

INSTRUCTIONS TO BIDDERS

Sealed bids will be received by the Purchasing Agent, 140 Main Street, Room 109A Torrington, CT until the time and date specified on the cover sheet and opened thereafter in the Purchasing Department, Room 109A. Bids received later than the time and date specified will not be accepted. Amendments to or withdrawal of any section of the submitted bid received later than the time & date set for the bid opening will not be considered. Bid proposals must remain in effect for a minimum of 30 days unless otherwise noted elsewhere in the bid specifications.

BID DOCUMENTS: are available over the Internet on the City's web page, under "open bids", www.torringtonct.org. Businesses without internet access may contact the Purchasing Department at 860-489-2224 for the bid documents. Any alleged oral agreement made by a bidder or contractor with any agency or employee of the City of Torrington will be disregarded.

FREIGHT: Prices quoted shall be net delivery **F.O.B. Torrington, CT**. All bid prices must include prepaid delivery, assembly, and/or installation (ready for operation and/or use) of all equipment and/ or materials to the individual locations(s) as designated by the Purchasing Agent. All bid prices are to be submitted on the sheets provided on this bid. Quantities and pricing are to be listed in accordance with these sheets.

EXPARTE COMMUNICATION: Please note that to insure the proper and fair evaluation of a bid, the City of Torrington prohibits exparte communication (i.e., unsolicited) initiated by the Bidder to a City Official or Employee evaluating or considering the bids prior to the time a bid decision has been made. Communication between Bidder and the City will be directed in writing to the Purchasing Agent only. The Purchasing Agent will obtain the information or clarification needed. Exparte communication may be grounds for disqualifying the offending Bidder from consideration or award of the bid and repeat offenders may be disqualified from future bids.

QUESTIONS: Request for interpretation of any portion of the bid shall be made by telephone to the Purchasing Agent at (860) 489-2225. All replies will be given verbally and a copy of any such inquiry and advice (if deemed vital to the bid by the Purchasing Agent) will be made available to each prospective bidder. Bidders should check the web site for addendums/updates 48 hours prior to the bid opening.

In the event of receipt of identical bids as to offerings, delivery, service, content, price, etc., the bid will be awarded in accordance with the information contained in the bid document, based on first received as to date and time of receipt of the bid.

NON-COLLUSION STATEMENTS: In order for bids to be considered, a non-collusive statement must be submitted with the bid. A sample non-collusive bid statement is attached. Bidders may elect to submit their own notarized non-collusion statement. **NOTE:** Documents must be signed before and sealed by a Notary Public. Only documents bearing a notary seal will be accepted.

CONDITIONAL, QUALIFIED OR NON-RESPONSIVE BIDS/PROPOSALS: All bids/proposals shall be submitted in the form and manner as indicated by the bid documents and bid forms. Any proposal which is not submitted in the form and manner indicated by the bid documents or which contains information, statements, conditions, or qualifications which place conditions or qualifications on the proposal submittal for purposes of making an award, or which alter any proposal terms, conditions, specifications, or forms, which has not been previously approved by written addendum from the Purchasing Agent, or which does not meet legal requirements, shall be declared as a qualified, conditional, or non-responsive proposal and shall be rejected without further consideration. Any proposal response that does not fully respond to and comply with all detailed specifications or requests for information including execution of proposal forms, may be declared "non-responsive" and recommended for rejection. The City of Torrington shall not be responsible for any errors or omissions of the respondent.

UNBALANCED BIDS AND/OR EXCESSIVE LINE ITEM PRICES: The City reserves the right to reject any bids in which unit prices, in the sole opinion of the City, are unbalanced. In addition, where the City has decided to make an award, it further reserves the right to non-utilize a particular line item that in the sole opinion of the City is excessively priced, and reserves the right to obtain that item from another source.

CONTRACT: A response to an Invitation To Bid is an offer to contract with the City of Torrington based upon the terms, conditions, and specifications contained in the City's ITB. Bids do not become contracts unless and until executed by the City, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the contract are contained in the ITB, unless any of the terms and conditions are modified by an ITB Amendment, a Contract Amendment, or by mutually agreed terms and conditions in the contract documents.

TAXES: Omit all State and Federal taxes from the bid. The City of Torrington is exempt from the payment of taxes imposed by Federal government and/or the State of Connecticut.

OWNERSHIP OF DOCUMENTS: All documents, including drawings, plans, specifications, videotapes, or other documents or maps prepared by a contractor pursuant to any agreement arising from this bid shall become the property of the City of Torrington upon completion of the project or any termination of the project prior to the completion of the project.

LEGALITY: All bid offers for commodities, work, materials, or equipment hereunder shall comply in every respect with the laws, specifications and requirements of the State of Connecticut and the Federal government. Contractor will comply with the provisions of the Connecticut Fair Employment Practices Law.

LANGUAGE DISPUTES: Any disputes over the interpretation and/or meaning of any individual terms, conditions, and/or language within this Request for Bid/Proposal document shall be resolved by and at the sole discretion of the City Purchasing Agent in a manner that is in the best interest of, and best advantage to, the City of Torrington, provided any such interpretation shall be reasonable. In the event that an individual term, condition, and/or language wording is determined at any time, including after award, by the City Purchasing Agent to be "not applicable at all" to this contract, then the term, condition, and/or language wording may be disregarded, even though an addendum is not issued. However, if the Purchasing Agent determines that the term, condition, and/or language wording "is applicable in part", then the term, condition, and/or language wording will apply to the degree applicable, even though an addendum is not issued.

RESPONSIBILITY: The Contractor shall save the City of Torrington, its agents or employees, harmless from liability of any kind for all claims of labor payments and materials furnished for this work, and for use of any copyrighted or uncopyrighted composition, secret process patented or unpatented invention, article or application furnished or used in the performance of the contract of which the Contractor is not the patentee, assignee, or licensee. The successful bidder agrees to indemnify and hold harmless the City of Torrington, its agents and employees from any and all liability arising out of the successful bidders' operations, functions and/or supplied items.

The successful bidder, vendor, and/or contractor must protect all property of the City of Torrington (i.e. all floors, furniture, grass, land, etc.) from injury or other damage. Any damage so caused must be repaired by contractor/vendor at his/her own expense. At the completion of work, the vendor and/or contractor must remove from the premises all surplus materials and all debris created by same. The premises must be left in a broom-clean and finished condition acceptable to the owner or its agents. Successful bidder will furnish adequate protection from damage for all work and to repair damage of any kind; for which he or his workers are responsible, to the premises or equipment to his own work or to the work of other contractors.

DEFAULT: It shall be understood that a bidder supplying equipment and/or supplies will be considered to be in default if/when they have not delivered the item(s) within the time constraints listed in this document or subsequent purchase orders and/or contract. Bidders providing a service and/or construction will be considered to be in default if/when they have failed to meet the completion date set forth in this document or its subsequent contract and/ or purchase orders and/ or they have ceased work on the project for a period of fifteen (15) working days, cumulative or consecutive.

SUSPENSION AND DEBARMENT: The Purchasing Agent may suspend or debar the right of a vendor to be included on the vendor list and has the authority to reject any bid or response from any suspended or debarred vendors.

