

**TOWN OF EAST HARTFORD
PUBLIC BUILDING COMMISSION**



A Special Meeting of the Public Building Commission is scheduled for
Thursday, January 23, 2014 at 7:00 p.m.

LOCATION:

The Special meeting will be held at the East Hartford Board of Education Office,
1110 Main Street, 3rd Floor Conference Room.

PLEASE NOTE: When the Commission meets for School Projects, there are nine (9) established members. A quorum requires the presence of five (5) Commission Members. If for any reason a member is unable to attend the meeting, please notify Al Costa, Director of Facilities at 622-5952. Thank you

AGENDA:

1. Call To Order
2. Approval of previous minutes (August 8, 2013 & February 24, 2010)
3. Public Participation
4. Update on Raymond Library Expansion Project
5. Middle School Window Wall Project:
 - Overview Preliminary Design and Discussion
6. Barnes School Asbestos Floor Tile Replacement:
 - Project Overview
 - Authorize PBC Chair to sign off on ED042 (Request for Review of Final Plans)
7. Old Business
8. New Business
 - Motion to pay Clerk

cc: PBC Members:
DePietro, Salemi Jr., Domler Jr., Povinelli Jr., Simpson, Kehoe, Morrison, Rup, Currey
Honorable Mayor Leclerc
Nathan Quesnel, Superintendent of Schools
Timothy Bockus, Director Public Works
Mary Martin, Project Admin for Raymond Library
Angela Attenello, Town Council Clerk
Donna Fitzgerald, Recording Secretary BOE

**PUBLIC BUILDING COMMISSION MEETING MINUTES
THURSDAY, AUGUST 8, 2013 (DRAFT)**

A special meeting of the Public Building Commission was held on Thursday, August 8, 2013 in the Lion's Community Room in the lower level of the Raymond Library (840 Main Street). The meeting was called to order at 7:02 P.M. by Vice Chairman Richard Domler.

PRESENT: Richard Domler, Vice Chairman
Valentine Povinelli, Jr., member
Travis Simpson, member
Richard Kehoe, member (Chairman of the Town Council)
Patricia Harmon, member (Town Council)

ABSENT: Daniel DePietro, Chairman
Pasquale J. Salemi, Jr., member

ALSO PRESENT: Marcia A. Leclerc, Mayor
Esther Clarke, Town Council
Susan Hansen, Library Director
Mary G. Martin, Project Administrator for Raymond Library
Gregg Verallis, Facilities Manager, Town of East Hartford
Bruce Tuthill, AIA, Tuthill & Wells Architects
Peter D. Wells, AIA, Tuthill & Wells Architects
Scott C. Boos, Owner's Representative for the Town of East Hartford

APPROVAL OF JANUARY 17, 2013 MEETING MINUTES:

Motion by: Richard Kehoe

Seconded by: Travis Simpson

To approve the Minutes of the January 17, 2013 meeting.

Vote: Motion approved unanimously. (Ms. Harmon abstained).

OLD BUSINESS:

PRESENTATION OF FINAL PLANS FOR THE RENOVATION AND ADDITION OF RAYMOND LIBRARY:

Ms. Martin called on Mayor Leclerc to introduce newly hired Library Director, Susan Hansen, to those present. A brief summary of the three meetings held to date regarding this project, including clarification of the role of the Public Building Commission to "review and approve or reject the architectural drawings and specifications" at this meeting, was made by Ms. Martin.

Architects Tuthill and Wells then gave an overview of changes made to the plans since the Commission last met. Highlights of the discussion held about these items included:

The front lobby's original ceiling and fireplace mantle will be refurbished or re-installed as an alternate to the bid; a north/south corridor has been added in the area of the community rooms to meet Fire Safety Code; additional door passages have been added at every level from the atrium to assist with pedestrian flow; hazardous materials concerns have been addressed (the existing elevator shaft will have its piston removed and be filled).

In addition: a generator transfer switch has been added to the exterior to allow for the hook-up of a portable generator; and the existing west (front) elevation and a portion of the north elevation masonry will be repointed. Glass walls to assist with supervising interior spaces will be utilized in the Young Adults section and the staircase leading to the Mezzanine from the Main Floor, and with the computer and small meeting rooms on the Upper Floor.

The building will have fire sprinklers and alarms throughout; the roof will be newly shingled; there will be no HVAC ductwork on the roof (the system will be variable flow refrigerant). The ramp leading to the exterior Lower Level entrance to the Community Rooms (east side of the addition) will be heated for snow and ice removal.

The Commission was informed by Ms. Martin that the Historic District Commission has reviewed and approved the plans and they are satisfied with the plan to highlight the original (west/Main Street) façade with exterior up-lighting. It was noted that this construction bid package does not include plans and specifications for information technology or fixtures, furniture and equipment. Those items will be covered under two separate bid packages in 2014.

Motion by: Richard Kehoe

Seconded by: Travis Simpson

To accept the plans and specifications as presented.

Vote: Motion approved unanimously.

Further discussion was held regarding the next steps in the process. Ms. Martin explained that the project will be out to bid by the end of August. Future meetings of the Commission will be called at major milestones by the Chairman to monitor the progress of construction and renovation.

NEW BUSINESS:

It was noted that Mr. Domler has been reappointed to the Public Building Commission for a five-year term to expire in December 2018.

Mr. Simpson questioned as to why the solar panel canopy projects to be undertaken by the Board of Education were not presented to the Commission. The possibility exists that they did not total \$500,000. Ms. Martin will contact Mr. Al Costa about this.

ADJOURNMENT:

Motion by: Richard Kehoe

Seconded by: Travis Simpson

To adjourn the meeting of the Public Building Commission (7:52 P.M.).

Vote: Motion approved unanimously.

Recorded by: Mary G. Martin _____
(signature)

**SPECIAL MEETING
PUBLIC BUILDING COMMISSION**

**WEDNESDAY,
FEBRUARY 24, 2010**

A Special Meeting of the Public Building Commission was held on Wednesday, February 24, 2010, at the East Hartford Board of Education Administrative Offices, 1110 Main Street, East Hartford, CT. The meeting was called to order at 5:30 P.M. by Chairman Daniel DePietro.

PRESENT Daniel DePietro, Chairman, Public Building Commission
Richard Domler, Jr., Vice Chairman, Public Building Commission
Rich Kehoe, Chairman, Town Council, Member, Public Building Commission
Travis Justin Simpson, Member, Public Building Commission
Susan Skowronek, Member, Public Building Commission
Robert Damaschi, Member, Public Building Commission and Board of Education

ALSO PRESENT Al Costa, Director of Facilities
Bryan Hall, Facilities Committee Chairman
Jeffrey Currey, Member, Facilities Committee
Anita Morrison, Member, Facilities Committee
Ram Aberasturia, Member, Board of Education
Marcus Oladell, IV, Member Board of Education
John R. Victorick, J Associates, Architects

MOTION By Richard Domler, Jr.
Seconded by Travis Simpson
To approve the Minutes of January 28, 2010
Motion unanimously carried.

GOODWIN AND O'CONNELL SCHOOL ROOF REPLACEMENT PROJECTS

Mr. Costa noted that the application for a roof pitch waiver to the State Department of Education for the built-up roof design option was rejected. They State Department Education felt we did not have a hardship for designing a ¼" pitch in lieu of a ½" pitch, further stating no significant structural changes needed to be made to the existing buildings to build the ½" design. Mr. Costa reminded the committee there was no cost benefit in going with the ½" pitch design as the Truss Roof design was almost equal in cost and at twice the life expectancy. Further, he and Mr. Victorick, project architect informed the committee that the East Hartford Building Department has one outstanding item in their plan review. Specifically, the area (size) of the building does not have fire walls in the existing corridors. The Building Official has raised the question of if Fire Walls are in fact required due to the roof project. It is our position that we are not altering or affecting the existing space below the new attic. Therefore, we believe the code specifically states that we do not need to comply with the current area requirements for that existing space. Mr. Victorick believes we have designed the roofing project correctly and noted the roof structure is all code compliant. We will be meeting with the Building Official again to discuss this matter. Mr. Costa stated that if fire walls will be required in the hallways it will change this project from a roof project to a code project. A re-application to the State Department of Education would be required as well as a re-authorization by the Town Council and possibly the voters seeing the scope of the project would be changed.

Mr. Simpson, PBC member, believes there is a significant problem in the Building Department. He agreed with the architect and a roof project should not trigger any code work inside the existing building. He expressed frustration that the Building Department has created an impact on development and that is why many businesses are not interested in East Hartford.

Mr. Costa recommended that the Committee approve the final plans for a truss roof project and forward to the Board for its approval at their March 1st meeting. Once the matter raised by the Building Department is concluded we will take action as appropriate. If it is determined the fire walls are not required we will submit plans along with the proper forms to the State Department of Education. Under that scenario we would expect construction bids to be received by April 5th, and then reviewed by Facilities and PBC. Hopefully construction could begin by mid-June and completed over the summer.

Public Building Commission members reviewed the final plans with Mr. Victorick.

MOTION

By Travis Simpson

Seconded by Richard Domler, Jr.

To approve final plans for the Goodwin and O'Connell schools roof replacement projects and authorize PBC Chair to sign off on ED042 (Request for Review of Final Plans)

Motion unanimously carried.

OLD BUSINESS

Mr. Simpson requested an update on doors on the new addition to Town Hall. Mr. Kehoe responded to his request.

NEW BUSINESS

MOTION

By Robert Damaschi

Seconded by Richard Domler, Jr.

To authorize payment to the Clerk for February 24, 2010 meeting.

Motion unanimously carried.

Chairman DePietro questioned why the PBC "draft" Minutes were not placed on the Web site. Mr. Costa will research this concern.

MOTION

By Richard Domler, Jr.

Seconded by Rich Kehoe

To adjourn the Special Meeting of the Public Building Commission (6:25 P.M.)

Motion unanimously carried.

Recorded by:

Donna Fitzgerald

**PUBLIC BUILDING COMMISSION
TOWN OF EAST HARTFORD**



January 6, 2014

Robert Pasek, Town Clerk
Town of East Hartford
740 Main Street
East Hartford CT 06108

Re: **PUBLIC BUILDING COMMITTEE SCHEDULE OF MEETINGS – FY 2014**

Dear Mr. Pasek:

Pursuant to the requirements by State law with respect to the referenced matter, the Public Building Commission wishes to inform you that currently meetings will be called as needed and proper legal notice will be posted for said meetings.

