

Project Manual and Specifications

**Athletic Building Abatement Project
Derby High School
Derby, CT**

City Project No. COD 2018-44

**Issued for BID
February 28, 2018**

KAESTLE BOOS
associates, inc

416 Slater Road, P.O. Box 2590
New Britain, CT 06050-2590
Phone: 860-229-0361
Fax: 860-229-5303

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Derby, CT
KBA #17015.00

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CITY OF DERBY

1 Elizabeth Street
Derby, CT 06418
P: (203) 736-1450 F: (203) 736-8880

Mayor

Richard Dziekan
Email: rdziekan@derbyct.gov

Building Committee Chair

Keith A. McLiverty P: (203) 627-3947
Email: kmcliverty@region15.org

DERBY PUBLIC SCHOOLS

35 Fifth Street
Derby, CT 06418
P: (203) 736-5027 | F: (203) 736-5031

Superintendent of Schools

Dr. Matthew Conway
Email: mconway@derbyps.org

DERBY HIGH SCHOOL

75 Chatfield Street
Derby, CT 06418
P: (203) 736-5032 | F: (203) 736-5056

Assistant Principal/Athletic Director

Rachael Caggiano
Email: rcaggiano@derbyps.org

LAND USE/ZONING COMMISSION CITY OF DERBY

Land Use Administrator/Zoning Commission
Theodore Estwan, Chair

LAND USE OFFICIALS

CITY OF DERBY

1 Elizabeth Street
Derby, CT 06418
P: (203) 736-1481

Building Official/Zoning Enforcement Officer/Inland- Wetlands Enforcement Agent/ADA Coordinator

Carlo Sarmiento
Email: csarmiento@derbyct.gov
Building Department Facility Inspectors
Andy Cota/ Jim Watson
M-W: 8:30-5, T: 8:30-6, F: 8:30-12:30

HEALTH DEPARTMENT

CITY OF DERBY

98 Bank Street
Seymour, CT
P: (203) 881-3255

Naugatuck Valley Health District

Karen N. Spargo, Director of Health
M-F: 8:30-4:00 and by appointment

PROJECT TEAM AND LOCAL OFFICIALS LIST

DERBY HIGH SCHOOL ATHLETIC FACILITY IMPROVEMENTS - TURF, TRACK, AND SOFTBALL FIELD

Derby, CT

KBA #17015.00

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OWNERS PROJECT MANAGER

Arum & Associates, LLC
2291 Tarringford West Street
Torrington, CT 06790
P: (860) 482-7087

Owners Project Manager

Ed Arum
Email: edarum@hotmail.com

ARCHITECT, LANDSCAPE, STRUCTURAL

Kaestle Boos Associates, Inc.
416 Slater Road, PO Box 2590
New Britain, CT 06050-2590
P: (860) 229-0361 | F: (860) 229-5303

Principal-In-Charge – Brian Solywoda
Email: bsolywoda@kba-architects.com
Project Manager/Landscape Architect – Luke McCoy
Email: lmccoy@kba-architects.com
Landscape Architect – Eric Roise
Email: eroise@kba-architects.com
Architect – Jennifer L. Mangiagli
Email: jmangiagli@kba-architects.com
Structural Engineer – Richard Lewandowski
Email: rlewandowski@kba-architects.com
Specifications and CA Coordination – Alice Nawrot
Email: anawrot@kba-architects.com

MECH./ELEC./PLUMB.

Consulting Engineering Services, Inc.
811 Middle Street
Middletown, CT 06457
P: (860) 632-1682 | F: 860-632-1768

Project Manager – Jesse VanCamp
Email: jvancamp@cesct.com
Plumbing Engineer – Jesse VanCamp
Email: jvancamp@cesct.com
Electrical Engineer – Rick McCracken
Email: rmccracken@cesct.com

CIVIL ENGINEER

Alfred Benesch & Company
90 National Drive
Glastonbury, CT 06033
P: (860) 633-8341
Direct: (860) 494-4422

Civil Engineer – Robert Newton
Email: RNewton@benesch.com

ASBESTOS ABATEMENT CONSULTANT

Hygenix Inc.
49 Woodside Street
Stamford, CT
P: (203) 324-2222 or (800) 201-1227

Project Manager
James Twitchell
Email: jtwitchell@hygenix.com

INVITATION TO BID
ATHLETIC BUILDING ABATEMENT PROJECT
DERBY HIGH SCHOOL -
DERBY, CT
CITY PROJECT NO. COD 2018-44

Sealed bids for the **Athletic Building Abatement Project - at Derby High School, Derby, CT** addressed to **Salvatore Coppola, Finance Director** will be received in the **Finance Office, Derby City Hall, 1 Elizabeth Street, Derby, CT 06418** on or before **10:00 a.m.** local time on **FRIDAY, MARCH 30, 2018**. Bids will be publicly opened and read aloud in the Joan Williamson Aldermanic Chambers, 2nd Floor, Derby City Hall. Late bids will be rejected.

A **Non-Mandatory** Pre-Bid Construction Meeting will be held on **THURSDAY, March 08, 2018, at 10:30 a.m.** local time at the **Site, 75 Chatfield Road, Derby, CT 06418**.

Drawings and specifications may be downloaded at www.derbyct.gov under the Bids link, on or after **FRIDAY, March 2, 2018**. All addenda will be available for viewing and downloading. Faxes of addenda will not be provided. It is the responsibility of bidders to check and download all addenda, prior to submitting bids.

As Security, each Bid must be accompanied by a Certified Check or Cashier's Check drawn upon either a State Bank and Trust Company or a National Banking Association, to the order of the **City of Derby**, or the Bid must be accompanied by a Bid Bond having as surety thereto, such Surety Company or Companies as are authorized to do business in the State of Connecticut of an amount not less than **(5%)** of the Bid. **NO BID WILL BE ACCEPTED UNLESS ACCOMPANIED BY THE REQUIRED BID DEPOSIT.**

Upon award and prior to any work being performed a 100% Performance, Labor and Material Payment Bond and other Bonds subject to the conditions provided for in the Bid Specifications are required. A Certificate of Insurance will also be required naming the **City of Derby** as an additional insured.

All Requests for Information (RFI) are to be in writing and emailed to the attention of Eric Roise at eroise@kba-architects.com. Phone calls will not be returned for RFI questions. RFIs must be received by the Architect by **WEDNESDAY, March 21, 2018 BY NOON**– Last day to receive RFIs.

Bidders shall not include Federal Excise Taxes or State of Connecticut Sales Taxes on which Public Buildings are exempt.

All Bidders should make an effort to consider the use of local trade contractors.

Bids must be held firm and may not be withdrawn for sixty (60) days after the bid opening.

The **City of Derby** reserves the right to waive any informalities in Bids, to reject any or all Bids, or to accept any proposal that in their judgment will be in the best interest of the Town.

The **City of Derby** does not discriminate on the basis of sex, race, age, physical disability, religion or national origin.

The **City of Derby** is an Affirmative Action/Equal Opportunity Employer. Minority/Women's Business Enterprises are encouraged to apply.

DERBY HIGH SCHOOL
DERBY, CT

ATHLETIC BUILDING ABATEMENT PROJECT
KBA #17015.00

Salvatore Coppola
Finance Director
City of Derby, CT

INSTRUCTION TO BIDDERS

CITY PROJECT NO. COD 2018-44

PROPOSAL

Proposals are being sought for the Derby High School Athletic Building Abatement Project. All work shall be done in full accordance with the plans and specifications.

KEY EVENT DATES

- Advertisement for Invitation to Bid: Friday, March 02, 2018.
- **NON-MANDATORY** Pre-Bid Construction Meeting: Thursday, March 08, 2018, 10:30 a.m.
- **FINAL QUESTIONS BY CONTRACTORS:** Wednesday, March 21, 2018 by Noon.
- **FINAL ADDENDUM ISSUED:** Friday, March 23, 2018.
- **Bid Opening:** Friday, March 30, 2018, 10:00 a.m. No bids will be accepted after said date and time.

ALTERNATE BIDS

No Alternate or Supplementary Bids will be considered unless such Bids are specifically requested in the Supplemental Specifications and shown on the Bid Proposal Form.

RECEIPT AND OPENING OF BIDS

Separate sealed bids will be received in the Finance Office, Derby City Hall, 1 Elizabeth Street, Derby, CT 06418 until the time and date stated in the Invitation to Bid. Bids shall then be publicly opened and read aloud in the Joan Williamson Aldermanic Chambers, 2nd floor, Derby City Hall.

One (1) Original and two (2) copies of the Bid Documents including the Bid, the Non-Collusion Affidavit, Certification(s) Regarding Equal Employment Opportunity and the Bidder's Qualification Statement shall be submitted in sealed envelopes clearly labeled with the name and address of the Bidder, the date and time of the Bid opening and the words **Derby High School Athletic Building Abatement Project** so as to guard against opening prior to the time set therefore. Bids may be forwarded by mail. If mailed, the sealed envelope containing the proposal, marked as described above, shall be enclosed in another envelope properly addressed for mailing and received in time for bid. Bids cannot be emailed or faxed.

The City may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities in or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening thereof.

DETERMINATION OF AWARD

This Contract will be awarded to the lowest, responsible, qualified bidder based upon his/her "Total Base Bid Amount" only. The City shall determine the "lowest, responsible, qualified bidder" on the basis of the bidder submitting the lowest Total Base Bid Amount; responsiveness of his/her proposal; demonstration of a history of the ability and integrity necessary to perform the required work; and certification that he/she can perform the required work in accordance with the Contract Documents.

Bids will be compared on the basis of the Total Base Bid of the items listed in the Bid proposal.

UNIT PRICES

The unit prices for each of the several items in the proposal of each bidder shall include its prorated share of overhead so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price represents the total bid. Any bid not conforming to this requirement may be rejected as informal. The special attention of all bidders is called to this provision, for should conditions make it necessary to revise the quantities, increase or decrease thereof may be made without limit, and adjustment and compensation shall be made on the basis of the unit prices for such items.

PREPARATION OF PROPOSAL

Each bid shall be handwritten in ink or typed and submitted on the prescribed form and all blank spaces for bid prices must be filled in both words and figures. Bid prices shall include all labor, materials, and equipment necessary to complete the work in accordance with the Contract Documents.

Each Bidder shall include in his/her Bid the following information:

Principals:

Names:

Home addresses, including City, State, Zip Code:

Firm:

Name:

Treasury Number:

Address:

City, State, Zip Code:

Phone Number:

Fax Number:

Email Address:

SECURITY FOR PROPOSAL

Each proposal must be accompanied by a bid bond with a surety acceptable to the City in the amount equal to at least ten percent (10%) of the amount of the bid. The successful Bidder, upon his failure or refusal to execute and deliver the Contract, certificates of insurance, or bonds required within ten days, unless otherwise agreed upon, after he has received notice of the acceptance of the Proposal, shall forfeit to the City, as liquidated damages for such failure or refusal, the security deposit with his Proposal.

COLLUSIVE AGREEMENTS

Each Bidder submitting a Bid to the City of Derby for the work contemplated by the Documents, on which bidding is based, shall execute and attach thereto the Non-Collusion Affidavit on the form herein provided, to the effect that he/she has not colluded with any other person, firm or corporation in regard to any Bid submitted.

Before executing any Subcontract, the successful Bidder shall submit the name of any proposed Subcontractor for prior approval and an affidavit in the form provided herein.

BIDDER'S QUALIFICATION STATEMENT

Each Bidder shall submit on the form furnished for that purpose (a copy of which is included in the Contract Documents) a Bidder's qualification statement, his/her experience record in the type of work embraced in the Contract, and his/her organization and equipment available for the work contemplated, and other pertinent information so contained on said form, and when specifically requested, the City of Derby shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform his/her obligations under the Contract, and the Bidder shall furnish the City of Derby all such information and data for this purpose as it may request. The right is reserved to reject any Bid where an investigation of the available evidence or information does not satisfy the City of Derby that the Bidder is qualified to carry out properly the terms of the Contract.

The City of Derby also reserves the right to consider as not responsible any Bidder who does not habitually perform with his/her own forces at least fifty-one (51%) percent of the dollar value of the work involved in this Contract.

ACT CONCERN WORKERS' COMPENSATION

Effective October 1, 1986, an Act concerning Workers' compensation insurance requirements for Contractors on public works projects and state licenses requires that municipalities, prior to entering into contractual obligation for construction or repair of any public works project, must obtain the evidence that the Contractor can prove that he/she is not liable to the State for any workers' compensation payments.

WITHDRAWAL OF BIDS

Bids may be withdrawn personally or on written or telefax request dispatched by the bidder in time for delivery in the normal course of business prior to the time fixed for opening, provided that written confirmation of any telefax withdrawal over the signature of the bidder is placed in the mail and postmarked prior to the time set for bid opening. Negligence on the part of the bidder in preparing his/her bid confers no right of withdrawal or modification of his/her bid after such bid has been opened.

FAMILIARITY WITH LAWS, SITE CONDITIONS, AND DOCUMENTS

Each bidder is required to be familiar with and to comply with the terms and conditions of the specifications and all other Contract Documents and with all Federal, State and Local Laws, Ordinances or Regulations, which in any manner relate to the performance of the work in accordance with the Contract.

TAX EXEMPTION

The City is exempt from paying tax and for that reason the bid price shall *not* include any tax on the items specified.

INSURANCE

The Contract requires the Contractor to maintain in force during the performance of the Work, policies of Workmen's' Compensation Insurance and Public Liability and Property Damage Insurance, covering the operations of the Contractor, subcontractors, and the agents of any of them, the use of any motor vehicles employed by the Contractor, subcontractors, and the agents of any of them.

Certificates evidencing the fact that the Contractor has procured the required insurance must be filed with the City of Derby Finance Office at the time of the execution of the Contract. Bidders should examine the General Conditions for the details of the insurance requirements.

ERRORS, INTERPRETATIONS, AND ADDENDA

Should a bidder find any omissions, discrepancies, or errors in the Specifications or other Contract Documents or should he/she be in doubt as to the meaning of the Specifications or other Contract Documents, he/she should immediately notify the City of Derby's Authorized Representative which may correct, amend, or clarify such documents by a written interpretation or addendum. No oral interpretations shall be made to any bidder and no oral statement of the City of Derby shall be effective to modify any of the provisions of the Contract Documents.

EMPLOYEE DISCRIMINATION

The Contractor agrees and warrants that in the performance of this Contract, he/she will not discriminate or permit discrimination against any person or groups of persons on the grounds of race, color, religion or national origin, age, marital status, sex, or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved in any manner prohibited by the laws of the United States or the State of Connecticut and further agrees to provide such information requested by the City concerning the employment practices and procedures of the Contract as related to the provisions of this section.

SUBCONTRACTORS

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the City of Derby and that approval of the proposed subcontract award cannot be given by the City unless and until the successful bidder submits all information and evidence requested by the City regarding the proposed subcontractor. Although the bidder is not required to attach such information and evidence to his/her bid, the bidder is hereby advised of this requirement so that appropriate action will be taken to prevent subsequent delay in subcontract awards.

All contracts made by the Contractor with subcontractors shall be governed by the terms and conditions of the prime Contract. The Contractor shall see to it that his/her subcontractors are fully informed in regard to these terms and conditions.

EXECUTION OF CONTRACT

If notified of the acceptance of this proposal within the acceptance period of ninety (90) days, the bidder agrees to execute the contract and all related documents for this work within ten days of receipt of the "Notice to Proceed."

TIME REQUIREMENTS

Time is a major factor for the completion of this contract. All work must be completed within the time limitations stipulated in the Supplemental Conditions. A monetary penalty as stipulated in the Supplemental Conditions will be imposed for work under this contract not completed within the aforementioned time period.

RIGHT OF THE CITY TO TERMINATE CONTRACT

In the event that any of the provisions of this Contract are violated by the Contractor, or by any of his/her subcontractors, the City of Derby may serve written notice upon the Contractor of its intention to terminate the Contract, such notices to contain the reasons for such intention to terminate the contract, and unless within five days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement for correction be made, the Contract shall, upon expiration of said five days, cease and terminate. In the event of any such termination, the City of Derby shall immediately serve notice thereof upon the Contractor.

PAYMENTS

Monthly estimates and/or invoices shall be furnished to the City of Derby for verification and approval of the amount of work done and the amount earned by the Contractor. An amount of 95% of the estimated amount due, less any payments previously made and/or any monies to be held will be paid to the Contractor. The balance will be retained by the City of Derby until final completion of the work. Final payment will not be made until final completion and acceptance by the City of all work covered by the contract. The Contractor agrees that he will indemnify and save the City of Derby harmless for all claims growing out of the lawful demands of subcontractors, laborers, suppliers, and assignees.

City of Derby
Finance Department
1 Elizabeth Street
Derby CT 06418
203-736-1450

BID REQUIREMENTS
CITY PROJECT NO. COD 2018-44

This sheet is designed for your assistance and guidance when submitting your proposal of a bid to the City of Derby. Return all bids to the above address.

Number of Copies:

All submitted bids should have one original and two copies when submitting to the Finance Committee. Since some departments require more, please make sure you follow the department's specifications.

Non-Collusion Affidavit: (submit as page two of submitted bid)

Pricing:

All bids shall be honored for no less than 90 days from bid opening date, bid extension date or clarification of contracts.

Insurances/Bonding:

Each proposal must be accompanied by a bid bond with a surety acceptable to the City in the amount equal to at least ten percent (10%) of the amount of the bid. Upon award and contract issuance, the City will require a payment and performance bond in the amount of the contract, which shall be binding upon the awarding, with a surety or sureties satisfactory to the City, for the protection of persons supplying the labor or materials in the prosecution of the work provided. The successful contractor shall be required to furnish with their bid a Certificate of Insurance acceptable to the City, naming the City as an additional insured. Tax Bonds: All non-resident contractors are required to post a Guaranty Bond (form AU-766 or Cash Bond (AU-72) in the amount required by the state. This bond will secure payment for applicable taxes payable to the State with regard to the project.

Prevailing Wages:

Under the Davis-Bacon Act, all construction projects for public works, prevailing wage schedules must be part of any and all specifications. Construction Projects that are considered are remodeling, refurbishing, rehabilitation, alterations or repair(s) whose value exceeds \$100,000 and projects for new construction where values exceed \$1,000,000.

For questions on prevailing wage, visit the Department of Labor's web page at www.CTDOL.State.CT.US

Waiver or Rejection of Bids:

The City's Finance Committee reserves the right to reject any and all bids in whole or in part, or to waive any informality or technicalities regarding said proposals; or to accept any proposal or part thereof deemed to be in the best interest of the City of Derby. Please be advised that if you are awarded a project from the City of Derby **do not** start work without a signed Purchase Order or Agreement. Both are legal documents engaging you to carry out the projects specifications. Carrying out a project without one of these documents in place can result in your lost time and revenue.

Please have your insurance carrier reference bid number on all Certificates of Insurance

- **Specifications supersede bid requirements above**

If this project is state funded and is \$50,000 or more, state set asides 4a-60, 4a-60a, 4a-60g, 46a-68b-46a-68f will apply.

BID LANGUAGE (for bid documents)

The contractor who is selected to perform this State project must comply with CONN. GEN. STAT. Sec. 4a-60, 4a-60a, 4a-60g and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-4. An Affirmative Action Plan must be filed with and approved by the Commission on Human Rights and Opportunities prior to the commencement of construction.

The contractor shall be required to make good faith efforts to place a minimum of twenty-five (25%) percent of the subcontracts awarded by the general contractor/construction manager at risk with eligible contractors holding current certification from the Connecticut Department of Administrative Services ("DAS") under the provisions of CONN. GEN. STAT. Sec. 4a-60g, as amended. (25% of the work with DAS certified Small and Minority owned business(s) and 25% of that work with DAS certified Minority, Women and/or Disabled owned businesses)

BID BOND

CITY PROJECT NO. COD 2018-44

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

_____, as Principal, and
(Name of Principal)

_____, as Surety,
(Name of Surety)

are held and firmly bound unto the CITY OF DERBY, CONNECTICUT, hereinafter called the
"CITY," in the penal sum of _____

_____ DOLLARS, (\$ _____),

lawful money of the United States, for the payment of which sum well and truly to be made, we bind
ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly
by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT

WHEREAS, the Principal, has submitted the Accompanying Bid dated _____

20 _____, for _____

NOW, THEREFORE, if the Principal shall not withdraw said Bid within the period specified, therein after the opening of the same, or, if no period be specified, within thirty days after the said opening, and shall within the period specified therefore, or if no period be specified, within ten days after the prescribed forms are presented to him for signature, enter into a written contract with the City in accordance with the Bid, as accepted, and give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such Contract; or in the event of the withdrawal of said Bid within the period specified, or the failure to enter into such Contract and give such bond within the time specified, if the Principal shall pay the City the difference between the amount specified in said Bid and the Amounts for which the City may procure the required work or supplies or both, if the latter be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS THEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

(Principal) (L.S.)

(Surety)

BY: _____

CERTIFICATION OF BIDDER REGARDING
EQUAL EMPLOYMENT OPPORTUNITY
CITY PROJECT NO. COD 2018-44

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION BY BIDDER

Bidder's Name: _____

Address and Zip Code: _____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
Yes ____ No ____ *(If answer is yes, identify the most recent contract,)*
2. Compliance reports were required to be filed in connection with such contract or subcontract.
Yes ____ No ____ *(If answer is yes, identify the most recent contract.)*
3. Bidder has filed all compliance reports due under applicable instructions, including SF-100.
Yes ____ No ____ None Required ____
4. If answer to item 3 is "No," please explain in detail on reverse side of this certification.

Certification - The information above is true and complete to the best of my knowledge and belief.

Name and Title of Signer (Please Type)

Signature

Date

CERTIFICATION OF SUBCONTRACTOR REGARDING
EQUAL EMPLOYMENT OPPORTUNITY
CITY PROJECT NO. COD 2018-44

Name of Prime Contractor

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the subcontractor has not filed a compliance report due under applicable instructions, such subcontractor shall be required to submit a compliance report before the Owner approves the subcontract or permits work to begin under the subcontract.

SUBCONTRACTOR'S CERTIFICATION

Subcontractor's Name: _____

Address and Zip Code: _____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
Yes ____ No ____
2. Compliance reports were required to be filed in connection with such contract or subcontract.
Yes ____ No ____
3. Bidder has filed all compliance reports due under applicable instructions, including SF-100.
Yes ____ No ____ None Required ____
4. If answer to item 3 is "No," please explain in detail on reverse side of this certification.

Certification - The information above is true and complete to the best of my knowledge and belief.

Name and Title of Signer (Please Type)

Signature

Date

BIDDER'S QUALIFICATION STATEMENT

CITY PROJECT NO. COD 2018-44

(To be submitted by the Bidder only upon the specific request of the City.)

All questions must be answered, and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on a separate attached sheet. The Bidder may submit any additional information he desires.

1. Name of Bidder.
2. Permanent main office address.
3. When organized.
4. If a corporation, where incorporated.
5. How many years have you been engaged in the contracting business under your present firm or trade name?
6. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion.)
7. General character of work performed by your company.
8. Have you ever failed to complete any work awarded to you?
If so, where and why?
9. Have you ever defaulted on a contract?
If so, where and why?
10. List the more important projects recently completed by your company, stating the approximate cost for each, and the month and year completed.
11. List your major equipment available for this Contract.
12. List your experience in work similar to this project.
13. List the background and experience of the principal members of your organization, including officers.
14. List the work to be performed by subcontractors and summarize the dollar value of each subcontract.
15. Credit available.

FORM OF PROPOSAL

**ATHLETIC BUILDING ABATEMENT PROJECT
DERBY HIGH SCHOOL
DERBY, CT
CITY PROJECT NO. COD 2018-44**

**TO: Salvatore Coppola, Finance Director
Finance Office
Derby City Hall
1 Elizabeth Street
Derby, CT 06418**

Pursuant to and in compliance with your "Invitation to Bid" relating thereto, the undersigned,

(Name of Firm)

having visited the site and carefully examined the Drawings, Bidding Documents and complete Specifications **dated February 28, 2018** together with all Addenda issued and received prior to scheduled closing time for recipient of Bids as prepared by the Architects, KAESTLE BOOS ASSOCIATES, INC., 416 Slater Road, New Britain, Connecticut, hereby offers and agrees as follows:

To provide all labor, materials, and all else whatsoever necessary to erect and properly finish all work in connection with the

**ATHLETIC BUILDING ABATEMENT PROJECT
DERBY HIGH SCHOOL
DERBY, CT**

to the satisfaction of the Architect and Owner for the sum of:

_____ (**\$** _____)

to provide all labor, materials, and all else whatsoever necessary to construct all improvements described in the specifications.

If awarded this Contract, we will execute a Contract with the **City of Derby**, Owner of the property.

UNIT PRICES

Should the amount of improvements required be increased or decreased due to special considerations found at the site or because of a request of the **City of Derby**, the undersigned agrees that the following supplemental UNIT PRICES will be the basic price in place for computing the EXTRA or CREDIT.

Each UNIT PRICE shall include all equipment, tools, labor, permits, fees, etc., incidental to the installation and completion of the work involved.

The amounts shown are net changes to the Contract for additional work and include the Contractor's and any Subcontractor's amounts for overhead and profit. For deleted work, the net credit to the Contract shall be 10% less.

All work is to be accomplished in accordance with applicable Sections of the Specifications.

C.Y. = cubic yard	S.F. = square foot
S.Y. = square yard	V.F. = vertical foot
L.F. = linear foot	EA = Each

ITEMS

1. Light Insulation in Light Fixture – Light insulation in light fixture removal and disposal according to Division 02 Sections. \$ _____/EA
2. Floor Tiles – Floor tiles removal and disposal as ACM according to Division 02 Sections. \$ _____/S.F.
3. Window Gaskets – PCB containing window gaskets removal and disposal according to Division 02 Sections". \$ _____/EA
4. Glovebag for Floor Tile – Processed Aggregate (in place) Glovebag for floor tile (<3LF/3SF) removal and disposal according to Division 02 Sections. \$ _____/Per Glovebag
5. Preparation of a Containment – Preparation of a contained Work area (<260 SF) with decon according to Division 02 Sections. \$ _____/S.F.
6. Preparation of a Containment – Preparation of a contained work area (>260 SF) with decon according to Division 02 Sections. \$ _____/S.F.

ALLOWANCES

1. Not Applicable

ALTERNATES

The undersigned Bidder further proposed and agrees that should the following Alternates be accepted and included in the Contract, the amount of the Lump sump Bid, as heretofore stated, shall be adjusted by the amount of said Alternates. All materials and workmanship shall be in strict accordance with the Drawings and specification and shall be in place prices.

Not Applicable

CONTRACT TIME

The undersigned Bidder hereby certifies that Substantial Completion and Final Completion will be achieved in accordance with the time designated in the General Conditions of the Contract for Construction.

The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work. The Bid includes Addenda listed below and they are hereby acknowledged:

Addendum No. # _____ Dated _____

Addendum No. # _____ Dated _____

Addendum No. # _____ Dated _____

ATTACHMENTS

Enclosed herewith, is the Bid Security which is in the form of:

Bid Bond () Certified Check ()

In the Amount of
\$ _____ Dollars

SIGNATURE

Contractor Firm

Authorized Signature

Printed Name and Title

Business Address

City and State

Telephone Number

Telephone Fax Number

NON-COLLUSION AFFIDAVIT
CITY PROJECT NO. COD 2018-44

State of _____)
)ss.
County of _____)

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

(1) He is (owner, partner, officer, representative or agent) of _____
_____, the Bidder that has submitted the attached bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all
pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid,

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives,
employees or parties in 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 Contract for which the attached Bid has been submitted or to refrain from
Bidding in connection with such Contract, or has 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 Bid price of any other Bidder or to secure through any collusion,
conspiracy, connivance or unlawful agreement any advantage against the Owner or any person
interested in the proposed Contract; 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 its
agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

(Title)

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

(Notary Public)

My commission expires _____, 20_____.