Suspension: A vendor may be suspended based on the following:

- 1) A vendor defaults or fails to fully comply with the conditions, specifications, or terms of a Bid, Quotation, Proposal or Contract with the City of Torrington.
- 2) A vendor commits any fraud or misrepresentation in connection with a Bid, Quotation, Proposal, or Contract with the City of Torrington.
- 3) A vendor is charged by a court with the commission of a criminal offense as incident to obtaining or attempting to obtain a public or private contract or sub-contract, or in the performance of such contract or sub-contract
- 4) A vendor is charged by a court with the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or any other offense indicating a lack of business integrity or business honesty which currently, seriously, and directly affects responsibility as a City contractor. If charges are dismissed or the vendor is found not guilty, the suspension shall be lifted automatically upon written notification and proof of final court disposition provided by the vendor to the City of Torrington.
- 5) A vendor becomes insolvent, has proceedings in bankruptcy instituted against it or, compounds its debts or assigns over its estate or effects for payment thereof, or has a receiver or trustee appointed over its property.
- 6) A vendor's commission of any act or omission to perform act is grounds for debarment.
- 7) A vendor violates the ethical standards set forth in local, state, or federal law.
- 8) Any other cause the Purchasing Agent determines to be so serious and compelling as to materially and adversely affect responsibility of a vendor as a City contractor, including but not limited to suspension by another government entity

Debarment: A vendor may be permanently debarred for the following:

- 1) Default or failure to fully comply with the conditions, specifications, drawings, or terms of a bid, proposal, or contract with the City of Torrington twice in any three-year period.
- 2) Conviction of or judgment obtained in a court for commission of those offenses in connection with the vendor's commercial enterprise stated sections 3) or 4) of suspension section listed above. If the conviction is reversed through the appellate process, the debarment shall be removed upon written notification and proof of final Court disposition from the vendor to the City of Torrington.

TRADE NAME REFERENCES: Any and all references to trade names, types, styles, model numbers, stock numbers or catalogs are intended to be descriptive only and not restrictive. The intention is to indicate to bidders the type and quality of the articles and or materials that will be satisfactory. When reviewing the information, it is the responsibility of the prospective bidder to inform the City of Torrington of any discrepancy that is found (i.e. number listed does not fit item description) Bids received on other makes or models with reference to other catalogs will be considered. The bidder is to clearly state in his bid exactly what he intends to furnish and to furnish with his bid a cut or illustration or other descriptive matter that will clearly indicate and give specification as to the product he/she proposes to furnish. Where a bid is offered on an item other than the trade standard used in the specification the item should be identified on the bid form by entering the MAKE, TRADE NAME AND MODEL NUMBER. It is understood that any substitute and/or alternate that might be offered are guaranteed by the bidder to be of equal or better quality than is referenced in the bid. The item(s) must be equivalent as to function, basic design, type and quality of material, method of construction and any required dimensions. It shall be further understood that during original as well as subsequent shipments spot checks will be performed to insure that the items received are in fact the items offered in the bid. When received, should items/materials prove to be different from what was bid in any way, the bidder agrees to the return of the items and agrees to supply correct items (per bid specifications) at the bidders expense. In the event this

return action is required, it is understood the bidder may be subject to removal from the city's approved bidder's list. Bidders are cautioned that surplus, seconds, factory rejects, floor samples, close outs or distressed items are not acceptable and shipments of substitutions, defective or shop-worn equipment will be returned for a full refund at the vendor's expense.

QUANTITY: The quantities and/or materials listed in the specifications/bid sheets may be increased or decreased by the City of Torrington or its designated representative based on actual need at the time the purchase orders are placed.

QUALITY: The City of Torrington reserves the right to reject any proposal in whole or in part offering equipment and/or materials and/or services that in its or its agent's opinion does not meet the quality standards desired. Such decision is final and not subject to further recourse by the bidder.

SAMPLES: forwarded by the bidder will be returned to the bidder at his request and expense. Requests for return of samples must be submitted in writing at the time the sample is given to the City of Torrington or its representative. Samples not returned to the bidder will be disposed of at the discretion of the City of Torrington or its designated representative. Large pieces of equipment submitted for evaluation and inspection are to be picked up by the bidder within 30 days of the bid opening date. Items remaining after 30 days will be discarded.

AWARD: It is the intent to award this bid in its entirety to one bidder, however, the City reserves the right to award the bid line item by line item if it is deemed in its best interest to do so. In addition, bidders are advised that should budgetary constraints dictate, part, and/or all the items in this bid may be rejected. This decision shall be considered final and not subject to recourse by the bidder.

In determining the lowest or highest responsible bidder, the City reserves the right to consider, in addition to price, the compatibility, quality, cost of maintenance and availability of parts, experience and/or past performance of the bidder, sufficiency of the financial resources of the bidder as relates to the offerings as well as the ability of the bidder to provide future maintenance and service.

Documents previously submitted to the city of Torrington will not be considered as satisfying submission requirements for this bid.

No bidder can claim any contract rights by virtue of bidding alone. Awarding of the contract means actual written notice by letter and a properly executed purchase order to the bidder or bidders to whom the bid has been awarded.

OPTION TO RENEW: This contract may be extended for four (4) additional one (1) year periods, provided all terms and conditions remain in full force and effect except for the contract period being extended. This option, if exercised, is to be executed in the form of a letter of agreement, to be issued no later than 30 days prior to the expiration of the then current contract period. This option to renew requires the mutual agreement of both parties. Refusal by either party to exercise this option to extend, will cause this contract to expire on the original or mutually agreed upon date. The total period of this contract, including all extensions as a result of exercising this option, will not exceed a maximum combined period of five (5) years.

REPLIES: whether bid or no bid, must have the bid number clearly identified on the outside of the envelope. Bidders not marking the envelopes with the Bid number and date/time of opening on the envelope will have no recourse against the City of Torrington or its employees. Such bidders run the risk of the bid being opened prior to the scheduled Bid Opening time. Once opened such bids are public record. Any alleged oral agreement made by a bidder or contractor with any agency or employee of the City of Torrington will be disregarded.

BONDS:

BID BONDS: shall be in the amount of 5% of the total bid made out in favor of the City of Torrington and issued by a Surety company acceptable to the City of Torrington must accompany each bid. A certified check, cashier's check, Treasurer's check, or money order in the same amount may be submitted in lieu of the bid bond. Bids submitted without Certified Check or Bid Bond will not be accepted. The City of Torrington will not be held liable for the accrual of interest on any check held by the city in conjunction with this bid. All checks or bid bonds will be refunded to the unsuccessful bidders after award of the bid by the City Council. The deposit check or Bid Bond of the successful bidder will be held in escrow until such time as the city determines that the bidder has or will meet their obligations as stated by the bid. If the bidder fails or refuses within a reasonable time after due notice that the contract has been awarded to him, to execute the same, an amount representing a loss to the city by reason of such failure shall be retained and paid into the city treasury.