A special meeting agenda will be posted prior to each meeting. Only items on the agenda may be discussed. No other committee business may be discussed.

Such meetings, when EH Board of Education business is being transacted, shall take place at the following time and location:

East Hartford Board of Education Offices
1110 Main Street
Third Floor Conference Room
7:00 PM

When all other business of the Town of East Hartford is to be transacted, those meetings shall take place at the Welling Conference Room at the Town Hall at 7:00 PM.

If you should have any questions regarding this matter, please contact me at (860) 569-8514.

Sincerely,

Daniel R. DePietro

Daniel R. DePietro
Chairperson,
Public Building Commission

Enclosure (1)

DD:sas

pc: Mayor Leclerc
Public Building Commission Members
Board of Education Members
Nathan Quesnel, Superintendent of Schools
Mr. Costa, Director of Facilities – BOE
File

**TOWN OF EAST HARTFORD
PUBLIC BUILDING COMMISSION FY 2014**

The PBC is a seven (7) member standing committee as referenced below, which meets for Town Construction projects.

- Five (5) Members from the Public (a)
And Two (2) Members from Town Council (b)
- During BOE Projects Requiring Grant Funding Reimbursement, Two (2) Additional Members from the BOE Shall be Appointed (c)

(With the BOE projects, the Committee would be nine (9) total)

<u>Member</u>		<u>Term Exp</u>	<u>Address</u>	<u>Phone #</u>
D Daniel DePietro,	Chair (a)	12/16	951 Forbes Street	(860) 569-8514
D Pasquale J. Salemi, Jr.	Member (a)	12/13	17 Pheasant Lane	(860) 289-8079
D Richard Domler, Jr.	Member (a)	12/18	147 Woodlawn Circle	(860) 289-1627
R Valentine Povinelli, Jr.	Member (a)	12/13	97 Langford Lane	(860) 568-5373
R Travis Justin Simpson	Member (a)	12/18	119 Naubuc Ave Apt 1-A	(860) 569-0686
D Richard Kehoe	Member (b)	11/13	8 Knollwood Road	(860) 568-8264
R Anita Morrison	Member (b)	11/15	47 Woodbridge Avenue	(860) 289-8327
R Thomas Rup	PBC BOE Rep (c)	11/13	24 Sunset Ridge Drive	(860) 569-8508
D Jeffrey Currey	PBC BOE Rep (c)	11/13	50 McKee Street	(860) 305-0699



East
Hartford
Public
Schools

"Schools that are the Pride of our Community"

Albert S. Costa
Director of Facilities

Nathan D. Quesnel, Superintendent of Schools

January 23, 2014

To: Dan DePietro, Chair of Public Building Commission
All Current Members of the Public Building Commission

From: Albert Costa, Director of Facilities 

RE: State Department of Ed, School Construction Grant Project 043-0235CV - Asbestos Floor Tile Removal/Replacement Barnes School

Greetings Members of the Public Building Commission:

The attached project involves the removal of asbestos floor tiles at the Barnes Elementary School and replacement with new vinyl composition tiles. Existing tiles are in poor condition and need to be removed per EPA guidelines. They have exceeded their useful life after 50 years of service. Areas to be completed are all classrooms as shown on drawing ASB-1 attached. The project is eligible for State grant reimbursement therefore we will need the Board of Education and the PBC to approve the required State forms. The project is estimated at \$200,000 with a State Reimbursement of 76.79% which would represent a local share of \$46,420. The local share funding is in a BOE Capital Reserve account.

This work will be started at the end of the school year and is expected to be completed by mid-August 2014.

With approval of the project and authorization for the Chair to sign the attached ED042 form, all required forms will be submitted to the Board of Education at their February 3rd meeting and then submitted to the State Department of Education for final approval.

Encl:





STATE OF CONNECTICUT
DEPARTMENT OF CONSTRUCTION SERVICES
Bureau of School Facilities



July 10, 2013

Mr. Nathan D. Quesnel
Acting Superintendent of Schools
East Hartford Public Schools
1110 Main Street
East Hartford, CT 06108

Dear Mr. Quesnel:

Subject: Application and Grant Commitment for a Proposed School Building Project

You have recently submitted a school construction grant application for a **Code Violation** project at the **Barnes School – East Hartford/Glastonbury Magnet**. The following identification number has been assigned and must be used on all subsequent submissions relating to this particular project:

State Project No. 043-0235 CV

Effective **June 24, 2013**, and assuming that East Hartford fully complies with all statutory and regulatory school construction procedures and policies, the State of Connecticut commits itself to reimburse the Town of East Hartford **76.79** percent of eligible final project costs as reported at the end of this project. To the extent that East Hartford's cost projection of \$200,000 accurately reflects final eligible project costs, you can forecast a state grant based upon 76.79 percent of that figure.

Note that this project has been authorized as a code violation project only. Costs outside the scope of this authorization will be ineligible for reimbursement. A copy of the funding authorization (e.g., appropriation, approved referendum) dated **April 2, 2013**, has been received for this project.

Connecticut General Statute, Section 10-284(b) allows the Commissioner of Construction Services to disapprove a project if construction has not started prior to June 30, 2015. Start of construction is defined as the date that the first construction contract is signed.

This letter does not constitute approval to let this project out for bid. Effective July 1, 2011, construction projects cannot be let out for bid until the State Department of Construction Services has approved the final plans and specifications for the projects and you have received written notice of such approval. (If the district requests state acceptance of *local plan review and approval*, the project cannot be let out for bid until the State Department of Construction Services has approved the local officials' certifications and you have received written notice of such approval.)

Mr. Nathan D. Quesnel
July 10, 2013
Page 2

Project contingency costs have been revised from \$10,000 to \$20,000 per the project cost estimate submitted on the school construction grant application.

This letter does not constitute approval to let this project out for bid. Effective July 1, 2011, construction projects cannot be let out for bid until the State Department of Construction Services has approved the final plans and specifications for the projects and you have received written notice of such approval. (If the district requests state acceptance of *local plan review and approval*, the project cannot be let out for bid until the State Department of Construction Services has approved the local officials' certifications and you have received written notice of such approval.)

Until further notice, please enter changes to project data, the start of construction date, and payment requests through the State Department of Education's secure Web site at www.csde.state.ct.us. Forms, instructions, and grant information are available through the State Department of Education's home page at www.sde.ct.gov/sde. (Please refer to the "School & District" link.)

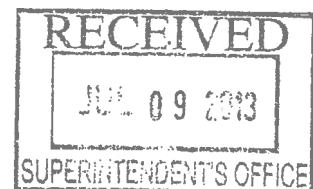
If you have any questions, please contact John Goldrick at 860-713-6481.

Sincerely,



Donald DeFronzo
Commissioner
Department of Administrative Services

DD: jg
cc: Craig Russell
Paige Farnham
Al Costa



ED042 Rev. 05/09
 Statutory Ref.: C.G.S. Sections
 10-282, 10-283, 10-291, 10-
 and 10-292

STATE OF CONNECTICUT
 Department of Education
 Bureau of School Facilities
 165 Capitol Avenue
 Hartford CT 06106-1630

REQUEST FOR REVIEW OF FINAL PLANS

DISTRICT NAME: East Hartford	FACILITY NAME AND ADDRESS: Barnes School 305 May Road	STATE PROJECT NUMBER: 043-0235CV
		PHASE NUMBER: 1 of 1

Estimated date to begin construction* 6/21/14 Estimated date to complete construction 8/26/14

* Please note that construction must begin within 2 years of grant commitment date to maintain grant eligibility.

Certification of Approval dates:

	Final Plans & Prof. Costs estimate	Site Approval (if applicable)
Local Board of Education	// _____	// _____
School Building Committee	// _____	// _____

We hereby certify that these final plans and project manual as prepared for bidding and dated March 13, 2013 and the professional costs estimate dated June 4, 2013 for this project have been reviewed and approved for this site on the dates shown above.

For the Town or Regional Board of Education:

Jeffrey A. Currey _____ **

Chairperson's Name (Type or print) Signature Date

For the School Building Committee:

Daniel DePietro _____ **

Chairperson's Name (Type or print) Signature Date

** Signature dates cannot precede the date on the submitted plans.

Project Architect/Engineer Firm:

TRC Environmental _____ (860) 298-9692

Firm Name (Type or print) Telephone

I hereby: (check one)

(INDICATE FOR BUREAU OF SCHOOL FACILITIES REVIEW)

request a review of the final plans, project manual, Ineligible and Limited Eligible Costs Worksheet and professional cost estimate cited above. (Attach copies of all these documents.)

(INDICATE FOR LOCAL OFFICIALS REVIEW)

submit certifications of local approval of plans and project manual as provided by CGS Sec. 10-292(b) and attached professional cost estimate cited above, the Ineligible and Limited Eligible Costs Worksheet and scope letter including alternates. (Reverse side of form must be completed.)

Nathan D. Quesnel _____

Superintendent's Name (Type or print) Signature Date

NOTE: NO PHASE OF THIS SCHOOL CONSTRUCTION PROJECT AND NO PURCHASE ORDER OVER \$10,000 SHALL GO OUT TO BID UNTIL YOU HAVE RECEIVED WRITTEN NOTIFICATION FROM THE STATE DEPARTMENT OF EDUCATION THAT IT HAS APPROVED YOUR FINAL PLANS AND PROJECT MANUAL.

**EDUCATIONAL SPECIFICATIONS FOR
STATE DEPARTMENT OF EDUCATION**

**PROJECT:
Asbestos Abatement
Barnes Elementary School**

1. **PROJECT RATIONALE**

The original school building was constructed in 1957 with one addition in 1965. Currently the academic wing of the building contains 29,300 square feet of floor area consisting of vinyl asbestos floor tile with asbestos mastic. TRC Environmental is the district's environmental consultant. The asbestos containing building materials have been inspected and tested in accordance to the United States Environmental Protection Agency's (USEPA) and State of Connecticut Department of Public Health (CTDPH) requirements for asbestos in schools.