**DO NOT REMOVE
THIS PAGE INTENTIONALLY LEFT BLANK**

CITY OF DERBY

SECURITY SATISFACTION
CITY PROJECT NO. COD 2018-44

The bidder, by submittal of this Bid, agrees with the City that the amount of the bid security deposited with this Bid fairly and reasonably represents the amount of damages the City will suffer due to the failure of the bidder to fulfill his agreements as above provided.

BY _____
(Signature and Title of Authorized Representative)

Business Name _____

Address _____

Date _____

The Bidder is:

1. Corporation, licensed in the State of _____
2. Partnership
3. Individual

Note: If the Bidder is a corporation, affix corporate seal and give below the names of its president, treasurer, and general manager, if any; if a partnership, give full names and residential addresses of all partners; and if an individual, give residential address if different from business address:

**DO NOT REMOVE
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Suspension and Debarment

CITY PROJECT NO. COD 2018-44

The City will not enter into contracts with parties that have been debarred, suspended or excluded from Federal assistance programs per 2 CFR part 180 and part 1532 and 40 CFR part 31.35

Further, the bidder is required to verify that the bidder, or its principals, as defined at 49 CFR 19.995, or affiliates, as defined at 49 CFR 29.40 and 29.945.

The bidder is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the City if it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the City the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

**DO NOT REMOVE
THIS PAGE INTENTIONALLY LEFT BLANK**

AGREEMENT
CITY PROJECT NO. COD 2018-44

THIS AGREEMENT, entered into on this ____ day of _____, 20____ by _____ and _____ between the **CITY OF DERBY** (hereinafter referred to as the "**CITY**") and _____ (hereinafter referred to as the "**CONTRACTOR**"):

WHEREAS, the **CITY** desires to _____

NOW, THEREFORE, **CITY** and the **CONTRACTOR** for the consideration of One (\$1.00) Dollar and other valuable consideration and under the terms and conditions hereinafter set forth, hereby agree as follows, to wit:

1. The **CITY** hereby engages the **CONTRACTOR** and the **CONTRACTOR** hereby agrees to _____
2. Additional work shall be performed by the **CONTRACTOR** only with the specific authorization of the **CITY** under a written amendment to this Agreement.
3. The **CONTRACTOR** covenants and agrees that it will perform its services under this Agreement in accordance with the highest standards and best practices of its trade.
4. In performing the services required under this Agreement, the **CONTRACTOR** shall conform to all applicable provisions of Federal, State and local laws and regulations including all environmental matters.
5. The **CONTRACTOR** shall indemnify, defend and save harmless the **CITY** for any damages, claims, actions and losses arising either directly or indirectly from the work performed by the **CONTRACTOR** or his subcontractors. The provisions of this paragraph shall survive the expiration or termination of this Agreement and shall in no way be limited by reason of any insurance coverage.
6. The **CONTRACTOR** shall provide the **CITY** with evidence of insurance coverage of a type and in the amounts required by the Contract Documents and naming the **CITY** as an additional insured if the **CITY** so requires. All insurance shall be taken out and maintained at no cost or expense to the **CITY** and the **CONTRACTOR** shall be responsible for the full amount of any deductible. A Performance Bond and a Payment Bond, each in the amount of 100% of the bid amount shall be presented to the **CITY** prior to commencing the performance of any work under

- this agreement. The Performance Bond shall be released upon the City's final acceptance of the Project.
7. In providing the services required under this Agreement, the **CONTRACTOR** shall meet with **CITY** officials/representatives as often as reasonably necessary and shall be available upon request.
 8. The City of Derby may terminate any Agent/Purchase Order at any time for any reason. Said termination shall not give rise to any claim against the City for damages or for additional compensation.
 9. Nonappropriation: If the **CITY** fails to appropriate the funds required by this Agreement or fails for two consecutive months to make the payments required hereunder, the Agreement shall be deemed terminated and of no further force and effect, and the **CONTRACTOR** shall retain all sums previously deposited as liquidated damages, provided the **CITY** shall pay **CONTRACTOR** any amounts due for services rendered as of the date of termination.
 10. The **CITY** shall compensate the **CONTRACTOR** _____

 11. The **CONTRACTOR** shall not assert any claim arising out of any act or omission by any agent, officer or employee of the **CITY** in the execution or performance of this Agreement.
 12. The **CONTRACTOR** shall commence work on this project within ten (10) calendar days after issuance of a Notice to Proceed by the **CITY** or the **CITY's** designated representative. All work shall be completed by the **CONTRACTOR** in accordance with the schedule detailed _____
 13. All work performed by the **CONTRACTOR** shall be subject to inspection and acceptance by the **CITY**.
 14. The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in subsection (i) of Section 31-53 of the General Statutes, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public work project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day.
 15. Pursuant to Connecticut General Statutes Section 49-41a, the **CONTRACTOR**, within thirty (30) days after payment by the **CITY**, shall pay any amounts due any

subcontractor, whether for labor performed or materials furnished, when the labor or materials have been included in a requisition submitted by the **CONTRACTOR** and paid by the **CITY**. In addition, the **CONTRACTOR** shall include in each of its subcontracts a provision requiring each subcontractor to pay any amounts due any of its subcontractors, whether for labor performed or materials furnished, within thirty (30) days after such subcontractor receives a payment from the **CONTRACTOR** which encompasses labor and materials furnished by such subcontractor.

16. Pursuant to Connecticut General Statutes Section 49-41b, the **CITY** shall withhold five (5%) percent from any periodic payment or final payment until the work required herein has been completed and accepted by the **CITY**.
17. The **CONTRACTOR** acknowledges the execution of the Non-Collusion Affidavit which was submitted as part of the bid documents and reaffirms the statements provided for therein.
18. The Contractor agrees that the City of Derby, the State of Connecticut, agencies of the Federal Government, or any other authorized representatives, shall, until the expiration of three (3) years after the final payment under the contract, have access to and the right to examine any directly pertinent books, documents, papers, and records of such contractor, involving transactions related to the contractor.

The period of access and examination described above, for records which relate to (1) appeals for disputes, (2) litigation of the settlement of claims arising out of the performance of this contract, or (3) costs and expenses in relation to the performance of the contract to which exception has been taken by the City, State or Federal government or any of their duly authorized representatives, shall continue until such appeals, litigation, claims or exceptions have been disposed of.

19. Pursuant to Connecticut General Statutes Section 31-52a, in the employment of mechanics, laborers or workmen to perform the work specified herein, preference shall be given to the residents of the state who are, and continuously for at least six (6) months prior to the date hereof have been, residents of this state, and if no such person is available, then to residents of other states.

CITY OF DERBY

CONTRACTOR

By _____

By _____

Richard Dziekan
Mayor

Contractor

**DO NOT REMOVE
THIS PAGE INTENTIONALLY LEFT BLANK**

Contractor Agreement – Additional Language

CITY PROJECT NO. COD 2018-44

The Contractor covenants and agrees that it will perform its services under this Agreement in accordance with the highest standards and best practices of its trade.

In performing the services required under this Agreement, the Contractor shall conform to all applicable provisions of Federal, State and local laws and regulations including all environmental matters.

The Contractor shall indemnify, defend and save harmless the City for any damages, claims, actions and losses arising either directly or indirectly from the work performed by the Contractor or his subcontractors. The provisions of this paragraph shall survive the expiration or termination of this Agreement and shall in no way be limited by reason of any insurance coverage.

A Performance Bond and a Payment Bond, each in the amount of **the contract price** shall be presented to the CITY prior to commencing the performance of any work under this agreement. The Performance Bond shall be released upon the City's final acceptance of the Project.

In providing the services required under this Agreement, the Contractor shall meet with City officials/representatives as often as reasonably necessary and shall be available upon request.

The City may terminate this Agreement at any time for any reason. Said termination shall not give rise to any claim against the City for damages or for additional compensation.

Nonappropriation: If the City fails to appropriate the funds required by this Agreement or fails for two consecutive months to make the payments required hereunder, the Agreement shall be deemed terminated and of no further force and effect, and the Contractor shall retain all sums previously deposited as liquidated damages, provided the City shall pay Contractor any amounts due for services rendered as of the date of termination.

"The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in subsection (h) of Section 31-53 of the General Statutes, shall be at a rate equal to the rate customary or prevailing for the same work in the same

trade or occupation in the town in which such public work project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day."

Pursuant to Connecticut General Statutes Section 49-41a, the Contractor, within thirty (30) days after payment by the City, shall pay any amounts due any subcontractor, whether for labor performed or materials furnished, when the labor or materials have been included in a requisition submitted by the Contractor and paid by the City. In addition, the Contractor shall include in each of its subcontracts a provision requiring each subcontractor to pay any amounts due any of its subcontractors, whether for labor performed or materials furnished, within thirty (30) days after such subcontractor receives a payment from the Contractor, which encompasses labor and materials furnished by such subcontractor.

The Contractor acknowledges the execution of the Non-Collusion Affidavit, which was submitted as part of the bid documents and reaffirms the statements provided for therein.

The Contractor agrees that the City of Derby, the State of Connecticut, agencies of the Federal Government, or any other authorized representatives shall, until the expiration of three (3) years after the final payment under the contract, have access to and the right to examine any directly pertinent books, documents, papers, and records of such contractor, involving transactions related to the contractor.

The period of access and examination described above, for records which relate to (1) appeals for disputes, (2) litigation of the settlement of claims arising out of the performance of this contract, or (3) costs and expenses in relation to the performance of the contract to which exception has been taken by the City, State or Federal government or any of their duly authorized representatives, shall continue until such appeals, litigation, claims or exceptions have been disposed of.

Pursuant to Connecticut General Statutes Section 31-52a, in the employment of mechanics, laborers or workmen to perform the work specified herein, preference shall be given to the residents of the state who are, and continuously for at least six (6) months prior to the date hereof have been, residents of this state, and if no such person is available, then to residents of other states.

PAYMENT BOND
CITY PROJECT NO. COD 2018-44

KNOW ALL MEN BY THESE PRESENTS:

That we, _____ a. _____
(Name of Contractor) (Corporation, Partnership, Individual)
hereinafter called "Principal," and _____, of _____,
State of _____, hereinafter called the "Surety," are held firmly bound
unto the City of Derby, Connecticut, 06418, hereinafter called the "City," in the penal
sum of _____ DOLLARS (\$))
in lawful money of the United States, for the payment of which sum well and truly to be made, we
bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by
these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, Principal entered into a certain Contract with the City, dated the
_____ day of _____, 20 _____, a copy of which is hereto attached and made a part
hereof for the construction of:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
subcontractors, and corporations furnishing materials for or performing labor in the prosecution of
the work provided for in such Contract, and any authorized extension or modification thereof,
including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on
machinery, construction of such work, and all insurance premiums on said work, or otherwise, then
this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed there under of the Specifications accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to work of the Specifications.

PROVIDED, FURTHER, that no final settlement between the City and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20 ____.

ATTEST:

(Principal)

(Principal) Secretary
(SEAL) BY: _____ (s)

(Address - Zip Code)

(Witness as to Principal)

(Address - Zip Code)

(Surety)

ATTEST:

(Surety) Secretary
(SEAL) BY: _____

(Attorney-in-fact)

(Witness as to Surety)

(Address - Zip Code)

(Address - Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all Partners should execute Bond.

PERFORMANCE BOND
CITY PROJECT NO. COD 2018-44

KNOW ALL MEN BY THESE PRESENTS:

That we, _____ a _____
(Corporation, Partnership, Individual)
hereinafter called "Principal," and _____, of _____,
State of _____, hereinafter called the "Surety,"
are held firmly bound unto the City of Derby, Connecticut 06418; hereinafter called the "City,"
in the penal sum of _____
DOLLARS (\$ _____) in lawful money of the United States, for the payment of which sum well
and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly
and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, Principal entered into a certain Contract with the City, dated the _____
day of _____, 20____, a copy of which is hereto attached and made a
part hereof for the construction of:

NOW, THEREFORE, if the Principal shall well, truly, and faithfully perform its duties, all
the undertakings, covenants, terms, conditions, and agreements of said Contract during original
term thereof, and any extensions thereof which may be granted by the City, with or without notice
to the Surety, and if he shall satisfy all claims and demands incurred under such Contract, and
shall fully indemnify and save harmless the City from all costs and damages which it may suffer
by reason of failure to do so, and shall reimburse and repay the City all outlay and expense which
the City may incur in making good any default, then this obligation shall be void; otherwise to
remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed hereunder of the Specifications accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to work of the Specifications.

PROVIDED, FURTHER, that no final settlement between the City and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal)

(Principal) Secretary
(SEAL)

BY: _____ (s)

(Address - Zip Code)

(Witness as to Principal)

(Address - Zip Code)

(Surety)

ATTEST:

(Surety) Secretary
(SEAL)

BY: _____
(Attorney-in-fact)

(Witness as to Surety)

(Address - Zip Code)

(Address - Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all Partners should execute Bond.

GENERAL CONDITIONS

CITY PROJECT NO. COD 2018-44

DEFINITIONS

Wherever used in these General Conditions or in the other contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural thereof:

Addenda: Written or graphic instruments issued prior to the opening of Bids, which clarify, correct, or change the bidding documents or the Contract Documents.

Agreement: The written agreement between the City and the Contractor covering the Work to be performed; other contract Documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment: The form accepted by the City of Derby, which is to be used by the Contractor in requesting progress or final payment and which is to include such supporting documentation as is required.

Bid: The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bonds: Bid Bonds, Payment Bonds, Performance Bonds and other instruments of security.

Change Order: A written order to the Contractor signed by the City of Derby's Authorized Representative authorizing an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued after the effective date of the Agreement.

Contract Documents: The Agreement, Addenda (which pertain to the Contract Documents) the Contractor's Bid (when attached as an exhibit to the Agreement), the Bonds, these General Conditions, the Supplemental Conditions, the Specifications, the Special Provisions, the Drawings (as the same are more specifically identified in the Agreement), together with all Modifications issued after the execution of the Agreement.

Contract Price: The monies payable by the City to the Contractor under the Contract Documents as stated in the Agreement.

Contract Time: The number of days or the date stated in the Agreement for the completion of the Work.

Contractor: The person, firm, or corporation with whom the City has entered into the Agreement.

Effective Date of the Agreement: The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

Field Order: A written order issued by the City of Derby or Authorized Representative, which orders minor changes in the Work.

Notice of Award: The written notice by the City to the apparent successful Bidder stating that upon compliance by the apparent successful Bidder with the conditions precedent enumerated therein, within the time specified, the City will sign and deliver the Agreement.

Notice to Proceed: A written notice given by the City to the Contractor fixing the date on which the Contract Time will commence to run and on which the Contractor shall start to perform his obligation under the Contract Documents.

Specifications: Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applied to thereto.

Subcontractor: An individual, firm, or corporation having a direct contract with the Contractor or with any other subcontractor for the performance of a part of the work at the site.

Substantial Completion: The work (or a specified part thereof) has progressed to the point where, in the opinion of the City of Derby's Authorized Representative, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it was intended.

Work: The entire completed construction of the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of

performing services, furnishing labor, and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

GENERAL MATTERS

Delivery of Bonds

When the Contractor delivers the executed Agreements to the City, the Contractor shall also deliver to the City such Payment and Performance Bonds as the Contractor may be required to furnish.

Copies of Documents

The City shall furnish the Contractor with sufficient copies of the Contract Documents as are reasonably necessary for the execution of the Work.

Commencement of Contract Time; Notice to Proceed

The Contract Time will commence to run on the effective date of the Agreement, or, if a Notice to Proceed is given on the day indicated in the Notice to Proceed.

Project Schedule

Bids Due	Friday, March 30, 2018
Contractor Scope Reviews	April 02-03, 2018
Recommendation to Building Committee	Wednesday, April 04, 2018
*Anticipated Building Committee Meeting Date	
City and Contractor Executions	April 05-April 13, 2018
<u>Construction</u>	
Construction Permit, Submittals, & Mobilizations (2 weeks)	April 16-April 27, 2018
Building Abatement (2 weeks)	April 30-May 11, 2018

Starting the Project

The Contractor shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run

Before Starting Construction

Before undertaking each part of the Work, the Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The Contractor shall promptly report in writing to the City of Derby's Authorized Representative any conflict, error, or discrepancy, which the Contractor may discover.

DERBY HIGH SCHOOL
DERBY, CT

ATHLETIC BUILDING ABATEMENT PROJECT
KBA #17015.00

Within ten days after the effective date of the Agreement, the Contractor shall submit to the City of Derby or Authorized Representative for review and acceptance an estimated progress schedule indicating the starting and completion dates of the various stages of the Work, and a preliminary schedule of values of the Work.

Before any Work at the site is started, the Contractor shall deliver to the City of Derby's Authorized Representative certificates of insurance, which the Contractor is required to purchase and maintain.

Preconstruction Conference

Before the Contractor starts the Work at the site, a conference may be required by the City of Derby's Authorized Representative for review and acceptance of the schedules, to establish procedures for handling submittals, for processing Applications for Payment, and to establish a working understanding among the parties as to the Work.

Suspension and Debarment

The City will not enter into contracts with parties that have been debarred, suspended or excluded from Federal assistance programs per 2 CFR part 180 and part 1532 and 40 CFR part 31.35.

Further the bidder is required to verify that the bidder, or its principals, as defined at 49 CFR 19.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 20.40 and 29.945.

The bidder is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, subpart C in any lower tier covered transaction it enters into.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the City if it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the City, the Federal Government may pursue available remedies, including but not limited to, suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 49 CFR 20, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

CONTRACT DOCUMENTS; INTENT

Intent

The Contract Documents comprise the entire Agreement between the City and the Contractor concerning the Work.

The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If, during the performance of the work the Contractor finds a conflict, error, or discrepancy in the Contract Documents, he shall report it to the City of Derby's Authorized Representative in writing at once and before proceeding with the Work affected thereby.

It is the intent of the Specifications to describe a complete project to be constructed in accordance with the Contract Documents. Any Work that may reasonably be inferred from the Specifications as being required to produce the intended result shall be supplied whether or not it is specifically called for. When words, which have a well-known technical or trade meaning, are used to describe Work, materials, or equipment, such words shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the code of any governmental authority, whether such reference be specified or by implication, shall mean the latest standard specification, manual, or code in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of the City, the Contractor, or the City's Authorized Representative, or any of their agents or employees from those set forth in the Contract Documents. Clarifications and interpretations of the Contract Documents shall be issued by the City of Derby's Authorized Representative.

The Agreement shall be governed by the laws of the State of Connecticut.

AVAILABILITY OF LANDS, PHYSICAL CONDITIONS, REFERENCE POINTS

Availability of Lands

The City shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way for access thereto, and such other lands, which are designated for the use of the Contractor. The Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

Unforeseen Physical Conditions

The Contractor shall promptly notify the City of Derby's Authorized Representative in writing of any subsurface or latent physical conditions at the site or in an existing structure differing materially from those indicated or referred to in the Contract Documents. The City of Derby's Authorized Representative will promptly review those conditions and determine if further investigation or tests are necessary. If the City of Derby's Authorized Representative finds that the results of such investigations or test indicated that there are subsurface or latent physical conditions which differ materially from those intended in the Contract Documents, and which could not reasonably have been anticipated by the Contractor, a Change Order shall be issued incorporating the necessary revisions.

Reference Points

The City shall provide documentation for construction to establish reference points, which in its judgment are necessary to enable the Contractor to proceed with the Work. The Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points, and shall make no changes or relocations without prior written approval of the City. The Contractor shall report to the City of Derby's Authorized Representative whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for replacement or relocation of such reference points by professionally qualified personnel.

INSURANCE

Contractor's Liability Insurance

The Contractor shall purchase and maintain such comprehensive general liability and other insurance in an amount and with a company acceptable to the City as will provide protection from claims set forth below which may arise out of or result from the Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether such performance is by the Contractor, by any subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- o Claims under worker's or workmen's compensation, disability benefits, and other similar employee benefit acts;
- o Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

- o Claims for damages insured by personal injury liability coverage, which are sustained by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or by any other person for any other reason;
- o Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; and
- o Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.

The insurance required by this paragraph shall include the specific coverage's and be written for not less than the limits of liability and coverage's provided in the Supplemental Conditions, or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. All such insurance shall contain a provision that the coverage afforded will not be canceled, materially changed, or renewal refused until at least thirty days prior written notice has been given to the City and the City of Derby's Authorized Representative. All such insurance shall remain in effect until final payment and at all times thereafter when the Contractor may be correcting, removing or replacing defective Work. General liability insurance shall be endorsed to include the City of Derby as an additional insurance and that such insurance to be primary and non-contributory and not excess to any liability policy carried by the City of Derby.

Contractual Liability Insurance

The comprehensive general liability insurance required above will include contractual liability insurance applicable to the Contractor's obligations.

City's Liability Insurance

The City shall be responsible for purchasing and maintaining its own liability insurance and at its option may purchase and maintain such insurance as will protect the City against claims which may arise from operations under the Contract Documents.

Property Insurance

The City shall not be responsible for purchasing and maintaining any property insurance to protect the interests of the Contractor or subcontractors in the Work to the extent of any deductible amounts. If the Contractor wishes property insurance coverage within the limits of such amounts, the Contractor may purchase and maintain it at his own expense.

Waiver of Rights

The City and the Contractor waive all rights against each other and the subcontractors and their agents and employees and separate contractors (if any) and their subcontractor's agents and employees, for damages caused by fire or other peril to the extent covered by insurance provided or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by the City as trustee. The Contractor shall require written waivers from each subcontractor; each such waiver will be in favor of all other parties enumerated in this paragraph.

Receipt and Application of Proceeds

Any insured loss under the policies of insurance required shall be adjusted with the City and made payable to the City as trustee for the insured's, as their interests may appear, subject to the requirements of any applicable mortgage clause. The City shall deposit in a separate account any money so received, and it shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached the damaged Work shall be repaired or replaced, the monies so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order.

The City as trustee shall have power to adjust and settle any loss with the insurers, unless one of the parties in interest shall object in writing within fifteen days after the occurrence of loss to the City's exercise of this power. If such objection be made, the City as trustee shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach.

Acceptance of Insurance

If the City has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by the Contractor on the basis of its not complying with the Contract Documents, the City will notify the Contractor in writing thereof within ten days of the date of delivery of such certificates to the City. If the Contractor has any objection to the coverage afforded by or other provisions of the policies of insurance required to be purchased and maintained by the City on the basis of their not complying with the Contract Documents, the Contractor will notify the City in writing thereof within ten days of the date of delivery of such certificates to the Contractor. The City and the Contractor will each provide to the other such additional information in respect to insurance provided by him as the other may reasonably request. Failure by the City or the Contractor to give any such notice of objection within the time provided shall constitute acceptance of such insurance purchased by the other as complying with the Contract Documents.

Partial Utilization – Property Insurance

If the City finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the work, such use or occupancy may be accomplished provided that no such use or occupancy shall commence before the insurer's providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy.

CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence

The Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.

The Contractor shall assign to the project a competent field superintendent. The superintendent shall spend sufficient time at the site as necessary to insure that work is proceeding efficiently and in accordance with the Contract Documents.

The superintendent shall not be replaced, except on a temporary basis because of sickness, vacations, etc... without written notice to the City of Derby's Authorized Representative.

The superintendent shall be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor.

Labor, Materials and Equipment

The Contractor shall provide competent, suitably qualified personnel to survey and layout the Work and perform construction as required by the Contract Documents. The contractor shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Supplemental Conditions, all Work at the site shall be performed during regular working hours, and the Contractor will not permit overtime work or the performance of work on Saturday, Sunday, or any legal holiday without the City of Derby's Authorized Representative's written consent.

The Contractor shall furnish all materials, equipment, labor, transportation, construction, equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities, and all other facilities and incidentals necessary for the execution, testing, initial operation, and completion of the Work.

All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by the City of Derby's Authorized Representative, the Contractor shall furnish satisfactory evidence (including reports or required tests) as to the kind and quality of materials and equipment.

All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, supplier, or distributor, except as otherwise provided in the Contract Documents.

Equivalent Materials and Equipment

Whenever materials or equipment are specified or described in the Specifications by using the name of a proprietary item or the name of a particular manufacturer, fabricator, supplier, or distributor, the naming of the item is intended to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other manufacturers, fabricators, suppliers, or distributors may be accepted by the City of Derby's Authorized Representative if sufficient information is submitted by the Contractor to allow the City of Derby's Authorized Representative to determine that the material or equipment proposed is equivalent to that named. The procedure for review by the City of Derby's Authorized Representative will be as follows:

Requests for review of substitute items of material and equipment will not be accepted by the City of Derby's Authorized Representative from anyone other than the Contractor. If the Contractor wishes to furnish or use a substitute item of material or equipment the Contractor shall make written application to the City of Derby's Authorized Representative for acceptance thereof, certifying that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified, and be suited to the same use and capable of performing the same function as that specified. The application will state whether or not acceptance of the substitute for use in the Work will require a change in the Specifications to adapt the design to the substitute. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair, and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the City of Derby's Authorized Representative in evaluating the proposed substitute. The City of Derby's Authorized Representative may require the Contractor to furnish at the Contractor's expense additional data about the proposed substitute. The City of Derby's Authorized Representative will be the sole judge of acceptability, and no substitute will be ordered or installed without the City of Derby's Authorized Representative's prior written acceptance.

The City of Derby's Authorized Representative will record time required by the City of Derby's Authorized Representative and the City of Derby's Authorized Representative's consultants in evaluating substitutions proposed by the Contractor and in making changes in the Specifications occasioned thereby. Whether or not the City of Derby's Authorized Representative accepts a proposed substitute, the Contractor shall reimburse the City for the charges of the City of Derby's Authorized Representative and the City of Derby's Authorized Representative's consultants for evaluating any proposed substitute.

Concerning Subcontractors

The Contractor shall not employ any subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom the City may have reasonable objection. A subcontractor or other person or organization identified in writing to the City by the Contractor prior to the Notice of Award will be deemed acceptable to the City. Acceptance of any subcontractor, other person, or organization by the City shall not constitute a waiver of any right of the City to reject defective Work. If the City or City of Derby's Authorized Representative after due investigation has reasonable objection to any subcontractor, other person, or organization proposed by the Contractor after the Notice of Award, the Contractor shall submit an acceptable substitute and the Contract Price shall be increased or decreased by the difference in cost occasioned by such substitution, and an appropriate Change Order shall be issued. The Contractor shall not be required to employ any subcontractor, other person, or organization against whom the Contractor has reasonable objection.

The Contractor shall be fully responsible for all acts and omissions of his subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that the Contractor is responsible for the acts and omissions of persons directly employed by the Contractor. Nothing in the Contract Documents shall create any obligation on the part of the City to pay or to see to the payment of any monies due any subcontractor or other person or organization, except as may otherwise be required by law. The City or the City of Derby's Authorized Representative may furnish to any subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to the Contractor on account of specific Work done.

Patent Fees and Royalties

The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device, which is the subject of patent rights or copyrights held by others. The Contractor shall indemnify and hold harmless the City and the City of Derby's Authorized Representative and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys' fees) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work, and shall defend all such claims in connection with any alleged infringement of such rights.

Permits

Unless otherwise provided in the Supplemental Conditions, the Contractor shall obtain and pay for all construction permits and licenses. The Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work. The Contractor shall pay all charges of utility service companies for connections to the Work.

Laws and Regulations

The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations, applicable to the Work. If the Contractor observes that the Specifications are at variance therewith, the Contractor shall give the City of Derby's Authorized Representative prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Change Order. If the Contractor performs any Work knowing or having reason to know that it is contrary to such laws, ordinances, rules, and regulations, and without such notice to the City of Derby's Authorized Representative, the Contractor shall bear all costs arising therefrom.