Performance Bond: The Contractor, when awarded the Bid, must submit within 10 days of the bid award, and before beginning the work or signing a contract, a Performance Bond amounting to one hundred percent (100%) of the total amount of the bid. Said performance bond must be in favor of the City of Torrington and executed by a surety company authorized to do business in the State of Connecticut. The City of Torrington reserves the right to retain the Bid Bond or Certified Check on bids below \$25,000.00 as a Performance Bond. On bids of \$25,000.00 or more the Performance Bond may be furnished in the following manner: Performance Bond, Surety Bond, Certified Check, Bank Check, Savings Account in both the City & Vendor's name or Letter of Credit

Maintenance Bond: The contractor, upon signing a contract and before beginning the work, must submit to the Purchasing Agent a Maintenance Bond to guarantee that if defects in either labor or materials becomes evident within one year after completion and acceptance of work will be fixed at no cost to the City of Torrington. The maintenance bond may be included as a portion of the Performance Bond or as a separate bond. If it is issued as a separate bond said maintenance bond must be in favor of the City of Torrington and issued by a surety company licensed and authorized to do business in the State of Connecticut.

Labor and Material Bonds: Per Section 49-41 of the Conn. General Statutes, on Public Works project where the estimate is in excess of \$25,000.00, a labor (payment) and material bond must be furnished to the City. Said bonds must be filed with the Purchasing Agent prior to the commencement of work.

Consent for Release of Final Payment: AIA Document G707 & G706, or equivalent, must be signed and returned by the Surety Company before final payment will be released to the contractor.

INSURANCE:

Certificate of Insurance: All insurers must have an AM Best rating of A-V11 or better and admitted to do business in the State of Connecticut. All insurance policies must include a Waiver of Subrogation whereby the insured waives its right to subrogate against the City, its subsidiaries, employees, volunteers, directors and officers. Proof of proper insurance coverage, Workers Compensation Insurance, Liability and Property damage, and Vehicle Insurance shall be filed with the City of Torrington Purchasing Agent within 10 days after the award of the bid. The Certificate of Insurance must name the City of Torrington, 140 Main St., Torrington, CT, its subsidiaries, employees, volunteers, directors & officers as the "Additional Insured" and filed with the Purchasing Agent prior to commencement of work. Renewal Certificates of Insurance must be mailed to the Purchasing Agent 10 days prior to the expiration of the required coverage.

Workman's Compensation Insurance: The Contractor shall take out and maintain during the life of the contract adequate Workman's compensation Insurance for all the employees employed on said work. In case any class of employees or subcontractors is engaged in hazardous work under the contract at the site of the work is not protected under the Workman's Compensation statute, the contractor shall provide Workman's Compensation Insurance for the protection of employees not otherwise protected.

Liability Insurance: The Contractor shall take out and maintain for the life of the contract, adequate public liability insurance insuring against liability to persons not employed by him in an amount of not less than \$1,000,000.00 for injuries, wrongful death to any one person and subject to the limit for each person in an amount of not less than \$2,000,000.00 on account of one accident and property damage insurance in an amount of not less than \$1,000,000.00.

Vehicle Insurance: The Contractor shall take out and maintain for the life of the contract, adequate automotive/truck or other vehicle insurance with minimum coverage of \$1,000,000.00 each for both liability and under insured and uninsured motorist as well as any other coverage required by the State of Connecticut or requested by an official of the City of Torrington as relates to the contract.

Additional Security: The City of Torrington reserves the right to require successful bidders to enter into and such security arrangements as are deemed necessary to protect the City of Torrington, its property and goods.

PERMITS: The successful bidder agrees to obtain all work/building permits as might be required. The cost of obtaining such permits is the responsibility of the bidder. The City of Torrington reserves the right to waive local permit fees. In addition, it shall be understood that where property lines are to be considered, bidders are to verify said lines and measurements with proper City Officials prior to commencement of work. It is to be understood that any/all specifications and/or plans or drawings contained in or developed as a result of the bid process are and shall be presented subject to the approval of the City of Torrington planning, zoning and building officials and that awards made prior to said approval are subject to cancellation.

PREVAILING WAGE: When the State of Connecticut Prevailing Wage Rate is applicable to the bid, the successful bidder must submit a Certified Payroll Record prior to any request and/or invoice for payment.

CITIZENSHIP: Each employee of the Contractor shall be a citizen of the United States or an alien who has been lawfully admitted for permanent residence as evidenced by an Alien Registration Receipt Card. The Contractor agrees not to employ any person undergoing sentence of imprisonment except as provided by Public Law 89-176, September 10, 1965, (18 USC 4082)(c)(2).

SAFETY:

Machine and/or Equipment Hazard Assessment and Safety Training: Upon delivery of machines and/or equipment, suppliers are required to provide to the end-user employees, at no additional charge, a training session that will emphasize hazard awareness and assessment and the safe use of such machinery/equipment.

Occupational Safety and Health Act of 1970: Seller shall warrant that the machinery, equipment or other materials covered hereby shall upon delivery to the City of Torrington, be in compliance with the standards required by said Act and any updates as pertain to or reference said Act as well as the standards required by comparable State and local laws, if any, for such machinery, equipment or other materials in effect at the time of delivery.

Machines and/or Equipment Lockout/Tagout: In an effort to comply with OSHA's final rule on the control of hazardous energy sources, vendors must warrant that any and all machines and/or equipment as is covered under this bid will be supplied and/or installed equipped with lockout/tagout devices as prescribed by OSHA.

Toxic Substance Control Act (PL94-469): Seller warrants that each and every chemical substance constituting or contained in the products sold or otherwise transferred to the City of Torrington under this bid and subsequent purchase orders is not on the list of prohibited chemical substances compiled and published by the Administrator of the Environmental Protection Agency pursuant to Act PL94-469 and are otherwise in compliance with said Act.

Hazardous Materials: Any materials required by this bid and subsequent purchase orders that are hazardous under federal, state, or local statute, ordinance, regulation, or agency order will be packaged, labeled, marked and shipped by the seller to comply with all federal, state and local regulations then in effect including but limited to the provisions of the Hazardous Materials Transportation Act and Regulations promulgated thereunder and will further comply with any special requirements and any policies and procedures of the City of Torrington relating to the purchase of hazardous materials as might be noted on subsequent purchase orders or otherwise communicated to seller in writing.

Material Safety Data Sheets: Shall be provided by the Seller upon delivery to the City of Torrington of any goods having constituents listed in the following references - OSHA 1910, ACHIG Current Threshold Values, DOT HazMat Table 49, IARC Carcinogen List, National Toxicology Program Carcinogen List, and/or Radioactive Materials. These Material Safety Data Sheets must be consistent with and include information required by the OSHA Hazard Communication Standard published as 29 CFR 1910.1200, as the same may be amended or supplemented from time to time.

Asbestos: Bidders are advised that asbestos-containing material may be located in the boiler rooms, pipe tunnels, storage areas and various portions of City buildings. Before proceeding on any contractual work on City buildings or their interiors, it is mandatory that bidders familiarize themselves with the asbestos-containing material and that said material be considered as a health hazard and all precautionary measures according to the Ahera Rules & Regulations be observed. It is the bidder's responsibility to notify all employees and/or subcontractors of this notification.

SUBCONTRACTORS: The successful bidder shall not employ any subcontractor to fulfill any of the duties herein specified without express, prior written approval of the City of Torrington or its designated agent.

EEO: The successful bidder shall provide any/all additionally required, affirmative action statements, fair employment plans and non-discrimination programs and statement as might be required by the City of Torrington. In connection with the execution of this bid, subsequent purchase orders and/or contracts, the seller shall not discriminate against any employee or applicant for employment because of age, race, religion, color, sex or national origin. Bidders must comply with all rules & regulations of the Department of Labor with regard to Equal Employment Opportunities as pertains to municipalities.