After more than 50 years, the existing floors, which are asbestos, have reached a point where it is no longer possible to maintain or perform small repairs. The floors have well exceeded their useful life.

The proposed asbestos abatement project will be designed by a CT Licensed Asbestos consultant, once funding is in place. The design will conform to the USEPA and CTDPH standards and abatement will not be performed when school is in session. Design will also include the installation of Vinyl Composite Tile (VCT) once the abatement phase is completed. Design for abatement will include approximately 17 rooms totaling about 15,000 square feet.

2. **LONG-RANGE PLAN**

The long-range plan for the school incorporates provisions for a safe and appropriate learning environment. This project will ensure the safety and health of the students and staff. The district plans to continue to utilize the Barnes Elementary School in its current capacity for the next twenty years and beyond.

3. **THE PROGRAM**

Current space: The Barnes Elementary School includes the following instructional and support spaces: students in grades K-2, library/media center, computer labs, music room, art room, cafeteria, nurse's office, kitchen, conference room, school offices, outdoor fields, custodial services, storage and mechanical spaces.

Construction: There will not be any construction in any of these spaces.

FF&E: None.

PROJECT TEAM LIST

Facility: Barnes School

Date: April 9, 2013

State Project No.: 043-0235 CV

NAME	TITLE	PHONE	FAX	E-MAIL
OWNER				
Superintendent of Schools	Nathan Quesnel	860-622-5108		Quesnel.nd@easthartford.org
Building Comm. Chairman	Dan DePietro	860 569-8514		DanDePietro@ct.usda.gov
Others				
OWNER'S REPRESENTATIVE (Project Manager-facilitator)				
	Albert Costa	860-622-5952		Costa.as@easthartford.org
CONSTRUCTION MANAGER				
	None			
DESIGN TEAM				
Architect	none			
M/E/P Engineers	none			
Structural Engineer	none			
Landscape Architect	none			
Civil Engineer	none			
Others Environmental	TRC Environmental Bob Romejko	860 298-9692		bromejko@trcsolutions.com
CONSULTANTS				
Code	none			
Acoustical	none			
Kitchen	none			
LEED	none			
Environmental	none			
Others	none			
COMMISSIONING AGENT				
	none			
TOWN CODE OFFICIALS				
Building Inspector	Greg Grew, AIA	860 291-7340		mggrew@easthartfordct.gov
Fire Marshal	Gloria Stokes	860 291-7406		gstokes@easthartfordct.gov
Sanitarian/Health Inspector	James Cordier	860 291-7295		jcordier@easthartfordct.gov
ADA/504 Coordinator				

STATE DEPARTMENT OF EDUCATION
BUREAU OF SCHOOL FACILITIES

INELIGIBLE AND LIMITED ELIGIBLE COSTS WORKSHEET

DISTRICT: EAST HARTFORD FACILITY: BARNES SCHOOL
 TEMPORARY PERMANENT
 STATE PROJECT NO: TMP-043-FDNJ STATE PROJECT NO: 043-0235 ✓

COSTS FOR **ONLY ONE PROJECT NUMBER** MAY BE REPORTED ON THIS WORKSHEET. **ESTIMATED** COSTS REPORTED SHOULD REFLECT **ALL PHASES** OF CONSTRUCTION FOR THIS ONE PROJECT.

NOTE: Types of costs generally ineligible for school construction grant payments include: Costs incurred for routine building repair, maintenance and replacement work; costs unrelated to code work; costs unrelated to the project type; and costs not made necessary because of construction. Typical ineligible costs are listed on, but are not limited to, this Worksheet. Some of the listed costs may be eligible within a specific project. Ineligible costs shall include materials and labor. The ineligible portion of prorated overhead, profit and A&E fees is reported on Line 60.

INSTRUCTIONS:

For: **PCT/LOCAL Initial Estimate Column**

- Complete the FIRST column, circling PCT or LOCAL review as appropriate, with estimated ineligible costs for ALL phases of the ENTIRE project.
- Complete the DATE (date submitted to BSF for review)
- Provide a dollar amount or a zero for each item.

For: **Revised Estimate Columns**

- Complete the NEXT AVAILABLE column with ALL estimated ineligible costs including costs for those items identified from Plan Review indicated with a "✓".
- Complete the DATE (date submitted to BSF for review)
- **NOTE: A WRITTEN EXPLANATION CONTAINING SUFFICIENT INFORMATION TO BE EVALUATED BY A PLAN REVIEWER IS REQUIRED FOR ANY SIGNIFICANT REDUCTIONS TO OR ELIMINATION OF PREVIOUSLY IDENTIFIED INELIGIBLE COSTS.**

For: **Final Costs Column**

- Complete the DATE (date Form ED049F is completed)
- **NEW: Ineligible costs from all Change Orders should be totaled and reported on Line 62 when the project is final.**

Item	PCT/LOCAL Initial Estimate (\$)	1 st Revised Estimate (\$)	2 nd Revised Estimate (\$)	3 rd Revised Estimate (\$)	Final Costs (\$)
Date	4/1/2013	/ /	/ /	/ /	/ /

SECTION A: OFF-SITE WORK DONE BEYOND SCHOOL PROPERTY

1.	Road Construction & Driveway Connections to Roadway	0						
2.	Water or Sewer Line (including manholes) & Connections	↓						
3.	Other Utilities & Connections	↓						

SECTION B: REPAIR, REPLACEMENT AND MAINTENANCE WORK

4.	Site Regrading (for repairs)	0						
5.	Resurfacing Drives, Walks and Parking Lots	↓						
6.	Reseeding/Repairs	↓						

SECTION B: REPAIR, REPLACEMENT AND MAINTENANCE WORK (CONT'D)

Item		PCT/LOCAL Initial Estimate (\$)	1 st Revised Estimate (\$)	2 nd Revised Estimate (\$)	3 rd Revised Estimate (\$)	Final Costs (\$)
7.	Site Repairs	Ø				
8.	Outdoor Athletic Equipment (Repair/Replacement) or Site Improvements					
9.	Shrubs and Trees (Repair/Replacement)					
10.	Fencing, Except in Hazardous Locations					
11.	Toilet Fixtures & Partitions (Repair/Replacement)					
12.	Concrete Steps, Walks and Curbs (Repair/Replacement)					
13.	Masonry and Concrete (Repair, Replace, Repoint, Clean and Water proof)					
14.	Caulking & Control Joints (Repair/Replacement)					
15.	Windows and Glass Repair or Replacement (Ineligible Labor to Line 44)					
16.	Louver except part of window wall (Repair/Replacement)					
17.	Exterior Door Replacement (include frame and hardware)					
18.	Repainting of Existing Areas					
19.	Carpet Replacement and Floor Refinishing, Repair and Replacement					
20.	All Finishes (unless code req.) (Repair/Replacement)					
21.	All Repair/Replacement Ceilings (unless code req.)					
22.	Fire Extinguishers in existing non- hazardous locations					
23.	Furniture (Repair/Replacement)					
24.	Equipment (Repair/Replacement)					
25.	Lockers (Repair/Replacement)					
26.	Chalkboards/Tackboards (Repair/Replacement)					
27.	Water Heaters (Repair/Replacement)					
28.	Boilers, HVAC Systems, Equip./Fuel Storage Equip.(Repair/Replacement/ Conversion)	✓				

SECTION B: REPAIR, REPLACEMENT AND MAINTENANCE WORK (CONT'D)

Item		PCT/LOCAL Initial Estimate (\$)	1 st Revised Estimate (\$)	2 nd Revised Estimate (\$)	3 rd Revised Estimate (\$)	Final Costs (\$)
29.	Plumbing Fixtures (except handicapped) (Repair/Replacement)	Ø				
30.	Light Fixture Replacement (except when tested-PCB)					
31.	Sound and Clock Systems. (Repair/Replacement)					
32.	Security Systems, Except in New Construction					
33.	All other repair, replacement or maintenance items not required by code	↓				

SECTION C: ROOF REPLACEMENT PROJECTS

Item		PCT/LOCAL Initial Estimate (\$)	1 st Revised Estimate (\$)	2 nd Revised Estimate (\$)	3 rd Revised Estimate (\$)	Final Costs (\$)
34.	General Roof Repairs	Ø				
35.	Repair of Gutters and Leaders (except built-in gutters).					
36.	Roof Leaks and damaged interior surfaces (Repair/Replacement)					
37.	Flashing not integral to a new roof (Repair/Replacement)					
38.	All Fascia & Soffit Work (Repair/Replacement)					
39.	Coping on Parapets (Repair/Replacement)					
40.	Roof Drains, Hatches, Fans, Skylights (Repair/Replacement)					
41.	Cleaning of Roof Drains					
42.	New Skylights in re-roofing projects					
43.	All Ladders, Antenna, Canopies & Cupolas (Repair/Replacement)	↓				

SECTION D: WINDOW REPLACEMENT PROJECTS

Item		PCT/LOCAL Initial Estimate (\$)	1 st Revised Estimate (\$)	2 nd Revised Estimate (\$)	3 rd Revised Estimate (\$)	Final Costs (\$)
44.	Labor* to remove and install	Ø				
45.	Blinds and Shades	Ø				

*Except for one egress window in each classroom if applicable.

