Warranty and Terms of Sale" (ID 3600-72-MC / February 2015). For MSA Cairns Fire Helmets manufactured prior to January 1, 2015, please refer to ID 3600-09-MC / Jan 2005. All warranty documents can be found on the MSA website (MSAsafety.com).

COMPLY _____ EXCEPTION _____

HELMET SHELL:

MSA Cairns 1044 Traditional Fire Helmets shall have a classic American Fire Service style helmet shell, comprising a crown, with four (4) major ribs (front, back, left and right sides), and four minor ribs equidistant between each major rib, and a brim that has a short front visor continuing around the sides to a large rear watershed area. The upper surface of the watershed shall have a textured finish with ivy

scroll on the back of the watershed brim. The underside of the brim shall have drill guides for the various eye/face protection that can be attached to the shell.

The shell material shall be a fiberglass composite, consisting of a high-temperature-, flame-, and chip-resistant "through-colored" thermoset resin, reinforced with 1" and 2" chopped fiberglass, compression-molded to form a one-piece shell.

1044 Helmet Colors

The shell shall be available in white, red, black, and yellow with an unpainted, matte finish.

The shell dimensions (with edge-trim) shall be 15.5" in length, 11.88" in width and a crown depth of 6.5". The shell shall have a nominal wall thickness of 0.065" in the crown and 0.080" in the brim.

The shell shall have black or white¹, high-temperature, flame-resistant, flexible edge trim made of thermoplastic rubber (TPR) with an aluminum core. The edge-trim is secured around the entire brim of the helmet by crimping the aluminum core, which simultaneously captures and retains a wire used to reinforce the brim of the helmet. The edge-trim is secured at the mating ends with a high temperature adhesive and clamped by the helmet hanger clip at the edge of the rear brim.

The shell shall have a helmet hanger comprised of a ¾", nickel plated "D" ring and a stainless steel clip. The helmet hanger shall be attached to the center rear of the brim.

COMPLY _____ **EXCEPTION** _____

FRONT HOLDER:

The helmet shell shall be furnished with a collapsible brass front-piece holder designed to absorb impact that shall be attached to the main rib on the shell front, and positioned to capture the top of standard 6" fire department identification shields (i.e., front piece). The front holder shall be a brass carved eagle, silk-screened brass eagle, a brass silk-screened Maltese cross, brass carved dragon or a brass carved beaver.

The shell shall have a thermoplastic, front-piece mounting bracket affixed to the front center of the brim. The bracket shall provide for positioning and retention of 6" front pieces.

COMPLY _____ **EXCEPTION** _____

IMPACT CAP:

The impact cap is designed to help provide increased thermal and impact protection. The impact cap shall be an impact-resistant polymer liner covered by a rigid cell, high temperature, energy absorbing urethane foam cap that covers the entire inner crown of the helmet. This impact cap is held into the helmet shell by the Shell Release tabs and corresponding brackets. It is removable for inspection and replacement.

COMPLY _____ **EXCEPTION** _____

HEAD SUSPENSION:

MSA Cairns 1010/1044 Traditional Fire Helmet shall consist of a six-way head suspension system, attached to the impact cap. The head suspension system comprises three (3) fixed 0.75" wide nylon straps mounted at six points on the impact liner and fastened at their intersection to form the 6-way overhead strap assembly. The straps are attached to the impact cap by means of a rigid plastic clip that locks the straps into the lugs of the impact cap liner. A cloverleaf crown pad shall be incorporated into the overhead strap assembly.

COMPLY _____ **EXCEPTION** _____

SHELL RELEASE SYSTEM:

The impact liner, complete with suspension system and chinstrap assembly (as described under "CHINSTRAP") shall be retained to the helmet shell by means of two (2) thermoplastic retention clips mounted under the eye/face protection hardware. This design will enable the shell to be released from the helmet when impacted from below the brim, reducing the chance of being injured by the chinstrap, and leaving the impact cap on the wearer's head for continued thermal and impact protection.