Use of Premises

The Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workmen to areas permitted by law, ordinances, permits, or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

During the progress of the Work, the Contractor shall keep the premises free from accumulation of waste materials, rubbish, and other debris resulting from the Work. At the completion of the Work, the Contractor shall remove all waste materials, rubbish, and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by the City. The Contractor shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents. The Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the Contractor subject any part of the work or adjacent property to stresses or pressures that will endanger it.

Taxes

No amount shall be included in the bid price for Connecticut State Sales Tax or for Federal Excise and Transportation Taxes.

Record Documents

The Contractor shall keep one record copy of all Specifications, Drawings, Addenda, Modifications, Shop Drawings, and samples at the site in good order and annotated to show all changes made during the construction process. These shall be available to the Project Engineer for examination and shall be delivered to the City of Derby's Authorized Representative upon completion of the Work.

Safety Protection

The contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury of loss to:

- All employees on the Work and other persons, who may be affected thereby,
- All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and
- Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify the City of adjacent property and utilities when prosecution of the Work may affect them. All damage, injury, or loss to any property caused directly or indirectly, in whole or in part, by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor. The Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed.

The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the City of Derby's Authorized Representative.

Emergencies

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the City of Derby's Authorized Representative or the City, is obligated to act to prevent threatened damage, injury, or loss. The Contractor shall give the City of Derby's Authorized Representative prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby.

Continuing the Work

The Contractor shall carry on the Work and maintain the progress schedule during all disputes or disagreements with the City. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the Contractor and the City may otherwise agree in writing.

Indemnification

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the City and the City of Derby's Authorized Representative and their agents and employees from and against all claims, damages, losses, and expenses including but not limited to attorney's fees arising out of the performance of the Work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the City or the City of Derby's Authorized Representative or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation of the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under workers' or workmen's' compensation acts, disability benefit acts, or other employee benefit acts.

WORK BY OTHERS

The City may perform additional work related to the Project by itself, or have additional work performed by utility service companies, or let other direct contracts therefore, which shall contain General Conditions similar to these. The Contractor shall afford the City, utility service companies, and the other contractors who are parties to such direct contract reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his/her Work with theirs.

If any part of the Contractor's Work depends, for proper execution or results, upon the work of any such other Contractor or utility service company, the Contractor shall inspect and promptly report to the City of Derby's Authorized Representative in writing any patent or apparent defects or deficiencies in such work that render it unsuitable for such proper execution and results. The Contractor's failure to so report shall constitute an acceptance of the other work as fit and proper for integration with the Contractor's Work except for latent or non-apparent defects and deficiencies in the other work.

The Contractor shall do all cutting, fitting, and patching of his Work that may be required to make its several parts come together properly and integrate with such other work. The Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of the City of Derby's Authorized Representative and the others whose work will be affected.

If the performance of additional work by other contractors or utility service companies or the City was not noted in the Contract Documents, written notice thereof shall be given the Contractor prior to starting any such additional work.

CITY'S RESPONSIBILITIES

The City shall issue all communications to the Contractor through the City of Derby's Authorized Representative.

The City shall furnish the data required of the City under the Contract Documents promptly and shall make payments to the Contractor promptly after they are approved in accordance with the provisions of the Supplemental Conditions.

CITY OF DERBY'S AUTHORIZED REPRESENTATIVE'S STATUS DURING CONSTRUCTION

City Representative

The City of Derby's Authorized Representative shall be the City's representative during the construction period. The duties and responsibilities and the limitations of authority of the City of Derby's Authorized Representative as the City's representative during construction set forth in the Contract Documents and shall not be extended without written consent of the City and the City of Derby's Authorized Representative.

Visits to the Site

The City of Derby's Authorized Representative or his representative shall make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the extended Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents.

Clarifications and Interpretations

The City of Derby's Authorized Representative shall issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of drawings or otherwise) as the City of Derby's Authorized Representative may determine necessary.

Rejecting Defective Work

The City of Derby's Authorized Representative shall have authority to disapprove or reject Work, which is defective, and shall also have authority to require special inspection or testing of the Work whether or not the Work is fabricated, installed, or completed.

Decisions on Disagreements

The Director of Public Works shall be the interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes, and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the Work shall be referred to the City of Derby's Authorized Representative in writing with a request for a formal decision in accordance with this paragraph, which the City of Derby's Authorized Representative shall render in writing within a reasonable time.

Limitations on the City of Derby's Authorized Representative's Responsibilities

Neither the City of Derby's Authorized Representative's authority to act under the Contract Documents nor any decision made by the City of Derby's Authorized Representative in good faith either to exercise or not exercise such authority shall give rise to any duty of responsibility of the City of Derby's Authorized Representative to the Contractor, any subcontractor, any manufacturer, fabricator, supplier, or distributor, or any of their agents or employees, or any other person performing any of the Work.

Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," or "reasonable," "suitable," "acceptable," "proper," or "satisfactory" or adjectives of like effect or import are used, to describe requirements, direction, review, or judgment will be solely to evaluate the Work for compliance with the Contract Documents. The use of any such term or adjective never indicates that the Engineer shall have authority to supervise or direct performance of the Work or authority to undertake responsibility contrary to the provisions of the following:

The City of Derby's Authorized Representative will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto.

The City of Derby's Authorized Representative will not be responsible for the acts or omissions of the Contractor or of any subcontractors, or of the agents or employees of any Contractor or subcontractor, or of any other persons at the site or otherwise performing any of the Work.

CHANGES IN THE WORK

Without invalidating the Agreement, the City may at any time or from time to time, order additions, deletions, or revisions in the Work; these will be authorized by Change Orders. Upon receipt of a Change Order, the Contractor shall proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made.

The City of Derby's Authorized Representative may authorize minor changes in the Work not involving an adjustment in the Contract Price or the Contract Time, which are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and shall be binding on the City and also on the Contractor who shall perform the change promptly. If the Contractor believes that a Field Order justifies an increase in the Contract Price or Contract Time, he shall notify the City of Derby's Authorized Representative in writing.

Additional Work performed without authorization of a Change Order will not entitle the Contractor to an increase in the Contract Price or an extension of the Contract Time, except in the case of an emergency.

If notice of any change affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it will be the Contractor's responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. The Contractor shall furnish proof of such adjustment to the City.

CHANGE OF THE CONTRACT TIME

The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to the Engineer within fifteen days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence, unless the City of Derby's Authorized Representative allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be reviewed by the City of Derby's Authorized Representative and after reviewing the City of Derby's Authorized Representative's recommendation and any other related information the City shall determine and approve any

appropriate change in the Contract Time. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

The Contract Time may be extended in an amount equal to time lost due to delays beyond the control of the Contractor if a claim is made therefore. Such delays may include, but not be limited to, acts or neglect by the City or to fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

All time limits stated in the Contract Documents are of the essence of the Agreement.

WARRANTY AND GUARANTEE; TESTS AND INSPECTION; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

Warranty and Guarantee

The Contractor warrants and guarantees to the City and the City of Derby's Authorized Representative that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to the Contractor. All defective Work, whether or not in place, may be rejected, corrected, or accepted.

Access to Work

The City of Derby's Authorized Representative and the City of Derby's Authorized Representative's representatives, other representatives of the City, testing agencies, and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspection, and testing. The Contractor shall provide proper and safe conditions for such access.

Test and Inspections

The Contractor shall give the City of Derby's Authorized Representative timely notice of readiness of the Work for all required inspections, tests, or approvals.

If any law, ordinance, rule, regulation, code, or order of any public body having jurisdiction requires any Work (or part thereof) to specifically be inspected, tested, or approved, the Contractor shall assume full responsibility therefore, pay all costs in connection therewith and furnish the City of Derby's Authorized Representative the required certificates of inspection, testing, or approval. The Contractor shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the City's or the Engineer's acceptance of a manufacturer, fabricator, supplier, or distributor of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to the Contractor's purchase thereof for incorporation in the Work.

All inspections, tests, or approvals other than those required by law, ordinance, rule, regulation, code or order of any public body having jurisdiction shall be performed by organizations acceptable to the Engineer and the Contractor.

If any Work that is to be inspected, tested, or approved is covered without written concurrence of the City of Derby's Authorized Representative, it must, if requested by the City of Derby's Authorized Representative, be uncovered for observation. Such uncovering shall be at the Contractor's expense unless the contractor has given the City of Derby's Authorized Representative timely notice of the Contractor's intention to cover such Work and the City of Derby's Authorized Representative has not acted with reasonable promptness in response to such notice.

Neither observations by the City of Derby's Authorized Representative nor inspections, tests, or approvals by others shall relieve the Contractor from his/her obligations to perform the Work in accordance with the Contract Documents.

Uncovering Work

If any Work is covered contrary to the request of the City of Derby's Authorized Representative, it must, if requested by the City of Derby's Authorized Representative, be uncovered for the City of Derby's Authorized Representative's observation and replaced at the Contractor's expense.

If the City of Derby's Authorized Representative considers it necessary or advisable that covered Work be observed by the City of Derby's Authorized Representative or inspected or tested by others, the Contractor, at the City of Derby's Authorized Representative's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as the City of Derby's Authorized Representative may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including compensation for additional professional services.

City May Stop the Work

If the Work is defective, or the Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, the Engineer may order the Contractor to Stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City to Stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other party.

Correction or Removal of Defective Work

If required by the City of Derby's Authorized Representative, the Contractor shall promptly, without cost to the City and as specified by the City of Derby's Authorized Representative, either correct any defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the City of Derby's Authorized Representative, remove it from the site and replace it with non-defective Work.

One-year Correction Period

If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the contract Documents, any Work is found to be defective, the Contractor shall promptly, without cost to the City and in accordance with the City's written instructions, either correct such defective Work, or if it has been rejected by the City, remove it from the site and replace it with non-defective Work. Where it is required for the contractor to repair, replace, resurface, reseed, replant or to modify, alter, add, or remove hardware, parts, components, or related accessories for the purpose of ensuring proper appearance, performance, or operation, such operations shall be done as required by the Contractor until such time as acceptable performance has been established. Problems which occur shall be corrected in an appropriate fashion under guarantee. The Contractor shall be responsible to attend to and remedy such items within a reasonable amount of time. Appropriate logs, schedules, and reports shall be maintained to reflect these items and their redress. If the Contractor does not promptly comply with the terms of such instruction, or in an emergency where delay would cause serious risk of loss or damage, the City may have the defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by the Contractor.

Acceptance of Defective Work

If, instead of requiring correction or removal and replacement of defective Work, the City prefers to accept it, the City may do so. In such case, if acceptance occurs prior to final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price; if the acceptance occurs after such final payment, an appropriate amount shall be paid by the Contractor to the City.

City May Correct Defective Work

If the Contractor fails within a reasonable time after written notice of the Engineer to proceed to correct defective Work or to remove and replace rejected Work as required by the Engineer, or if the Contractor fails to perform the Work in accordance with the Contract Documents (including any requirements of the progress schedule), the City may, after seven days written notice to the Contractor, correct and remedy any such deficiency. In exercising its rights under this paragraph the City shall proceed expeditiously to the extent necessary to complete corrective and remedial action, the City may exclude the Contractor from all or part of the site, take possession of all or part of the Work, and suspend the Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere. The Contractor shall allow the City, the City's representatives, agents and employees such access to the site as may be necessary to enable the City to exercise its rights under this paragraph. All direct and indirect costs of the City in exercising such rights shall be charged against the Contractor in an amount verified by the City of Derby's Authorized Representative and a Change Order shall be issued incorporating the necessary revisions in the Contract documents and a reduction in the Contract Price. Such direct and indirect costs shall include, in particular but without limitation, compensation for additional professional services required and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of the Contractor's defective Work. The Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the work attributable to the exercise by the City of the City rights hereunder.

PAYMENTS TO CONTRACTOR AND COMPLETION

Schedules

At least ten days prior to submitting the first Application for a progress payment, the Contractor shall submit to the City of Derby's Authorized Representative (Kaestle Boos Associates, Inc.) a progress schedule and a schedule of values of the Work. These schedules shall be satisfactorily in form and substance to the City of Derby's Authorized Representative. The schedule of values shall include quantities and unit prices aggregating the Contract Price, and shall subdivide the Work into component parts in sufficient detail to serve as the basis for progress payment during construction. Upon acceptance of the schedule of values by the City of Derby's Authorized Representative, it shall be incorporated into a form of Application for Payment acceptable to the City of Derby's Authorized Representative.

Application for Progress Payment

At least ten days before each progress payment falls due (but not more often than once a month), the Contractor shall submit to the City of Derby's Authorized Representative for review an draft Application for Payment filled out by the Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents and also as the City of Derby's Authorized Representative may reasonably require. Upon review and approval by the City of Derby's Authorized Representative, the Contractor shall submit three (3) final Application for Payments filled out, notarized, and signed by the Contractor. Each subsequent Application for Payment shall include an affidavit of the Contractor stating that all previous progress payment received on account of the Work have been applied to discharge in full all of the Contractor's obligations reflected in prior Applications for Payment. The amount of retainage with respect to progress payments will be as stipulated in the Contract Documents.

Contractor's Warranty of Title

The Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for payment, whether incorporated in the project or not, will pass to the City at the time of payment free and clear of all liens, claims, security interests, and encumbrances.

Review of Applications for Progress Payment

The City of Derby's Authorized Representative will, within ten (10) days after receipt of each Application for Payment either indicated in writing a recommendation of payment and present the application to the City, or return the application to the Contractor indicating in writing the City of Derby's Authorized Representative's reasons for refusing the recommended payment. In the latter case, the Contractor may make the necessary corrections and resubmit the Application. The Application for Payment must be presented the first week of each month for review and recommendation for payment. Only after the City of Derby's Authorized Representative's recommendation for payment is received it will then be sent to the Road Bond Committee for approval. If approved the recommendation will be forwarded to the full Board of Aldermen for review and possible action at their regular monthly meeting, which is held the fourth Thursday of each month (date subject to change due to holiday.)

The City of Derby's Authorized Representative may refuse to recommend the whole or any part of any payment if, in his opinion, it would be incorrect to make such representations. He may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended to such extent as may be necessary

in the City of Derby's Authorized Representative's opinion to protect the City from loss because:

- The Work is defective, or completed Work has been damaged requiring correction or replacement;
- Written claims have been made against the City in connection with the Work;
- The Contract Price has been reduced;
- The City has been required to correct defective Work or complete the Work, of the Contractor's unsatisfactory prosecution of the Work in accordance with the Contract Documents; and/or
- The Contractor's failure to make payment to subcontractors, or to make payment for labor, materials, or equipment.

Substantial Completion

When the Contractor considers the entire Work ready for its intended use the Contractor shall, in writing to the City of Derby's Authorized Representative, certify that the entire Work is substantially complete and request that the City of Derby's Authorized Representative issue a certificate of Substantial Completion. Within a reasonable time thereafter, the Contractor and City of Derby's Authorized Representative shall make an inspection of the Work to determine the status of completion. If the City of Derby's Authorized Representative does not consider the Work substantially complete, the City of Derby's Authorized Representative will notify the Contractor in writing giving his reasons therefore. If the City of Derby's Authorized Representative considers the Work substantially complete, the City of Derby's Authorized Representative will prepare certificate of Substantial Completion, which shall fix the date of Substantial Completion. There shall be attached to the certificate a list of items to be completed or corrected before final payment.

The City shall have the right to exclude the Contractor from the Work after the date of Substantial Completion, but the City shall allow the Contractor reasonable access to complete or correct items on the list.

Partial Utilization

Use by the City of completed portions of the Work may be accomplished prior to Substantial Completion of all Work subject to the following:

The City at any time may request The Contractor in writing to permit the City to use any part of the Work, which the City believes to be substantially complete, and which may be so used without significant interference with construction of the other parts of the Work. If the Contractor agrees, the Contractor will certify to the City and the City of

Derby's Authorized Representative that said part of the Work is substantially complete and request the Engineer to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time thereafter, the Contractor and City of Derby's Authorized Representative shall make an inspection of that part of the Work to determine its status of completion. If the City of Derby's Authorized Representative does not consider that part of the Work to be substantially complete, the City of Derby's Authorized Representative will notify the Contractor in writing giving his reasons therefore. If the City of Derby's Authorized Representative considers that part of the Work to be substantially complete, the City of Derby's Authorized Representative will execute and deliver to the Contractor a certificate to that effect, fixing the date of Substantial Completion as to that part of the Work, attaching thereto a list of items to be completed or corrected before final payment.

In lieu of the issuance of a certificate of Substantial Completion as to part of the Work, the City may take over operation of a facility constituting part of the Work whether or not it is substantially complete if such facility is functionally and separately useable provided that prior to any such takeover the City and Contractor have agreed as to the division of responsibilities between the City and Contractor for security, operation, safety, maintenance, correction period, heat, utilities, and insurance with respect to such facility.

Final Inspection

Upon written notice from the Contractor that the Work is complete, the City of Derby's Authorized Representative will make a final inspection with the Contractor and will notify the Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. The Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

Final Application for Payment

After the Contractor has completed all such corrections to the satisfaction of the City of Derby's Authorized Representative and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents and other documents – all as required by the Contract Documents, and after the Engineer has indicated that the work is acceptable, the Contractor may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents and such other data and schedules as the City of Derby's Authorized Representative may reasonably require, together with complete and legally effective releases or waivers (satisfactory to the City) of all claims arising out of or filed in connection with the Work. In lieu thereof and as approved by the City, the

Contractor may furnish receipts or releases in full; an affidavit of the Contract that the releases and receipts include all labor, services, material, and equipment for which a claim could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which the City or its property might in any way be responsible, have been paid or otherwise satisfied; and consent of the Surety, if any, to final payment.

Final Payment and Acceptance

If on the basis of the City of Derby's Authorized Representative's observation of the Work during construction and final inspection, and the Engineer's review of the final Application for Payment and accompanying documentation – all as required by the Contract Documents, the City of Derby's Authorized Representative is satisfied that the Work has been completed and the Contractor has fulfilled all of his obligations under the Contract Documents, the City of Derby's Authorized Representative will, within ten days after receipt of the final Application for Payment, process the Application for payment. Otherwise, the City of Derby's Authorized Representative will return the Application to the Contractor, indicating in writing the reasons for refusing to process final payment, in which case the Contractor shall make the necessary corrections and resubmit the Application.

Contractor's Continuing Obligation

The Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by the Engineer, nor the issuance of a certificate of Substantial Completion, nor any payment by the City to the Contractor under the Contract Documents, nor any use or occupancy of the Work or any part thereof by the City, nor any act of acceptance by the City nor any failure to do so, nor the issuance of a notice of acceptability by the City of Derby's Authorized Representative, nor any correction of defective Work by the City shall constitute an acceptance of Work not in accordance with the Contract Documents or a release of the Contractor's obligation to perform the Work in accordance with the Contract Documents.

Waiver of Claims

The making and acceptance of final payment shall constitute:

A waiver of claims by the City against the Contractor except for claims arising from unsettled debts, from defective Work appearing after final inspection or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein and it shall not constitute a waiver by the City of any rights in respect of the Contractor's continuing obligations under the Contract Documents and a waiver of all

claims by the Contractor against the City other than those previously made in writing and still unsettled.

SUSPENSION OF WORK AND TERMINATION

The City May Terminate:

Upon the occurrence of any one or more of the following events:

- If the Contractor is adjudged a bankrupt or insolvent;
- If the Contractor makes a general assignment of the benefit of creditors;
- If a trustee or receiver is appointed for the Contractor or for any of the Contractor's property;
- If the Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws;
- If the Contractor repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment;
- If the Contractor repeatedly fails to make prompt payments to the subcontractors or for labor, materials, or equipment;
- If the Contractor disregards laws, ordinances, rules, regulations, or orders of any public body having jurisdiction;
- If the Contractor disregards the authority of the Engineer, or
- If the Contractor otherwise violates in any substantial way any provisions of the Contract Documents;
- At the convenience of the City

The City may, after giving the Contractor and his surety seven days written notice, terminate the services of the Contractor, exclude the Contractor from the site and take possession of the Work, incorporate in the Work all materials and equipment stored at

the site or for which the City has paid the Contractor but which are stored elsewhere and finish the Work as the City may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the City. Such costs incurred by the City shall be incorporated in a Change Order, but in finishing the Work the City shall not be required to obtain the lowest figure for the Work performed. Notwithstanding the foregoing, if the City terminates this Agreement for its convenience, the City shall only be required to pay the Contractor for services to the date of termination.

Where the Contractor's services have been so terminated by the City, the termination shall not affect any rights of the City against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies due the Contractor by the City will not release the Contractor from liability.

Upon seven days written notice to the Contractor, the City may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, the Contractor shall be paid for all Work executed and any expense sustained plus reasonable expenses.

Contractor May Stop Work or Terminate

If, through no act or fault of the Contractor, the Work is suspended for a period of more than ninety days by the City or under an order of court or other public authority, or the Engineer fails to act on an Application for Payment within thirty days after it is submitted, or the City fails for sixty days to pay the Contractor any sum finally determined to be due, then the Contractor may, upon fourteen days written notice to the City and the Engineer, terminate the Agreement and recover from the City payment for all Work executed and any expense sustained. In addition and in lieu of terminating the Agreement, if the Engineer has failed to act on an Application for Payment or the City has failed to make any payment as aforesaid, the Contractor may upon seven days notice to the City and the Engineer Stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve the Contractor of his obligations to carry on the Work in accordance with progress schedule and without delay during disputes and disagreements with the City.

MISCELLANEOUS

Giving Notice

Whenever any provision of the Contract Documents requires the giving of written notice it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

Computation of Time

When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

General

Should the City or the Contractor suffer injury or damage to his/her person or property because of any error, omission, or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim shall be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees, and obligations imposed upon the Contractor and all of the rights and remedies available to the City and the Engineer thereunder, shall be in addition to, and shall not be construed in any way as a limitation of any rights and remedies available to any or all of them which are otherwise imposed or available by law or contract, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph shall be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties, and guarantees made in the Contract Documents shall survive final payment and termination or completion of this Agreement.

Non-Discrimination

The Contractor shall agree and warrant that in the performance of the contract, he will not discriminate or permit discrimination against any person or group of persons on the ground of race, color, religious creed, age, marital status, national origin, sex, or physical disability, including but not limited to, blindness, unless it is shown by the Contractor that such disability prevents performance of the work involved in any manner prohibited by the laws of the United States or of the State of Connecticut. The Contractor shall further agree to provide the Commission on Human Rights and Opportunities with such information requested by the Commission concerning the

employment practices and procedures of the Contractor as they relate to the provisions of Section 4-11a of the Connecticut General Statutes as amended.

Affirmative Action

If requested by the City, the Contractor shall submit details of his Affirmative Action Program. Such Program shall be modified as and where necessary to meet the requirements of the City and shall remain in force throughout the contract period.

SUPPLEMENTAL CONDITIONS

CITY PROJECT NO. COD 2018-44

These Supplemental Conditions amend or supplement the General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

DEFINITIONS

The Terms used in these Supplemental Conditions, which are defined in the General Conditions of the Construction Contract, have the meanings assigned to them in the General Conditions.

Wherever used in the Contract Documents, the following words have the meanings indicated, which are applied to both the singular and the plural thereof:

“Project Manual” – shall mean the bound volume containing the following Contract Documents:

- Invitation to Bid
- Instruction to Bidders
- Contract Forms
- General Conditions
- Supplemental Conditions
- Wage Rates
- Addenda (if issued)
- Technical Specifications and Construction Drawings

The word “Remove” where it applies to existing materials shall mean remove entirely from the site unless material is approved by the City of Derby's Authorized Representative for re-use. In addition, the word “remove” shall imply the patching of all remaining work affected by removal. All existing materials, which have been removed, shall become the Contractor's property unless otherwise specified.

“As Necessary” or “As Required” – Work referred to as “As Necessary” shall be that work which is required for completed construction, but is not necessarily shown or described in the Contract Documents.

The word “Furnish” or the word “Supply” – shall mean purchase, delivery, and off-loading at the job site including all documentation, storage, and protection.

The word "Install" or the word "Apply" – shall mean set in place complete for normal use or service, all in accordance with the Contract Documents.

The word "Provide" – shall mean furnish (or supply) and install (or apply.)

The words "Approved Equal" – shall mean any product, which in the opinion of the City of Derby's Authorized Representative is comparable in quality, durability, appearance, strength, performance, design, physical dimension, and arrangement to the product specified, and will function properly in accordance with the design intent.

The word "Product" – shall mean any item of equipment or material provided under the Contract Documents.

THE CONTRACTOR'S INSURANCE

The Contractor shall maintain insurance of the kinds and in at least the amounts in a form satisfactory to the City; such certificates shall contain a provision that the City shall be given thirty days advance written notice by registered mail of change in, or cancellation of, coverage.

TIME FOR COMPLETION

It shall be understood and mutually agreed that the time for Substantial Completion is an essential condition of this Contract.

It is expressly understood and agreed by the Contractor and the City that the time for Substantial Completion is reasonable, taking into consideration average climatic range, City restrictions, and other conditions prevailing.

The Contractor agrees that the Work shall be performed diligently and uninterrupted at such rate as will insure Substantial Completion of all Work on or before the date stated in the Contract. If it appears that some of the work cannot be completed by the scheduled date, the Contractor shall increase the work force or increase the hours of work, including evenings and weekends if necessary, at no additional cost to the City.

If the work is complete but the area is not cleaned and debris or equipment is not removed, the City shall have the right to have the area prepared for occupancy with its own or other forces and deduct the costs from the contract amount.

The Construction Schedule is critical to the Project. It is specifically understood that all work is required to be Substantially Complete, and ready for full occupancy and use by

the City, on or before the date agreed upon in the Contract and that the time of completion is of the essence and of great importance to the City.

PAYMENTS AND RETAINAGE

Applications for payment shall be submitted to the City's Authorized Representative for consideration by the **first Thursday of each month.** Payment shall be made within forty-five days after approval of the application for payment by the City.

An amount of 95 percent (95%) of the estimated amount due, less any payments previously made and/or any monies to be held will be paid to the Contractor monthly. The balance will be retained by the City until final completion of the work. Final payment will not be made until final completion and acceptance by the City of all work covered by the Contract. The Contractor agrees that he/she will indemnify and save the City harmless for all claims growing out of the lawful demands of subcontractors, laborers, suppliers, and assignees.

SCOPE OF WORK

The City reserves the right to decrease the Scope of Work to be done under this Contract, select bid or alternate items in its best interest, or to omit any work in order to bring the cost within available funds. Exercise by the City of the above rights shall not constitute any grounds or basis of claim for damages or for anticipated profits on work omitted.

ALTERNATES

Additive Alternates Definitions: An Additive Alternate is defined as a specific scope of work, products, materials, equipment or systems for the work not included in the Base Bid work and which may, at the City's option and under terms established herein, be selected and recorded in the Contract to either supplement or displace basic requirements of contract documents. Alternates may or may not substantially change scope and general character of the work; and must not be confused with "allowances," "unit prices," "change orders," "substitutions," and other similar provisions. The bid price for the Additive Alternate is not included in the Base Bid price.

Additive Alternate Pricing: The bid price for the additive alternate shall include all cost associated with the changes, omissions, additions or other adjustments to the Work in this Bid Package described in the Alternate or reasonably inferred therefrom. The additive alternate bid price shall include the cost of all labor, materials, equipment, time extension or deletion, general conditions, general requirements, overhead, profit, insurance, for the work. Claims for extras resulting from the acceptance or rejection of any Additive Alternate will not be allowed.

Bidding must provide a bid for each Additive Alternate. If no bid is provided for any of the Additive Alternates contained in the bid proposal or if any bid for such an Alternate is obviously unbalanced either in excess of, or below reasonable fair market values, then the entire bid will be considered nonresponsive, and the bid will be rejected.

Award of Contract: The Award of Contract will be made to lowest responsible bidder for the "Base Bid" work – which does not include the bid price for any Additive Alternate.