SECTION E: OTHER INELIGIBLE COSTS

Item		PCT/LOCAL Initial Estimate (\$)	1 st Revised Estimate (\$)	2 nd Revised Estimate (\$)	3 rd Revised Estimate (\$)	Final Costs (\$)
46.	Relocation of Facilities on site except at new school or exten.	0				
47.	Athletic Facility Lighting					
48.	Athletic Facility Parking					
49.	Artificial Turf					
50.	Movable Site Furnishings					
51.	Feasibility Study					
52.	Textbooks, Library Books & Media, & Supplies (all expendable items)					
53.	Computer Software					
54.	Lease of Facilities (except per Sect 10-286(a)(8), C G S)					
55.	Service equipment or maintenance contracts					
56.	Administrative Salaries					
57.	Permits & Fees					
58.	Replacement of Stolen, Vandalized, Broken Equipment					
59.	Work Outside the Authorized Project Scope**					
SUB-TOTAL LINES 1 - 59						
60.	Prorated Overhead, Profit, and A/E Fees					
61.	Architect/CM Fees Percentage-based Increase	0				
62.	Ineligible Costs from CHANGE ORDERS					

**Including but not limited to:

Town offices when sharing space in a facility with Board of Education (BOE);
 BOE offices when sharing space in a school/educational facility;
 Project components not included in the authorized state grant commitment

INELIGIBLE COSTS TOTALS	0				
DISTRICT SIGN-OFF					

SECTION F: LIMITED ELIGIBLE COSTS

Item		PCT/LOCAL Initial Estimate (\$)	1st Revised Estimate (\$)		2nd Revised Estimate (\$)		3rd Revised Estimate (\$)		Final Costs (\$)
63.	Outdoor Athletic Facilities (includes tennis courts)	0							
64.	Swimming Pools	0							
65.	Retractable Gym Seating (includes movable bleachers)	0							
66.	PERMANENT (NOT RETRACTABLE) Spectator Seating in a Gymnasium. Complete lines a) through d) below.								
	a) Square Footage of Area Occupied by Seating	0							
	b) Total Square Footage of Gymnasium	↓							
	c) Total Cost (\$) of Gym Construction Excluding Seating								
	d) Total Cost (\$) of Seats (Including Installation)								
66.	Seating Area in an Auditorium. Complete lines a) through e) below only if NEW AUDITORIUM SPACE will be created as a result of the project. Replacement seating costs in an existing auditorium are either ineligible (report costs on line 23) or are prorated between ineligible and eligible construction costs if the work involves creating seating areas for person with disabilities.								
	a) Square Footage of Area Occupied by Seating	0							
	b) Total Square Footage of Auditorium	↓							
	c) Total Cost (\$) of Auditorium Construction Excluding Seating								
	d) Total Cost (\$) of Seats (Including Installation)								
	e) Capacity of Auditorium (Report Maximum Number of Potential Seats.)*								

* Note that seating capacity does not mean the actual number of seats, but the number which the auditorium has the capacity to hold.



21 Griffin Road North
Windsor, CT 06095

860.298.9692 PHONE
860.298.6399 FAX

www.TRCSolutions.com

**BARNES SCHOOL
ASBESTOS ABATEMENT AND PUT BACK
COST ESTIMATE 6-4-13**

ABATEMENT

<u>Item Description</u>	<u>Quantity/Unit</u>	<u>Unit Cost</u>	<u>Subtotal Cost</u>
Floor tile and mastic	16,000 sf	\$6/sf	\$96,000

PUT BACK

<u>Item Description</u>	<u>Quantity/Unit</u>	<u>Unit Cost</u>	<u>Subtotal Cost</u>
Floor tile and mastic	16,000 sf	\$5/sf	\$80,000
		Engineering services	\$24,000
		Total cost	\$200,000

Robert Romo

Principal Engineer
Senior Project Manager



East Hartford Public Schools

Nathan D. Quesnel
Superintendent of Schools

1110 Main Street • East Hartford, CT 06108 • Tel: (860) 622-5107 • Fax: (860) 622-5119

April 8, 2013

Ms. Paige Farnham
State Department of Education
School Facilities Unit
P.O. Box 2219
Hartford, CT 06145

Re: State Project No. TMP-043-~~FDNJ~~, Barnes school – Designated Accessible Schools Letter
0235 CV

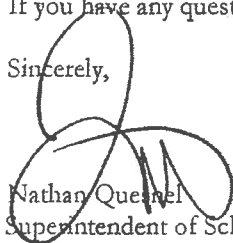
Dear Ms. Farnham:

All of our district schools are designated accessible buildings as follows:

1. East Hartford High
2. East Hartford Middle
3. Barnes
4. Central Administration Building
5. Goodwin Elementary
6. Hockanum Elementary
7. Langford Elementary
8. Mayberry Elementary
9. Norris Elementary
10. O'Brien Elementary
11. O'Connell Elementary
12. Pitkin Elementary
13. Silver Lane Elementary
14. Stevens
15. Sunset Ridge
16. Willowbrook
17. Woodland
18. Department of Facilities

If you have any questions please contact Albert Costa, Director of Facilities at 622-5952.

Sincerely,


Nathan Quesnel
Superintendent of Schools



**BUREAU OF SCHOOL FACILITIES PLAN REVIEW CHECK LIST FOR
ASBESTOS**

The following checklist contains areas that must be addressed if applicable to your school project. Please indicate plan page number, specification section and page number in columns headed Plans, and/or Specifications where compliance is most clearly identified. Do not use N/A, explain condition.

VERIFY EACH ENTRY ON THIS CHECKLIST WITH THE PLANS AND/OR SPECIFICATIONS.

AMP Preparer	TRC Environmental	AMP Coordinator	Al Costa	PAGE(S) WHERE CODE ITEM IS MOST CLEARLY IDENTIFIED		Reviewer Use only. Complies with code.	
		Plans	Specifications	Y	N		
1.	Type(s) and amount(s) of ACM to be abated	ASB-1	Section 02080 Pages 2-3 Para 1.2B				
2.	Notification of demolition and renovation to DPH prior approval of in-state disposal required from DEP		Pages 11 Para 1.5C				
3.	Proper worker protection (OSHA req.)		Pages 13-15 Para 1.6				
4.	Licensed air sampling professional employed by school district		Page 1 Para 1.1C				
5.	Pre-abatement meeting		Page 11 Para 1.5A				
6.	All ACM locations identified	ASB-1	Pages 2-3 Para 1.2B				
7.	Employees' decontamination system		Page 19 Para 3.2				
8.	Waste disposal system (ACM removal from contaminated area)	Page 19 Para 3.3A	Page 21 Para 3.5I Page 22 Para 3.8				
9.	Negative air pressure system		Page 20 Para 3.4D				
10.	Proper worksite preparation		Pages 18-20 Para 3.1-3.4				
11.	Reoccupancy clearance standards		Page 23 Para 3.10A Page 24 Para 3.10C				
12.	Replacement materials specified						
13.	DPH approved project designer		Page 2 Para 1.2.B				
14.	Mini-containment – "Alternative Work Practice" approved by DPH		Not Used				
15.	Alternates		Not Used				

GUIDE3
Revised 1-23-09

Barnes School - East Hartford 043-0235 CV



21 Griffin Road North
Windsor, CT 06095

860.298.9692 phone
860.298.6399 fax

www.TRCSolutions.com

Date: 6/3/13

Department of Construction Services
Bureau of School Facilities
165 Capitol Avenue, Room 258
Hartford, CT 06106

Subject: PCB Investigation Results
Facility Name: Barnes School, East Hartford, CT
State Project No.: TMP - 043 - FDNJ
0235CV

I the undersigned, certify that I have made a reasonable investigation of the noted facility in response to the requirements of CFR 40, Part 761. Based upon U.S. Environmental Protection Agency (EPA) recommendations where renovation or demolition are being performed, than a determination should be made as to what PCB-containing material is present so that it can be properly managed and disposed. When laboratory analysis of test samples was required, the work was performed by an independent testing lab to avoid any perceived risk of a conflict of interest.

[check the box adjacent to the applicable statement]

1. Test results indicated materials containing PCBs with concentrations in excess of 50 mg/Kg, and those contaminants have been incorporated into a PCB Abatement Plan that has been submitted to the EPA for their review/approval. This PCB Abatement Plan may also include materials with PCB concentrations \leq 50 mg/Kg which are being disposed of as PCB remediation waste and/or PCB bulk product waste. ****See attached****
2. Test results (for items not included in number 1 above) indicated materials with PCB concentrations in excess of 1 mg/Kg, but not exceeding 50 mg/Kg. Where these materials are impacted by the project scope we have developed a plan to remove and dispose of them in conformance with all State Department of Energy and Environmental Protection (DEEP) regulations (including but not limited to C.G.S. Sections 22a-463 through 22a-469). A notification has been made to the DEEP, Bureau of Materials Management and Compliance Assurance/PCB Program.
3. After conducting a thorough investigation and subsequent testing of potential PCB-containing building materials (if any) in the proposed project area(s), results have yielded no materials containing concentrations of PCBs in excess of 1 mg/Kg. As a result of these findings no PCB Remediation Plan is required for this project (copy of facility PCB survey, and if performed testing results attached). **** See attached sheet**

Environmental Professional or Design Professional
cc: Superintendent of Schools/District



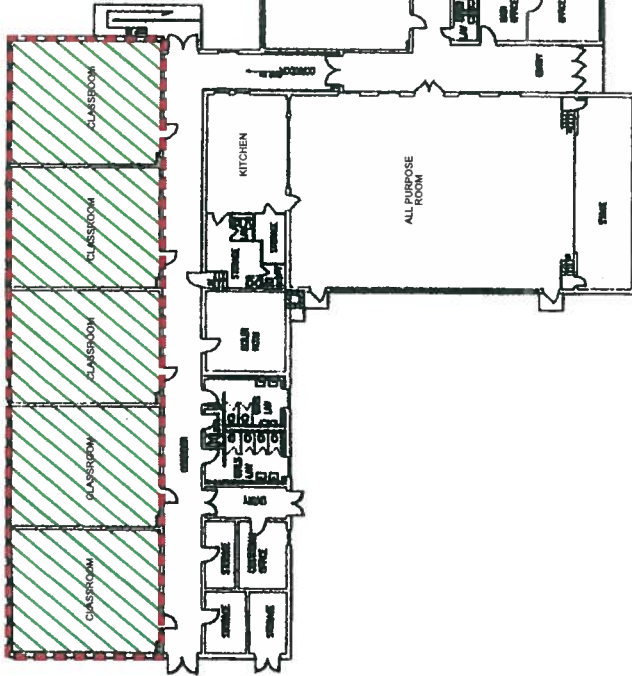
Professional Seal here
(if applicable)

June 3, 2013
PCB Testing
Barnes School, East Hartford, CT

Additional Notes:

***After conducting a thorough investigation of potential PCB-containing building caulks and/or glazes (if any) in the proposed project area(s), it has been determined that NO suspect PCB-containing building caulks and/or glazes will be impacted, as the project entails only a flooring replacement project. Therefore, no sampling and subsequent PCB Remediation Plan is required for this project.**

WORK AREA 3



WORK AREA 1

WORK AREA 2

LEGEND OF SYMBOLS

-  Vat and Mastic
-  Work Area Demarcation Line

NOTES

1. Work Areas 1 and 2 - Classrooms
Remove ACM in the form of:
 - VAT and mastic
 - under containment with a pressure differential and contiguous decontamination units. For asbestos mastic removal, utilize shot-blasting.
2. Work Area 3- Classrooms
Remove ACM in the form of:
 - VAT and mastic
 - under containment with a pressure differential and contiguous decontamination units. For asbestos mastic removal, utilize shot-blasting.