TERMINATION OF CONTRACT: Any contract entered into by the City and the successful bidder shall provide that the City may terminate the contract upon thirty (30) days notice to the bidder.

The City of Torrington reserves the right to award or reject any or all bids, or any portion thereof, to waive technicalities, and to award the bid and/or contracts to one or more bidders submitting essentially identical proposals and, that in the city's judgment, will best serve the public interest.

The terms and conditions of these "Instructions To Bidders" are made a part this bid.

SAMPLE FORM

Bid # _____

NON-COLLUSION AFFIDAVIT

STATE OF _____ COUNTY OF _____

I, _____, being first duly sworn, deposes and says that:

1. I am _____ of _____, the bidder that has submitted the attached request for proposal for _____;
2. I am fully informed respecting the preparation and contents of the attached RFP and of all pertinent circumstances respecting such bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties of interest, including this affiant, has in any way colluded, conspired, connived or agreed directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the work for which the attached Bid has been submitted nor has it in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the price of any Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Torrington or any person interested in the proposed Bid; and
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of it agents, representatives, owners, employees, or parties in interest, including this affiant.

Signed _____

Title _____

Subscribed and sworn to before this _____ day of _____, 20____.

Notary Public

My commission expires _____

NOTE: Documents must be signed before and sealed by a Notary Public. Only documents bearing a notary seal will be accepted.

SAMPLE FORM

BID # _____

**CONSENT OF SURETY COMPANY
TO RELEASE FINAL PAYMENT**

- City
- Architect
- Contractor
- Surety
- Other

PROJECT/BID NUMBER :

TO: City of Torrington
 Attn: Pennie Zucco
 Purchasing Agent
 140 Main Street
 Torrington, CT 06790

CONTRACTOR: _____

In accordance with the provisions of the Contract between the City of Torrington and the Contractor as indicated above, the (insert name & address of Surety Co.)

 SURETY COMPANY on bond of (insert name & address of Contractor) _____

CONTRACTOR, hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to the CITY OF TORRINGTON as set forth in the Surety Company's bond.

Subscribed and sworn to before this _____ day of _____, 20__.

 Notary Public

Surety Company

Authorized Representative's Signature

My commission expires _____

Title

NOTE: Documents must be signed before and sealed by a Notary Public. Only documents bearing a notary seal will be accepted.

LEGAL RIGHT TO SPECIFY

The City of Torrington (for the remainder of this section referred to as the “City”) chooses to exercise its Legal Right to Specify as determined by the U.S. Supreme Court’s affirmation of the decision handed down in the case of Whitten Corp. vs. Paddock, by the U.S. District Court of Massachusetts, the First Federal District Court, which in effect states:

- 1) That as trained professionals, the City will make informed decisions on products that they feel best serve their needs. Also, that proprietary specifications (if chosen) DO NOT violate any antitrust laws. Technically, very few brands of material or equipment are exactly alike, and if the City wants to limit the specification to one source, the City has the right to do so and enforce it.
- 2) Only the City has the responsibility and decision for determining whether a proposed substitution is an “or equal”.
- 3) That from start to finish in the purchasing process, only the City can ultimately decide if another desirable product is available in lieu of the specification.
- 4) Finally, that the courts concluded “the burden is on the supplier or manufacturer, who has NOT been specified to convince the City that their product is equal for the purpose of a particular project”.

Any exceptions to specifications must be clearly stated at the time of bid. Attach a memo to the bid proposals identifying all exceptions to the specifications and alternatives to the specification. In the absence of comment on a specific point, the bidder is required to furnish a totally compliant garment. Taking a blanket exception shall not be acceptable.

Detailed Technical Specifications

for

Protective Clothing for Structural Firefighting Coat and Pant Bloodborne Pathogen Resistant

City of Torrington
Torrington, CT

This specification dated February 10, 2009 supersedes, modifies and replaces all previous editions.

CITY OF TORRINGTON BID# TOG-022-030509

PROTECTIVE CLOTHING FOR STRUCTURAL FIREFIGHTING
COAT AND PANT
BLOODBORNE PATHOGEN RESISTANT

ALL QUESTIONS IN THIS SECTION MUST BE ANSWERED AND SUBMITTED WITH THE BID PROPOSAL

Date Today: February 10, 2009

PURPOSE AND SCOPE

This specification defines the minimum requirements for bloodborne pathogen resistant (BPR) firefighter personal protective equipment (PPE) to provide limited protection to fire fighters against adverse environmental effects during structural fire fighting operations and certain other emergency operations where there is a threat of fire or where certain physical hazards are likely to be encountered, such as during non-fire-related rescue operations, emergency medical operations, and victim extraction, as defined by NFPA 1971, *Standard on Protective Ensemble for Structural Fire Fighting*, 2007 Edition (hereinafter referred to as NFPA 1971, except in the Applicable Documents section). In the absence of comment on a particular point, industry standard practice shall be presumed to prevail. Workmanship and material shall be first quality throughout. All exceptions to specifications must be clearly spelled out at the time of bid. In the absence of comment to a specific point, the bidder is required to furnish a wholly compliant garment. Taking a blanket exception shall not be acceptable.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

UNITS OF MEASURE

Current NFPA standards applicable to this product specification express values for measurement requirements in SI (metric-based) units, followed by US (inch-pound) approximate equivalents in parentheses. For the convenience of the fire department, this product specification *reverses the order* and presents the more familiar US approximation first, followed by the SI requirement in parentheses.

CERTIFICATION

The manufacturer must certify that the garments proposed in its bid meet or exceed all requirements of NFPA 1971. The manufacturer must also list and label this product with Underwriters Laboratories Inc. (UL) or Safety Equipment Institute (SEI), as the third party certification organization 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.

Certification shall include, by definition, the scope of bloodborne pathogen protection as follows: When used with BPR gloves, BPR boots, and a BPR helmet (with BPR face shield and ear covers), the garments shall provide head-to-toe bloodborne pathogen resistance protection, including the interface areas, as defined by the NFPA 1971 Viral Penetration Resistance Test using the Phi-X174 bacteriophage, in conjunction with the NFPA 1971 Whole Garment Liquid Penetration Test.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

Barrier layer material[s] and barrier layer seams shall meet requirements of the NFPA 1971 Viral Penetration Resistance Test.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

Manufacturer must provide, on request, third party certification of the required interface bloodborne pathogen resistant capability.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

The manufacturer shall be registered to ISO 9001, *Quality Management Systems – Requirements*, 2000.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

WARRANTY

The manufacturer must include a written statement of lifetime warranty terms and conditions with the bid package against defects in materials and workmanship of the garments.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PRODUCT COUNTRY OF ORIGIN

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.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

LABELING REQUIREMENTS

Labels shall be permanently and integrally printed onto breathable materials that meet all the requirements for labels of NFPA 1971. Garment labels shall meet all requirements of NFPA 1971 Flame Resistance Test One (for vertical flame resistance of cloth). 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 layer of garment shall be labeled with the FEMSA-style DANGER label in an obvious location.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

CARE INSTRUCTIONS

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 NPFA 1971 requirements, and shall reference same.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

TRACEABILITY PROGRAM

The manufacturer shall have in place a computer maintained traceability program that provides for the assignment of a production control number to each garment. The traceability program must be capable of tracing the garment through production, from the bolts of cloth used in all three layers of the garment composite construction, to the assignment of the garment to the individual firefighter. This production control number shall be visibly located on the garment label and on other protected areas of garment.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PATENT CONSIDERATIONS

Seller agrees to defend Buyer at Seller's own expense, in all suits, actions or proceedings in which Buyer is made a defendant for actual or alleged infringement of any United States of America, Canada or foreign letters patent resulting from Buyer's use of the goods purchased as a result of this Invitation to Bid. Seller further agrees to pay and discharge any and all judgments or decrees which may be rendered in any such suit, action or proceedings against Buyer.