The Owner shall have the right to accept or omit any Additive Alternate.

The Contract Documents shall be considered appropriately modified by either the acceptance or omission of any Additive Alternates. Bid Bonds: Bid Bond amounts shall be at least ten percent (10%) of the sum of the Base Bid plus all Additive Alternates. The Contract completion date (calendar days) will be adjusted if any of the additive alternates is added. All costs associated with a time extension are to be included in the Additive Alternate Price.

Notification: After award of the Contract, one or more additive alternates for which funds are available may be added to the Contract in the discretion of the City. The adjustment of the Contract price shall be solely based on the bid price for the alternate(s) added. The Contractor will be notified as to which alternates will be included in the Contract within fourteen (14) calendar days of the Award of Contract.

SCHEDULE AND TIME OF COMPLETION

Attention of the Bidder is directed to the time provision for completion of work under the Contract, which requires that all work be completed within thirty (30) calendar days from the date of receipt of the Notice to Proceed from the City. The calendar days shall be consecutive. Prior to the start of construction, the Contractor shall prepare and submit a schedule for the sequence of construction for approval by the Street Commissioner.

LIQUIDATED DAMAGES

The Contractor will proceed with the work at such rate of progress to ensure full completion within the time requirements stated above. It is expressly understood and agreed by and between the Contractor and the City that the contract items for the completion of the work described herein shall be reasonable, taking into consideration the climatic and economic conditions and other factors prevailing in the locality of the work.

If the Contractor shall fail to complete the work within the contract times, or extension of time granted by the City, then the Contractor and his sureties shall be liable for and shall pay to the City for each and every calendar day that he shall be in default in completing any given assignment in the time stipulated above, the sum of One Thousand Dollars (\$1,000.00.) This sum is hereby agreed upon, not as a penalty, but as fixed liquidated damages which the City will suffer by reason of such default, time being of the essence of the Contract and a material consideration thereof.

The City shall have the right to deduct the amount of any such damages from any monies due the Contractor under this Contract.

PAYMENT OF WAGES

Attached is a copy of the minimum federal and state wage rate schedule issued by the U.S. and State of Connecticut Labor Departments. Said wage rate schedules shall, at all times, be posted at a conspicuous location on the project site.

The Contractor is cautioned that wage rates are continually changing and he shall ensure himself that the enclosed schedules contained herein or otherwise posted are the latest issue, this being his responsibility.

FAIR EMPLOYMENT PRACTICES

The successful Contractor shall agree that neither he nor his subcontractors will refuse to hire or employ or to bar or to discharge from employment an individual, or to discriminate against him in compensation or ill terms, conditions, or privileges of employment because of race, color, religious creed, age, sex, national origin, or ancestry, except in the case of a bona fide occupational qualification or need.

The terms stated above are taken from Section 31-126 of the Connecticut General Statutes "Unfair Employment Practices."

SAFETY

The Contractor shall perform all work in accordance with the latest governmental safety regulations including, but not limited to, the Department of Labor and Office of Safety and Health Administration regulations and suggested practices.

MEASUREMENTS

The Contractor shall make all measurements and check all dimensions necessary for the proper construction of the work as directed or as called for in the Specifications. During the performance of the work, the Contractor shall make all necessary measurements to prevent misfitting in said work and be responsible therefore for the accurate construction of the entire work.

PUBLIC ACCESS

Roads, including driveways, sidewalks, and crossings shall remain passable while work is in progress.

UTILITIES

Utilities may be located within the area and may be adjacent to the construction work.

The Contractor shall make all the necessary arrangements with any utility that must be protected or relocated in order to accomplish the work. The Contractor shall be solely responsible for the protection of the operating condition of all active utilities within the areas of construction and he shall take all necessary precautions to avoid damage to existing utilities. Any cost of temporary relocations for the Contractor's convenience shall be paid for by the Contractor.

The Contractor shall avail himself of the Connecticut Underground Protection Plan ("Call Before You Dig") Box 1562, New Haven, CT (Telephone Toll Free: 1-800-922-4455) for notifications to utility companies prior to excavating.

OFF-SITE DISPOSAL

The Contractor shall load and haul any surplus or unsuitable material for disposal at a disposal site provided by the Contractor at his cost.

PERFORMANCE OF WORK

The Contractor will be responsible for providing all the necessary services necessary to perform the work described in the specifications.

HOURS OF OPERATION

The Contractor shall limit his operations from Monday-Friday between 7:00 a.m. – 6:00 p.m. No work will be permitted on Sundays or legal holidays. Permission from the City of Derby's Authorize Representative would be required for work to be performed on Saturday.

MAINTENANCE AND PROTECTION OF TRAFFIC

The Contractor will be responsible for the scheduling of Derby Police Officers at least one working day in advance of plans to work in the roadway. The cost for Police will be included in the bid price for the job.

The Contractor may schedule Police Officers by contacting the Derby Police Department, 125 Water Street, Derby, CT 06418 - telephone 203-734-1651.

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Application and Certificate for Payment

TO OWNER: City of Derby 1 Elizabeth Street Derby, CT 06418	PROJECT: Derby High School - Athletic Building Abatement Project 75 Chatfield Street, Derby, CT 06148	APPLICATION NO: 001 PERIOD TO: CONTRACT FOR: General Construction CONTRACT DATE: PROJECT NOS: 17022.00 / /	Distribution to: OWNER: <input type="checkbox"/> ARCHITECT: <input type="checkbox"/> CONTRACTOR: <input type="checkbox"/> FIELD: <input type="checkbox"/> OTHER: <input type="checkbox"/>
FROM CONTRACTOR:	VIA ARCHITECT: Kastle Boos Associates, Inc. 416 Slater Road, P.O. Box 2590 New Britain, CT 06050-2590		

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM	\$0.00
2. NET CHANGE BY CHANGE ORDERS	\$0.00
3. CONTRACT SUM TO DATE (Line 1 + 2)	\$0.00
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)	\$0.00
5. RETAINAGE:	
a. 0 % of Completed Work (Column D + E on G703)	\$0.00
b. 0 % of Stored Material (Column F on G703)	\$0.00
Total Retainage (Lines 5a + 5b or Total in Column I of G703)	\$0.00
6. TOTAL EARNED LESS RETAINAGE	\$0.00
(Line 4 Less Line 5 Total)	
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT	\$0.00
(Line 6 from prior Certificate)	
8. CURRENT PAYMENT DUE	\$0.00
9. BALANCE TO FINISH, INCLUDING RETAINAGE	\$0.00
(Line 3 less Line 6)	

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$0.00	\$0.00
Total approved this Month	\$0.00	\$0.00
TOTALS	\$0.00	\$0.00
NET CHANGES by Change Order		\$0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:
 By: _____ Date: _____
 State of: _____
 County of: _____
 Subscribed and sworn to before
 me this _____ day of _____

Notary Public:
 My Commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED \$0.00
 (Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:
 By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

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SECTION 01 10 00 – SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

1. Instructions to Bidders, AIA Document A201, “General Conditions of the Contract for Construction, 2007 Edition as amended, and Division 01 General Requirements are bound herein, are hereby made a part of this Section, and shall be binding on all Contractors and Subcontractors who perform this work.

1.2 SUMMARY

This Section includes the following:

1. Project information.
2. Work covered by the Contract Documents.
3. Work under other contracts.
4. Use of premises.
5. Owner's occupancy requirements.
6. Work restrictions.
7. Specification formats and conventions.

Related Sections include the following:

1. Division 01 Section “Temporary Facilities and Controls” for limitations and procedures governing temporary use of Owner’s facilities.

1.3 PROJECT INFORMATION

Project Identification: The Project consists of **ATHLETIC BUILDING ABATEMENT PROJECT**

1. Project Location: **Derby High School, 75 Chatfield Road, Derby, CT 06418**

Owner: NAME OF OWNER

2. Owner's Representative: **Patty Finn, Director of Economic & Community Development**

Architect Identification: The Contract Documents, dated **February 28, 2018**, were prepared for Project by Kaestle Boos Associates, Inc.

1.4 WORK COVERED BY THE CONTRACT DOCUMENTS

The Work includes but is not necessarily limited to:

1. The Work includes selective demolition and abatement of the existing athletic facility building in preparation of the demolition of the building.

1.5 WORK SEQUENCE

General: The Contractor shall utilize the proposed Schedule as the basis for a detailed construction schedule, to be submitted to the Owner, Architect, and Owner's Representative for review and approval. The schedule must clearly demonstrate the proper sequencing of construction and relocation activities, and how operational and environmental conditions will be satisfactorily maintained in all occupied spaces.

The Sequence of work is to be completed per the following schedule:

Bids Due	Friday, March 30, 2018
Contractor Scope Reviews	April 02-03, 2018
Recommendation to Building Committee	Wednesday, April 04, 2018
*Anticipated Building Committee Meeting Date	
City and Contractor Executions	April 05-April 13, 2018
Construction	
Construction Permit, Submittals, & Mobilizations	April 16-April 27, 2018
Building Abatement (2 weeks)	April 30-May 11, 2018

1.6 CONTRACTOR USE OF PREMISES

General: Each Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.

Use of Site: Confine operations to areas within Contract limits indicated. Do not disturb portions of the Project site beyond areas in which Work is indicated.

1. Confine the parking of workmen's and construction vehicles, and the storage of construction materials to a designated staging area determined by the **Architect and Owner**
2. Keep driveways and entrances clear and available to Owner, Owner's employees, and emergency vehicles at all times. Staging at access ways may be required in order to permit completion of the work of this Project. Do not use these areas for parking or storage of materials.
3. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

Site Security: Continuously maintain the security of the site and the Work. Cooperate with the Owner in particularly sensitive areas where security and special safeguards are required.

4. Provide security guards or patrols as necessary for adequate protection of the interests of the Contractor, Owner, and the general public on the site, or in public ways around the site.
5. Ensure that all gates and other openings are secured at the end of each work day.
6. Ensure property signage is installed to signify the project areas is closed.

1.7 OWNER OCCUPANCY

Completion Requirements: Timely completion of the project is critical. Aggressive construction scheduling and careful monitoring of crucial path milestones cannot be overemphasized.

Partial Owner Occupancy: Owner will occupy the school premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise directed by authorities having jurisdiction.

1. Maintain access to existing walkways, driveway, bleachers, concession building, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner, and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner and Architect of activities that will affect Owner's operations.

Adjacent Project Work: J.R Payden Field House and Baseball Field Project General Contractor will also occupy the premises during entire construction period. Cooperate with Owner, CM, and GC during construction operations to minimize conflict. Perform the Work so as not to interfere with Projects operations. Maintain existing exits, unless otherwise directed by authorities having jurisdiction. Adjacent work shall not be a reason for delay of work or failure to meet project milestones.

1.8 WORK RESTRICTIONS

On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of **7:00 a.m. to 5:00 p.m.**, Monday through Friday, except otherwise indicated.

1. Weekend Hours: **8:00 am to 4:00 pm**
2. Extended Hours: **Approval by Owner**

1.9 CODES, STANDARDS AND PERMITS

All work under this contract shall conform to all codes and standards in effect as of the date of receipt of Bids which are applicable to this Project. All work shall further conform to specific requirements and interpretations of local authorities having jurisdiction over the Project, These Codes, standards, and authorities are referred to collectively as "the governing codes and authorities", and similar terms, throughout the Specifications. Determination of applicable codes and standards and of the authorities having jurisdiction, shall be the responsibility of each Contractor, as shall be the analysis of all such codes and standards in regard to their applicability to the Project for the purposes of determining necessary construction to conform to such code requirements, for securing all approvals and permits necessary to proceed with construction, and to obtain all permits necessary for the Owner to occupy the facilities for their intended use. In the case of conflicts between the requirements of different codes and standards, the most restrictive or stringent requirements shall be met.

1. The Contractor shall maintain at the site, for the duration of the construction operations at the site, two (2) copies of all relevant codes and standards listed herein or determined to

be applicable to the work. Maintain one copy of such codes in the Construction Manager's site office, for the exclusive use of the Owner the Architect and its consultants.

The codes that were used in the design of the Project are as follows:

1. State of Connecticut State Building Code
2. National Fire Protection Association (NFPA) codes and standards.
3. Architectural Access Board 521 CMR, as amended (AAB)
4. The Americans with Disabilities Act, Title II, including ADA Regulations.
5. ADA Standards for Accessible Design, 28 CFR 36 (7-1-94 Edition) ADA Accessibility Guidelines (ADAAG).
6. Section 504, Rehabilitation Act 1973 including 504 Regulations.
7. Uniform Federal Accessibility Standards, 41 CFR 101-19.6.

Code Enforcement and Approvals: Secure the general building permit for the work. Conform to all conditions and requirements of the permit and code enforcement authorities. Provide names and license numbers of its responsible representatives to complete application for permit.

8. Upon receipt of the permit, promptly distribute copies thereof to Owner and Architect.

1.10 SPECIFICATION FORMATS AND CONVENTIONS

These Specifications are intended to describe and illustrate all material, labor, and equipment necessary to complete **ATHLETIC BUILDING ABATEMENT PROJECT**

Specification Format: The Specifications are organized into Divisions and Sections using the 48-division format and CSI/CSC's "MasterFormat" numbering system.

1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

3. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
4. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for

clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

- a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

In general, the Specifications will describe the "quality" of the work and the Drawings, the "extent" of the work. The Drawings and Specifications are cooperative and supplementary, however, and each item of the work is not necessarily mentioned in both the Drawings and the Specifications. All work necessary to complete the project, so described, is to be included in this Contract.

In case of disagreement between Drawings and Specifications, or within either document itself, the Architect shall construe the Documents to require the better quality or greater quantity of work for the Owner that can reasonably be construed therefrom. Any work done by the Contractor without consulting the Architect, when the same requires a decision, shall be done at the Contractor's risk.

1.11 SOCIAL SECURITY TAXES

The Contractor and each Subcontractor shall pay the taxes measured by the wages of all their employees as required by the Federal Social Security Act all amendments thereto, and accept the exclusive liability for said taxes. The Contractor shall also indemnify and hold the Owner, and its respective officers, agents and servants, and the Architect harmless on account of any tax measured by the wages aforesaid of employees of the Contractor and his Subcontractors, assessed against the Owner under authority of said law.

1.12 UNEMPLOYMENT INSURANCE

The Contractor and each Subcontractor shall pay unemployment insurance measured by the wages of his employees as required by law and accept the exclusive liability for said contributions. The Contractor shall also indemnify and hold harmless the Owner, and the Architect on account of any contribution measured by the wages of aforesaid employees of the Contractor and his Subcontractors, assessed against the Owner under authority of law.

1.13 OCCUPATIONAL SAFETY AND HEALTH ACT

The Contractor shall comply with the requirements of the Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, including all standards and regulations which have been promulgated by the Governmental Authorities which administer such Acts and said requirements, standards and regulations are incorporated herein by reference.

1. The Contractor shall comply with M.G.L. Chapter 306 of the Acts of 2004, which requires that everyone employed at the job site to complete a course in construction safety and health approved by the U.S. Occupational Safety and Health Administration, known as the "OSHA-10 hour course".

The Contractor shall comply with said regulations, requirements and standards and require and be directly responsible for compliance therewith on the part of his agents, employees material men and

Subcontractors; and shall directly receive and be responsible for all citations, assessments, fines or penalties which may be incurred by reason of his agents, employees, material men or Subcontractors failing to so comply.

The Contractor shall indemnify the Owner and Architect and save them harmless from any and all losses, costs and expenses, including fines and reasonable attorney's fees incurred by the Owner, the Construction Manager and Architect by reason of the real or alleged violation of such laws, Ordinances, regulations and directives, Federal, State, and Local, which are currently in effect or which become effective in the future, by the Contractor, his Subcontractors or material men.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION (Not applicable)

END OF SECTION 01 10 00

SECTION 01 22 00 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the Related Documents identified in Division 01 Section "Summary."

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - 2. Division 01 Section "Quality Requirements" for general testing and inspecting requirements.

1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.
- B. Abbreviations: The following abbreviations for units of measurement are used in unit prices:
 - 1. C.Y.: cubic yard
 - 2. S.Y.: square yard
 - 3. S.F.: square foot
 - 4. L.F.: linear foot
 - 5. EA.: each
 - 6. LB.: pound

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead and profit.
 - 1. Unit price amounts are net changes in the Contract Sum for additional work and include the Contractor's and any Subcontractor's amount for overhead and profit.
 - 2. For deleted work, the net credit to the Contract Sum shall be 10% less.

- B. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- C. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES

- A. Provide the following unit prices as listed on the Bid Form:
 - 1. Light Insulation in Light Fixture:
 - a. Description: Light insulation in light fixture removal and disposal as ACM, according to Division 02 Sections.
 - b. Unit of Measurement: EA
 - 2. Floor Tiles:
 - a. Description: Floor tiles removal and disposal as ACM according to Division 02 Sections.
 - b. Unit of Measurement: S.F.
 - 3. Window Gaskets:
 - a. Description: PCB containing window gaskets removal and disposal according to Division 02 Sections."
 - b. Unit of Measurement: EA
 - 4. Glovebag for Floor Tile:
 - a. Description: Glovebag for floor tile (<3LF/3SF) removal and disposal according to Division 02 Sections.
 - b. Unit of Measurement: Per Glovebag
 - 5. Preparation of a Containment:
 - a. Description: Preparation of a contained work area (<260 SF) with decon according to Division 02 Sections.
 - b. Unit of Measurement: S.F.

6. Preparation of a Containment:
 - a. Description: Preparation of a contained work area (>260 SF) with decon according to Division 02 Sections.
 - b. Unit of Measurement: S.F.

END OF SECTION 01 22 00

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SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the Related Documents identified in Division 01 Section "Summary."

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, as follows:
 - 1. **"Architect's Supplemental Instruction" (ASI)** form, included at end of Part 3, is an Owner/Architect-initiated supplemental instruction.
 - a. Architect's Supplemental Instructions, including attachments, will be issued to the contractor electronically via email, in the form of a "portable document file" (.PDF).

1.4 CONTRACTOR REQUEST FOR INFORMATION

- A. Contractor-Initiated Requests for Information: If clarification is required to the Contract Documents, the Contractor may submit a "Request for Information" (RFI) to the Architect. This request will be responded to by the Architect with a "Response to Request for Information" (RRFI) form.
 - 1. RFI forms shall be submitted in a typewritten, standardized format, including title and description, and sequentially numbered.
 - 2. Submit RFI, including attachments, electronically in the form of a "portable document file" (.PDF).
 - 3. RFI forms are not to be submitted as requests for shop drawing approval. Comply with requirements in Division 01 Section "Submittal Procedures."
 - 4. **"Response to Request for Information" (RRFI)**, included at the end of Part 3, will be issued in response to Contractor's Request for Information (RFI).

- a. A Response to Request for Information (RRFI), including attachments, will be issued to the contractor electronically via email, in the form of a “portable document file” (.PDF).
 - b. If the RRFI directs the Contractor to carry out the Work with no change in Contract Sum or Contract Time, but the Contractor anticipates a change associated with the Work, the Contractor must submit to the Architect in writing within 5 days of receipt of the RRFI, the reason for the anticipated change in Contract Sum and/or Contract Time. A change in Contract Time must be submitted with a revised CPM Schedule in accordance with Division 01 Section “Construction Progress Documentation.”
- B. The Contractor shall review any RFI’s submitted by Subcontractors prior to submission to the Architect to ensure such RFI’s are not already clearly and unambiguously answered in the Contract Documents.
1. The Contractor shall pay for the Architect’s time and expenses for reviewing RFI’s which are already clearly answered or inferable from the Contract Documents in accordance with the Architect’s standard rates. Such payments will be paid by the Contractor through the Owner.

1.5 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. **“Proposal Requests” (PR)** included at the end of Part 3, including attachments, will be issued to the contractor electronically via email, in the form of a “portable document file” (.PDF).
 2. Proposal Requests issued by the Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 3. Within **21 days** after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made; and the labor hours for each class of labor at the hour rate. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by first submitting a “Request for Information”

(RFI) to Architect. This request will be responded to by the Architect with a “Response to Request for Information” form, wherein the Contractor may submit a Change Order Proposal.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made; and the labor hours for each class of labor at the hour rate. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
5. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

C. Change Order Proposal Form: Use CSI Form 13.6A, “Change Order Request (Proposal),” with attachments CSI Form 13.6D, “Proposal Worksheet Summary,” and Form 13.6C, “Proposal Worksheet Detail,” or similar document acceptable to Architect, for Change Order Proposals.

1. Submit Change Order Proposals (COP), including attachments from vendors and subcontractors and the initiating document, electronically in the form of a “portable document file” (.PDF).
2. Each Change Order Proposal is to include reference to the initiating document (PR, RRFI, etc.), a title and description, and be sequentially numbered.
3. **“Response to Change Order Proposal” (RCOP)**, included at the end of Part 3, will be issued in response to Contractor’s Change Order Proposal (COP).
 - a. A Response to Change Order Proposal (RCOP) will be issued to the Contractor electronically via email, in the form of a “portable document file” (.PDF).
 - b. Following review of a COP by the Architect, if corrections are required prior to inclusion in a Change Order, resubmit revised COP with revision number and include all backup documentation and the initiating document.

1.6 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on **AIA Document G701**.

1.7 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on **AIA Document G714**. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records of time and material for work required by the Construction Change Directive.
 1. After completion of change, submit a Change Order Proposal associated with the Work of a Construction Change Directive, including an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
 2. The **Architect** will prepare a Change Order upon approval by the Architect and Owner of a Change Order Proposal.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FORMS

- A. The following forms referenced in this Section are attached:
 1. ASI – Architect’s Supplemental Instructions, 1 page.
 2. RRFI – Response to Request for Information, 1 page.
 3. PR – Proposal Request, 1 page.
 4. RCOP – Response to Change Order Proposal, 1 page.

END OF SECTION 01 26 00

ASI - ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS

PROJECT

City, State

KBA #

Page: 1 of 1

CONTRACTOR: **GENERAL CONTRACTOR OR CM**
(or CM)

Address
City, State, Zip
Attn: M.

ASI NO. (3 digit)-(2 digit)

ISSUED BY: (Name and Credentials)
 (Project Architect, Landscape Architect, etc.)

DATE: (Month, Day, Year)

COPIES TO:

- KBA – CT/MA
 - Owner
 - Official
 - Consultant
 - Consultant
-

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time. If the Contractor believes that additional cost or time is involved, the Contractor shall make Claims as provided in the General Conditions of the Contract.

Description: ASI Title

Description of work.....

Attachments: Sketches, Bulletins, etc.

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RRFI – RESPONSE TO REQUEST FOR INFORMATION

PROJECT

City, State

KBA #

Page: 1 of 1

CONTRACTOR: **GENERAL CONTRACTOR OR CM**
(or CM)

Address
City, State, Zip
Attn: M.

RRFI NO.: (3 digit)-(2 digit)

ISSUED BY: (Name and Credentials)
 (Project Architect, Landscape Architect, etc.)

DATE: (Month, Day, Year)

COPIES TO:

- KBA – CT/MA
- Owner
- Official
- Consultant

-
- The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.
 - Please submit an itemized quotation for changes in the Contract Sum and/or Contract Time for proposed modifications to the Contract Documents described herein. Notify the Architect in writing of the date on which you anticipate submitting your proposal. **THIS IS NOT A CHANGE ORDER, CONSTRUCTION CHANGE DIRECTIVE, OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED IN THE PROPOSED MODIFICATIONS.**
 - The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents. A Construction Change Directive to follow.
-

Description: RRFI Title

Response.....

Attachments: RFI #

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PR – PROPOSAL REQUEST

PROJECT
City, State

KBA #
Page: 1 of 1

CONTRACTOR: **GENERAL CONTRACTOR OR CM**
(or CM) Address
 City, State, Zip
 Attn: M.

PR NO. (3 digit)-(2 digit)

ISSUED BY: (Name and Credentials)
 (Project Architect, Landscape Architect, etc.)

COPIES TO:

- KBA – CT/MA
- Owner
- Official
- Consultant

DATE: (Month, Day, Year)

Please submit an itemized quotation for changes in the Contract Sum and/or Contract Time for proposed modifications to the Contract Documents described herein. Notify the Architect in writing of the date on which you anticipate submitting your proposal.

THIS IS NOT A CHANGE ORDER, CONSTRUCTION CHANGE DIRECTIVE, OR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED IN THE PROPOSED MODIFICATIONS.

Description: PR Title

Response

Attachments:

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RCOP – RESPONSE TO CHANGE ORDER PROPOSAL

PROJECT
City, State

KBA #
Page: 1 of 1

CONTRACTOR: **GENERAL CONTRACTOR OR CM**
(or CM) Address
 City, State, Zip
 Attn: M.

RCOP NO. (3 digit)-(2 digit)

ISSUED BY: (Name and Credentials)
 (Project Architect, Landscape Architect, etc.)

COPIES TO:
 KBA – CT/MA/NH
 Owner
 Official
 Consultant
 Consultant

DATE: (Month, Day, Year)

-
- Change Order Proposal has been reviewed by the Architect and is recommended to the Owner for approval.**
 - Change Order Proposal is rejected.**
 - Owner will not require the Contractor to proceed with the Work described in Change Order Proposal*
 - Work described in Change Order Proposal is required by the Contract Documents.* *Refer to comments below.*
 - Revise and resubmit Change Order Proposal.**
 - Overhead/Profit is incorrect.* *Labor and material costs breakdown is insufficient.*
 - Backup documentation is insufficient.* *Refer to comments below.*

Description: RCOP Title

Response.....

Attachments: COP No.

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SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the Related Documents identified in Division 01 Section "Summary."

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - 4. Division 01 Section "Photographic Documentation" for submitting construction photographs.
 - 5. Division 01 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
 - 6. Division 01 Section "Closeout Procedures" for submitting warranties.
 - 7. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 8. Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 9. Division 01 Section "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.
 - 10. Divisions 02 through 48 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 - 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.
 - 1. Refer to Division 01 Section "Project Management and Coordination" for submitting Coordination Drawings and Contractor's use of Architect's digital data files.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow two (2) weeks for initial review of each submittal. Allow two (2) additional weeks for review of architectural submittals that require plumbing, HVAC, or electrical work to complete the installation, with the exception of Food Service Equipment if specified for this Project. Allow four (4) additional weeks for the review of Food Service Equipment. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow two (2) weeks for review of each resubmittal. Allow two (2) additional weeks for review of architectural submittals that require plumbing, HVAC, or electrical work to complete the installation, with the exception of Food Service Equipment if specified for this Project. Allow four (4) additional weeks for the review of Food Service Equipment.
 - a. Resubmittals will be reviewed no more than 2 times at the Owner's expense. Resubmittals which fail to comply with Contract requirements will be reviewed at the Contractor's expense, based on an hourly rate of \$75 per hour, not to exceed \$600 for each subsequent submittal.
 - b. The Owner reserves the right to deduct said reimbursement from the Contractor's application for payment on a monthly basis.
 4. Direct transmission of submittals to Consultants: Submittals may be transmitted directly to the Architect's consultants, with the approval of the Architect. Allow 2 weeks for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.
 - a. The Contractor shall request approval from the Architect prior to transmitting submittals to the Architect's consultants for each Specification Section that the Contractor intends to submit directly to a consultant.
- D. Identification: Place a permanent label or title block on each submittal for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Provide a stamp approximately 4 by 4 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 - a. The stamp must contain information as indicated on the "Combined Contractor and KBA Inc. Shop Drawing Review Stamp" attached to this section following Part 3.
3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall include the Specification Section number followed by a hyphen and the sequence number for that Specification Section, followed by a hyphen and the review number (i.e. the fourth item submitted under Section 06 10 53 which is being resubmitted after an initial review by the Architect would be numbered as 06 10 53 – 004 - Rev 02).
 - 2) Submittals that are required by Specification Sections included in Division 01 shall include the Division 01 Section number, followed by a hyphen and the construction Specification Section number, followed by a hyphen and the sequence number for that Specification Section, followed by a hyphen and the review number. (i.e. If the Maintenance Manual for the Hydraulic Elevator were the first item being submitted as a closeout document in Section 14 24 00, it would be numbered as 01 78 23 - 14 24 00 – 01 - Rev 01).
 - i. Paragraph number from Part 2 of the appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, and/or proposed use of the product, as appropriate.
 - l. Other necessary identification.
- E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals. Differentiate in writing the identified deviations from the products and options which are not in compliance with the Contract Documents.
- F. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 1. If the Architect approves direct transmission of a submittal to a consultant, the Contractor shall simultaneously transmit one (1) copy of the submittal to the Architect in addition to the required number of submittals. This additional copy will be used as a reference by the Architect during the review and will not be returned to the Contractor. This submittal shall

- be accompanied by a copy of the transmittal that was sent to the consultant and shall note that it has been transmitted directly to the Architect's consultant for review.
2. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.
- G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Transmittal number numbered consecutively.
 - k. Submittal and transmittal distribution record.
 - l. Remarks.
 - m. Signature of transmitter.
 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
 3. Prepare each transmittal separately for the work of a single specification section.
- H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked "Approved" or "Approved as Corrected."
 4. The Contractor shall resubmit submittals that are returned from the Architect as "Revise and Resubmit" or "Not Approved" using the same submittal number as the original submittal. The Contractor shall revise the Review number, as appropriate.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Use only final submittals with mark indicating "Approved" or "Approved as Corrected" taken by Architect.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
- B. Product Schedule: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 2. Form: Tabulate information for each product under the following column headings:
 - a. Specification Section number and title.
 - b. Generic name used in the Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - h. Identification of items that require early submittal approval for scheduled delivery date.
 3. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 4. Completed List: Within 90 days after date of commencement of the Work, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 5. Architect's Action: Architect will respond in writing to Contractor within 15 days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.
- C. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.