COMPLY _____ **EXCEPTION** _____

SIZING ADJUSTMENT:

The size of the headband may be adjusted to fit the wearer's head by means of a ratchet adjustment system. The headband is attached to the sides of the impact cap liner by four (4) flexible retention tabs. The rear ratchet arms shall have three (3) adjustable positions so that the angle of the ratchet may be set to accommodate the nape of the wearer's head. The headband height shall be adjustable at the

front of the helmet via a hook and loop system to provide additional comfort to the wearer and maximize compatibility with the SCBA facepiece.

The headband shall have a head size range of 6 3/8 to 9, adjustable in 1/8" increments.

COMPLY _____ **EXCEPTION** _____

COMFORT LINER:

MSA Cairns 1044 Traditional Fire Helmet shall have a removable comfort liner, consisting of a headband cushion and a ratchet pad. Both components made of a foam-core laminate system, comprised of a soft black flame-resistant flannel material against the user's head backed by a soft loop material secured to the headband and ratchet with hook fastener. The comfort liner is machine-washable. It can easily be upgraded to a standard flannel or deluxe leather-lined version.

COMPLY _____ **EXCEPTION** _____

CHINSTRAP:

The chinstrap shall be constructed of three (3) pieces (or sections) of 3/4" wide, spun-Nomex webbing, which are connected by a high-temperature, durable thermoplastic quick-release buckle on the left side of the helmet, and by an optional cast zinc postman's slide buckle on the right side of the helmet. The middle section shall be a minimum of 23" in length and the total length of the chinstrap shall be 35" at full extension, end to end. An optional four-point chin strap shall be available without requiring an alternate impact cap assembly.

COMPLY _____ **EXCEPTION** _____

EAR/NECK PROTECTION:

MSA Cairns 1044 Traditional Fire Helmet provides ear and neck protection with a 7.25" wide, 19" long, full-cut earlap with an expanded opening at the neck, making the ratchet adjustment easily accessible. The triple-layer earlap consists of a 4.5 oz. / yd., yellow or black colored Nomex outer layer, and two flame resistant black flannel inner layers. The earlap shall be secured via two (2) Velcro tabs at either end of the top of the earlap and one continuous length of Velcro along the top edge of the earlap. The earlap is machine washable and can be easily upgraded to a PBI/Kevlar or Bloodborne Pathogen earlap. The ear and neck protector shall be removable without interfering with the overhead strap assembly in any way and without removing any part of the helmet suspension. All versions shall also be available with underchin extensions.

COMPLY _____ **EXCEPTION** _____

RETRO-REFLECTIVE TRIM:

MSA Cairns 1044 Traditional Fire Helmet shall have eight (8) tetrahedron shaped pieces of retro-reflective trim around the exterior crown of the helmet shell for maximum visibility. Both Reflexite and Scotchlite trim shall be available. Color options include Lime-Yellow, Red-Orange*, Scotchlite Triple Trim in Lime-Yellow or Red-Orange; White* and Blue* Reflexite are also available (*not compliant with NFPA-1971). 1 Available on white shells only.

COMPLY _____ **EXCEPTION** _____

EYE PROTECTION OPTIONS:

Three eye protection options are available. Selection of one is required to meet the performance criteria and standards as listed in this product specification. Faceshield and Hardware

Faceshield

The MSA Cairns 1044 Traditional Fire Helmets could have a faceshield that shall be a wrap-around, high pivot design, 4.5" wide, 18.0" long and 0.150" thick. The lens material shall be high performance, high-temperature, impact-resistant thermoplastic. The lens shall be coated with a scratch resistant coating on both inner and outer surfaces to protect the lens from abrasions.

Hardware

The faceshield shall be mounted to the helmet shell by means of two (2) glass-reinforced, high-temperature and flame-resistant thermoplastic bracket assemblies, with adjustable thermoplastic knobs one (1) on either side of the helmet shell. The brackets allow the faceshield to be raised above the helmet shell when not in use.

COMPLY _____ **EXCEPTION** _____

LEATHER FRONT:

Leather Front Installed Per Fire Dept. Spec w/ Badge decal.