21 Griffin Road North
 Hartford, CT 06185
 860.236.9682

BARNES SCHOOL
 EAST HARTFORD, CONNECTICUT

ASB-1
 GROUND FLOOR PLAN

Date: 03/13 | Project No. 199611.0000.0000

Section 02080 – Asbestos Abatement

PART 1 - GENERAL

1.1 SCOPE

- A. The work specified herein shall be the abatement of asbestos-containing materials by persons who are knowledgeable, qualified, and trained in the removal, treatment, handling, and disposal of asbestos-containing material, and the subsequent cleaning of the affected environment. The Contractor shall have a Competent Person in control on the job site at all times during asbestos abatement work. This person must comply with applicable Federal, State and Local regulations that mandate work practices, and be capable of performing the work of this contract.
- B. The Contractor shall be licensed by the State of Connecticut in accordance with State of Connecticut Regulations, Sections 19a-332a-17 through 23. Should any portion of the work be subcontracted, the subcontractor must also be licensed in accordance with these regulations.
- C. The East Hartford Board of Education will retain the services of a State of Connecticut licensed Project Monitor for protection of its interests and those using the building. Pre-abatement, during abatement and post-abatement sampling will be conducted as deemed necessary.
- D. Deviations from this Specification require the written approval of the East Hartford Board of Education.
- E. Restore all work areas and auxiliary areas utilized during abatement to conditions equal to or better than original. Any damage caused during the performance of abatement activities shall be repaired by the Contractor (e.g., paint peeled off by barrier tape, nail holes, water damage, removal of ceiling tiles or concrete blocks, broken glass, etc.) at no additional expense to the East Hartford Board of Education. The Contractor is responsible for protecting all objects in work areas that are permanent fixtures or too large to remove.

The Contractor shall be responsible for the following general requirements:

- 1. Obtain all approvals and permits, and submit all notifications required.
- 2. Provide, erect, and maintain all planking, bracing, shoring, barricades, and warning signs.
- 3. Unless otherwise specified, all equipment, fixtures, piping and debris resulting from demolition shall become the property of the Contractor and shall be removed from the premises.
- 4. Materials to be reused shall be removed with the utmost care to prevent damage of any kind. All material to be reused shall be stored as directed. The Contractor shall coordinate with the East Hartford Board of Education as to the storage location.

5. Materials not scheduled for reuse shall be removed from the site and disposed of in accordance with all applicable Federal, State and Local requirements.
- F. It shall be the responsibility of the Contractor to protect and preserve in operating condition, all utilities traversing the building and site. Damage to any utility due to work under this Contract shall be repaired to the satisfaction of the East Hartford Board of Education at no cost to the East Hartford Board of Education.

1.2 DESCRIPTION OF WORK

- A. The Contractor shall supply all labor, materials, equipment, services, insurance (with specific coverage for work on asbestos), and incidentals which are necessary or required to perform the work in accordance with applicable governmental regulations and these specifications.
- B. The asbestos abatement work shall include the removal of asbestos-containing materials as specified herein. This abatement project was designed by Mr. Robert Romejko, a State of Connecticut licensed Asbestos Project Designer (#000008).

1. Work Areas 1 and 2 – Classrooms

Remove ACM in the form of:

- VAT and mastic

under containment with a pressure differential and contiguous decontamination units. For asbestos mastic removal, utilize shot-blasting.

2. Work Area 3– Classrooms

Remove ACM in the form of:

- VAT and mastic

under containment with a pressure differential and contiguous decontamination units. . For asbestos mastic removal, utilize shot-blasting.

1.3 DEFINITIONS

Accessible - A space easily accessed and which can be entered or seen without demolition.

Adequately Wet - Sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

AHERA - Asbestos Hazard Emergency Response Act - U. S. EPA regulation 40 CFR Part 763 under Section 203 of Title II of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2643. This rule mandates inspections, accreditations of persons involved with asbestos, and -final air clearances following abatement in public and private schools, and public and commercial buildings.

Asbestos - The term asbestos includes chrysotile, amosite, crocidolite, asbestiform tremolite, asbestos, anthophyllite asbestos, actinolite asbestos and any of these minerals that has been chemically treated and/or altered.

Asbestos Abatement - The removal, encapsulation, enclosure, renovation, repair, demolition or other disturbance of asbestos-containing materials except activities which are related to the removal or repair of asbestos cement pipe and are performed as defined in Section 25-32a of the Connecticut General Statutes.

Asbestos-Containing Waste Materials (ACM Waste) - Any waste that either contains or is contaminated with asbestos. This term includes asbestos-containing materials and materials contaminated with asbestos including disposable equipment and clothing, filters from control devices, polyethylene sheeting generated from disassembly of a containment structure, and any other items from within regulated areas which cannot be properly decontaminated.

Asbestos Control Area - An area where asbestos abatement operations are performed which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris. Two examples of an Asbestos Control Area are a "full containment" and a "glovebag".

Asbestos Fiber - A particulate form of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals having a length of five micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

Authorized Asbestos Disposal Facility - A location approved by the Connecticut Department of Environmental Protection for handling and disposing of asbestos waste or by an equivalent regulatory agency if the material is disposed of outside the State of Connecticut.

Category I Non-Friable Asbestos-Containing Material (ACM) - Asbestos-containing packings, gaskets, resilient Floor coverings and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II Non-Friable ACM - Any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Class I Asbestos Work - Activities involving the removal of TSI and surfacing ACM and PACM.

Class II Asbestos Work - Activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III Asbestos Work - Repair and maintenance operations, where ACM, including TSI and surfacing material, is likely to be disturbed.

Class IV Asbestos Work - Maintenance and custodial activities during which employees contact ACM and PACM and activities to clean up waste and debris containing ACM and PACM.

Competent Person - In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition, for Class I and Class II work who is specifically trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763).

Concealed Space - Space which is out of sight. Examples of a concealed space include area above ceilings; below floors; between double walls; furred-in areas; pipe and duct shafts; and similar spaces.

Confined Space - See Permit Required Confined Spaces (PRCS).

Critical Barrier - A minimum of two layers of six (6) mil polyethylene sheeting taped securely over windows, doorways, diffusers, grilles and any other openings between the Work Area and uncontaminated areas outside of the Work Area, including the outside of the building.

Decontamination Enclosure System - A series of rooms separated from the Work Area and from each other by air locks, for the decontamination of workers and equipment.

Demolition - The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

DEP - The Connecticut Department of Environmental Protection, 79 Elm Street, Hartford, CT 06106.

DPH - The Connecticut Department of Public Health, 410 Capitol Avenue, Hartford, CT 06106.

Differential Pressure - A difference in the static air pressure between the Work Area and occupied areas, and is developed by the use of HEPA filtered exhaust fans. This differential is generally in the range of 0.02 to 0.04 inches of water column.

Encapsulant - Specific materials in various forms used to chemically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are four types of encapsulant as follows:

1. Removal Encapsulant (can be used as a wetting agent).
2. Bridging Encapsulant (used to provide a tough durable surface coating to asbestos-containing material).
3. Penetrating Encapsulant (used to penetrate the asbestos containing material down to substrate, encapsulating all asbestos fibers).

4. Lock-down Encapsulant (used to seal off "lock-down" minute asbestos fibers left on surfaces from which asbestos containing materials have been removed).

Encapsulation - The application of an encapsulant to asbestos-containing building materials to control the possible release of asbestos fibers into the air.

Engineering Controls - Controls to include, but not be limited to, pressure differential equipment, decontamination enclosures, critical barriers and related procedures.

Equipment Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled transfer of materials and equipment into or out of the Work Area, typically consisting of a Washroom and a Holding Area.

Exposed - Open to view.

Finished Space - Space used for habitation or occupancy where rough surfaces are plastered, paneled or otherwise treated to provide a pleasing appearance.

Fixed Critical Barrier - Barrier constructed of 2" x 4" wood or metal framing 16" O.C., with 2" plywood on the occupied side and two layers of six (6) mil polyethylene sheeting on the Work Area side to prevent unauthorized access or air flow.

Fixed Object - A piece of equipment or furniture in the Work Area which cannot be removed from the Work Area, as determined by the Project Monitor.

Friable Asbestos Material - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy, that when dry can be crumbled, pulverized or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Full Containment - Two layers of six (6) mil poly on walls and floors, contiguous decontamination units, pressure differential between work area and adjacent area and engineering controls.

Glovebag - A sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used glovebags provide a small Work Area enclosure typically used for small scale asbestos stripping operations. Information on glovebag installation, equipment and supplies, and work practices is contained in 29 CFR 1926.1101).

Glovebag Technique - A method with limited applications for removing small amounts of friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contaminated work area. The glovebag assembly is a manufactured or fabricated device consisting of a glovebag (typically constructed of six (6) mil polyethylene or polyvinyl chloride plastic), two inward projecting long sleeves, 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 or material to be removed and contains all asbestos fibers released during the process. This technique requires AWP application and may

only be used if pre-approved by DPH or with the approval of the Design Consultant, East Hartford Board of Education's Project Monitor and DPH when not pre-approved.

HEPA Filter Equipment - High-efficiency particulate air (HEPA) filtered vacuum and/or exhaust ventilation equipment with a filter system capable of trapping and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 microns in diameter or larger.

Inaccessible - A space not accessible and which cannot be entered or seen without demolition.

Lock-Down - The procedure of spraying polyethylene sheeting and building materials with an encapsulant type sealant to seal in non-visible asbestos-containing residue.

Mini-Containment - A procedure using a single layer of polyethylene sheeting to contain the Work Area. Access to the mini-containment is controlled by an air lock which also serves as a Holding Area. This procedure requires AWP application and may only be used if pre-approved by DPH or with the approval of the Design Consultant, East Hartford Board of Education's Project Monitor and DPH when not pre-approved.