- d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Mill reports.
 - j. Standard product operation and maintenance manuals.
 - k. Compliance with specified referenced standards.
 - l. Testing by recognized testing agency.
 - m. Application of testing agency labels and seals.
 - n. Notation of coordination requirements.
4. Submit Product Data before or concurrent with Samples.
 5. Number of Copies: Submit three copies of Product Data, unless otherwise indicated. Architect will return two copies. Mark up and retain one returned copy as a Project Record Document, the other copy shall be given to the Owner.
- D. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Design calculations.
 - j. Compliance with specified standards.
 - k. Notation of coordination requirements.
 - l. Notation of dimensions established by field measurement.
 - m. Relationship to adjoining construction clearly indicated.
 - n. Seal and signature of professional engineer if specified.
 - o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
 3. Number of Copies: Submit **three** opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit **three** copies where copies are required for operation and maintenance manuals. Architect will retain one copy; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing.

- E. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit three full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 - b. Color charts for HVAC equipment, electrical accessories, and light fixtures shall be submitted separately from the product data. Each color chart shall reference the Product Data submittal number, be submitted under a separate transmittal and have its own submittal number.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain one Sample set; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.

- 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- F. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Project Manager's action.
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- N. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- O. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- P. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- Q. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- R. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

- S. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- T. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- U. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- V. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- W. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
 - 1. Preparation of substrates.
 - 2. Required substrate tolerances.
 - 3. Sequence of installation or erection.
 - 4. Required installation tolerances.
 - 5. Required adjustments.
 - 6. Recommendations for cleaning and protection.
- X. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
 - 1. Name, address, and telephone number of factory-authorized service representative making report.
 - 2. Statement on condition of substrates and their acceptability for installation of product.
 - 3. Statement that products at Project site comply with requirements.
 - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 6. Statement whether conditions, products, and installation will affect warranty.
 - 7. Other required items indicated in individual Specification Sections.
- Y. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

- Z. Construction Photographs: Comply with requirements specified in Division 01 Section "Photographic Documentation."
- AA. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect except as required in "Action Submittals" Article.

2.2 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
 - 1. Provide "Combined Contractor/KBA Inc. Shop Drawing Review Stamp" attached after this Section.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. "Approved": The portion of Work covered by the submittal may proceed provided it complies with the Contract Documents.
 - 2. "Approved as Corrected": The portion of Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal, and with the Contract Documents.
 - 3. "Not Approved" or "Revise and Resubmit": Revise or prepare a new submittal in accordance with notations; resubmit. Do not proceed with that portion of the Work covered by the submittal.

- C. Informational Submittals: Where a submittal is for information, record purposes or special processing or other activity, the Architect will review each submittal, and mark it “Reviewed” or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Unsolicited Submittals: Submittals not required by the Contract Documents may not be reviewed and may be discarded.
- F. Return of Submittals: Architect will return submittals to Contractor via standard USPS mail or standard rate for private delivery where PDF by email is not available. If the Contractor requires expedited delivery, the Contractor must provide the Architect with an active shipping account number and forms in order to pay for expedited delivery.

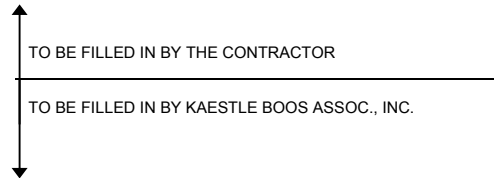
3.3 FORMS

- A. The following form referenced in this Section is attached:
 - 1. Combined Contractor and KBA Inc. Shop Drawing Review Stamp, 1 page.

END OF SECTION 01 33 00

COMBINED CONTRACTOR AND K.B.A. INC. SUBMITTAL REVIEW STAMP

CONTRACTOR: _____	
PROJECT: _____	
PARAGRAPH. NO.: _____	SUBMITTAL NO.: _____
CONTRACTOR HAS DETERMINED AND VERIFIED MATERIALS, FIELD MEASUREMENTS AND FIELD CONSTRUCTION CRITERIA AND HAS CHECKED AND COORDINATED THE INFORMATION CONTAINED IN THIS SUBMITTAL WITH THE REQUIREMENTS OF THE WORK AND OF THE CONTRACT DOCUMENTS AND RECOMMENDS APPROVAL BY THE ARCHITECT/ENGINEER.	
BY: _____ DATE: _____	
KAESTLE BOOS ASSOC. PROJECT NO.: <u>17015.00</u>	
ARCHITECTS/ENGINEERS DATE RECEIVED STAMP:	<div style="border: 1px solid black; width: 150px; height: 80px; margin-left: 20px;"></div>
COMMENTS MADE ON THE SUBMITTALS DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. REVIEWING IS ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE SITE; FOR INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESSES OR TO THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION; AND FOR COORDINATION OF THIS WORK WITH THE WORK OF ALL TRADES.	
ACTION STAMP:	<div style="border: 1px solid black; width: 300px; height: 50px; margin-left: 20px;"></div>



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SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the Related Documents identified in Division 01 Section "Summary."

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
1. Inspection procedures.
 2. Warranties.
 3. Final cleaning.
- B. Related Sections include the following:
1. Division 01 Section "Execution" for progress cleaning of Project site.
 2. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 3. Division 01 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
 4. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 5. Division 01 Section "Photographic Documentation" for submitting Final Completion construction photographs and negatives.
 6. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 7. Divisions 02 through 48 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 2. Advise Owner of pending insurance changeover requirements.
 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs and photographic negatives, damage or settlement surveys, property surveys, and similar final record information.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
9. Submit test/adjust/balance records.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
15. Submit list of subcontractors, service providers, and principal vendors including contact information where they can be reached for emergency service.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Within 30 days of original request for inspection, request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, and within 60 days of issuance of Certificate of Substantial Completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report and warranty.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training videotapes.

- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number; 1 of x.

1.6 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Schedule of Warranties: Arrange a Schedule of Warranties in columnar format and include the Specification Section number and title, product name or description, and duration of the warranty. Indicate whether the warranty is by Installer, Manufacturer, or both. Under each of these headings, indicate whether the warranty includes labor only, material only, or both labor and material. Whenever there are differing warranty responsibilities between Installer and Manufacturer, list the responsibilities and duration of each separately.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.

3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
- c. Remove tools, construction equipment, machinery, and surplus material from Project site.
- d. Remove labels that are not permanent.
- e. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

f. Leave Project clean and ready for occupancy.

C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

DERBY HIGH SCHOOL
DERBY, CT

ATHLETIC BUILDING ABATEMENT PROJECT
KBA #17015.00

END OF SECTION 01 77 00

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SECTION 020810 - HAZARDOUS MATERIALS SPECIFICATION

PART 1- ASBESTOS REMOVAL SPECIFICATIONS

1.1 SUMMARY

- 1.1.1 Work Included: Remove and dispose of asbestos containing materials in accordance with the Contract Documents. The Work of this Section shall include, but not be limited to the following:
- 1.1.1.1 Performance of interior and exterior demolition to uncover and gain access to asbestos containing building materials.
 - 1.1.1.2 Removal of asbestos-containing building materials listed in the Inventory of Asbestos-Containing Materials.
 - 1.1.1.3 Removal of any asbestos-containing materials that may be uncovered when walls and ceiling cavities are opened.
 - 1.1.1.4 Transportation of asbestos-containing waste materials to an approved disposal site by a licensed asbestos waste hauler.
 - 1.1.1.5 Disposal of asbestos-containing waste materials at an approved asbestos waste disposal site.
- 1.1.2 Pre-Requisite Work: The Owner will be responsible for vacating the areas where work will take place, and removing all movable objects and furnishings prior to the start of prep work for asbestos abatement.
- 1.1.3 Related Work: Work of this Section is part of a project involving demolition, site work and general construction. The contractor shall coordinate the work of this Section with work specified elsewhere.

1.2 REFERENCES

1.2.1 Applicable Regulations

The contractor shall comply with all applicable federal and state requirements including, but not limited to the following. Where the regulations specify conflicting requirements, the contractor shall follow the stricter requirement.

1.2.1.1 U.S. Environmental Protection Agency

National Emission Standard for Hazardous Air Pollutants (40 CFR 61, Subparts A and M)
Asbestos Hazard and Emergency Response Act (40 CFR 763)

1.2.1.2 U.S. Occupational Safety and Health Administration

Respiratory Protection Standard (29 CFR 1926.103)
Asbestos Construction Standard (29 CFR 1926.1101)
Hazard Communication Standard (29 CFR 1910.1200)

1.2.1.3 Connecticut Department of Public Health

Standards for Asbestos Abatement (Sections 19a-332a (1-16))
Licensure and Training Requirements for Persons Engaged in Asbestos

Abatement and Asbestos Consultation Services and Related Civil Penalties
(Sections 20-440(1-9))
Asbestos in Schools Regulations (Section 19a-333(1-13))

1.2.2 Trade Association References

1.2.2.1 ANSI

ANSI Z9.2 - Fundamentals Governing the Design and Operation of Local
Exhaust Systems (1979; R 1991)
ANSI Z88.2 - Respiratory Protection (1992)

1.2.2.2 ASTM

ASTM E1368 - Visual Inspection of Asbestos abatement Projects (1990)
ASTM E1494 - Encapsulants for Spray- or Trowel-Applied Friable Asbestos-
Containing Building Materials (1992)

1.2.2.3 UL

UL 586 - High-Efficiency, Particulate, Air Filter Units (1990)

1.3 DEFINITIONS

1.3.1 Asbestos Containing Material (ACM)

Material containing more than one percent by weight of asbestos.

1.3.2 Amended Water

Water containing a wetting agent or surfactant.

1.3.3 Area Sampling

Sampling of asbestos fiber concentrations at stationary location which approximates the concentration of asbestos in the theoretical breathing zone but is not actually collected in the breathing zone of an employee.

1.3.4 Asbestos

A naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cummingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.

1.3.5 Asbestos Control Area

Designated rooms, spaces, or areas of the building or structure where asbestos abatement activities take place. For glovebag procedures, the work area shall also include the areas contiguous to where the procedure takes place.

1.3.6 Asbestos Fibers

Those fibers having an aspect ratio of at least 3:1 and longer than 5 micrometers as determined by NIOSH Method 7400.

1.3.7 Asbestos Worker

An individual certified by the State, who disturbs, removes, encapsulates, repairs, or encloses friable asbestos material.

1.3.8 Asbestos Worker Supervisor

An individual certified by the State, who supervises the asbestos workers during the asbestos project and ensures that proper asbestos abatement procedures as well as individual safety procedures are being adhered to.

1.3.9 Asbestos Permissible Exposure Limit

A fiber level of 0.1 fibers per cubic centimeter of air as an 8-hour time weighted average measured in the breathing zone as defined by 29 CFR 1926.1101.

1.3.10 Background

The ambient airborne asbestos concentration in an uncontaminated area as measured prior to any asbestos hazard abatement efforts. Background concentrations for other (contaminated) areas are measured in similar but asbestos free locations.

1.3.11 Contractor

A public authority or any other governmental agency or instrumentality thereof, self-employed person, company, unincorporated associations, firm, partnership or corporation and any owner or operator thereof, which engages in an asbestos project or employs persons engaged in an asbestos project.

1.3.12 Encapsulation

The coating or spraying of asbestos-containing material or the bare surfaces exposed after an abatement with a pigment (non-transparent) sealant.

1.3.13 Encapsulants

Liquid material which can be applied to asbestos-containing material or the bare surfaces exposed after an abatement which temporarily controls the possible release of asbestos fibers from the material or surface either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant).

1.3.14 Friable Asbestos Material

Any asbestos or any ACM that can be crumbled, pulverized or reduced to a powder when dry, by hand or other mechanical pressure.

1.3.15 Glovebag Technique

A method for removing friable asbestos-containing material from heating, ventilation and air conditioning (HVAC) ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces. The glovebag assembly is a manufactured device consisting of a large bag (constructed of at least 6-mil transparent plastic), two inward-projecting long sleeve gloves, one inward-projecting water wand sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object to be

decontaminated and contains all asbestos fibers released during the removal process.

1.3.16 HEPA Filter

A high efficiency particulate air filter capable of trapping and retaining 99.97 percent of particles (asbestos fibers) greater than 0.3 micrometers mass median aerodynamic equivalent diameter.

1.3.17 Negative Pressure Equipment

A portable local exhaust system equipped with HEPA filtration. The system shall be capable of creating a negative pressure differential between the outside and inside of the work area.

1.3.18 Nonfriable Asbestos Material

Material that contains asbestos in which the fibers have been immobilized by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not normally release asbestos fibers during any appropriate use, handling, storage or transportation. It is understood that asbestos fibers may be released under other conditions such as demolition, removal, or mishap.

1.3.19 PCM

Phase contrast microscopy (PCM) is a measurement protocol for the assessment of the fiber content of air (NIOSH Method 7400).

1.3.20 Personal Sampling

A method used to determine employees' exposure to airborne fibers. The sample is collected outside the respirator in the worker's breathing zone.

1.3.21 PLM

Polarized light microscopy (PLM) is a measurement protocol for the assessment of the asbestos content of bulk materials (40 CFR Part 763, Subpart F, Appendix A).

1.3.22 Project Monitor

The licensed person who has been retained by the owner to review the contractor's work practices and to perform area air sampling for the project.

1.3.23 TEM

Transmission electron microscopy (TEM) is the measurement protocol for the assessment of the asbestos fiber content of air. (40 CFR Part 763, Subpart E, Appendix A).

1.3.24 Time Weighted Average (TWA)

The TWA is an 8-hour time weighted average airborne concentration of asbestos fibers.

1.3.25 Wetting Agent

A surfactant or chemical agent added to water to improve penetration.

1.4 REQUIREMENTS

1.4.1 Medical Requirements

1.4.1.1 Medical Examinations

Provide medical requirements for all Asbestos Workers and Asbestos Worker Supervisors including, but not limited to medical surveillance and medical record keeping as listed in 29 CFR 1926.1101.

1.4.1.2 Medical Records

Before exposure to airborne asbestos fibers, provide workers with a comprehensive medical examination as required by 29 CFR 1926.1101 and other pertinent State directives. This requirement must have been satisfied within the 12 months prior to the start of work on this contract. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos and within 30 calendar days before or after the termination of employment in such occupation. Specifically identify x-ray films of asbestos workers to the consulting radiologist and mark medical record jackets with the work "Asbestos".

1.4.2 Training

Train all persons involved in the asbestos control work in accordance with the State training criteria for Asbestos Workers or Asbestos Worker Supervisors. The contractor shall document the training by providing dates of training and the name and address of the training entity. Furnish each Asbestos Worker and Asbestos Worker Supervisor with respirator training and fit testing as required by 29 CFR 1926.1101. Fully cover engineering and other hazard control techniques and procedures.

1.4.3 Permits, Licenses and Notifications

Obtain necessary permits and licenses in conjunction with asbestos removal, hauling and disposal, and furnish notification of such actions required by Federal and State authorities prior to the start of work. The contractor shall pay all fees as required for notification, permit and variance application (as necessary), and for any licenses and certifications.

The Contractor shall send written notification to the following agencies as required by Federal and State regulations, and shall be responsible for payment of all fees attendant to such notifications:

Connecticut Department of Public Health

1.4.4 Environment, Safety and Health Compliance

The contractor shall comply with all applicable Federal and State regulations, regardless of whether the regulation is cited in these specifications.

1.4.5 Respiratory Protection Program

Establish and implement a respirator program as required by ANSI Z88.2, 29 CFR 1926.1101, and 29 CFR 1926.103. Submit a written description of the program,

including copies of personal air monitoring data for similar, previously-completed projects, to the Project Monitor.

1.4.6 Hazard Communication

Adhere to all parts of 29 CFR Part 1926.59, and provide the Project Monitor with a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site.

1.4.7 Contractor Qualifications

The contractor shall have held a valid State of Connecticut Asbestos Abatement Contractor license under their current company name for a minimum of three (3) years and shall not have been cited and penalized for violations of asbestos regulations in the past three (3) years. The contractor shall have adequate liability/occurrence insurance for asbestos work, have comprehensive standard operating procedures for asbestos work and have adequate materials, equipment and supplies to perform the work. The contractor shall only use workers from his/her payroll and will not be allowed to sub-contract the abatement work.

1.4.8 Project Supervisor

1.4.8.1 The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:

- The Project Supervisor shall hold a current CT asbestos supervisor license and current EPA certificate.
- The Project Supervisor shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of two (2) years experience as a supervisor.
- The Project Supervisor must be able to read and write English fluently, as well as communicate in the primary language of the Workers.

1.4.8.2 If the Project Supervisor is not on-site at any time whatsoever, all work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Project Supervisor cannot be removed from the Project without written consent of the Owner and the Project Monitor. The Project Supervisor shall be removed from the Project if so requested by the Owner.

1.4.8.3 The Project Supervisor shall maintain the bound Daily Project Log that also includes the entry/exit logs and the Waste Disposal Log.

1.4.8.4 The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the primary point of contact for the Owner and Project Monitor.

1.4.9 Independent Project Monitor

The Owner will employ a Connecticut licensed asbestos project monitor, independent from the abatement contractor, to perform various services on behalf of the Owner. The project monitor will perform the necessary monitoring, inspection, testing, and other support services to ensure that building occupants, employees, and visitors will not be adversely affected by the abatement work, that the abatement work proceeds in accordance with these specifications, that the abated areas or abated buildings have been successfully decontaminated. The work of the project monitor in no way relieves the Contractor from their responsibility to perform the work in accordance

with contract/specification requirements, to perform continuous inspection, monitoring and testing for the safety of their employees, and to perform other such services as specified. The cost of the project monitor and their services will be borne by the Owner except for any repeat of final inspection and testing that may be required due to unsatisfactory initial results. Any repeated final inspections and/or testing, if required, will be paid for by the Contractor.

1.5 SUBMITTALS

1.5.1 Manufacturer's Catalog data

The contractor shall submit the following Manufacturer's Catalog Data, prior to starting the asbestos abatement work:

- Local exhaust equipment
- Vacuums
- Respirators
- Pressure differential recording instrument
- Amended water
- Glovebags
- Material Safety Data Sheets
- Encapsulants
- Waste Water Filtration Systems

1.5.2 Statements

The contractor shall submit the following Statements, prior to starting the asbestos abatement work:

1.5.2.1 Health and Safety Pan

Submit a detailed plan of the safety precautions and OSHA compliance program for the project. The plan shall include, but not be limited to lockout/tagout, fall protection and confined space entry procedures. The health and safety plan shall also include both fire and medical emergency response plans.

1.5.2.2 Testing laboratory

Submit the name, address, and telephone number of each testing laboratory selected for the analysis and reporting of personal air samples. Furnish evidence that the selected laboratory is an accredited participant in the AIHA PAT programs for airborne asbestos analysis.

1.5.2.3 Approval of asbestos waste disposal site and transporter

Submit copies of permits for the asbestos waste disposal site, transfer station and the waste transporter. If the Contractor plans to utilize in-state disposal facilities, prior approval will be required from the Department of Energy & Environmental Protection Agency (DEEP).

1.5.2.4 Asbestos Worker and Supervisor certificates

Submit copies of each employee's State asbestos certification cards.

1.5.2.5 Medical certification

Provide a written certification for each Asbestos Worker and Supervisor, signed by a licensed physician indicating that the employee has met or exceeded all of the medical prerequisites listed herein and in 29 CFR 1926.1101 and 29 CFR 1926.103.

1.5.2.6 Respiratory protection program

Submit a written program manual or operating procedure including methods of compliance with regulatory statutes.

1.5.3 Field Reports

The contractor shall submit the following Field Reports, daily during the course of the asbestos abatement work:

1.5.3.1 Personal Air Sampling Results

The contractor shall provide copies of laboratory reports for personal air samples to the Project Monitor for review within 24 hours of the "time off" of the sample pump. Notify the Project Monitor immediately of any airborne levels of asbestos fibers in excess of the Asbestos Permissible Exposure Limits. Post a copy of the personal air sample results at a location accessible to the affected employees. Failure to comply with these requirements may result in all work being stopped until compliance is achieved.

1.5.3.2 Pressure Differential Recordings for Local Exhaust System

For each work area, provide a local exhaust system that creates a negative pressure of at least 0.02 inches of water, relative to the pressure external to the enclosure and operate it continuously, 24 hours a day, until the temporary enclosure of the asbestos control area is removed. Submit records of the pressure differential recordings and the supervisor's inspection of the containment barriers to the Project Monitor at least twice daily.

1.5.3.3 Work Area Entry Log

The contractor shall maintain and provide to the Project Monitor a log of all employees and authorized visitors who enter asbestos work areas. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

1.5.3.4 Daily Performance Log

The project supervisor shall document all work performed on site at a minimum of five (5) times every day. Entries shall include, but not be limited to, job progress, amount of material removed, containment inspections, project issues, etc. and shall be logged into a bound log book with non-washable, permanent ink.

1.5.4 Project Close-out Submittals

Within forty-five (45) days of project completion, the Contractor shall submit three (3) copies of the documents listed below for review and approval prior to the Contractor's final payment.

- Originals of all waste disposal manifests, seals and disposal logs.
- OSHA compliance air monitoring records, conducted during work.
- Daily progress log, including the entry/exit log.
- All list of all workers used in the performance of the project, including name, social security number, current and original EPA training certificate and Connecticut license number.
- For each worker used in the performance of the project, submit the Worker's Acknowledgement Statement.
- Disposal Site/Landfill permit from applicable regulatory agency.
- Project notification and alternate work plans, if applicable, with State acknowledgement.

1.6 PRE-CONSTRUCTION MEETING

- 1.6.1 Prior to commencing the work, the Contractor shall meet with the Owner and the Owner's licensed representative to present and review, as appropriate, the items listed in Section 1.5. The Contractor's Competent Person(s) who will be on-site shall participate in the pre-start meeting. The pre-start meeting is to discuss and determine procedures to be used during the project.

PART 2 - PRODUCTS

2.1 ENCAPSULANTS

- 2.1.1 Only encapsulants rated as acceptable or marginally acceptable on the basis of Battelle Columbus Laboratory test procedures and rating requirements developed under the 1978 US EPA contract shall be used for lockdown encapsulation.
- 2.1.2 Latex paint with solids content greater than 15 percent shall be considered a lockdown sealant for coating all non-metallic surfaces.

2.2 WETTING AGENTS

Wetting agents (surfactants) shall conform to current US EPA requirements, and shall contain no toxic or hazardous substances as defined in 29 CFR 1926.59.

2.3 MASTIC REMOVAL SOLVENTS

Mastic removal solvents are not being considered for this project. If allowed, mastic solvents shall conform to current US EPA requirements, and shall contain no toxic or hazardous substances as defined in 29 CFR 1926.59.

PART 3 - EXECUTION

3.1 EQUIPMENT

At all times, provide the Project Monitor and employees with at least two complete sets of personal protective equipment (including disposable coveralls), as required for entry to and inspection of the asbestos control areas. Provide manufacturer's certificate of compliance for all equipment used to contain airborne asbestos fibers.

3.1.1 Respirators

Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH).

3.1.1.1 Respirators for Handling Asbestos

Provide personnel engaged in pre-cleaning, cleanup, handling, removal and demolition of asbestos materials with respiratory protection as indicated in 29 CFR 1926.1101 and 29 CFR 1926.103.

3.1.2 Exterior Whole Body Protection

3.1.2.1 Outer Protective Clothing

Provide personnel exposed to asbestos with disposable, whole body outer protective clothing, head coverings, gloves, and foot coverings. Provide disposable work gloves. Work gloves shall be disposed of as asbestos waste after the project. Make sleeves secure at the wrists, make foot coverings secure at the ankles, and make clothing secure at the neck by use of tape. Provide disposable undergarments for wear under the outer protective clothing.

3.1.2.2 Eye Protection

Provide goggles to personnel engaged in asbestos abatement operations when the use of a full-face respirator is not required.

3.1.3 Warning Signs and Label

Provide bilingual warning signs printed in English and Spanish (and the prevailing language spoken by employees) at all approaches to asbestos control areas. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos materials, scrap, waste, debris, and other products contaminated with asbestos.

3.1.3.1 Warning Sign

Provide vertical format conforming to 29 CFR 1926.1101, minimum 20-in x 14-in, displaying the following legend in the lower panel.

Legend

Danger
Asbestos
Cancer and Lung Disease Hazard
Authorized Personnel Only

Notation

1-inch Sans Serif Gothic or Block
1-inch Sans Serif Gothic or Block
1/4-inch Sans Serif Gothic or Block
1/4-inch Sans Serif Gothic or Block

Respirators and Protective
Clothing are Required in
this Area

1/4-inch Sans Serif Gothic or Block

Spacing between lines shall be at least equal to the height of the upper of any two lines.

3.1.3.2 Warning Labels

Provide labels conforming to 29 CFR 1926.1101 of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM

3.1.4 Local Exhaust System

For each indoor asbestos abatement area, provide a local exhaust system in accordance with ANSI Z9.2 and 29 CFR 1926.1101 that will provide at least four air changes per hour inside of the negative pressure enclosure. Local exhaust equipment shall be operated 24 hours per day, until the asbestos control area is removed and shall be leak proof the filter and equipped with HEPA filters. Maintain a minimum pressure differential in the asbestos abatement area of minus 0.02 inches of water column relative to adjacent, unsealed areas. In no case shall the building ventilation system be used as the local exhaust system for the asbestos abatement area. Filters on exhaust system equipment shall conform to ANSI Z9.2 and UL 586. The local exhaust system shall terminate out of doors and remote from any public access or ventilation system intakes.

3.1.5 Tools

Vacuums shall be leak proof to the filter and equipped with HEPA filters. Filters on vacuums shall conform to ANSI Z9.2 and UL 586. Do not use power tools to remove asbestos containing materials unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation systems. Remove all residual asbestos from reusable tools prior to storage or reuse.