COMPLY _____ **EXCEPTION** _____

HAIX® North America, Inc. Product Specification Sheet
FIRE HUNTER® XTREME

Article # **501605 Men 501606 Women**

Sizes men 5-16, half sizes / ladies 5-12, half sizes / Widths Narrow, Medium, Wide / Leg Height 14 inches

Manufacturer HAIX® - Schuhe Produktions- und Vertriebs GmbH Country of Origin Germany

Product Abstract Bunker boot, black, waterproof (to 10.5 inches measured from top of the insole in the heel area), full leather,

profiled rubber toe cap, large boot straps on both sides, shin protection, boot with non-slip, shock-absorbing rubber outsole and machine washable insole. Information A booklet containing product details, antistatic information, and care instructions will be included with each pair of shoes.

COMPLY _____

EXCEPTION _____

Materials

Upper Hydrophobic, full grain cowhide, breathable, color black. Approx. 0.1 - 0.08 inches (2.5 – 2.7 mm) thick.

Tested to be hydrophobic for a minimum of 120 minutes (dynamic test in the Penetrometer).

Free of PCP, AZO dyes and Chromium-VI.

Shaft closure (casing & top band)

Hydrophobic casing leather, breathable, color black. Approx. 0.04 – 0.05 inches (1.1 - 1.3 mm) thick.

Tested to be hydrophobic for a minimum of 120 minutes (dynamic test in the Penetrometer).

Free of PCP, AZO dyes and Chromium-VI. The casing is approx. 1.5 inch (40 mm) high.

Heel bend Black edging leather, minimum 0.04 – 0.05 inches (1.0 - 1.2 mm) thick.

Shin protection Memory foam between shaft and lining, 0.31 inches (8 mm) thick.

Pull-on loop Two large pull-on loops at both sides made from upper leather, strengthened with textile strip.

Padding Soft, reticulated, breathable foam.

Lining 4 layer waterproof laminate with permanently welded seams, abrasion resistance, and nonwoven.

1st layer Thermobonded nonwoven. 2nd layer Bicomponent membrane based on ePTFE or at least similar

3rd layer Functional nonwoven. 4th layer Backing fabric: knit monofilament

Inside back strap A highly abrasion resistant non-woven material.

Thread NOMEX® threads, with a minimum dimension of Nm 30/3, water repellent, colour yellow.

Foot bed Moisture-absorbing insole with steel joint and ankle support made from polyester non-woven, 0.1 inch (2.5 mm) thick.

Ladder shank Thickness \geq 1.4 mm, stainless, 3 ruffles, deflection at 400 lb (182 kg) acc. NFPA 1971-2018 not more than 1/4 inch (6 mm)

Insole Anatomically formed, removable climatic innersole made from polyester fleece laminated with polyamide nonwoven,

high abrasion resistant, wicks moisture away from foot, machine washable at 86 °F.

Heel counter Made of fibrous leather board, matching to the firefighting last.

Protective toe cap Steel toe cap

Outsole Oil and fuel resistant, non-slip and non-chalky rubber shell sole, contains PU damping wedge with puncture

resistant metal insert, self cleaning.

COMPLY _____

EXCEPTION _____

Technical Information

Upper leather with "Sun Reflect"

- Specially furnished upper leather, made during the tanning process • Reduces the heating effect of the upper leather by direct sunlight • Sunlight is reflected by the leather, keeping the leather and the feet cooler
- The leather has a reflection rate of over 65 % at a test wavelength of 980 nm, tested with a calibrated test equipment

Outsole

- Shore hardness rubber outsole Shore A (65 ± 3)° at 73.4 °F • Toe spring of approx. 0.38 inches (10 mm)
- Heel spring of approx. 0.50 inches (12 mm) ensure a natural stride. • Main tread depth minimum 0.24 inches (5.5 mm);
- Round tread groove base. • Angular edging or the tread stake at the sole margin for high lateral stability.
- Light ladder heel treading in the joint area. • Highly heat resistant connection of the rubber sole with the PU wedge and the upper.

Steel mid sole

- Thickness ≥ 0.02 inches (0.5 mm) • Stainless, corrosion-resistant Puncture resistance acc. NFPA 1971-2018 ≥ 1212 N (272 lbf)
- Flex cracking resistance acc. to ASTM F2413-11 and CAN/CSA Z195-09 $\geq 1,500,000$ flexes

MSL-System

- Worldwide unique system with injected foam for enhanced shock absorbing and insulation against heat and cold.