Seller agrees to indemnify and hold harmless the Buyer from any and all licenses, royalty and proprietary fees or costs, including legal costs, which may arise out of Buyer's purchase and use of goods supplied by the seller. It is expressly agreed by Seller that these covenants are irrevocable and perpetual.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

SIZING

To ensure a perfect fit, sizing shall be based on 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 between the manufacturer and the department. All visits will be overseen by the Deputy Chief and delivery of all gear will be supervised by the Deputy Chief. Sizing will require at least four visits as well as the delivery. Vendor shall be present at the time of the delivery to ensure that the gear is properly sized. At no time will newly ordered gear be dropped off without first being fitted and signed off by the Deputy Fire Chief or the Chief only.

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.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

FLAMMABILITY OF CONSITUENT MATERIALS

Labels, bindings, hang-up loops and production labels shall be tested for flame resistance and shall comply with the requirements of NFPA 1971 Flame Resistance Test One (for vertical flammability of cloth).

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

SELF-BINDING

Liner and moisture barrier shall be stitched together and turned, then topstitched, to create a self binding. The extra bulk of separate binding material is specifically prohibited.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

THREAD

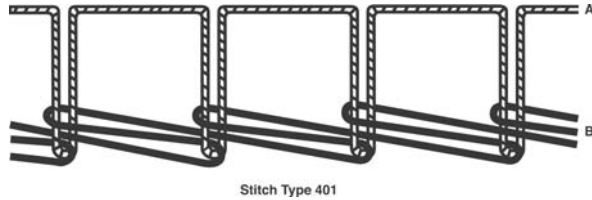
All thread used in structural seams shall be Nomex® of minimum Tex size T-70. Light colored garments and trim areas shall feature yellow thread. Black and dark garments shall feature black thread. Tan or bronze colored garments shall feature tan thread.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

STITCH METHODS

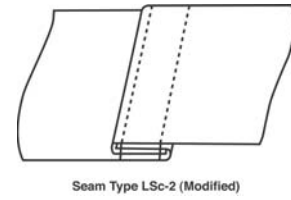
MAJOR A & B SEAMS

Except for the collar Major A seam, which is single-needle lockstitched three times, all Major A & 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, Tex size T-90. Detailed stitch and seam type requirements are shown below.



Stitch Type 401

*Double lockstitch, as defined by
 ASTM D 6193-97*



Modified Seam Type LSc-2

*Double feld seam, modified only to ensure that
 both stitch lines penetrate all layers of cloth at
 joining, otherwise as defined by
 ASTM D 6193-97*

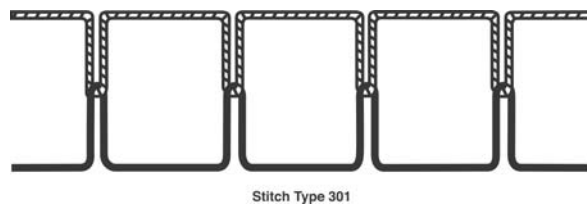
Also, all moisture barrier seams shall be tape-sealed to meet all requirements of the NFPA 1971 Liquid Penetration Resistance Test.

Does Your Bid Comply With All Aspects Of This Section?

For Outer Shell:	Yes _____	No _____
For Thermal Lining:	Yes _____	No _____
For Moisture Barrier:	Yes _____	No _____

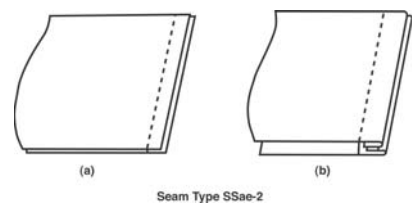
MINOR SEAMS

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.



Stitch Type 301

Lockstitch as defined by ASTM D 6193-97



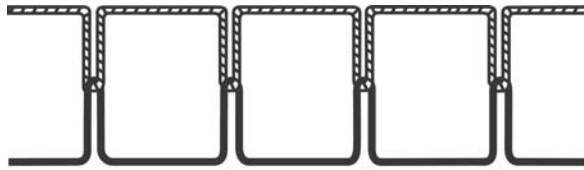
Seam Type SSae-2

*As defined by ASTM D 6193-97, shown
 (a) before and (b) after required turning*

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

POCKETS

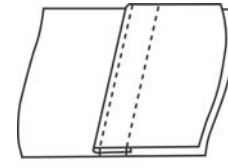
Flat garment pockets shall be stitched with the specified Nomex® thread. Detailed stitch and seam type requirements are shown below.



Stitch Type 301

Stitch Type 301

Lockstitch as defined by ASTM D 6193-97

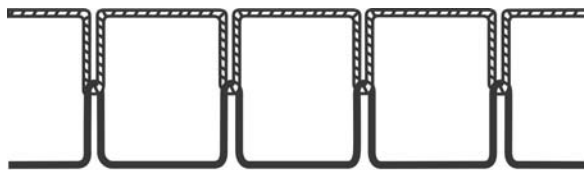


Seam Type LSd-2

Seam Type LSd-2

As defined by ASTM D 6193-97

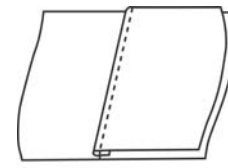
3-Dimensional pocketing shall feature these same construction details, but the reinforced single stitch Seam Type LSd-1 may be substituted for LSd-2. Detailed seam type requirements are shown below.



Stitch Type 301

Stitch Type 301

Lockstitch as defined by ASTM D 6193-97



Seam Type LSd-1

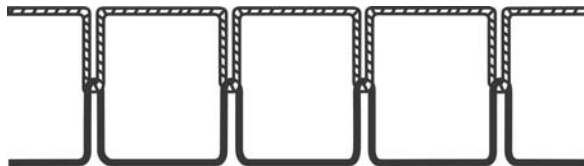
Seam Type LSd-1

As defined by ASTM D 6193-97

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

TRIM AND DANGER LABELS

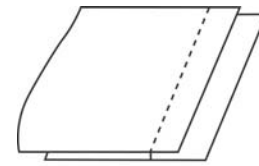
Trim and DANGER labels shall be stitched with the specified Nomex® thread. Detailed stitch and seam type requirements are shown below.



Stitch Type 301

Stitch Type 301

Lockstitch as defined by ASTM D 6193-97



Seam Type SSbd-1

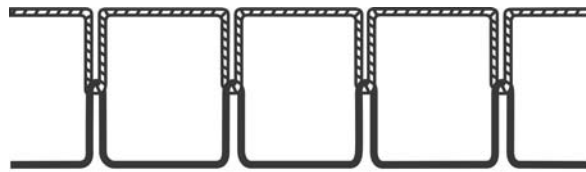
Seam Type SSbd-1

As defined by ASTM D 6193-97

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

SINGLE LAYER HEMMING AND FINISHING

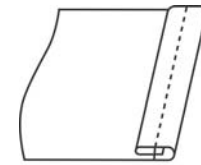
Single layer hemming and finishing shall be stitched with the specified Nomex® thread. Detailed stitch and seam type requirements are shown below.