Movable Object - A piece of equipment or furniture in the Work Area which can be removed from the Work Area, as determined by the Project Monitor.

Negative Exposure Assessment - For any one specific asbestos job which will be performed by employees who have been trained in compliance with the standard, the employer may demonstrate that employee exposures will be below the PELs by data which conform to the following criteria:

1. Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the TWA and excursion limit under those work conditions having the greatest potential for releasing asbestos; or
2. Where the employer has monitored prior asbestos jobs for the PEL and the excursion limit within 12 months of the current or projected job, the monitoring and analysis were performed in compliance with the asbestos standard in effect; and the data were obtained during work operations conducted under workplace conditions "closely resembling" the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the employer's current operations, the operations were conducted by employees whose training and experience are not more extensive than that of employees performing the current job, and these data show that under the conditions prevailing and which will prevail in the current workplace there is a high degree of certainty that employee exposures will not exceed the TWA and excursion limit; or
3. The results of initial exposure monitoring of the current job made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee covering operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

Non-Friable Asbestos-Containing Material - Material containing more than 1 percent asbestos as determined using the method specified in Appendix A, subpart F, 40 CFR part 763, section 1,

Polarized Light Microscopy, that when dry cannot be crumbled, pulverized or reduced to powder by hand pressure.

NPE - Negative pressure enclosure.

Owner or Operator of a Demolition or Renovation Activity - Any person who owns, leases, operates, controls and supervises the facility being demolished or renovated or any person who owns, leases, operates, controls or supervises the demolition or renovation, or both.

Permissible Exposure Limit (PEL) - (1) time-weighted average unit (TWA). The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fibers per cubic centimeter (f/cc) or air as an eight (8) hour time-weighted average time (TWA). (2) excursion limit. The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fibers per cubic centimeter of air (f/cc) as averaged over a sampling period of thirty (30) minutes.

Permit Required Confined Spaces (PRCS) - A confined space that has the potential to cause harm to the entrants. These spaces could contain a hazardous atmosphere, material that could engulf the entrant, have an internal configuration that could entrap an entrant and any other serious safety or health hazard. PRCS require special entry precautions which could include retrieval systems, ventilation, monitoring and air line respirators. A written permit is required to be completed prior to entry. All TRC personnel entering a PRCS must follow TRC's health and safety program and the requirements for entering PRCS.

Personal Monitoring - Air sampling within the breathing zone of an employee.

Pre-Clean - The process of cleaning an area before asbestos abatement activities begin to ensure all dust and debris in the area considered to be asbestos-containing are properly contained and disposed of. This increases the likelihood the area will pass aggressive air sampling clearance requirements after asbestos-containing materials have been removed.

Presumed Asbestos-Containing Material (PACM) - TSI and surfacing material found in buildings constructed no later than 1980.

Project Monitor - The certified and licensed individual contracted or employed by the building owner or contractor to supervise and/or conduct air monitoring and analysis schemes. This individual is responsible for recognition of technical deficiencies in procedures during both planning and on-site phases of an abatement project. Requirements for Project Monitor are defined in the Connecticut DPH regulations (Sections 19a-332a-17 to 19a-332a-23, inclusive). In addition to these requirements, this person shall be listed in the American Industrial Hygiene Association's Asbestos Analysts Registry.

Regulated Area - Area established by the employer to demarcate areas where Class I, II and III work is conducted and any adjoining area where debris and waste from such asbestos work accumulate; a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed the Permissible Exposure Limit.

Regulated Asbestos-Containing Material (RACM) - (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that

has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Renovation - Altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting members are wrecked or taken out are demolitions.

Repair - Overhauling, rebuilding, reconstructing or reconditioning of structures or substrates where asbestos, tremolite, anthophyllite or actinolite is present.

Thermal System Insulation (TSI) - Materials applied to pipes, fittings, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

Unfinished Space - Space used for storage, utilities or work area where appearance is not a factor. Examples of an unfinished space include crawlspace; pipe tunnel and similar spaces.

Visible Emissions - Any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Visible Residue - Any debris or dust on surfaces in areas within the Work Area where asbestos abatement has taken place and which is visible to the unaided eye. All visible residue is assumed to contain asbestos.

Waste Generator - Any owner or operator of a source whose act or process produces asbestos-containing waste material.

Waste Shipment Record - The shipping document, required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Wet Cleaning - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

Work Area - Specific area or location where the actual work is being performed or such other area of a facility which the Commissioner determines may be hazardous to public health as a result of such asbestos abatement.

Worker Decontamination Enclosure System - The portion of a Decontamination Enclosure System designed for controlled passage of workers and authorized visitors, typically consisting of a Clean Room, a Shower Room and an Equipment Room that is under negative pressure.

1.4 REFERENCES

- A. The current issue of each document shall govern. Where conflict among requirements or with these specifications exists, the more stringent requirements shall apply.

1. Occupational Safety and Health Administration (OSHA)
 - 29 CFR 1910.1001 - Asbestos, Tremolite, Anthophyllite, and Actinolite
 - 29 CFR 1910.134 - Respiratory Protection
 - 29 CFR 1926.21 - Safety Training and Education
 - 29 CFR 1926.32 - Competent Person
 - 29 CFR 1926.51 – Sanitation
 - 29 CFR 1926.59 - Hazard Communication.
 - 29 CFR 1926.62 - Lead in Construction
 - 29 CFR 1926.200 - Accident Prevention Signs and Tags
 - 29 CFR 1926.417 - Lockout and Tagging of Circuits
 - 29 CFR 1926.1101 - Asbestos
2. Environmental Protection Agency (EPA)
 - 40 CFR 61, Subpart M - National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule
 - 40 CFR 260-271 - Hazardous Waste Disposal
 - 40 CFR 763, Subpart E - Asbestos Hazard Emergency Response Act (AHERA)
 - 40 CFR 763, Subpart G - Worker Protection Rule
3. State of Connecticut, Department of Public Health (DPH) Regulations
 - Section 19a-332a-1 through 19a-332a-16 - Standards for Asbestos Abatement
 - Section 19a-332a-17 through 19a-332a-23 - Licensure and Training
 - Section 19a-333-1 through 19a-333-13 - Asbestos-Containing Materials in Schools
 - Section 22a-209-1; 22a-209-8(i); 22a-449(c)-11; and 22a-449(c)-100 - Hazardous Waste Management Regulations
4. American National Standards Institute (ANSI)
 - ANSI Z9.2 - Fundamentals Governing the Design and Operation of Local Exhaust Systems
 - ANSI Z88.2 - Respiratory Protection
5. American Society of Testing and Materials (ASTM)
 - Section 02080 – Asbestos Abatement 9 of 23**

ASTM E 84 - Surface Burning Characteristics of Building Materials

ASTM E 96 - Water Vapor Transmission of Materials

ASTM E 119 - Fire Tests of Building and Construction Materials

ASTM E 736 - Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members

ASTM E 1368 - Visual Inspection of Asbestos Abatement Projects

ASTM E 1494 - Encapsulants for Spray- or Trowel- Applied Friable Asbestos-Containing Building Materials

6. Underwriters Laboratories, Inc. (UL)

UL 586 - High-Efficiency, Particulate, Air Filter Units

1.5 DOCUMENTATION

A. Submit two copies of the following documentation to ensure compliance with the applicable regulations. An up to date copy shall be retained at the job site at all times. Submission must be made prior to the Pre-abatement Meeting, which will be held two weeks prior to the start of abatement. The General Contractor, Abatement Contractor, Architect, Asbestos Project Designer and Owners Representative shall be present at the meeting.

B. Manufacturer's Catalog Data:

Local Exhaust Equipment
Vacuum Equipment
Respirators
Pressure Differential Automatic Recording Instrument
Surfactant
Chemical Encapsulant
Polyethylene Sheeting
Airless Sprayers
Portable Shower Units
Adhesive Removal Chemicals
MSDS for All Materials Delivered to the Site
Letters of Compatibility for Encapsulant and Coating Materials

C. Statements:

Notification to State of Connecticut Department of Health
(ten (10) days before the start of asbestos abatement)
Notification to State of Connecticut Department of Environmental Protection
(if waste is to be disposed of in Connecticut)
Worker Medical Certification
Worker Training Certification
Worker Respirator Fit Testing

OSHA Laboratory Certification
Contractor's Project Monitor Certification
Landfill Approval
Safety Plan
Respirator Protection Plan
Initial Exposure Assessment

1. Copies of all required notifications, approvals and permits for the removal, disposal and transport asbestos-containing or contaminated materials.
2. Documentation from a physician certifying that all employees who may be exposed to airborne asbestos in excess of the background level have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health affects. In addition, document that personnel have received medical monitoring required in 29 CFR 1926.1101. They shall also be informed of the specific types of respirators the employee shall be required to wear and the work he/she will be required to perform as well as special work place conditions such as high temperature, high humidity and chemical contaminants which to which he/she may be exposed.
3. Documentation certifying that all employees have received training in the proper handling of materials that contain asbestos; understand the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment as indicated in 29 CFR 1926.1101 on an initial and annual basis.
4. Documentation of respiratory fit testing for all employees who must enter the Work Area. This fit testing shall be in accordance with qualitative procedures as detailed in 29 CFR 1926.1101.
5. Qualifications of the Project Monitor the Contractor proposes for air sampling to assure workers are using appropriate respiratory protection in accordance with OSHA Standard 1926.1101. Include the name and address of the testing laboratory proposed to perform air monitoring on behalf of the Contractor, along with their NIOSH PAT Program I.D. number.
6. Establish and supervise in accordance with 29 CFR 1926.21, a program for the education and training of workers in the recognition, avoidance and prevention of unsafe conditions and the regulations applicable to the work environment to control or eliminate any hazards or other exposure to illness or injury. Include any site-specific information to address health and safety procedures unique to this project.
7. Establish a written Respiratory Protection Plan in accordance with 29 CFR 1910.134. This plan shall establish procedures governing the selection and use of respirators and shall include such information as training in the proper use of respirators; medical examination of workers to determine whether or not they

may be assigned an activity where respiratory protection is required; training in proper use and limitations of respirators; respirator fit testing; regular inspection and evaluation of the continued effectiveness of the program; and other elements included in the standard.