Instep flex

- System offering a very good heel adaptation of the boot to different instep heights and widths. • With elastic insert which stretches when stepping into the boot and therefore enables the foot to get in. • This elastic insert encompasses the foot tightly in the instep area and pushes it against the rear cap. • During walking, a tight heel fit has to be guaranteed. The heel may not (or only at a minimum) move up and down inside the boot ("slipping" in the boot).

Heel and instep bend

- Guarantees a smooth movement when kneeling, bending, and operating a machine. • With padded leather as instep and heel bend.
- With an equivalent puncture proof analogical to the rest of the upper in the instep area.

Pull-on loops

- With leather straps on both sides of the boots. • At least 1 inch (25 mm) broad having a length of approx. 10 inches (25 cm).

Reflective strip

- With an at least 20 mm wide reflection strip at the outside. • From the upper edge of the outer counter to the middle seam of the boot tube.

Toe protection cap

- Steel toe cap according to ASTM F2413-11 and CAN/CSA-Z195-09

Rubber toe cap

- The boot is equipped with a profiled rubber toe cap which is fixed with a seam at the end.
- The seam is in a furrow which protects it from scrubbing.

Inlay sole

- Surface layer material must withstand a minimum of 100,000 scrubbing cycles without scrubbing through.

Climate System

- Permits air circulation with every step. • At the upper leg height ending, there are at least 18 ventilation holes.

- Inner lining glued to upper only periodically to prevent detachment and allow full breathability of the leather.

Extended Wear Program

- Out of warranty HAIX® footwear can be completely refurbished through a resole package. This package includes any necessary replacement or repair of stitching, toe caps, and soles. Footwear will also be cleaned, deodorized, and receive new insoles. HAIX® footwear owners also have the option of a sole replacement only or a toe cap replacement only. All HAIX® footwear can be refurbished with original manufacturer parts.

Quality Assurance

Every shoe is equipped with a durable, long lasting, and legible label containing company specific data as serial number, size, and production site. Each shoe has a unique code number which permits tracking of the shoes in the production company and with consumers.

Waterproof quality

- Each 50th pair (and/or after each disturbance of the producing process) of welded seams must be checked using an imperviousness testing device.
- The welding seam must withstand a test pressure of 1 bar for at least 5 minutes. The test result is available upon demand.
- Daily, at least one pair of shoes is checked for its waterproof quality on a walking simulator.
- Over a period of 300,000 scrubbing cycles (approx. 24 hours) the shoe should not take on any water. Test results are available on demand. On prior agreement and on demand, technically adequate testing procedures (e.g. centrifuge) are also able to be used due to production organizational reasons.

Certification by Underwriter's Laboratories, Inc.

- NFPA 1971-2018, Standard for Protective Ensembles for Structural Fire Fighting
- NFPA 1992-2012, Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Material Emergencies
- CAN/CSA-Z195-2009, Standard for Protective Footwear, **Grade 1**
- ASTM F2413-11, Standard Specification for Protective Footwear
 - Impact Class **I/75**, Compression Class **C/75**
 - Puncture Resistance **PR**

COMPLY _____

EXCEPTION _____

Super Glove Gauntlet Model GL-SGKCG

Features and Benefits

- Regular Sizes: 2XS, XS, S, M, L, XL, 2XL, 3XL

Regular body, fingers, and thumb

- Cadet Sizes: 2XS, XS, S, M, L, XL, 2XL, 3XL

Regular body with shorter fingers, and thumb

- Air Spacer™ Thermal Architecture

Traps air for thermal protection without adding bulk (patented and patent pending)

- True 3D Hand-shaped Styling

Anthropomorphically correct 3D (three dimensional) shape of the hand

- Bubble-Flex Finger and Knuckle Construction

Dead-air spacer ridges allow natural, unencumbered hand flexing (patented and patent pending)