3.1.6 Decontamination Facilities

Provide each regulated area with separate personnel decontamination facility (PDF) and waste/equipment decontamination facilities (W/EDF). Ensure that the PDF are the only means of ingress and egress to the regulated area and that all equipment, bagged waste, and other material exit the regulated area only through the W/EDF.

3.1.6.1 General Requirements

All personnel entering or exiting a regulated area must go through the PDF and shall follow the requirements at 29 CFR 1926.1101 (j)(1) and these specifications. All waste, equipment and contaminated materials must exit the regulated area through the W/EDF and be decontaminated in accordance with these specifications. Walls and ceilings of the PDF and W/EDF must be constructed of a minimum of 3 layers of 6 mil opaque polyethylene sheeting and be securely attached to existing building components and/or an adequate

temporary framework. A minimum of 3 layers of 6 mil re-enforced poly shall also be used to cover the floor under the PDF and W/EDF units. Construct doors so that they overlap and secure to adjacent surfaces. Weight inner doorway sheets with layers of duct tape so that they close quickly after release. Put arrows on sheets so they show direction of travel and overlap. If the building adjacent area is occupied, construct a solid barrier on the occupied side(s) to protect the sheeting and reduce potential for non-authorized personnel entering the regulated area.

3.1.6.2 Temporary Facilities to the PDF and W/EDF

The Asbestos Supervisor shall provide temporary water service connections to the PDF and W/EDF. Backflow prevention must be provided at the point of connection to the VA system. Water supply must be of adequate pressure and meet requirements of 29 CFR 1910.141(d)(3). Provide adequate temporary overhead electric power with ground fault circuit interruption (GFCI) protection. Provide a sub-panel for all temporary power in the clean room. Provide adequate lighting to provide a minimum of 50-foot candles in the PDF and W/EDF. Provide temporary heat, if needed, to maintain 70°F throughout the PDF and W/EDF.

3.1.6.3 Personal Decontamination Facility (PDF)

The Asbestos Supervisor shall provide a PDF consisting of shower room which is contiguous to a clean room and equipment room which is connected to the regulated area. The PDF must be sized to accommodate the number of personnel scheduled for the project. The shower room, located in the center of the PDF, shall be fitted with as many portable showers as necessary to insure all employees can complete the entire decontamination procedure within 15 minutes. The PDF shall be constructed of opaque poly for privacy. The PDF shall be constructed to eliminate any parallel routes of egress without showering.

3.1.6.3.1 Clean Room

The clean room must be physically and visually separated from the rest of the building to protect the privacy of personnel changing clothes. The clean room shall be constructed of at least 3 layers of 6 mil opaque poly to provide an air tight room. Provide a minimum of 2 - 900 mm (3 foot) wide 6 mil poly doorways. One doorway shall be the entry from outside the PDF and the second doorway shall be to the shower room of the PDF. The floor of the clean room shall be maintained in a clean, dry condition. Shower overflow shall not be allowed into the clean room. Provide 1 storage locker per person. A portable fire extinguisher, Type ABC, shall be provided in accordance with OSHA and NFPA Standard 10. All persons entering the regulated area shall remove all street clothing in the clean room and dress in disposable protective clothing and respiratory protection. Any person entering the clean room does so either from the outside with street clothing on or is coming from the shower room completely naked and thoroughly washed. Females required to enter the regulated area shall be ensured of their privacy throughout the entry/exit process by posting guards at both entry points to the PDF so no male can enter or exit the PDF during her stay in the PDF.

3.1.6.3.2 Shower Room

The Asbestos Supervisor shall assure that the shower room is a

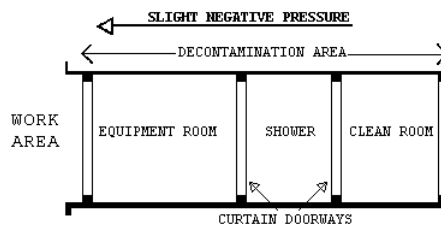
completely water tight compartment to be used for the movement of all personnel from the clean room to the equipment room and for the showering of all personnel going from the equipment room to the clean room. Each shower shall be constructed so water runs down the walls of the shower and into a drip pan. Install a freely draining smooth floor on top of the shower pan. The shower room shall be separated from the rest of the building and from the clean room and equipment room using air tight walls made from at least 3 layers of 6 mil opaque poly. The shower shall be equipped with a shower head and controls, hot and cold water, drainage, soap dish and continuous supply of soap and shampoo, and shall be maintained in a sanitary condition throughout its use. The controls shall be arranged so an individual can shower without assistance. Provide a flexible hose shower head, hose bibs and all other items shown on Shower Schematic. Waste water will be pumped to a drain after being filtered through a minimum of a 100-micron sock in the shower drain; a 20 micron filter; and a final 5 micron filter. Filters will be changed a minimum of daily or more often as needed. Filter changes must be done in the shower to prevent loss of contaminated water. Hose down all shower surfaces after each shift and clean any debris from the shower pan. Residue is to be disposed of as asbestos waste.

3.1.6.3.3 Equipment Room

The Asbestos Supervisor shall provide an equipment room which shall be an air tight compartment for the storage of work equipment/tools, reusable personal protective equipment, except for a respirator and for use as a gross decontamination area for personnel exiting the regulated area. The equipment room shall be separated from the regulated area by a minimum 3-foot-wide door made with 2 layers of 6 mil opaque poly. The equipment room shall be separated from the regulated area, the shower room and the rest of the building by air tight walls and ceiling constructed of a minimum of 3 layers of 6 mil opaque poly. Damp wipe all surfaces of the equipment room after each shift change. Provide an additional loose layer of 6 mil fire retardant poly per shift change and remove this layer after each shift. If needed, provide a temporary electrical sub-panel equipped with GFCI in the equipment room to accommodate any equipment required in the regulated area.

3.1.6.3.4 The PDF shall look like as follows:

Clean room at the entrance followed by a shower room followed by an equipment room leading to the regulated area. Each doorway in the PDF is minimum of 2 layers of 6 mil opaque poly.



3.1.6.4 Waste/Equipment Decontamination Facility (W/EDF)

The Asbestos Supervisor shall provide a W/EDF consisting of a wash room, holding room, and clean room for removal of waste, equipment and contaminated material from the regulated area. Personnel shall not enter or exit the W/EDF except in the event of an emergency. Clean debris and residue in the W/EDF daily. All surfaces in the W/EDF shall be wiped/hosed down after each shift and all debris shall be cleaned from the shower pan. The W/EDF shall consist of the following:

3.1.6.4.1 Wash Down Station

Provide an enclosed shower unit in the regulated area just outside the Wash Room as an equipment bag and container cleaning station.

3.1.6.4.2 Wash Room

Provide a wash room for cleaning of bagged or containerized asbestos containing waste materials passed from the regulated area. Construct the wash room using 50 x 100 mm (2" x 4") wood framing and 3 layers of 6 mil poly. Locate the wash room so that packaged materials, after being wiped clean, can be passed to the Holding Room. Doorways in the wash room shall be constructed of 2 layers of 6 mil poly.

3.1.6.4.3 Holding Room

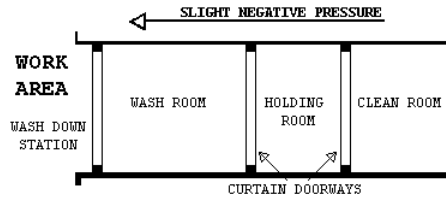
Provide a holding room as a drop location for bagged materials passed from the wash room. Construct the holding room using 50 x 100 mm (2" x 4") wood framing and 3 layers of 6 mil poly. The holding room shall be located so that bagged material cannot be passed from the wash room to the clean room unless it goes through the holding room. Doorways in the holding room shall be constructed of 2 layers of 6 mil poly.

3.1.6.4.4 Clean Room

Provide a clean room to isolate the holding room from the exterior of the regulated area. Construct the clean room using 2 x 4 wood framing and 2 layers of 6 mil poly. The clean room shall be located to provide access to the holding room from the building exterior. Doorways to the clean room shall be constructed of 2 layers of 6 mil poly. When a negative pressure differential system is used, a rigid enclosure separation between the W/EDF clean room and the adjacent areas shall be provided.

3.1.6.4.5 The W/EDF shall be provided as follows:

Wash Room leading to a Holding Room followed by a Clean Room leading to outside the regulated area. See diagram.



3.1.6.5 Waste/Equipment Decontamination Procedures

At washdown station in the regulated area, thoroughly wet clean contaminated equipment and/or sealed polyethylene bags and pass into Wash Room after visual inspection. When passing anything into the Wash Room, close all doorways of the W/EDF, other than the doorway between the washdown station and the Wash Room. Keep all outside personnel clear of the W/EDF. Once inside the Wash Room, wet clean the equipment and/or bags. After cleaning and inspection, pass items into the Holding Room. Close all doorways except the doorway between the Holding Room and the Clean Room. Workers from the Clean Room/Exterior shall enter the Holding Room and remove the decontaminated/cleaned equipment/bags for removal and disposal. These personnel will not be required to wear PPE. At no time shall personnel from the clean side be allowed to enter the Wash Room.

3.2 WORK PROCEDURE

Perform asbestos related work in accordance with 29 CFR 1926.1101, 40 CFR 61-Subpart M, and applicable State regulations. Use wet removal procedures for all asbestos removal work, and negative pressure enclosure techniques for all indoor asbestos removal activities.

Personnel shall wear and utilize protective clothing and equipment as specified herein. Eating, smoking, drinking, chewing gum, tobacco, or applying cosmetics shall not be permitted in the asbestos work or control areas. Personnel of other trades not engaged in the removal and demolition of asbestos containing materials shall not be exposed at any time to airborne concentrations of asbestos unless all the personnel protection and training provisions of this section are complied with by the trade personnel.

Prior to asbestos roofing work, seal all rooftop penetrations, except plumbing vents. Shut down the building heating, ventilating, and air conditioning system, cap the openings to the system, prior to the commencement of asbestos work. Disconnect electrical service where wet removal is performed and provide temporary electrical service with verifiable ground fault circuit interrupter (GFI) protection prior to the use of any water.

If an asbestos fiber release or spill occurs outside of the asbestos control area, stop work immediately, correct the condition to the satisfaction of the Project Monitor prior to resuming work.

3.2.1 Protection of Adjacent Building Areas

Perform work without damage or contamination of adjacent building areas. Where such areas are damaged or contaminated as verified by the Project Monitor using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the contractor at no expense to the owner as deemed appropriate by the Project Monitor. This includes inadvertent spill of dirt, dust, or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, stop work immediately. Then clean up the spill. When satisfactory visual inspection and

air sampling results are obtained from the Project Monitor, asbestos abatement work may be resumed.

3.2.2 Furnishings

Furniture, miscellaneous equipment and trash are found in the buildings. In areas where asbestos removal work will take place, the contractor shall move all furniture, miscellaneous equipment and trash from the asbestos control area.

3.2.3 Pre-cleaning

Wet wipe and HEPA vacuum all surfaces within the work area prior to establishment of an enclosure. Fixed objects within the proposed work area shall be pre-cleaned by HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate, and enclosed with 6-mil plastic sheeting sealed to protect from contamination.

3.2.4 Asbestos Control Area Procedures

The following requirements apply to all indoor areas:

3.2.4.1 Isolation barriers

Separate any operations in the regulated area from adjacent areas using 6 mil poly and duct tape. Individually seal with 2 6 mil poly and duct tape all HVAC openings into the regulated area. Individually seal all lighting fixtures, clocks, doors, windows, convectors, speakers, or any other objects/openings in the regulated area.

3.2.4.2 Floor and Wall Plastic

In addition to the isolation barriers, floor shall be covered with two layers of 4-mil plastic sheeting and wall surfaces shall be sealed with a minimum of two layers of 6-mil plastic sheeting, except where asbestos floors and/or walls are being removed, in which case they need not be sealed. The plastic layers on the floor shall extend 12 inches up the walls. Walls shall be covered with plastic sheeting down to the floor level, thus overlapping the floor material by a minimum of 12 inches. There shall be a distance of at least 12 inches between seams of adjacent layers.

3.2.4.3 Emergency and Fire Exits

Emergency and fire exits from the work area shall be maintained, or alternative exits shall be established in accordance with applicable codes and regulations. Exits shall be checked daily against exterior blockage or impediments to exiting. Entrances to the work place that will not be used for worker entry or emergency exits shall be locked to prevent unauthorized entry.

3.2.4.4 Sanitary Facilities

Adequate portable toilet and hand washing facilities shall be provided by the contractor.

3.2.5 Negative Pressure Enclosure

Provide negative pressure HEPA ventilation for all indoor asbestos control areas as follows:

- 3.2.5.1 The negative pressure ventilation equipment shall be operated continuously, 24 hours a day, from the establishment of isolation barriers through successful clearance air monitoring. Is such equipment shuts off; adjacent areas shall be monitored for asbestos fibers.
- 3.2.5.2 A static negative air pressure of 0.02 inches (minimum) water column shall be maintained at all times in the work place during abatement to ensure that contaminated air in the work area does not filter back to uncontaminated areas.
- 3.2.5.3 If more than one ventilation unit is installed, units shall be turned on one at a time while checking the integrity of all barriers for secure attachment and the need for additional reinforcement.
- 3.2.5.4 A dedicated power supply for the negative pressure ventilating units shall be utilized.
- 3.2.5.5 On loss of negative pressure or electric power to the negative pressure ventilating units, abatement shall stop immediately and shall not resume until power is restored and negative pressure ventilation equipment is operating again. When power failure or loss of negative pressure equipment lasts or is expected to last longer than one-half hour:
- the make-up air inlets shall be sealed airtight, and
 - the decontamination systems shall be sealed airtight after the evacuation of workers and/or authorized visitors from the work area, and
 - all adjacent areas shall be monitored for asbestos fiber concentration upon discovery of, and subsequently throughout the power failure.
- 3.2.5.6 Negative pressure ventilation equipment shall be installed and operated to provide at least one air change in the work area every 15 minutes.
- 3.2.5.7 Negative pressure ventilation equipment shall be exhausted to the outside of the building away from occupied areas.
- At no time shall the negative pressure ventilation unit exhaust within 20 feet of a receptor or adversely affect the air intake ports, louvers, or entrances for the building or adjacent buildings.
 - Heavy duty ducting or equivalent, or larger, shape and dimension as that of the negative pressure ventilation exhaust port shall be used to exhaust to the outside of the structure.
 - All ducting shall be sealed and braced or supported to maintain airtight joints.
- 3.2.5.8 Careful installation shall be done to ensure that the ducting does not release fibers into uncontaminated building areas.
- 3.2.5.9 The Contractor shall provide a manometer to verify negative air pressure. Manometers shall be read twice daily by the Contractor's Supervisor and recorded within the Daily Project Log.

3.2.5.10 The system shall include a series of pre-filters and filters to provide High Efficiency Particulate Air (HEPA) filtration of particles down to 0.3 microns at 100% efficiency and below 0.3 microns at 99.9% efficiency. The Contractor shall supply sufficient replacement filters to replace pre-filters every 2 hours, secondary filters every 24 hours and primary HEPA filters every 600 hours of operation. A log shall be provided for each unit brought to the site with the current hours of use for each filter. Failure to provide this log will require that all filters be changed at the beginning of the project.

3.2.5.11 Once installed and operational, the Contractor's Supervisor shall conduct daily inspections of the Work Area to insure the airtight integrity of the enclosure and operation of the negative air system. Findings shall be recorded within the Daily Project Log.

3.2.6 Alternate Work Practices

The use of alternate work practices will be allowed only after review by, and with the consent of, the Owner's representative. The contractor shall be responsible for filing any applications for alternative work practices, and payment of all fees associated with such applications.

3.2.7 Interior & Exterior Asbestos Removal Procedures

Wet asbestos material with a fine spray of amended water during removal, cutting, or other handling to reduce the emission of airborne fibers. Place floor tiles, transite or other sharp-edged asbestos materials in burlap bags prior to placement in 6-mil plastic disposal bags. Other asbestos materials which are unlikely to puncture the plastic shall be removed and placed directly into 6-mil plastic disposal bags. Remove asbestos containing material in a gradual manner, with continuous application of the amended water or wetting agent in such a manner that no asbestos material is disturbed prior to being adequately wetted. Where unusual circumstances prohibit the use of 6-mil plastic bags, submit an alternate proposal for containment of asbestos fibers to the Project Designer for approval. (For example, in the case where non-friable lab counter tops are removed whole, wrapped and sealed in two layers of 6-mil plastic sheeting and labeled in accordance with NESHAP and OSHA requirements.) Asbestos material shall be containerized while wet. At no time shall asbestos material be allowed to accumulate or become dry. Lower and otherwise handle asbestos containing material as indicated in 40 CFR 61-Subpart M. All asbestos waste generated from removal activities must be completely bagged up, removed from the containment and placed in the secure waste storage trailer at the end of each work shift.

3.2.7.1 Final Cleaning Procedures

Final cleaning procedures shall be initiated after gross removal and double-bagging of ACM waste has been completed. At a minimum, final cleaning shall consist of HEPA vacuuming and wet-wiping all exposed surfaces in the work area.

3.2.7.2 Lockdown Encapsulation

Lockdown encapsulation shall be applied to seal nonvisible residue on all surfaces in the work area, including those surfaces from which ACM was removed. Encapsulant shall be applied using airless spray equipment. Spraying shall occur at the lowest pressure range possible to minimize fiber

release from encapsulant impact at the surface. It shall be applied with a consistent horizontal or vertical motion.

3.2.8 Air Sampling

The contractor is responsible for performing personal air sampling in accordance with 29 CFR 1926.1101. Area air sampling, including pre-abatement, during abatement and post-abatement will be carried out by the Project Monitor, as required by the client and in compliance with applicable State and Federal regulations.

3.2.9 Inspection of Work

While performing asbestos removal work, the contractor shall be subject to on-site inspection by the Project Monitor and other representatives of the Owner. If the work is found to be in violation of this specification, the Owner's representative will immediately issue a stop work order to be in effect and until the violation is resolved. All related costs including standby time required to resolve the violation shall be at the contractor's expense.

3.2.9.1 Final Visual Inspection

The contractor will notify the Project Monitor when asbestos removal is completed in each work area so that a final visual inspection can be scheduled. The Project Monitor will inspect the area, accompanied by Asbestos Worker Supervisor. During the inspection, the Project Monitor will identify any areas where remedial action is required, including damaged containment barriers, defective or malfunctioning HEPA filter units, asbestos and non-asbestos debris, and any safety violations. If the area is deemed satisfactory by the Project Monitor, the contractor will be permitted to proceed with lockdown encapsulation of the work area. If the visual inspection is not satisfactory, the contractor will bear the added cost of re-cleaning and re-inspecting the area.

3.2.9.2 Clearance Air Testing

The Project Monitor will perform clearance air testing in each work area, after cleaning has been completed and lockdown encapsulation has dried. The contractor shall not dismantle the containment barriers, decontamination facilities or engineering controls until the Project Monitor provides an executed Certification of Final Visual Inspection (Attachment 02081-2) and laboratory analysis report indicating that the clearance air test results are satisfactory. Re-occupancy air samples for all work areas containing more than or equal to 160 square feet or 260 linear feet of asbestos containing materials shall be Transmission Electron Microscopy air samples (TEM) in accordance with AHERA regulations. All other air samples shall be analyzed by Phase Contrast Microscopy (PCM) in accordance with NIOSH Method P&CAM 7400.

For PCM air samples the re-occupancy air monitoring shall be considered satisfactory when every sample is less than or equal to 0.01 f/cc. For TEM air samples the re-occupancy air monitoring shall be considered satisfactory when the average of all the inside samples is less than 70 structures/mm². If the clearance air test results are not satisfactory, the contractor will bear the added cost of re-cleaning, re-inspecting and retesting the area.

Final clearance air testing will not be required in all abatement areas where demolition of the existing structure is to follow. This only applies if the

building is not to be reoccupied and demolition is to follow immediately after the abatement, final visual and encapsulation are completed.

3.3 CLEAN-UP AND DISPOSAL

3.3.1 Disposal of Asbestos

3.3.1.1 Procedure for Disposal

Collect asbestos waste, asbestos contaminated water, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing which may produce airborne concentrations of asbestos fibers and place in sealed fiber-proof, waterproof, non-returnable containers (e.g. double 6-mil plastic bags, cartons, drums or cans). Wastes within the containers must be adequately wet in accordance with 40 CFR 61-Subpart M. Affix a warning and Department of Transportation label to each container and/or bag. The name of the abatement contractor and license number, the name of the waste generator and the location at which the waste was generated shall be clearly indicated on the outside of each container. Prevent contamination of the transport vehicle. These precautions include lining the vehicle cargo area with plastic sheeting and thorough cleaning of the cargo area after transport and unloading of asbestos debris is complete. Dispose of waste asbestos materials at an EPA and State-approved asbestos landfill. Consolidation of loads at an asbestos waste transfer station is permissible provided that the transfer station is properly permitted under regulations of the State of Connecticut. Workers unloading the waste containers shall wear appropriate respirators and personal protective equipment when handling asbestos materials at the disposal site.

3.3.1.2 Transportation and Disposal Site

The following shall apply to the Contractor's waste hauler and disposal site:

- The Contractor's hauler and disposal site shall be approved by the Owner.
- Waste shall be removed from the site only during normal working hours unless otherwise specified or approved by the Owner.
- All waste generated as part of the asbestos project shall be removed from the site with ten (10) calendar days after successful completion of all asbestos abatement work.
- Unless specifically approved by the Owner, the Contractor shall not permit any off-site transfers of the waste or allow the waste to be transported or combined with any other off-site asbestos materials. The Hauler must travel directly to the disposal site as identified on the notifications with no unauthorized stops.

3.3.1.3 Asbestos Waste Shipment Records

For each shipment of asbestos waste generated at the site, the contractor shall supply the owner with a properly executed Waste Shipment Record, in accordance with 40 CFR 61-Subpart M. The contractor shall notify the owner and contact the EPA regional office if a copy of the waste shipment record, signed by the owner or operator of the disposal site, is not received within 35 days of the date the waste was accepted by the transporter.

PART 4 - BALLAST REMOVAL

4.01 BALLAST REMOVAL & DISPOSAL

The fluorescent light fixtures listed in the attached summary have ballasts that may contain polychlorinated biphenyls (PCBs) or diethyl hexyl phthalate (DEHP). DEHP is a listed hazardous waste as referenced in 40 CFR 261. The hazardous waste number given to DEHP is U028. DEHP-containing ballasts should be handled, stored and disposed of as hazardous waste. The fluorescent tubes within the lighting fixtures at the site may contain mercury. Prior to the disposal of the potential mercury-containing lamps, testing by Toxicity Characteristic Leaching Procedure (TCLP) should be performed, which identifies whether a waste is toxic and must be managed as hazardous waste. If the mercury concentration exceeds 0.2 milligrams per liter, the lamp fails the TCLP and shall be managed as hazardous waste. Lamps that tested hazardous must be disposed of at a hazardous waste landfill or sent to a lamp recycling facility. Mercury-containing lamps should never be incinerated.

Work of this section shall be carried out in accordance with applicable EPA and State regulations

Disposal requirements & general information:

<http://www.p2pays.org/ref/19/18366.htm>

<http://www.epa.gov/waste/hazard/wastetypes/universal/lamps/faqs.htm>

http://www.epa.gov/reg3wcmd/ts_pcb.htm#ballast

PART 5 – MERCURY CONTAINING MATERIALS

5.01 MERCURY REMOVAL & DISPOSAL

The mercury containing items listed in the attached summary must be removed and disposed of prior to building demolition. For proper removal, storage and disposal requirements please refer to the Connecticut Department of Energy & Environmental Protection Universal Waste Rule. A copy of which has been attached to this specification.

Work of this section shall be carried out in accordance with applicable EPA and State laws and regulations

Disposal requirements & general information:

<http://www.ct.gov/DEP/cwp/view.asp?A=2714&Q=324830>

<http://www.ehd.org/pdf/sources/617.pdf>

<http://www.epa.gov/osw/hazard/wastetypes/universal/batteries.htm>

PART 6 – REFRIGERATOR & AIR CONDITIONER

6.01 REFRIGERATOR & AIR CONDITIONER REMOVAL & DISPOSAL

All required refrigerator and air conditioning units must be removed and disposed of prior to building demolition. The proper handling of these items, prior to disposal, must be performed in accordance with the United States Environmental Protection Agency, Section 608, Refrigerant Recycling Rule. An overview copy from the U.S. EPA website is attached to this specification.

Work of this section shall be carried out in accordance with applicable EPA and State laws and regulations.

Disposal requirements & general information:

<http://www.epa.gov/ozone/title6/608/608fact.html>

PART 7 – SMOKE DETECTORS

7.01 SMOKE DETECTOR REMOVAL & DISPOSAL

Both photoelectric and ionization smoke alarms contain plastic and electronic circuit boards and in some cases batteries (alkaline or lithium). Ionization technology also includes a chamber containing radioactive material (americium-241) incorporated into a gold matrix.

Work of this section shall be carried out in accordance with applicable EPA and State laws and regulations.

Disposal requirements & general information:

http://www.epa.gov/rpdweb00/sources/smoke_dispose.html

PART 8 – BATTERIES

8.01 BATTERY REMOVAL & DISPOSAL

Batteries contain heavy metals such as mercury, lead, cadmium, and nickel, which can contaminate the environment when batteries are improperly disposed of. When incinerated, certain metals might be released into the air or can concentrate in the ash produced by the combustion process.

Work of this section shall be carried out in accordance with applicable EPA and State laws and regulations.

Disposal requirements & general information:

<http://www.epa.gov/osw/conserves/materials/battery.htm>

<http://www.ct.gov/dep/cwp/view.asp?A=2714&Q=324832>

<http://www.ct.gov/dep/cwp/view.asp?A=2714&Q=324830>

END OF SECTION 020810

ATTACHMENT 020810-1 CERTIFICATION OF FINAL VISUAL INSPECTION

Work Area: _____

CONTRACTOR'S CERTIFICATION

As the contractor's authorized representative, I have visually inspected the work area (all surfaces including pipes, beams, ledges, walls, ceiling and floor), and certify that the area is free of any dust, debris, or asbestos-containing materials or residue. I further certify that the asbestos abatement work was carried out in conformance with the specifications and all applicable State, Federal and Local regulations.

Abatement Contractor's Representative

Date

PROJECT MONITOR'S CERTIFICATION

As the Project Monitor, I have performed a final visual inspection of work area and conducted clearance air testing. The inspection found the area free of visible asbestos residue, and clearance air test results met the release criteria for the work area.

Project Monitor

Date

All costs associated with the performance of repeat clearance air testing as the result of failed clearance air sample results shall be borne by the Contractor.

**ATTACHMENT 020810-2
INVENTORY OF ASBESTOS CONTAINING BUILDING MATERIALS**

INVENTORY OF ASBESTOS CONTAINING BUILDING MATERIALS:

ACBM Description	Location (s) in Building	Estimated Quantity	Comments
Light Insulation	2 nd Floor Bathroom	1 light fixture	
Floor Tiles	1 st Floor – Under Partition Walls	20 square feet	The mastic is not asbestos containing. The tiles are present under the partition walls in the rooms to the left and right of the stairs leading to the second floor.

INVENTORY OF NON-ASBESTOS CONTAINING BUILDING MATERIALS:

Sheet Rock	Joint Compound	Stair Tread Adhesive	Exterior Window Caulk	Interior Window Caulk
Interior Door Caulk	Window Gasket	12x12 Floor Tile (2 nd Floor)	12x12 Floor Tile Adhesive	Ceramic Floor Mortar
Ceramic Wall Adhesive	Cove Base Adhesive	Wood Wall Adhesive	Old Metal Window Glazing/Putty	Textured Wall Coating
Exterior Vent Caulk	Sink Insulation	Roofing Shingles	Roll-out Roofing	

ATTACHMENT 020810-3
SITE INVENTORY OF UNIVERSAL WASTE/RECYCLABLE MATERIALS

Universal Waste Material	Estimated Quantity	Comments
Fluorescent Light Fixtures	33	These units have lighting tubes that require recycling and ballast that require recycling or proper disposal. Ballast that were looked at did not have the "no pcb marking."
Door Closers	5	These units typically have oil in them that require recycling
Thermostats	1 unit	Thermostats may have Mercury inside it.
Emergency Exit Signs/Lights	7	These units have batteries present in them that require recycling
AC Units	N/A	These units have refrigerants in them that require recycling.