Stitch Type 301

Stitch Type 301

Lockstitch as defined by ASTM D 6193-97



Stitch Type EFb-1

Seam Type EFb-1

As defined by ASTM D 6193-97

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

POCKETS

If exterior pockets are specified in either the COAT CUSTOM OPTIONS TO BE PROVIDED section or in the PANT CUSTOM OPTIONS TO BE PROVIDED section, the following requirements shall apply to all such custom option specified exterior pockets:

All pockets and flaps shall be reinforced at the top corners with bar tack stitching.

All pockets shall be reinforced with an extra layer of NFPA-certified outer shell, moisture barrier, or other NFPA-certified reinforcement material for extra durability. The exact location of the reinforcements shall be identified in the custom options section(s).

All pockets shall have a means to drain water and shall have a means of closure.

All pocket closures shall be made either with hook and loop fastener tape a minimum of 1.5 inches (3.8 cm) wide, with a flap, or with snaps. The specific placement of the closure system shall be declared at the time of order.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

TAILORED GRADING OF GARMENT LININGS

Wherever garment linings are specified, including but not limited to thermal linings and moisture barriers, each such lining layer shall be tailor-graded to fit within the overall garment composite of all layers without causing bunching or binding when the garment is worn.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

POINTS OF STRESS

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.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

HIGH TEMPERATURE, NFPA 1971-CERTIFIED MATERIAL REINFORCEMENTS

Reinforcements shall be provided at cuffs and pockets and shall meet the requirements of NFPA 1971.

For cuff reinforcements only: Manufacturer shall provide cuff reinforcements made of outer shell material at no additional cost. If the purchaser specifies reinforcements made of materials other than outer shell material, the manufacturer shall identify the additional cost for the specified material.

For pocket reinforcements only: Any NFPA 1971-certified material may be used in the reinforcement of the pocket. If the purchaser requests specific NFPA 1971-certified materials for pocket reinforcements, the manufacturer shall identify the additional cost for the specified material.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

ASSET TRACKING SERVICES

Upon request, the manufacturer shall be capable of providing a Windows-compatible software program for the tracking of care, cleaning and maintenance of the department's PPE.

This tracking program shall meet or exceed all record-keeping requirements of standard NFPA 1851, *Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensembles*, 2001 Edition.

Labels on each separable part of the garment shall include a standard style interleaved 2 of 5 barcode containing (at a minimum) an individualized serial number for asset tracking purposes.

The manufacturer must be capable of providing onsite or internet training to department personnel who are involved with the daily use of this tracking program, and if there is an additional cost involved for this service, the Bidder must disclose those costs at the time of bid.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

REPAIRS AND ALTERATION SUPPORT

The manufacturer shall furnish, free of charge, reasonable quantities of NFPA 1971-certified thread, materials and other supplies to allow the department to manage its own ongoing internal maintenance efforts. Also, 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, on its own cost-only basis, all repairs that must be performed at the manufacturer's plant, rather than in department, over the life of the contract. The vendor must respond to the Fire House within 24 hours to pick up gear and supply a reasonable return time for all repairs. Should the repair take longer than the agreed upon time frame, the vendor agrees to notify the Fire Department of the delay.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PRECLUSION OF PVC OR SIMILAR FOAM

Because safety is the overriding factor in determining the composite makeup of PPE, and because the use of PVC foam, non-breathable neoprene foam, or foams of any type, may contribute to a loss of protective performance over time and/or after exposure to heat, sweat, etc., this specification precludes all use of PVC foam or foams of any type, as a component of the PPE garments, and such material may not be used anywhere in the PPE garment composite. Any exception taken, or any non-compliance with this section, will be grounds for immediate removal from consideration.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

BREATHABILITY REQUIREMENT

Excluding where required by NFPA standard, necessary for functionality, or specifically called out in the custom option sections, all materials used in the construction of the garments shall be breathable and all moisture barrier material must be as specified in the following materials section, or must be Crosstech.

The breathability requirement includes but is not limited to: collar, chinstrap, storm shield, fly, waterwells, front coat facings, labels, and reinforcement cushioning where applicable.

Areas where non-breathability is allowed (absent Custom Option specifications): trim, hook and loop fastening, hardware or hardware backing, and external pocketing.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

CONDUCTIVE AND COMPRESSIVE HEAT RESISTANCE (CCHR)

Using breathable materials as outlined in the section titled Breathable Materials, there shall be a minimum area of 4" x 4" (10.2 cm x 10.2 cm) at the shoulders and elbows that provide a minimum of 25 CCHR at 2 psi, and a minimum 6" x 6" (15.2 cm x 15.2 cm) area at the knees that provide 25 CCHR at 8 psi. All three-compression areas shall be constructed of high temperature fiber based materials and sewn to the thermal liner on the inside of the liner toward the moisture barrier.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

SEAM PROTECTION AT CUFFS

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, 0.75” (1.91 cm) wide black Nomex webbing material laid on top of the Major A seam and covering each end of the trim.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

APPLICABLE DOCUMENTS

The following standards in their active versions on the date of invitation for bid shall form a part of this specification to the extent specified herein.

<u>STANDARD</u>	<u>TITLE</u>
ASTM D 6193-97	Standard Practice for Stitches and Seams
NFPA 1500, 2002 Edition	Standard on Fire Department Occupational Safety and Health Program
NFPA 1851, 2001 Edition	Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensembles
NFPA 1971, 2007 Edition	Standard on Protective Ensemble for Structural Fire Fighting

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

COAT

To avoid liability and interface problems, coats and pants shall be procured from the same manufacturer.

DESIGN CONCEPT (STYLING)

Coat styling shall be “Tails” design. The coat shall be approximately 6 inches (15.2 cm) longer at the rear hem than at the front. **“Name Plates” or other attachable plates, patches, or other products that attach to the back rear of coat by hook and loop fastening, or by snaps or zippers are not acceptable substitutes (since these “fake” tails do not provide all layer protection and this still requires the use of bibbed pants to preclude protective gap.** The coat composite (all three layers) shall not gap when the firefighter is bending, crawling or climbing. Gapping shall be determined as defined by NFPA 1500 with both arms fully overhead and wearer bending to rear, sides and front. The actual length of coats (shorter or longer) will be determined by each individual’s torso length. Coat must interface properly with standard height pants.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PATTERNING CONCEPT

Garments shall feature a tailored three-piece body, one-piece back construction throughout the outer shell, moisture barrier and thermal liner layers. One-piece garments (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 & 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.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PATTERNING REQUIREMENTS

To assure maximum freedom of movement and reduce kinetic resistance with minimum garment weight and bulk, coat patterning shall include the following features:

- Degree of slope on shoulders shall be no more than 20%.
- Hydraulic Butterfly sleeve patterning with 85-degree Lift Up Release Action shall be provided to minimize coat hem rise.
- Sleeve attachment shall minimize shoulder lift and allow a full 360 degrees freedom of movement.
- Coat hem rise with overhead reach of both arms not to exceed 4-inch (10.2-cm) maximal extension on properly fitted garments.
- 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.
- 10-inch (25.4-cm) chest over-sizing shall be provided.
- Coat sweep measurements must be consistent with the chest over-size at the hem.
- 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.