8. Demonstrate that employee's exposures will be below the PELs for Class I asbestos work until the employer conducts exposure monitoring and documents that employees on that job will not be exposed in excess of the PELs, or otherwise make a Negative Exposure Assessment. The employer shall presume that employees are exposed in excess of the TWA and excursion limit.

D. Records:

Sign-in/out Logs
Pressure Differential Recording Data
NPE Inspection and Smoke Test Logs
Rental Equipment Statements

When rental equipment is to be used in removal areas or to transport waste materials, submit a copy of written notification provided to the rental company informing them of the nature of use of the rented equipment.

- E. During the asbestos abatement, submit to the Asbestos Project Designer and receive acknowledgment of the following:
 1. Results of the personal air sampling data within one (1) working day of when the sampling was done.
 2. Copies of all waste shipment records of asbestos waste that is transported from the facility site.
- F. At the conclusion of the project, submit to the Asbestos Project Designer and receive acknowledgment of the following:
 1. The original copy of all completed waste shipment records. This shall be submitted to the Asbestos Project Designer within 35 days from the date the waste was transported from the facility site.

1.6 PERSONNEL PROTECTION

- A. Instruct workers in all aspects of personnel protection, work procedures, emergency evacuation procedures and use of equipment including procedures unique to this project.
- B. Ensure workers are fully protected with respirators and protective clothing during work in the Asbestos Control Area, where there is the possibility of disturbing asbestos-containing or asbestos-contaminated materials.
- C. Respiratory protection shall meet the requirements of OSHA as required in 29 CFR 1910.134 and 29 CFR 1926.1101. Provide appropriate respiratory protection for each

worker and ensure usage during potential asbestos exposure. As a minimum, workers shall be equipped with powered air-purifying respirators (PAPR) with HEPA filters.

- D. Select respirators from among those jointly approved as being acceptable for protection by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11. Provide an adequate supply of filter elements for respirators in use.
- E. Minimum respiratory protection shall be as follows:

Airborne concentration of asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals	Required Respirator
Not in excess of 1 f/cc (10 × PEL) or otherwise as required	Half mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5 f/cc (50 × PEL)	Full face piece air purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc (100 × PEL)	Any powered air-purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1000 × PEL)	Full face piece supplied air respirator operated in pressure demand mode.
Greater than 100 f/cc (>1000 × PEL) or unknown concentration	Full face piece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

- Note:
1. Respirators assigned for higher airborne fiber concentrations may be used at lower concentrations.
 2. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.
 3. The Contractor shall provide a full face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus for all persons within the regulated area where apparatus for all persons within the regulated area where Class I work is being performed for which a negative exposure assessment has not been produced and, the exposure assessment indicates the exposure level will not exceed 1 f/cc as an 8-hour time weighted average. A full face piece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus shall be provided under such conditions, if the exposure assessment indicates exposure levels above 1 f/cc as an 8 hour time weighted average.
 4. If compressed air is used for supplied air respirators, this air will meet the requirements for grade D breathing air as described by the Compressed Gas Association Commodity

Specification G-7.1-1996. The compressor will be equipped with the necessary safety devices and sorbents/filters, and be situated to avoid entry of contaminated air. In addition, the compressor will be equipped with alarms to indicate failure or overheating, and additional alarms for indicating the presence of carbon monoxide. Air line couplings will be incompatible with outlets for other gas systems to prevent inadvertent servicing of air line respirators with non-respirable gases.

- F. Provide and require all workers to wear protective clothing in Work Areas where asbestos fiber concentrations exceed permissible limits established by OSHA. Protective clothing shall include impervious coveralls with elastic wrists and ankles, head covering, gloves and foot coverings.
- G. Provide all authorized persons entering contaminated areas with proper respirators and protective clothing.
- H. Ensure that all workers and authorized persons enter and leave the Asbestos Control Area through the Worker Decontamination Enclosure System.
- I. Ensure all contaminated protective clothing remains in the Equipment Room for reuse or disposal of as contaminated waste.
- J. Ensure workers do not eat, drink, smoke or chew gum or tobacco while in the Asbestos Control Area.

1.7 EQUIPMENT REMOVAL PROCEDURE

- A. Clean surfaces of contaminated containers and equipment thoroughly by vacuuming with HEPA filtered equipment and wet wiping before moving such items into the Equipment Decontamination Enclosure System for final cleaning and removal to uncontaminated areas. Ensure that personnel do not leave the Asbestos Control Area through the Equipment Decontamination Enclosure System.

1.8 SEQUENCE OF WORK

- A. Proceed in accordance with the sequence of work as mutually agreed upon with the East Hartford Board of Education.
- B. The following sequence of work shall be used for the asbestos abatement work:
 - 1. A visual inspection of the Work Area to determine pre-existing damage to facility components.
 - 2. Release of work area to the Contractor.
 - 3. All temporary utilities required for the project shall be on site and operational prior to the initiation of asbestos work.
 - 4. Removal of all movable objects from the Work Area undergoing abatement by the Contractor.

5. Abatement of all asbestos-containing materials by the Contractor.
6. Air sampling by the East Hartford Board of Education's Project Monitor for re-occupancy.
7. Cleanup by the Contractor. Work Areas must be returned to their original condition or better.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description. Do not use damaged or deteriorating materials. Material that becomes contaminated with asbestos shall be decontaminated or disposed of as asbestos waste.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fire retardant polyethylene sheet in roll size to minimize the frequency of joints, shall be delivered to job site with factory label indicating four (4) or six (6) mil.
- B. Polyethylene disposable bags shall be six (6) mil with pre-printed label. Disposable bags shall be opaque.
- C. Tape shall be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheet to finished or unfinished surfaces. Tape must be capable of adhering under both dry and wet conditions.
- D. Surfactant (wetting agent) shall consist of fifty (50) percent polyoxyethylene ether and fifty (50) percent polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration one (1) ounce surfactant to five (5) gallons of water or as directed by the manufacturer.
- E. Containers must be impermeable and shall be both air and watertight. Containers shall be labeled in accordance with OSHA Standard 29 CFR 1926.1101 and EPA 40 CFR Part 61.152 as appropriate.
- F. Labels and signs shall conform to OSHA Standard 29 CFR 1926.1101.
- G. Encapsulant shall be bridging or penetrating type which has been approved by the Design Consultant. Usage shall be in accordance with manufacturer's printed technical data. Encapsulant must be compatible with new materials being installed. Encapsulant shall be clear.
- H. Glovebag assembly shall be manufactured of six (6) mil transparent polyethylene or PVC with two (2) inward projecting long sleeve gloves, an internal pouch for tools, and an attached labeled receptacle for waste.

2.2 TOOLS AND EQUIPMENT

- A. Tools and equipment shall be suitable for asbestos removal.
- B. Protective clothing, respirators, filter cartridges, air filters and sample filter cassettes shall be provided in sufficient quantities for the project.
- C. Electrical equipment, protective devices, emergency generators and power cables shall conform to all applicable codes.
- D. Shower stalls and plumbing shall include sufficient hose length and drain system or an acceptable alternate. Showers shall be equipped with hot and cold or warm running water. One shower stall shall be provided for each eight workers.
- E. Exhaust air filtration units shall be equipped with HEPA filters capable of providing sufficient air exhaust to create a minimum pressure differential of 0.02 inches of water column, and to allow a sufficient flow of air through the area. An automatic warning system shall be incorporated into the equipment to indicate pressure drop or unit failure. No air movement system or air filtering equipment shall discharge unfiltered air outside the Asbestos Control Area.
- F. Pressure differential automatic recording instrument shall be provided to ensure exhaust air filtration devices provide the minimum pressure differential required between the Work Area and occupied areas of the facility.
- G. Spray equipment shall be capable of mixing wetting agent with water and capable of generating sufficient pressure and volume. Hose length shall be sufficient to reach all of the Asbestos Control Area.
- H. Vacuum units, of suitable size and capabilities for the project, shall have HEPA filters capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 microns in diameter or larger.
- I. Ladders and/or scaffolds shall be of adequate length, strength and sufficient quantity to support the work schedule.
- J. Other materials such as lumber, nails and hardware necessary to construct and dismantle the decontamination enclosures and the barriers that isolate the Work Area shall be provided as appropriate for the work.

PART 3 - EXECUTION

3.1 PREPARATION OF WORK AREA ENCLOSURE SYSTEM

- A. Prior to beginning work, the Design Consultant, East Hartford Board of Education's Representative and Contractor shall perform a visual survey of the Work Area and list all pre-existing damage to building components. The Contractor shall submit to the East Hartford Board of Education's Representative a list which shall include all damaged areas not scheduled to be repaired under this Contract and include photographs, video tapes as applicable.

- B. Post warning signs meeting the specifications of OSHA 29 CFR 1910 and 29 CFR 1926.1101 at each Regulated Area. In addition, signs shall be posted at all approaches to Regulated Areas so that an employee may read the sign and take the necessary protective steps before entering the area. Additional signs may require posting following construction of work place enclosure barriers.
- C. Utilize engineering controls and personnel protective equipment while installing enclosures and supports when asbestos-containing materials may be disturbed.
- D. When feasible, shut down and lock out electrical power, including all receptacles and light fixtures. Protect receptacles and light fixtures remaining in the Work Area with six (6) mil polyethylene and seal with tape. Protect fire alarm system components remaining in the area with six (6) mil polyethylene and seal with tape. Coordinate all power and fire alarm isolation with the East Hartford Board of Education.
- E. Provide temporary power and lighting, if applicable, and ensure safe installation, including ground fault protection, of temporary power sources and equipment in compliance with applicable electrical code and OSHA requirements. The Contractor is responsible for proper connection and installation of electrical wiring.
- F. Shut down and isolate heating, cooling, and ventilating air systems to prevent contamination and fiber dispersal to other areas of the building. Seal all vents. Construct wooden platform over gas burners and gas trains to prevent damage.
- G. Pre-clean movable objects within the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate and remove such objects from Work Areas to a temporary location.
- H. Pre-clean fixed objects within the proposed Work Areas, using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate, and enclose with two layers of six (6) mil polyethylene sheeting sealed with tape. Objects which must remain in the Work Area and which require special ventilation or enclosure include electrical equipment, pumps, compressors, control panels, and meter equipment.
- I. Clean the proposed Work Areas using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.
- J. Seal off all openings between the Work Area and the uncontaminated areas outside of the Work Area with critical barriers. Doorways and corridors, which will not be used for passage during work, must be sealed with fixed critical barriers.
- K. Conspicuously label and maintain emergency and fire exits from the Asbestos Control Area satisfactory to the Project Monitor.