- Crosstech® Moisture Barrier and Kevlar®/Nomex® Thermal Liner

High-temperature resistance, stable and durable

- Ultra-thin, Ultra-strong Top Grain Kangaroo Leather on Glove Back

For easy flexing, exceptional durability and abrasion resistance

- Black Digiroom™ Digital Kangaroo Grip Palms and Fingers

For incredible durability, grip, and tactility with unparalleled feeling

- Wing Thumb™ with Black Eversoft Cowhide Gauntlet Cuff

Certification – NFPA 1971

COMPLY _____

EXCEPTION _____

Specifications: Particulate Barrier Hood

Scope: It is the intent of these specifications to offer a particulate barrier fire fighters hood that meets and exceeds the particulate barrier hood as designed in NFPA 1971 Standard for Fire Fighters Protective Clothing, 2018 revised edition. This hood is specially designed to offset the dangers of air borne particulate matters that are known to be cancer causing agents under structural fire conditions. Members using this hood are highly trained professionals who know full well the known chemicals and hazards in every structural fire event. This hood is designed for their safety and greater health for during their career and beyond. Special consideration has been given to the need and performance value of this particulate barrier hood. **NO EXCEPTIONS SHALL BE ALLOWED.**

COMPLY _____

EXCEPTION _____

Exterior: The exterior layer shall consist of a 20%/80% Nomex/Lenzing blend (8 oz. /yd²), providing excellent and reliable performance.

COMPLY _____

EXCEPTION _____

Middle Layer: The middle layers shall consist of a high filtration layer of material of Stedair® PREVENT. This layer shall block carcinogenic particulates 0.1 µm to 1.0 µm (microns) by greater than 99%. NFPA 1971, 2018 edition will require a minimum of 90%. (These specifications will require a proven 99% passage). The middle layers shall be air permeable, which means air freely passes through it, letting body heat dissipate and helping reduce the risk of increased core temperature. This layer also shall offer a 100% coverage throughout the entire hood. (Pieced barriers around the ears and neck with head top openings will be considered unacceptable in meeting this criteria).

The inner layer shall be a 100% FR viscose multi-filament liner. This material shall give a noticeably cool feeling when worn with superior wicking abilities that spread out moisture to allow for quicker drying. The liner material shall be designed in a way to be less prone to piling than a standard Nomex/Lenzing material.

COMPLY _____

EXCEPTION _____

Layers 2 & 3 shall be laminated together, reducing the bulk of multiple layers and increasing comfort.

COMPLY _____

EXCEPTION _____

TPP: The particulate barrier hood shall have a TPP rating in excess of 20 TPP (department prefers a value of greater than 30 after the pre-conditionings for maximum thermal performance protection).

COMPLY _____

EXCEPTION _____

THL: The particulate barrier hood shall have a THL rating in excess of 425.

COMPLY _____

EXCEPTION _____

Particulate Blocking: The particulate barrier hood, in all its composites and configurations shall be designed to block particulates of 0.1 µm to 1.0 µm (microns) by greater than 99%. (NFPA requirement is a minimum of 90%. Successful supplier will be required to exceed the minimum standard).

COMPLY _____

EXCEPTION _____

Design: The particulate barrier hood shall be designed with a Universal Size Flatlock stitch for maximum comfort. It shall be available in 21'' in length with a full drape coverage around the shoulders. The particulate barrier hood shall be made to offer 100% protection coverage throughout the hood. A heavy ½'' Elastic around the face opening shall be included to prevent stretching out when worn around the neck. This particulate barrier hood is expected to pass all standards well beyond the 10 wash requirement outlined in NFPA 1971, 2018 revised addition standards. (Department prefers the hood to pass air permeability for up to 100 washes and to still provide optimized comfort and protection).

COMPLY _____

EXCEPTION _____

Made in the USA: All hoods shall be made in the USA.

COMPLY _____

EXCEPTION _____

BID FORM

2019 Structural Firefighting Bunker Gear

<u>ITEM</u>	<u>BRAND</u>	<u>PRICE</u>
Bunker Coat	_____	_____
Bunker Pants	_____	_____
Helmet	_____	_____
Boots	_____	_____
Gloves	_____	_____
Hood	_____	_____
	Total	_____

Bidder _____

Address _____

City, State, Zip _____

Representative _____

Phone _____

Email _____

Bidder's Signature _____