<u>Chest Size</u>	<u>Standard Reach</u>
40 in (101.6 cm)	66 in (167.6 cm)
42 in (106.7 cm)	67 in (170.2 cm)
44 in (111.8 cm)	68 in (172.7 cm)
46 in (116.8 cm)	68 in (172.7 cm)

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

DRAG RESCUE DEVICE (DRD)

Manufacturer shall supply an NFPA required and certified Drag Rescue Device with each coat. The device shall be designed to fit each individual chest size. Each strap will be properly labeled with DANGER labels that include what chest size the Rescue Strap is designed to fit

along with instructions for care and installation/removal of the Rescue Strap.

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.

The device shall be constructed using two components: a 1.75" (4.45 cm) Kevlar webbing grab handle; and a free-floating loop of Kevlar rope to go around each of the wearer's arms/shoulder. The grab handle shall be positioned at the rear of the upper torso and through the grab handle.

The grab loop shall extend upward and pass through a reinforced slot in the coat outer shell just below the center rear of the collar seam where it will exit the outer shell where it will be covered by an outer shell tunnel. The protruding grab loop shall then fold back down over the top of the tunnel and be stowed by Velcro with the pile sewn for the width of the tunnel and the hook sewn on the grab loop. There shall then be an outer shell flap sewn below the collar that will fold down over the stored grab loop and held in place with Velcro to reduce the chances of snagging the grab loop by accident.

To facilitate comfort and safety the Grab Handle shall be constructed of soft and pliable Kevlar webbing meeting the following specifications:

Description	100% Kevlar Double Plain Weave - Black with Natural Kevlar Center
Warp Yarn	1500/1000/2.75z Kevlar T-970F Black 1500/1000/2.75z Kevlar T-961 Natural
Weft Yarn	1500/1000/2.75z Kevlar T-970F Black
Catch cord	Tex size T-50 3-Ply/9.5z Bonded Kevlar Sewing Thread Black
Width	1.75" (4.45 dm)
Thickness	0.064" ± 0.010" (.163 cm ± .0254 cm)
Tensile	5,000 lb minimum (22.24 kN)

To facilitate comfort and safety the free-floating loop shall be constructed of soft and pliable Kevlar rope meeting the following specifications:

Description	100% Kevlar Tubular Plain Weave - Natural
Warp Yarn	1500/1000/2.75z Kevlar T-961 Natural
Weft Yarn	1500/1000/2.75z Kevlar T-961 Natural
Catch cord	Tex size T-35 Crispin Kevlar thread
Width	.038" (.097 cm)
Thickness	0.144" ± 0.005" (.366 cm ± .013 cm)
Tensile	3500 lb minimum (15.57 kN)

Rescue Strap shall be sewn with Kevlar thread with a minimum Tex size T-210

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

LINER ATTACHMENT & INSPECTION PORT

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.

Liner sleeves shall be attached at the outer shell cuff by means of snaps on two (2) sets of outer shell fabric tabbing strips per cuff. These snaps shall be isolated by the tabbing material so that they will not abrade against the outer shell.

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, both folded over and sewn in at the neck seam.

The liner system design shall not allow products of combustion or other contaminants to move into the liner interior between the moisture barrier and thermal liner. For instance, separately hemmed and bartacked liner and moisture barrier with open edge designs would not be acceptable.

Attachment shall be by means of four (4) glove straps that penetrate only the layer of the attachment facing towards the liner, so that metal contact at a wearer's neckline is completely eliminated.

The liner system shall incorporate a hook and loop fastener port at the lower right body panel to allow for field inspection of the "internal" condition of the moisture barrier membrane, seam sealing and thermal insulation layer quilt stitching.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

COAT CERTIFICATION LABEL ON LINER

The coat certification label on the liner shall be integrally printed on FR Cotton Indura® and lockstitched to the inside right body panel in a fashion to provide an inside liner pocket.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

COAT CERTIFICATION LABEL ON SHELL

The coat certification label on the shell shall be integrally printed on FR Cotton Indura® and lockstitched to the shell along one side of the label at the back of coat.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

COLLAR

The collar shall be of layered construction, at least 3 inches (7.6 cm) high, consisting of a layer of breathable moisture and pathogen barrier material and another layer of NFPA 1976-certified insulating material (no foam – see section titled Preclusion Of PVC Foam Or Similar Foam),

sandwiched between an outer layer of outer shell material and an inner, facing layer of non-aluminized 7.5 oz PBI material. The design shall incorporate in its patterning a natural contour that will allow proper fit and performance in the standing (upright) or stowed position.

There shall be no vertical or horizontal seams or stitching in the body of the collar, since this may weaken collar integrity. Left outside of collar shall have a sewn piece of 3-inch x 5-inch (7.6-cm x 12.7-cm) hook and loop fastener hook tape to ensure maximum adjustability when engaging chinstrap-to-collar closure. Each collar shall be graded to individual coat sizes.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

CHIN STRAP

The chin strap shall be of layered construction identical to that of the collar configuration described in the previous paragraphs. Chin straps shall be 10 inches (25.4 cm) long across the top corners, 12 inches (30.5 cm) long across the bottom corners, and 5 inches (12.7 cm) in vertical height, measured at the center. The top edge shall incorporate extra material in the shape of a crescent to ensure that the whole garment will pass the NFPA 1971 Whole Garment Liquid Penetration Test. The leading underside edge of the chin strap shall have a 1.5-inch-wide (3.8-cm-wide) horizontal strip of hook and loop fastener pile to ensure closure and to ensure passage of the NFPA 1971 Whole Garment Liquid Penetration Test.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

HANG-UP LOOP

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, lockstitched to the coat. Webbing is not acceptable.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

SLEEVES

To prevent stove-piping, sleeves shall be individually graded by coat size and sleeve length. For maximum freedom, sleeve design shall feature extra full cut one-piece outer shell 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 A seam 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 strength (that is, Major A seam requirement, as previously defined in this specification).

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

INNER WRISTLET & WATERWELL WITH THUMB TAB

Every coat shall feature 4.5-inch (11.4-cm) long, double-layer 100% Nomex knit inner wristlets protected by a flame-resistant and moisture-resistant waterwell. The inner wristlet shall be sewn

to the thermal liner sleeve end (not to the outer shell), and shall provide a thumb attachment by means of a Nomex tabbing material bar tacked at each end approximately 2 inches (5.1 cm) apart at the cuff opening. A specified moisture barrier waterwell with an elastic gather shall be sewn to the moisture barrier sleeve end with all seams sealed to allow maximum channeling of water away from inside the moisture barrier/ thermal liner sleeve end. This waterwell must pass the NFPA 1971 Whole Garment Liquid Penetration Test. The thermal liner/wristlet shall be bar tacked and seam sealed at the junction of the moisture barrier sleeve to waterwell seam to prevent liner pullout. This inner waterwell assembly shall be interface capable with the appropriate glove to provide wrist protection during the NFPA 1971 Whole Garment Liquid Penetration Test.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

EXTERNAL WRISTLET

Every coat shall feature a 2.5-inch (6.4 cm) long 100% Nomex 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.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

FRONT CLOSURE PROTECTIVE OVERLAP

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.