**ATTACHMENT 020810-4
UNIVERSAL WASTE RULE**

Connecticut Department of Environmental Protection

Universal Waste Rule

Purpose

This fact sheet is designed to answer general questions and provide basic information on management of universal wastes in Connecticut, and is not intended to supersede the applicable regulations. The information provided below addresses the requirements applicable only to large quantity handlers (LQH) and small quantity handlers (SQH) of universal wastes. The universal waste rule requirements are found in Section 22a-449(c)-113 of the Regulations of Connecticut State Agencies (RCSA), effective as of June 27, 2002. It incorporates 40 CFR (Code of Federal Regulations) 273 in its entirety except for following provision that is not incorporated: 40 CFR 273.32(a)(3) (regarding an exemption from notification requirements for large quantity handlers of recalled universal waste pesticides). It is your responsibility to comply with all applicable laws and regulations. The state has modified certain federal requirements making the program more stringent in certain sections. For the specific modifications, refer to the above noted web site.

What is the Universal Waste Rule?

The Universal Waste Rule provides a set of streamlined regulations to reduce the regulatory burden by allowing longer time for the storage of the wastes, reduced record-keeping requirements and consolidation off-site without a permit. Universal wastes are:

1. Generated in a wide variety of settings other than the industrial settings usually associated with hazardous wastes;
2. Generated by a vast community (typically greater than 1,000 sources);
3. May be present in significant volumes in non-hazardous waste management systems.

Why did EPA develop the Universal Waste Rule and DEP adopt the rule?

There are three general goals that EPA had when it developed the streamlined universal waste regulations:

1. To encourage resource conservation while ensuring adequate protection of human health and the environment;
2. To improve implementation of the current Subtitle C hazardous waste regulatory program;
3. To provide incentives for individuals and organizations to collect the unregulated portions of these universal waste streams and manage them using the same systems developed for the regulated portion, thus removing them from the municipal waste stream.

Although EPA's primary goal for the universal waste program is to encourage recycling, batteries, thermostats, pesticides, lamps and used electronics being sent for disposal may also be managed under the universal waste regulations.

What wastes are subject to the Universal Waste Rule? 40 CFR 273.1 and Sections 22a-449(c)-113(a)(2)(B) of the RCSA

There are five waste streams that can be managed as a universal waste in Connecticut.

These universal wastes are:

1. Batteries,
2. Mercury-containing thermostats,
3. Certain pesticides,
4. Lamps (including but not limited to fluorescent, neon and mercury vapor lamps), and
5. Used electronics.

How long can I store Universal Wastes on-site? 40 CFR 273.15 and 40 CFR 273.35

In general, a handler can store a universal waste on-site for no longer than one year from the date the universal waste is generated, or received from another handler.

How much can I store on-site? 40 CFR 273.6

- A small quantity handler can accumulate not more than 5000 kilograms total of universal waste (batteries, pesticides, thermostats, lamps and used electronics collectively) at any time.
- A large quantity handler can accumulate 5000 kilograms or more of universal waste (batteries, pesticides, thermostats, lamps and used electronics collectively) at any time.

When does the time limit begin? 40 CFR 262.34(a)(2)

In general, the time limit begins when the generator first determines that the universal waste is a waste. It must be marked, labeled and dated at that time.

What are the universal waste labeling and marking requirements? 40 CFR 273.14 and 273.34 with modifications under Section 22a-449(c)-113(a)(2)(I) &(T) of the RCSA and Sections 22a-449(c)-113(c) and (d) of the RCSA. A generator must follow the labeling and marking requirements as outlined below:

1. Universal waste batteries (each battery) or a container in which the batteries are contained must be labeled or marked clearly with any of the following: "Universal Waste - Battery(ies)" or "Waste Battery(ies)", or "Used Battery(ies)".
2. Each container in which the thermostats are contained, must be labeled or marked clearly with any one of the following: "Universal Waste Thermostat(s)" or "Waste Thermostat(s)", or "Used Thermostat(s)".
3. Universal waste lamps (each lamp) or a container or package in which such lamps are contained must be labeled or marked clearly with any of the following: "Universal Waste - Lamp(s)" or "Waste Lamp(s)", or "Used Lamp(s)".
4. A container containing recalled universal waste pesticides as covered under these regulations must be labeled or marked clearly with:
 - a. the label that was on or accompanied the product as sold or distributed; and
 - b. the words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)".

A container of unused pesticide products as covered under these regulations must be labeled

or marked clearly with:

- a. the label that was on the product when purchased, if still legible; or, if not feasible, an appropriate label as required under DOT regulations 49 CFR part 172; or, if not feasible, another label prescribed or designated by the pesticide collection program; and
 - b. the words "Universal Waste - Pesticide(s)" or "Waste Pesticide(s)".
1. Universal waste used electronics (each piece of equipment) or a container, package or pallet in which the used electronics are contained must be labeled or marked clearly with any of the following: "Universal Waste - used electronics" or "Waste Used Electronics, or "Used Electronics".

What are the requirements for areas where universal wastes are stored? 40 CFR 273.13 and 273.33 with modifications in Section 22a-449(c)-113(F), (G), (H), (Q), (R) and (S) of the RCSA and Section 22a-449(c)-113(c) and (d) of the RCSA.

A handler must manage universal wastes in a way that prevents releases of any universal waste or component, or constituent of a universal waste to the environment. Universal waste pesticides, lamps and thermostats must be stored in a container. A handler must contain any universal waste battery that shows evidence of leakage, spillage or damage that could cause leakage in a container. A handler must place and keep any universal waste thermostats in a container. All containers for universal waste must be closed, structurally sound, compatible with the contents of the universal waste, and must be capable of preventing leakage, spillage or damage that could cause leakage.

Used electronics must be stored in a building with a roof and four walls or in a cargo carrying portion of a truck, in a manner to prevent used electronics from being exposed to the environment. The used electronics must be handled, stored and transported in a manner that maintains the reuse or recyclability of the used electronic. A handler must immediately clean up and contain any broken cathode ray tube and place in a container that is closed, structurally sound and compatible with the CRT. It should prevent leakage, spillage or releases of broken CRTs, glass particles or other hazardous constituents from such broken tubes to the environment. A handler must not shred, crush, heat or otherwise treat used electronics. A small quantity handler may disassemble used electronics for the sole purpose of marketing, reselling, reusing or recycling components. A large quantity handler must first obtain a permit issued by the commissioner before disassembling used electronics.

Adequate aisle space must be maintained around the containers to allow unobstructed movement of personnel and emergency response equipment. A minimum of 30-inch aisle space is recommended.

Handlers of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes. A handler must determine whether any material resulting from the release (e.g., spilled material, residue, absorbent) is hazardous wastes, and if so, must manage that material as a hazardous waste. The handler is considered the generator of the material resulting from the release and is treated as a hazardous waste generator.

What are the requirements when shipping universal waste off-site? RCSA Section 22a-449(c)-113(a)(1) incorporating 40 CFR 273.18 and 40 CFR 273.38 with modifications under 22a-449(c)-113(a)(2)(L),(M),(W) and (X).

You are prohibited from sending or taking universal waste to a place other than another

universal waste handler, a destination facility (including a RCRA treatment, storage, disposal facility), or a foreign destination.

If you self-transport universal waste off-site, you become a universal waste transporter and must comply with all universal waste transporter regulations under Subpart D and F of 40 CFR 273.

If your universal waste meets the definition of hazardous materials under 49 CFR 171 through 180, you must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with DOT regulations under 49 CFR parts 172 through 180.

Before sending universal waste to another universal waste handler, you must ensure that the receiving handler will receive the shipment.

If you send a shipment of universal waste to another handler or to a destination facility and the shipment is rejected, you must either receive the waste back or agree on a destination facility to which the shipment will be sent.

You may reject a shipment of universal waste to your site. If you do so, you must inform the original handler. You must send the shipment back to the original handler or send the shipment to a destination facility agreed to by both the originating and receiving handler.

If you receive a shipment of hazardous waste that cannot be managed as a universal waste, you must notify EPA of the illegal shipment and provide the necessary information to EPA.

If you receive a shipment of non-hazardous, non-universal waste, the handler may manage the waste in compliance with federal, state or local solid waste regulations.

How do I track my universal waste shipments? RCSCA Section 22a-449(c)-113(a)(2)(Y) and (Z) incorporating 40 CFR 273.19; 273.39.

Universal waste does not count toward generator status. Universal wastes do not need to be shipped on a manifest.

A small quantity handler of universal waste is not required to keep records of shipments of universal wastes unless the waste is being exported to a foreign destination.

A large quantity handler of universal waste must keep a record of each universal waste shipment received at the facility. In addition, a large quantity handler of universal waste must keep a record of each universal waste shipment sent from the handler to other facilities. Each record may be in the form of a log, invoice, manifest, bill of lading or other shipping document. The records must include the following information: name and address of the original handler, quantity of each type of universal waste shipped or received, date of shipment or receipt. You must retain all of these records for at least three years from the date of receipt of shipment or the date a shipment of universal waste left the facility.

What are the employee training requirements?

A small quantity handler of universal waste must inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

A large quantity handler of universal waste must ensure that all employees are thoroughly familiar with the proper waste handling and emergency procedures, relative to their

responsibilities during normal facility operations and emergencies.

Where can I obtain additional information?

For further information on this program, contact DEP's Waste Engineering and Enforcement Division through COMPASS (Compliance Assistance) at (888) 424-4193 or mail to:

Department of Environmental Protection
Bureau of Materials Management and Compliance Assurance
Engineering and Enforcement Division
79 Elm Street
Hartford, CT 06106-5127

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**ATTACHMENT 020810-5
REFRIGERANT RECYCLING RULE
U.S. EPA, SECTION 608 OVERVIEW**



U.S. Environmental Protection Agency

Stationary Air Conditioning

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Complying With The Section 608 Refrigerant Recycling Rule

This fact sheet provides an overview of the refrigerant recycling requirements of [Section 608](#) of the Clean Air Act of 1990, as amended (CAA), including final regulations published on [May 14, 1993 \(58 FR 28660\)](#), [August 19, 1994 \(59 FR 42950\)](#), [November 9, 1994 \(59 FR 55912\)](#), and [July 24, 2003 \(68 FR 43786\)](#). The fact sheet also describes the prohibition on venting that became effective on July 1, 1992.

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Frequently Asked Questions

[Refrigeration and Air-Conditioning Regulations \(Section 608\)](#)

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Overview

Under [Section 608](#) of the CAA, EPA has established [regulations \(40 CFR Part 82, Subpart F\)](#) EXIT Disclaimer that:

- Require service practices that maximize recycling of ozone-depleting compounds (both chlorofluorocarbons [CFCs] and hydrochlorofluorocarbons [HCFCs] and their blends) during the servicing and disposal of air-conditioning and refrigeration equipment.
- Set certification requirements for [recycling](#) and [recovery](#) equipment, [technicians](#), and [reclaimers](#).
- Restrict the sale of refrigerant to certified technicians.
- Require persons servicing or disposing of air-conditioning and refrigeration equipment to certify to EPA that they have acquired recycling or recovery equipment and are complying with the requirements of the rule.
- Require the repair of substantial leaks in air-conditioning and refrigeration equipment with a charge of greater than 50 pounds.
- Establish safe disposal requirements to ensure removal of refrigerants from goods that enter the waste stream with the charge intact (e.g., motor vehicle air conditioners, home refrigerators, and room air conditioners).

The Prohibition on Venting

Effective July 1, 1992, [Section 608](#) of the Act prohibits individuals from knowingly venting [ozone-depleting compounds](#) (generally [CFCs](#) and [HCFCs](#)) used as refrigerants into the atmosphere while maintaining, servicing, repairing, or disposing of air-conditioning or refrigeration equipment ([appliances](#)). Only four types of releases are permitted under the prohibition:

1. "De minimis" quantities of refrigerant released in the course of making good faith attempts to recapture and recycle or safely

dispose of refrigerant.

2. Refrigerants emitted in the course of normal operation of air-conditioning and refrigeration equipment (as opposed to during the maintenance, servicing, repair, or disposal of this equipment) such as from mechanical purging and leaks. However, EPA requires the repair of leaks above a certain size in large equipment (see [Refrigerant Leaks](#)).
3. Releases of CFCs or HCFCs *that are not used as refrigerants*. For instance, mixtures of nitrogen and R-22 that are used as holding charges or as leak test gases may be released, because in these cases, the ozone-depleting compound is not used as a refrigerant. However, a technician may not avoid recovering refrigerant by adding nitrogen to a charged system; before nitrogen is added, the system must be evacuated to the appropriate level in [Table 1](#). Otherwise, the CFC or HCFC vented along with the nitrogen will be considered a refrigerant. Similarly, pure CFCs or HCFCs released from appliances will be presumed to be refrigerants, and their release will be considered a violation of the prohibition on venting.
4. Small releases of refrigerant that result from purging hoses or from connecting or disconnecting hoses to charge or service appliances will not be considered violations of the prohibition on venting. However, recovery and recycling equipment manufactured after November 15, 1993, must be equipped with low-loss fittings.

Regulatory Requirements

Service Practice Requirements

1. Evacuation Requirements

Since July 13, 1993, technicians have been required to evacuate air-conditioning and refrigeration equipment to established vacuum levels when [opening](#) the equipment. If the technician's recovery or recycling equipment was manufactured any time before November 15, 1993, the air-conditioning and refrigeration equipment must be evacuated to the levels described in the first column of [Table 1](#). If the technician's [recovery](#) or [recycling](#) equipment was manufactured on or after November 15, 1993, the air-conditioning and refrigeration equipment must be evacuated to the levels described in the second column of [Table 1](#), and the recovery or recycling equipment must have been [certified](#) by an EPA-approved equipment testing organization. Persons who simply add refrigerant to (top-off) [appliances](#) are not required to evacuate the systems.

Technicians repairing [small appliances](#), such as household refrigerators, window air conditioners, and water coolers, must

recover:

80 percent of the refrigerant when

- the technician uses recovery or recycling equipment manufactured before November 15, 1993, or
- the compressor in the appliance is not operating;

OR

90 percent of the refrigerant when

- the technician uses recovery or recycling equipment manufactured after November 15, and
- the compressor in the appliance is operating

In order to ensure that they are recovering the correct percentage of refrigerant, technicians must use the recovery equipment according to the directions of its manufacturer. Technicians may also satisfy recovery requirements by evacuating the small appliance to four inches of mercury vacuum.

2. Exceptions to Evacuation Requirements

EPA has established limited exceptions to its evacuation requirements for 1) repairs to leaky equipment and 2) repairs that are not [major](#) and that are not followed by an evacuation of the equipment to the environment.

If, due to leaks, evacuation to the levels in [Table 1](#) is not attainable, or would substantially contaminate the refrigerant being recovered, persons opening the appliance must:

- isolate leaking from non-leaking components wherever possible;
- evacuate non-leaking components to the levels in [Table 1](#); and
- evacuate leaking components to the lowest level that can be attained without substantially contaminating the refrigerant. This level cannot exceed 0 psig.

If evacuation of the equipment to the environment is not to be performed when repairs are complete, and if the repair is not major, then the appliance must:

- be evacuated to at least 0 psig before it is opened if it is a high- or very high-pressure appliance; or
- be pressurized to 0 psig before it is opened if it is a low-pressure appliance. Methods that require subsequent purging (e.g., nitrogen) cannot be used except with appliances containing R-

113.

3. Reclamation Requirement

EPA has also established that refrigerant recovered and/or recycled can be returned to the same system or other systems owned by the same person without restriction. If refrigerant changes ownership, however, that refrigerant must be [reclaimed](#) (i.e., cleaned to the ARI 700-1993 standard of purity and chemically analyzed to verify that it meets this standard) unless the refrigerant was used only in a motor vehicle air conditioner (MVAC) or [MVAC-like appliance](#) and will be used in the same type of appliance. (Refrigerant used in MVACs and MVAC-like appliances is subject to the purity requirements of the MVAC regulations at 40 CFR Part 82 Subpart B.) EPA updates the [list of reclaimers](#) as new companies are added.

Equipment Certification

The Agency has established a certification program for refrigerant recovery and recycling equipment. Under the program, EPA requires that manufacturers or importers of refrigerant recovery and recycling equipment manufactured on or after November 15, 1993, have their equipment tested by an EPA-approved testing organization to ensure that it meets EPA requirements. Equipment intended for use with air-conditioning and refrigeration appliances must be tested under EPA requirements based upon the ARI 740 test protocol (i.e., EPA Appendices B and B1 to 40 CFR 82 subpart F). Recycling and recovery equipment intended for use with small appliances must be tested under EPA Appendix C or alternatively under requirements based upon the ARI 740 test protocol (i.e., Appendices B and B1 to 40 CFR 82 subpart F).

The Agency requires recovery efficiency standards that vary depending on the size and type of air-conditioning or refrigeration equipment being serviced. For recovery and recycling equipment intended for use with air-conditioning and refrigeration equipment besides small appliances, these standards are the same as those in the second column of [Table 1](#). Recovery equipment intended for use with small appliances must be able to recover 90 percent of the refrigerant in the small appliance when the small appliance compressor is operating and 80 percent of the refrigerant in the small appliance when the compressor is not operating.

EPA has approved both the [Air-Conditioning and Refrigeration Institute \(ARI\)](#) [EXIT Disclaimer](#) and [Underwriters Laboratories \(UL\)](#) [EXIT Disclaimer](#) to certify recycling and recovery equipment. Certified equipment can be identified by a label reading: "This equipment has

been certified by ARI/UL to meet EPA's minimum requirements for recycling and/ or recovery equipment intended for use with [appropriate category of appliance--e.g., small appliances, HCFC appliances containing less than 200 pounds of refrigerant, all high-pressure appliances, etc.]." Lists of certified equipment may be obtained by contacting ARI at 703-524-8800 and UL at 708-272-8800 ext. 42371.

Equipment Grandfathering

Equipment manufactured before November 15, 1993, including home-made equipment, may be grandfathered if it meets the standards in the first column of [Table 1](#). Third-party testing is not required for equipment manufactured before November 15, 1993, but equipment manufactured on or after that date, including home-made equipment, must be tested by a third-party ([Equipment Certification](#)).

Refrigerant Leaks

Owners of equipment with charges of greater than 50 pounds are required to repair leaks in the equipment when those leaks together would result in the loss of more than a certain percentage of the equipment's charge over a year. For the commercial and industrial process refrigeration sectors, leaks must be repaired when the appliance leaks at a rate that would release 35 percent or more of the charge over a year. For all other sectors, including comfort cooling, leaks must be repaired when the appliance leaks at a rate that would release 15 percent or more of the charge over a year.

The trigger for repair requirements is the current leak rate rather than the total quantity of refrigerant lost. For instance, owners of a commercial refrigeration system containing 100 pounds of charge must repair leaks if they find that the system has lost 10 pounds of charge over the past month; although 10 pounds represents only 10 percent of the system charge in this case, a leak rate of 10 pounds per month would result in the release of over 100 percent of the charge over the year. To track leak rates, owners of air-conditioning and refrigeration equipment with more than 50 pounds of charge must keep records of the quantity of refrigerant added to their equipment during servicing and maintenance procedures.

Owners are required to repair leaks within 30 days of discovery. This requirement is waived if, within 30 days of discovery, owners develop a one-year retrofit or retirement plan for the leaking equipment. Owners of industrial process refrigeration equipment may qualify for additional time under certain circumstances. For

example, if an industrial process shutdown is required to repair a leak, owners have 120 days to repair the leak. Owners of leaky industrial process refrigeration equipment should see the Compliance Assistance Guidance Document for Leak Repair (available from the hotline) for additional information concerning time extensions and pertinent recordkeeping and reporting requirements. EPA anticipates putting this document on the web site, but does not have an estimated date for when that will happen.

A [longer fact sheet](#) about leak repair is also available.

Technician Certification

EPA has established a technician certification program for persons ("technicians") who perform maintenance, service, repair, or disposal that could be reasonably expected to release refrigerants into the atmosphere. The definition of "technician" specifically includes and excludes certain activities as follows:

Included:

- attaching and detaching hoses and gauges to and from the appliance to measure pressure within the appliance;
- adding refrigerant to (for example "topping-off") or removing refrigerant from the appliance
- any other activity that violates the integrity of the [MVAC-like appliances](#), and small appliances.

In addition, [apprentices](#) are exempt from certification requirements provided the apprentice is closely and continually supervised by a certified technician.

The Agency has developed four types of certification:

1. For servicing small appliances (Type I).
2. For servicing or disposing of high- or very high-pressure appliances, except small appliances and MVACs (Type II).
3. For servicing or disposing of low-pressure appliances (Type III).
4. For servicing all types of equipment (Universal).

Technicians are required to pass an [EPA-approved test](#) given by an [EPA-approved certifying organization](#) to become certified under the mandatory program. Section 608 Technician Certification credentials do not expire.

Refrigerant Sales Restrictions

Since November 14, 1994, the sale of refrigerant in any size container has been restricted to technicians certified either under the program described in [Technician Certification](#) above or under EPA's [motor vehicle air conditioning regulations](#). The sales restriction covers refrigerant contained in bulk containers (cylinders or drums) and pre-charged parts.

The restriction excludes refrigerant contained in refrigerators or air conditioners with fully assembled refrigerant circuits (such as household refrigerators, window air conditioners, and packaged air conditioners), pure HFC refrigerants (such as R-134a), and CFCs or HCFCs that are not intended for use as refrigerants. In addition, a restriction on sale of pre-charged split systems has been stayed (suspended) while EPA reconsiders this provision.

Under Section 609 of the Clean Air Act, sales of CFC-12 in containers smaller than 20 pounds are restricted solely to technicians certified under EPA's motor vehicle air-conditioning regulations (i.e., Section 609 certified technicians). Technicians certified under EPA's stationary refrigeration and air-conditioning equipment (i.e., Section 608 certified technicians) may buy containers of CFC-12 larger than 20 pounds.

Section 609 technicians are only allowed to purchase refrigerants that are suitable for use in motor vehicle air-conditioners. Effective September 22, 2003, EPA has restricted the sale of ozone-depleting refrigerants, approved for use in stationary refrigeration and air-conditioning equipment, to Section 608 certified technicians. Therefore, the sale of ozone-depleting refrigerants (such as HCFC-22) that are approved for use in stationary equipment but not for use in motor vehicle air-conditioners is restricted to Section 608 certified technicians.

More detailed information is available in an EPA fact sheet titled "[The Refrigerant Sales Restriction](#)."

Certification by Owners of Recycling and Recovery Equipment

EPA requires that persons servicing or disposing of air-conditioning and refrigeration equipment certify to the appropriate EPA Regional Office that they have acquired (built, bought, or leased) recovery or recycling equipment and that they are complying with the applicable requirements of this rule. This certification must be signed by the owner of the equipment or another responsible officer and sent to the appropriate EPA Regional Office. A [sample form](#) for this certification is attached. Although owners of recycling and

recovery equipment are required to list the number of trucks based at their shops, they do not need to have a piece of recycling or recovery equipment for every truck. Owners do not have to send in a new form each time they add recycling or recovery equipment to their inventory.

Reclaimer Certification

Reclaimers are required to return refrigerant to the purity level specified in ARI Standard 700-1993 (an industry-set purity standard) and to verify this purity using the laboratory protocol set forth in the same standard. In addition, reclaimers must release no more than 1.5 percent of the refrigerant during the reclamation process and must dispose of wastes properly. Reclaimers must certify to the Section 608 Recycling Program Manager at EPA headquarters that they are complying with these requirements and that the information given is true and correct. Certification must also include the name and address of the reclaimer and a list of equipment used to reprocess and to analyze the refrigerant.

EPA encourages reclaimers to participate in a voluntary third-party reclaimer certification program operated by the [Air-Conditioning and Refrigeration Institute \(ARI\)](#) EXIT Disclaimer. The voluntary program offered by ARI involves quarterly testing of random samples of reclaimed refrigerant. Third-party certification can enhance the attractiveness of a reclaimer's product by providing an objective assessment of its purity. EPA maintains a list of [approved reclaimers](#) that is available from the hotline. In addition, a [checklist](#) helps prospective reclaimers provide appropriate information for EPA to review.

MVAC-like Appliances

Some of the air conditioners that are covered by this rule are identical to motor vehicle air conditioners (MVACs), but they are not covered by the MVAC refrigerant recycling rule (40 CFR Part 82, Subpart B) because they are used in vehicles that are not defined as "motor vehicles." These air conditioners include many systems used in construction equipment, farm vehicles, boats, and airplanes. Like MVACs in cars and trucks, these air conditioners typically contain two or three pounds of CFC-12 and use open-drive compressors to cool the passenger compartments of vehicles. (Vehicle air conditioners utilizing HCFC-22 are not included in this group and are therefore subject to the requirements outlined above for HCFC-22 equipment.) EPA is defining these air conditioners as "MVAC-like appliances" and is applying the MVAC rule's requirements for the certification and use of recycling and recovery

equipment to them. That is, technicians servicing MVAC-like appliances must "properly use" recycling or recovery equipment that has been certified to meet the standards in Appendix A to 40 CFR Part 82, Subpart B. In addition, EPA is allowing technicians who service MVAC-like appliances to be certified by a certification program approved under the MVAC rule, if they wish.

More detailed information is presented in an EPA fact sheet titled "[Servicing Farm and Heavy-Duty Equipment](#)."

Safe Disposal Requirements

Under EPA's rule, equipment that is typically dismantled on-site before disposal (e.g., retail food refrigeration, central residential air conditioning, chillers, and industrial process refrigeration) has to have the refrigerant recovered in accordance with EPA's requirements for servicing. However, equipment that typically enters the waste stream with the charge intact (e.g., motor vehicle air conditioners, household refrigerators and freezers, and room air conditioners) is subject to special safe disposal requirements.

Under these requirements, the final person in the disposal chain (e.g., a scrap metal recycler or landfill owner) is responsible for ensuring that refrigerant is recovered from equipment before the final disposal of the equipment. However, persons "upstream" can remove the refrigerant and provide documentation of its removal to the final person if this is more cost-effective. If the final person in the disposal chain (e.g., a scrap metal recycler or landfill owner) accepts appliances that no longer hold a refrigerant charge, that person is responsible for maintaining a signed statement from whom the appliance/s is being accepted. The signed statement must include the name and address of the person who recovered the refrigerant, and the date that the refrigerant was recovered, or a copy of a contract stating that the refrigerant will be removed prior to delivery. EPA does not mandate a sticker as a form of verification that the refrigerant has been removed prior to disposal of the appliance. Such stickers do not relieve the final disposer of their responsibility to recover any remaining refrigerant in the appliance, unless the sticker contains a signed statement that includes the name and address of the person who recovered the refrigerant, and the date that the refrigerant was recovered.

The equipment used to recover refrigerant from appliances prior to their final disposal must meet the same performance standards as equipment used prior to servicing, but it does not need to be tested by a laboratory. This means that self-built equipment is allowed as long as it meets the performance requirements. For MVACs and

MVAC-like appliances, the performance requirement is 102 mm of mercury vacuum and for small appliances, the recovery equipment performance requirements are 90 percent efficiency when the appliance compressor is operational, and 80 percent efficiency when the appliance compressor is not operational.

Technician certification is not required for individuals removing refrigerant from appliances in the waste stream.