The inside trailing edge of each 2-inch-wide (5.1-cm-wide) inner panel shall have the breathable moisture/ pathogen material wrapped around the edge by 0.5 inch (1.3 cm) to create an anti-wick guard to prevent soak-through during the required NFPA 1971 Whole Garment Liquid Penetration Test. An additional layer of 6-inch-wide (15.2-cm-wide) 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.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

COMPOSITE MATERIALS

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.

OUTER SHELL

7.5 oz.; PBI ripstop weave; 40% PBI/60% Kevlar; EWR - Bronze

THERMAL LINING

7.4 oz. calendared 100% spun 3.6 oz. Meta Aramid facecloth; 1 layer of 2.3 oz. E-89, and one layer 1.5 oz. E-89

MOISTURE BARRIER

5.0 oz; Crosstech Bi-Component (PTFE) on a 3.2 oz. Nomex III A facecloth

Does Your Bid Comply With All Aspects Of This Section?

For Outer Shell:	Yes _____	No _____
For Thermal Lining:	Yes _____	No _____
For Moisture Barrier:	Yes _____	No _____

COAT CUSTOM OPTIONS TO BE PROVIDED

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.

NFPA 2007 Edition Construction and Labeling

- Foldover Comfort Chinstrap
- Coat Cuffs
- Inspection Port Liner
- Liner Detachable
- Liner Label Pocket
- Take Up Straps 2 Postman
- Nomex-Tabbed long wristlets
- Articulating Rapid Rescue Strap with New Coat
- Project Fires-1 trim -Lime 2-Tone Scotchlite
- Back Patch -PBI EWR Bronze
- <T.F.D.>

3-Sewn Periods

- 3 -3" sewn letters -lime Scotchlite
- Hem Patch -PBI EWR Bronze
- FF LAST NAME or 1st INITIAL + LAST NAME - avg. 7 letters -Ok to use 2" letters to Fit

7 -3" sewn letters -lime Scotchlite

- 1.5" Velcro/Zipper Coat Closure -PBI EWR Bronze
- Liner Locator -Coats -PBI EWR Bronze
- Shoulder Caps -PBI EWR Bronze
- FDNY Semi-bellows Coat Pockets -PBI EWR Bronze
- Handwarmers in Front of Bellows Pockets -PBI EWR Bronze
- Mic Tab -PBI EWR Bronze
 - left chest
 - 0.5" x 2.5"
 - 3" above Radio Pocket
- Radio Pocket -PBI EWR Bronze

- left chest
- 9" x 3.5" x 3"
- SL-90 Flashlight Clip -PBI EWR Bronze
- right chest

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PANTS

To avoid liability and interface problems, coats and pants shall be procured from the same manufacturer.

DESIGN CONCEPT (STYLING)

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.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PATTERNING CONCEPT

Garments shall feature a tailored four-piece outer shell with a two-piece moisture barrier and lining. A pant with a four-piece moisture barrier and thermal liner shall be provided, at no additional charge, when and if an individual’s tailoring needs require it.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PATTERNING REQUIREMENTS

To assure maximum freedom of movement and reduced kinetic resistance with minimum garment weight and bulk, the pants patterning shall:

- Incorporate hydraulic, swivel action leg-to-torso interfaces.
- Incorporate an oversized diamond-shaped crotch insert, graded according to size, for maximum action stride, optimum stepping reach and no “in-crotch” seaming.
- Meet individual tailoring needs, and offer superior functionality. Diamond shall 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 4 inches (10.2 cm), graded to size.
- Ensure that pants rest in normal body line balance of 22 inches (55.9 cm) center distance at the cuff.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

REINFORCED CUSHIONED KNEE

The cushioning for the Knee reinforcement is required, which shall be a heavy duty knee panel

and the thermal pad sewn to the internal side of the thermal liner assembly, shall provide a minimum of 25 CCHR and be comprised of breathable, fiber based materials. The panel shall be heat resistant and durable to withstand repetitive bending.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

SUSPENDER BUTTONS

Eight (8) heavy duty, rust-resistant suspender buttons shall be positioned around the waist. Suspender buttons shall be mounted through waistband of triple layer outer shell material that is internally reinforced with an additional band of coated needlepunch aramid.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

LINER ATTACHMENT AND INSPECTION PORT

The moisture barrier and thermal liner assembly shall be attached to the outer shell at the cuff by means of two (2) Nomex® webbing snap assemblies per leg, and to the waistband, at the waist, with seven (7) evenly-spaced glove snaps.

The liner system design shall not allow products of combustion or other contaminants to move into the liner interior between the moisture barrier and thermal liner. For instance, separately hemmed and bartacked liner and moisture barrier with open edge designs would not be acceptable.

The thermal liner/ moisture barrier shall incorporate a hook and loop fastening port at the right side fly seam to allow access for field inspection of the moisture barrier membrane, seam sealing and thermal insulating layer/ quilt stitching.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PANT CERTIFICATION LABEL ON LINER

The pant certification label on the liner shall be integrally printed on FR Cotton Indura and lockstitched to the inner left hip area.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PANT CERTIFICATION LABEL ON SHELL

The pant certification label on the shell shall be integrally printed on FR Cotton Indura and lockstitched at the top rear of the waist, at the inside.

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

FLY FRONT

The outer shell fly shall be lockstitched to the left side of 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) to the left of the outer shell fly attachment seam and shall be constructed of certified breathable moisture barrier and thermal liner. The right front pant opening shall have an internal facing extending at least 2 inches (5.1 cm) to the right 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.

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COMPOSITE MATERIALS

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OUTER SHELL

7.5 oz.; PBI ripstop weave; 40% PBI/60% Kevlar; EWR - Bronze

THERMAL LINING

7.4 oz. calendared 100% spun 3.6 oz. Meta Aramid facecloth; 1 layer of 2.3 oz. E-89, and one layer 1.5 oz. E-89

MOISTURE BARRIER

5.0 oz; Crosstech Bi-Component (PTFE) on a 3.2 oz. Nomex III A facecloth

Does Your Bid Comply With All Aspects Of This Section?

For Outer Shell: Yes _____ No _____

For Thermal Lining: Yes _____ No _____

For Moisture Barrier: Yes _____ No _____

PANT CUSTOM OPTIONS TO BE PROVIDED

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Narrow 1.5" Velcro Fly

Inspection Port Liner

Liner Detachable

3" Cuff trim -Lime 2-Tone Scotchlite

Angled Cuffs -Pants -PBI EWR Bronze

Pants Cuffs -PBI EWR Bronze

Heat Channel Knees -PBI EWR Bronze
 Take Up Straps 2 Postman -PBI EWR Bronze
 X-Large Bellows Pockets -Pants -PBI EWR Bronze
 - 10" x 10" x 2"
 Lined with Kevlar
 Dynaback Suspenders with Quick Adjust Installed

Does Your Bid Comply With All Aspects Of This Section? Yes _____ No _____

PERCENTAGE SPECIFICATION COMPLIANCE CALCULATIONS

	Total Number "Yes/No" Questions		
	Total Number of Yes Answers		
	Total Number of No 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.			