The safe disposal requirements went into effect on July 13, 1993. Equipment must be registered or certified with the Agency. A [sample form](#) is available.

Major Recordkeeping Requirements

Technicians

servicing appliances that contain 50 or more pounds of refrigerant must provide the owner with an invoice that indicates the amount of refrigerant added to the appliance. Technicians must also keep a copy of their proof of certification at their place of business.

Owners

of appliances that contain 50 or more pounds of refrigerant must keep servicing records documenting the date and type of service, as well as the quantity of refrigerant added.

Wholesalers

who sell CFC and HCFC refrigerants must retain invoices that indicate the name of the purchaser, the date of sale, and the quantity of refrigerant purchased.

Reclaimers

must maintain records of the names and addresses of persons sending them material for reclamation and the quantity of material sent to them for reclamation. This information must be maintained on a transactional basis. Within 30 days of the end of the calendar year, reclaimers must report to EPA the total quantity of material sent to them that year for reclamation, the mass of refrigerant reclaimed that year, and the mass of waste products generated that year.

Hazardous Waste Disposal

If refrigerants are recycled or reclaimed, they are not considered hazardous under federal law. In addition, used oils contaminated with CFCs are not hazardous on the condition that:

- They are not mixed with other waste.
- They are subjected to CFC recycling or reclamation.
- They are not mixed with used oils from other sources.

Used oils that contain CFCs after the CFC reclamation procedure, however, are subject to specification limits for used oil fuels if these oils are destined for burning.

Enforcement

EPA is performing random inspections, responding to tips, and pursuing potential cases against violators. Under the Act, EPA is authorized to assess fines of up to \$32,500 per day for any violation of these regulations. Information on selected enforcement actions is available in the [enforcement section](#).

If you wish to report a possible violation of the Clean Air Act, please file a [complaint form](#) or contact the Ozone Hotline at 800-296-1996.

Planning and Acting for the Future

Observing the refrigerant recycling regulations for [Section 608](#) is essential in order to conserve existing stocks of refrigerants, as well as to comply with Clean Air Act requirements. However, owners of equipment that contains CFC refrigerants should look beyond the immediate need to maintain existing equipment in working order. **EPA urges equipment owners to act now and prepare for the phaseout of CFC production and import, scheduled for January 1, 1996.** Owners are advised to begin planning for conversion or replacement of existing equipment with equipment that uses alternative refrigerants.

To assist owners, suppliers, technicians and others involved in comfort chiller and commercial refrigeration management, EPA has published a series of short fact sheets and expects to produce additional material. Copies of material produced by the EPA Stratospheric Protection Division are available from the Stratospheric Ozone Information Hotline (see hotline number below).

For Further Information

For further information concerning regulations related to stratospheric ozone protection, please call the Stratospheric Ozone Information Hotline: 1-800-296-1996. Lists of certified equipment may be obtained by contacting [ARI](#) EXIT Disclaimer at 703-524-8800 and [UL](#) EXIT Disclaimer at 708-272-8800 ext. 42371.

[Ozone Home](#) | [Ozone Science](#) | [Rules & Regulations](#) | [Alternatives](#)

[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)

Last updated on Tuesday, December 26th, 2006
URL: <http://www.epa.gov/spdpublic/title6/608/608fact.html>

**ATTACHMENT 020810-6
PROJECT DESIGNER LICENSE**

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED
BY THIS DEPARTMENT AS A
ASBESTOS CONSULTANT-PROJECT DESIGNER

JAMES M. TWITCHELL

CERTIFICATE NO.
000221

CURRENT THROUGH
07/31/18

VALIDATION NO.
03-601283

SIGNATURE 

COMMISSIONER 

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SECTION 020811 - ABATEMENT OF PCB CONTAINING MATERIALS

PART 1 - GENERAL

1.1 SUMMARY

1.1.1 Work Included: Remove and dispose of polychlorinated biphenyls (PCB) containing caulking materials (>1 PPM <50PPM) in accordance with the Contract Document and the Connecticut General Statutes 22a-467. The Work of this Section shall include, but not be limited to the following:

1.1.1.1 Furnish all labor, materials, facilities, equipment, installation services, employee training, notifications, permits, licenses, certifications, agreements and incidentals necessary to perform the specified work.

1.1.1.2 Removal of PCB containing window gaskets. (See Appendix A for a complete inventory).

1.1.1.3 Supply containers for temporary storage of PCB-containing waste materials at the site

1.1.1.4 Transportation of PCB-containing waste materials to an approved disposal facility by a properly licensed waste hauler.

1.1.1.5 Dispose of PCB-containing waste materials at one of the following facilities:

- A solid waste landfill permitted under RCRA title D (for CT facilities, a special waste authorization may be required);
- Bulky waste landfill (for CT facilities, a special waste authorization may be required);
- Facilities permitted to manage non-hazardous waste subject to 40 CFR 257.5-257.30
- A RCRA hazardous waste landfill

1.1.2 Related Work: Work of this Section is part of a project involving other environmental remediation and the complete demolition of the building. The contractor shall coordinate the work of this Section with work specified elsewhere.

1.2 REFERENCES

1.2.1 Applicable Regulations

The contractor shall comply with all applicable federal and state requirements including, but not limited to the following. Where the regulations specify conflicting requirements, the contractor shall follow the stricter requirement.

1.2.1.1 American National Standards Institute (ANSI)

ANSI.Z89.1 Personal Protective Equipment-Protective Headwear for Industrial Workers Requirements (latest revision)
ANSI.Z87

1.2.1.2 Code of Federal Regulations (CFR)

- Hazardous Waste Operations and Emergency Response (29 CFR 1910.120)
- Respiratory Protection Standard (29 CFR 1910.134)

- Hazard Communication (29 CFR 1910.1200)
- General Health and Safety Provisions (29 CFR 1926.20)
- Ventilation (29 CFR 1926.57)
- Hazard Communication Program (29 CFR 1926.59)
- Hazardous Waste Operations and Emergency Response (29 CFR 1926.65)
- Criteria for Personal Protective Equipment (29 CFR 1926.95)
- Materials Handling, Storage and Use (29 CFR 1926, Subpart H)
- Scaffolding (29 CFR 1926, Subpart L)
- Fall Protection (29 CFR 1926, Subpart M)
- Ladders (29 CFR 1926, Subpart X)
- Toxic and Hazardous Substances (29 CFR 1926, Subpart Z)
- National Primary and Secondary Ambient Air Quality Standards for Particulate Matter (40 CFR 50.6)
- General Information, Regulations and Definitions (49 CFR 171)
- Shippers-General Requirements for Shipments and Packaging (49 CFR 173)
- Carriage by Public Highway (49 CFR 177)

1.2.1.3 National Institute for Occupational Safety and Health (NIOSH)

- Respiratory Decision Logic (Publication #87-108)
- Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH Publication 85-115)

1.2.1.4 Connecticut Department of Energy & Environmental Protection (CT DEEP)

- Regulations of Connecticut State Agencies (22a-133k-1 through 22a-133k-3)

1.3 DEFINITIONS

1.3.1 Authorized Personnel

Owner or the Owner's Representative, and all other personnel who are authorized officials of any regulating agency, be it State, Local, Federal or Private entity who possess legal authority for enforcement or inspection of the work.

1.3.2 Containment

The enclosure on the interior and/or exterior of the building which establishes a contaminated area and surrounds the location where hazardous material remediation is taking place and establishes a Controlled Work Area.

1.3.3 Clearance Criteria

A Visual Inspection of all removal surfaces, performed by the independent testing lab employed by the Owner's, conforming to all standards set forth by all authorities having jurisdiction, mentioned in the references.

1.3.4 Fixed Object

Mechanical equipment, electrical equipment, fire detection systems, alarms, and all other fixed equipment, fixtures or other items which cannot be removed from the work area.

1.3.5 HEPA

High Efficiency Particulate Absolute filtration efficiency of 99.97 percent down to 0.3 microns. Filtration provided on specialized vacuums and air filtration devices to trap particles.

1.3.6 PCB Containing Material

Any material containing greater than 1 mg/kg of PCBs.

1.3.7 PPE

Personal Protective Equipment.

1.4 REQUIREMENTS

1.4.1 General

The Contractor shall furnish all labor, materials, facilities, equipment, installation services, employee training, notifications, permits, licenses, certifications, agreements and incidentals necessary to perform the specified work. Work shall be performed in accordance with the contract documents, the latest regulations from the Occupational Safety and Health Administration (OSHA), the State of Connecticut and all other applicable federal, state and local agencies.

1.4.2 Notification

The Contractor shall be responsible for submitting project notification and any applicable fees as required by the Connecticut Department of Environmental & Energy Protection (DEEP). The contractor shall be responsible for securing all required permits and variances for the project.

1.4.3 Training

All general project personnel engaged in the work covered under this section shall have been trained with OSHA 10-hour Construction Outreach Training and all Foreman and Site Supervisors shall be training in OSHA 30-hour Construction Outreach Training. In addition, all workers must receive additional training on specific hazards of the job.

1.4.4 Project Health and Safety

1.4.4.1 The contractor is responsible and liable for the health and safety of all on-site personnel and the off-site community affected by the project. All on-site workers and other persons entering the abatement work areas, decontamination areas or waste handling and staging areas shall be knowledgeable of and comply with the requirements of the site-specific Health and Safety Plan (HASP) always. The contractor's HASP shall comply with all applicable federal, state and local regulations protecting human health and the environment from the hazards posed by the work performed under this project.

1.4.4.2 Consistent disregard for the provisions of the HASP shall be deemed sufficient cause for the immediate stoppage of work and termination of the Contract or any Subcontracts without compromise or prejudice to the rights of the Owner

1.4.4.3 In addition to exposure concerns relating to the presence of PCBs, other health and safety considerations will apply to this project. The contractor shall be responsible for the health and safety of contractor employees always. It is the contractor's responsibility to comply with all applicable health and safety regulations.

1.4.5 Project Health and Safety Officer

1.4.4.1 The Contractor shall designate a full-time Project Health & Safety Officer who shall meet the following qualifications:

- The Project Health & Safety Officer shall be trained in OSHA 30-hour Construction Outreach Training and have additional training on specific hazards of the job.
- The Project Health & Safety Officer shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of two (2) years experience as a supervisor over PCB related work.
- The Project Health & Safety Officer must be able to read and write English fluently, as well as communicate in the primary language of the Workers.

1.4.4.2 If the Project Health & Safety Officer is not on-site at any time whatsoever, all work shall be stopped. The Project Health & Safety Officer shall remain on-site until the Project is complete. The Project Health & Safety Officer cannot be removed from the Project without written consent of the Owner and the Project Monitor. The Project Health & Safety Officer shall be removed from the Project if so requested by the Owner.

1.4.4.3 The Project Health & Safety Officer shall maintain the bound Daily Project Log that also includes the entry/exit logs and the Waste Disposal Log.

1.4.4.4 The Project Health & Safety Officer shall be responsible for ensuring that project personnel and site visitors are informed of and comply with the provisions of the HASP always during the project. Review of the HASP shall be acknowledged and documented by obtaining the name, signature and affiliation of all persons reviewing the HASP.

1.4.4.5 The Project Health & Safety Officer shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Health & Safety Officer shall be the primary point of contact for the Owner and Project Monitor.

1.4.6 Respiratory Protection Program

Establish and implement a respirator program as required by ANSI Z88.2, 29 CFR 1926.1101, and 29 CFR 1926.103. Submit a written description of the program, including copies of personal air monitoring data for similar, previously-completed projects, to the Project Monitor. If previous data is not available the contractor will be required to perform an initial exposure assessment with a minimum of three (3) days of monitoring.

1.4.6 Hazard Communication

Adhere to all parts of 29 CFR Part 1926.59, and provide the Project Monitor with a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site.

1.5 SUBMITTALS

The following documents shall be submitted to the Owner or Owner's representative prior to commencement of abatement work:

1.5.1 Manufacturer's Catalog Data

Catalog sheets, specifications and application instructions for any removal products, if used.

1.5.2 Abatement Plan

Submit an abatement plan that clearly describes the procedures to be used for the removal of the caulk, including the plan to protect workers and prevent PCB contamination from migrating outside of the regulated areas. The abatement plan shall include, but not be limited to, a drawing indicating the location, size, and details of PCB Collection Areas, staging areas for PCB removal from identified area, location and details of containment, decontamination facilities, sequencing of removal, work procedures, types of equipment, crew size, and emergency procedures for fire and medical emergencies.

1.5.3 Health and Safety Pan (HASP)

Submit a detailed, site-specific plan of the safety precautions and OSHA compliance program for the project. The HASP shall govern all work conducted at the site during the abatement of caulk and related debris, waste handling, sampling, management and waste transportation. Any discrepancies between the contractor's HASP and these specifications or federal and state regulations shall be resolved in favor of the more stringent requirements that provide the highest degree of protection to the project personnel and the surrounding community and environment. The plan shall include, but not be limited to the following:

- Health and Safety Organization
- Site Description and Hazard Assessment
- Training
- Medical Surveillance
- Work Areas
- Personal Protective Equipment
- Personal Hygiene and Documentation
- Standard Operating Procedures and Engineering Controls
- Emergency Equipment and First Aid Provisions
- Equipment Decontamination
- Air Monitoring
- Telephone List
- Emergency Response and Evacuation Procedures and Routes
- Site Control
- Spill Prevention & Containment Plan
- Heat and Cold Stress
- Record Keeping
- Community Protection Plan

1.5.4 Worker's Qualifications Data

Documentation of training for all employees and subcontractors to be used for the abatement work shall be submitted. Persons performing PCB abatement and their supervisor

shall have site specific training for PCB abatement work. The site supervisor and the health and safety officer shall have been regularly employed by a company performing PCB abatement for a minimum of 2 years.

1.5.5 PCB Disposal Plan

Submit a detailed plan for the transportation and disposal of PCB-containing wastes generated during the project which identifies the following:

- Waste packaging, labeling, placarding and manifest procedures
- The name, address and 24-hour contact number for the proposed treatment or disposal facility or facilities to which waste generated during the project will be transported.
- The name, address, contact person(s) and state-specific permit numbers for proposed waste transporters, and EPA identification numbers for firms that will transport hazardous waste.
- The route(s) by which the waste will be transported to the designated disposal facility, and states or territories through which the waste will pass and the waste is to be disposed of outside of the State of Connecticut.

1.5.6 PCB Work Closeout Submittals

Submit the following documents to the Owner or Owner's representative within thirty (30) days of the waste being removed from the site:

- Waste profile sheets
- Pre-disposal analysis test results (If required by disposal facility)
- Signed manifests from the disposal facility
- Tipping receipts provided by the disposal facility
- Certification of the final treatment/disposal signed by the responsible disposal facility official.

1.6 PRE-CONSTRUCTION MEETING

- 1.6.1 Prior to the commencement of the Work, the contractor shall meet with the Owner and the Owner's representatives for reviewing the Contract Documents, discussing requirements for the Work, and reviewing the Work procedures.

PART 2 - PRODUCTS

All products delivered to the site shall be in the original packages, containers, etc. with the name of the manufacturer and the brand name on them.

2.1 ABATEMENT PRODUCTS

2.1.1 Disposal Containers

Metal or other approved containers, with warning labels as required by OSHA and/or CTDEEP.

2.1.2 Respirators

Approved by the National Institute for Occupational Safety and Health (NIOSH).

2.1.3 Vacuum Cleaners

Vacuums equipped with HEPA filters.

2.1.4 Plastic Sheets

- Minimum 6 mil., opaque, fire retardant polyethylene sheets.
- Floor Protective Layer: Minimum 10 mil., reinforced polyethylene sheets.

2.2 GENERAL PRODUCTS

2.2.1 Decontamination Equipment

A sufficient supply of disposable mops, rags, and sponges for work area decontamination shall be available.

2.2.2 General Tools

A sufficient supply of scaffolding, ladders, lifts, and hand tools, (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be provided as needed.

2.3 PERSONNEL PROTECTIVE EQUIPMENT

The contractor shall provide to all workers and authorized visitors, in sufficient quantity the appropriate safety equipment for this project (e.g., hard hats meeting the requirements of ANSI Standard Z89.1-1981, eye protection meeting the requirements of ANSI Standard Z87.1-1979, safety shoes meeting the requirements of ANSI Standard Z41.1- 1967, disposable PVC gloves or other work gloves, and disposal coveralls with full foot covers).

2.4 EMERGENCY PRODUCTS

2.4.1 Fire Extinguishers

The contractor shall provide a minimum of one fire extinguisher for each abatement/work area with a minimum 20-pound Class ABC dry fire extinguisher with Underwriter Laboratory approval per 29 CFR 1910.157

2.4.2 First Aid Kit

The contractor shall supply a minimum of one first aid kit meeting the requirements of 29 CFR 1910.151 for the site.

PART 3 - EXECUTION

3.1 EQUIPMENT

At all times, provide the Owner, Owner's Representative, Authorized Visitors and employees with at least two complete sets of personal protective equipment (including disposable coveralls), as required for entry to and inspection of the abatement areas.

3.1.1 Respirators

Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH).

3.1.1.1 Respirators for Handling PCBs

Provide personnel engaged in pre-cleaning, cleanup, handling, removal and demolition of PCB materials with a minimum of half-face respirator with HEPA filter cartridge for all projects. Respiratory protection shall be in accordance with OSHA regulation 1910.134 and ANSI Z88.2.

3.1.2 Exterior Whole Body Protection

3.1.2.1 Outer Protective Clothing

Provide personnel exposed to PCBs with whole body outer protective clothing, head coverings, gloves, and foot coverings that are made of Tyvek or equivalent material. Provide Nitrile or equivalent disposable work gloves. Make sleeves secure at the wrists, make foot coverings secure at the ankles, and make clothing secure at the neck by use of tape. Provide disposable undergarments for wear under the outer protective clothing. All protective clothing shall be disposed of as PCB waste each time a worker exits the regulated work area.

3.1.2.2 Hard Hats, Eye Protection, Footwear

Hard hats, eye protection, rubber boots shall be provided by the contractor as required for workers and authorized visitors. Safety shoes and hard hats shall comply with ANSI Z89.1 (1969) and ANSI Z41.1 (1967)

3.1.3 Protective Clothing Disposal

All contaminated protective clothing, respirator cartridges and disposable protective items must be placed in proper containers for transport and proper disposal with the PCB waste.

3.1.4 Warning Signs and Labels

Provide bilingual warning signs printed in English and Spanish (and the prevailing language spoken by employees) at all approaches to the control areas. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required

before entering the area. Provide labels and affix to all materials, scrap, waste, debris, and other products contaminated with PCBs.

3.1.4.1 Warning Signs

Provide a vertical format with a minimum 20-in x 14-in displaying the following legend:

WARNING:
REGULATED WORK AREA
PCBS-POISON
NO SMOKING, EATING OR DRINKING
AUTHORIZED PERSONNEL ONLY
PROTECTIVE CLOTHING IS REQUIRED IN THIS AREA

3.1.4.2 Warning Labels

All waste containers must be properly labeled in accordance with CT DEEP.

3.1.6 Tools

Vacuums shall be leak proof to the filter and equipped with HEPA filters. Filters on vacuums shall conform to ANSI Z9.2 and UL 586. Do not use power tools to remove PCB containing materials unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation systems and full negative pressure containment is installed around the work area. Proper decontamination of all tools is required prior to removal from the site.

3.2 WORK PROCEDURE

Perform PCB related work in accordance with all applicable federal, state and local regulations. If mechanical measures are required for removal the Contractor must use, at a minimum, HEPA shrouded equipment or employ a negative pressure HEPA filtered enclosure.

Personnel shall wear and utilize protective clothing and equipment as specified herein. Eating, smoking, drinking, chewing gum, tobacco, or applying cosmetics shall not be permitted in the work or control areas. Personnel of other trades not engaged in the removal and demolition of PCB containing materials shall not be exposed at any time to airborne concentrations of PCBs unless all the personnel protection and training provisions of this section are complied with by the trade personnel.

If any PCB release or spill occurs outside of the regulated area, stop work immediately, correct the condition to the satisfaction of the Owner's representative prior to resuming work.

3.2.1 Protection of Adjacent Building Areas

Perform work without damage or contamination of adjacent building areas. Where such areas are damaged or contaminated as verified by the Owner's representative using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the contractor at no expense to the owner as deemed appropriate by the Owner's representative. This includes inadvertent spill of dirt, dust, liquid or debris in which it is reasonable to conclude that PCBs may exist. When these spills occur, stop work immediately. Then clean up the spill. When satisfactory visual inspection and sampling results are obtained from the Owner's representative, PCB abatement work may be resumed.

3.2.2 PCB Work Areas

The following requirements apply to the PCB work area:

3.2.2.1 Abatement Zone

The abatement zone shall consist of all areas where abatement or waste handling and staging activities are ongoing and the immediate surrounding area that may be contaminated. Each zone shall be delineated with a minimum of orange construction fencing and restricted from access by all persons except those directly necessary to the completion of each abatement task. The abatement zones shall be relocated and delineated as necessary as work progresses from one portion of the project site to another. Access shall be controlled at the periphery of the abatement zones to regulate the flow of personnel and equipment into and out of each zone and to ensure that proper procedures for entering and exiting are followed.

3.2.2.2 Decontamination Zone

The decontamination zone is the transition zone between the abatement area and the clean support zone of the site, and is intended to reduce the potential for contaminants from being dispersed from the abatement zone to the clean areas. The decontamination zone shall consist of a buffer area surrounding the abatement zone through which the transfer of equipment, materials, personnel and containerized waste products will occur and in which decontamination of equipment, personnel and clothing will occur. The decontamination zone shall be clearly delineated with a minimum of orange construction fencing and labeled with proper signage. There shall also be a decontamination station within this zone where personnel and tool decontamination will occur. The station will consist of a minimum of 6-mil re-enforced plastic sheeting on the ground with raised edges, a HEPA vacuum for removal of gross debris and a wash station where workers can clean exposed body parts and small tools/equipment. All emergency response and first aid equipment shall be maintained in this zone and all protective equipment and clothing shall be removed or decontaminated in this zone prior to removal into the clean areas.

3.2.2.3 Support Zone

The support zone will consist of all areas outside of the decontamination zones.

3.3 PCB GASKET/GLAZING REMOVAL

3.3.1 Once the proper containment zones and decontamination facilities have been established the ground beneath below all opening locations where PCB containing materials are to be removed shall have a layer of reinforced polyethylene sheeting installed to collect debris from removal operation. Ground plastic must be secured to the building by duct tape and other suitable materials and must extend away from the building a minimum of ten (10) feet for ground level abatement and twenty (20) feet for second and third floor abatement. Additional protection, i.e. wood sheeting shall be used directly under any lifts or other machinery that will be placed on the plastic sheeting to prevent tearing.

3.3.3 Remove all identified gasket/glazing from the building by removing the entire window system and disposing the entire unit as PCB waste. Caulk shall be completely removed and pass a visual inspection by the Owner's representative. The building substrate in direct contact with the PCB containing caulk can be removed and disposed of as PCB waste

in lieu of scraping the caulk from the surface. When removing these surfaces from elevated locations, an additional layer of plastic shall be secured to the lift and to the building below the unit to catch any materials that may fall to prevent them from dropping to the ground below. Caulk may be scraped from the window and door unit so the unit may be disposed of as general construction waste.

3.3.4 Immediately containerize all waste generated for proper disposal.

3.4 CLEANING AND DECONTAMINATION

The Contractor shall be responsible for the complete cleaning and decontamination of the Abatement Zone upon completion of the work. HEPA vacuum and wet cleaning methods shall be used to remove all visible dust and debris from all surfaces within the work area.

3.4.1 Rags and other disposable cleaning materials shall be properly disposed of with the PCB wastes.

3.4.2 Equipment used in the remediation of PCBs shall be decontaminated prior to leaving the site. Equipment, tools and machinery that are visibly clean will be swabbed with solvent solution containing d-limonene. Grimy non-porous surfaces will be decontaminated following a double wash/rinse procedure.

3.4.3 Wash water and decontamination liquids shall be captured and containerized for off-site disposal.

3.5 CERTIFICATION OF ABATEMENT

3.5.1 Schedule visual clearance inspection with the Owner's Representative at the site, when work is completed.

3.5.2 The Owner's Representative will employ the services of an independent testing/monitoring lab to perform visual clearance inspection. Visual Clearance Criteria requirements are as follows:

3.5.2.1 Containment barriers and floor plastic are intact and warning signs are in place.

3.5.2.2 Decontamination facilities are in place and tools used for abatement have been properly cleaned and decontaminated.

3.5.2.3 PCB containing material has been removed and placed in appropriate disposal containers. Waste containers are sealed, posted, and secured.

3.5.2.4 Work area contains no waste or visible debris from abatement work. Trash, extraneous plastic sheeting, used disposable PPE and floor plastic have been removed from the area and placed in PCB waste container.

3.5.3 The remediation contractor shall be responsible for achieving all aspects of the Visual Inspection Criteria to the satisfaction of the Owner. Any costs associated with satisfaction of the Visual Inspection Criteria shall be borne by the Contractor.

3.5.4 No additional samples of building materials will be collected after the removal is complete and it has passed a visual inspection by the Owner's representative.

3.6 MARKING OF WASTE CONTAINERS

- 3.6.1 All waste containers containing PCB Waste, used PPE, personal and equipment wash water and decontamination fluids, or other wastes generated during the abatement work shall be labeled per local, State and Federal requirements.
- 3.6.2 All markings must be durable, in English and printed on or affixed to the surface of the package or on a label, tag or sign; displayed on a background of sharply contrasting color; un-obscured by labels or attachments and located away from any other markings that could substantially reduce its effectiveness.

3.7 WASTE MANAGEMENT AND DISPOSAL

- 3.7.1 Properly containerized waste must be transported by a licensed hauler and shipped to one of the following facilities:
- A solid waste landfill permitted under RCRA title D (for CT facilities, a special waste authorization may be required):
 - Bulky waste landfill (for CT facilities, a special waste authorization may be required);
 - Facilities permitted to manage non-hazardous waste subject to 40 CFR 257.5-257.30
 - A RCRA hazardous waste landfill

Waste manifests must show chain of custody. Provide one copy of the waste manifests to the Owner. In cases where caulk is also asbestos containing, the Contractor must confirm that the disposal facility will accept the dual waste.

- 3.7.2 All contaminated waste shall be carefully loaded on trucks or other appropriate vehicles for transport. Before and during transport, care shall be exercised to insure that no unauthorized persons have access to the material.
- 3.7.3 Transporters of the waste are prohibited from “back hauling” any freight after the disposition of the Owner’s waste stream until decontamination of the vehicle and/or trailer is assured.
- 3.7.4 The Contractor shall be responsible for all packaging, labeling, transport, disposal and record-keeping associated with PCB waste in accordance with all federal, state and local regulations.
- 3.7.5 The Contractor shall ensure that the person transporting the waste holds a valid permit issued in accordance with appropriate federal, state, and local regulations.
- 3.7.6 The Contractor shall provide to the transporter at the time of transfer appropriate shipping records as required by the federal, state and local regulations with a copy to the project engineer.
- 3.7.7 Contractor shall maintain proper follow up procedures to assure that waste materials have been received by the designated waste site in a timely manner and in accordance with all federal, state and local regulations.

END OF SECTION

APPENDIX A
INVENTORY OF PCB CONTAINING MATERIALS

PCB CONTAINING MATERIAL	ESTIMATED QUANTITY	ASBESTOS CONTAINING
Window Gasket/Glazing	35 windows	No

K▲ESTLE BOOS
a s s o c i a t e s , i n c

416 Slater Road, P.O. Box 2590, New Britain, CT 06050-2590
Phone: 860-229-0361 ▲ Fax: 860-229-5303

325 Foxborough Boulevard, Suite 100, Foxborough, MA 02035
Phone: 508-549-9906 ▲ Fax: 508-549-9907

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