3.2 WORKER DECONTAMINATION ENCLOSURE SYSTEM

- A. Establish contiguous to the Work Area, a Worker Decontamination Enclosure System consisting of Equipment Room, Shower Room and Clean Room in series. Access to the Work Area shall only be through this enclosure.
- B. Access between rooms in the Worker Decontamination Enclosure System shall be through double flap curtained openings (air locks). Other effective designs are permissible. The Clean Room, Shower Room and Equipment Room located within the Worker Decontamination Enclosure, shall be completely sealed ensuring sole source of airflow into the Asbestos Control Area originates from the outside uncontaminated areas.
- C. The Clean Room shall be adequately sized to accommodate workers and shall be equipped with a suitable number of hooks, lockers, shelves, etc., for workers to store personal articles and clothing. Changing areas of the Clean Room shall be suitably screened from areas occupied by the public.
- D. The Shower Room shall be of sufficient capacity to accommodate the number of workers. Supply warm water to showers. Provide one shower for each eight workers. No worker or other person shall leave an Asbestos Control Area without showering. Shower water shall be collected and filtered using best available technology and dumped down an approved drain.
- E. No personnel or equipment shall be permitted to leave the Asbestos Control Area unless just decontaminated by showering, wet cleaning or HEPA vacuuming to remove all asbestos debris. No asbestos-contaminated materials or persons shall enter the Clean Room.

3.3 EQUIPMENT DECONTAMINATION ENCLOSURE SYSTEM

- A. Establish contiguous to the Work Area an Equipment Decontamination Enclosure System consisting of two (2) totally enclosed chambers divided by a double flap curtained opening. Other effective designs are permissible. This enclosure must be constructed so as to ensure that no personnel enter or exit through this unit.

3.4 SEPARATION OF WORK AREAS FROM OCCUPIED AREAS

- A. Occupied areas and/or building space not within the Asbestos Control Area shall be separated from asbestos abatement Work Areas by means of airtight barriers. Barriers at openings with dimensions exceeding two (2) feet in both directions shall be blocked with fixed critical barriers.
- B. Do not impair required building exits from any occupied building area. Where normal exits have been blocked by the asbestos work, provide temporary exit signs directing building occupants to the nearest available exit location.
- C. For Class I work, visually inspect and smoke test barriers to assure an effective seal. Repair defects immediately.

- D. Create a pressure differential in the range of 0.02 to 0.04 inches of water column between the Work Area and occupied areas by the use of acceptable pressure differential equipment. Provide a sufficient quantity of units to exhaust the volume of air within the Asbestos Control Area a minimum of four times per hour. Continuously monitor the pressure differential between the Work Area and occupied areas utilizing recording type equipment to ensure exhaust air filtration equipment maintains a minimum pressure differential of 0.02 inches of water column.

3.5 ASBESTOS REMOVAL

- A. A Competent Person shall be on the job at all times to ensure the establishment and maintenance of the negative pressure enclosure (NPE) and proper work practices throughout the project.
- B. Do not begin abatement work until authorized by the East Hartford Board of Education's Project Monitor. Follow the steps for abatement as outlined in Section 1.8, Sequence of Work.
- C. For all Class I work, before beginning work within the enclosure and at the beginning of each shift, the NPE shall be inspected for breaches, and smoke tested for leaks, and any leaks sealed. Results of the NPE inspection shall be logged.
- D. Spray asbestos materials with amended water, using airless spray equipment capable of providing a "mist" application to reduce the release of fibers during the removal operation.
- E. In order to maintain indoor asbestos concentrations at a minimum, remove the wet asbestos in manageable sections. Materials shall not be allowed to dry out. Material drop shall not exceed 8 feet. For heights up to 15 feet provide inclined chutes or scaffolding to intercept drop. For heights exceeding 15 feet provide enclosed dust-proof chutes.
- F. Fill disposal containers (six (6) mil polyethylene bags or fiber drums) as removal proceeds, seal filled containers, apply caution labels and clean containers before removal to wash area. Bags shall be securely sealed to prevent accidental opening and leakage by taping in gooseneck fashion. Bags may be placed in drums for staging and transportation to the disposal site. Bags shall be decontaminated by wet cleaning and HEPA vacuuming before being placed in clean drums and sealed with locking ring tops. Large components removed intact may be wrapped in two (2) layers of six (6) mil polyethylene sheeting secured with tape for transport to the waste disposal site. Small components and asbestos containing waste with sharp-edged components (e.g., nails, screws, metal lath, tin sheeting) which could tear polyethylene bags and sheeting shall be placed in clean drums and sealed with locking ring tops. Wet clean each container thoroughly before moving to Holding Area. Ensure that workers do not enter from uncontaminated areas into the Washroom or the Work Area. Ensure that contaminated workers do not exit the Work Area through the Equipment Decontamination Enclosure.
- G. After completion of stripping work, all surfaces from which asbestos has been removed shall be wet brushed, using a nylon brush, wet wiped and sponged or cleaned by an

equivalent method to remove all visible material (wire brushes are not permitted). During this work the surfaces being cleaned shall be kept wet.

- H. If at any time during asbestos removal, should the East Hartford Board of Education's Project Monitor suspect contamination of areas outside the Work Area, the Contractor shall stop all abatement work and take steps to decontaminate these areas and eliminate causes of such contamination. Unprotected individuals shall be prohibited from entering contaminated areas until air sampling and visual inspections determine decontamination.
- I. Containerize asbestos-containing waste material removed daily. Do not allow ACM to remain on the floor overnight, allowing it to dry out.

3.6 CLEAN-UP PROCEDURE

- A. Remove and containerize all visible accumulations of asbestos-containing and/or asbestos-contaminated debris which may have splattered or collected on the polyethylene wall covering. Carefully remove the cleaned outer layer of polyethylene from the walls, fold inward as material is being removed, and place in disposal containers. Any debris which may have leaked behind the outer layer shall be removed by HEPA vacuuming and/or wet cleaning.
- B. Remove contamination from the exteriors of the negative air machines, scaffolding, ladders, extension cords, hoses and other equipment inside the Work Area. Cleaning may be accomplished by brushing, HEPA vacuuming and/or wet cleaning.
- C. The East Hartford Board of Education's Project Monitor shall conduct a thorough visual inspection utilizing a high-intensity flashlight, with the containment barriers in place, to detect visible accumulations of dust or bulk asbestos-containing materials remaining in the Work Area. Should dust, debris or residue be detected, the Contractor shall repeat the cleaning, at the Contractor's expense, until the area is in compliance. The visual inspection will detect incomplete work, damage caused by the abatement activity, and inadequate clean-up of the work site. At the conclusion of the final visual inspection, the East Hartford Board of Education's Project Monitor and the Contractor's supervisor shall certify that they have visually inspected the work area and have found no dust, debris or residue.
- D. Once the area has been re-cleaned, any equipment, tools or materials not required for completion of the work, shall be removed from the Work Area. Negative air filtration devices shall remain in place and operating for the remainder of the clean-up operation.
- E. Apply a lock-down encapsulant to all surfaces within the Work Area from which asbestos has been removed. The Contractor is responsible for ensuring that the encapsulant and the new floor tile mastic are compatible i.e. the new tiles will adhere to the floor.
- F. Air sampling for re-occupancy clearance shall be undertaken using aggressive sampling techniques. Analysis of clearance samples shall follow State of Connecticut Regulations, Section 19a-333-7-(h). Areas which do not comply shall continue to be cleaned by and at the Contractors expense, until the specified Standard of Cleaning is achieved as evidenced by results of air testing. When the Work Area passes the re-occupancy clearance, controls established by this specification may be removed.

- G. Remove all remaining polyethylene, including critical barriers, and Decontamination Enclosure Systems leaving negative air filtration devices in operation. HEPA vacuum and/or wet wipe any visible residue which is uncovered during this process. Dispose of poly as asbestos waste.

3.7 REINSTALLATION OF DISPLACED EQUIPMENT

- A. After re-occupancy is granted, re-secure mounted items removed during the course of the work to their former positions.
- B. Re-establish to proper working order all HVAC, mechanical and electrical systems including lights, exit lights, fire alarm systems and sound systems.
- C. Install new filters in HVAC systems and dispose of used filters as asbestos-containing waste. All systems shall be function tested in the presence of the East Hartford Board of Education's Representative.

3.8 DISPOSAL OF ASBESTOS

- A. Disposal of asbestos-containing and/or asbestos contaminated material shall occur at an authorized site and must be in compliance with the requirements of, and authorized by the Office of Solid Waste Management, Department of Environmental Protection, State of Connecticut, or other designated agency having jurisdiction over solid waste disposal.
- B. Disposal approval shall be obtained prior to commencement of asbestos removal.
- C. Warning signs must be attached to vehicles used to transport asbestos-containing waste. Warning signs shall be posted during loading and unloading of disposal containers. The signs must be posted so that they are plainly visible.
- D. Waste removal dumpsters and cargo areas of transport vehicles shall be lined with a layer of six (6) mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first, and shall be extended up sidewalls 12-inches. Wall sheeting shall overlap floor sheeting 24-inches and shall be taped into place.
- E. The completed waste shipment record shall be provided to the East Hartford Board of Education's Representative.

3.9 CONTRACTOR RESPONSIBILITY

- A. Conduct air sampling, as necessary, to assure that workers are using appropriate respiratory protection in accordance with OSHA Standard 1926.1101. Perform monitoring to determine accurately the airborne concentrations of asbestos to which employees may be exposed. Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8-hour TWA and 30-minute short-term exposures of each employee. Documentation of air sampling results must be recorded at the work site within twenty-four (24) hours of receipt of results, and shall be available for review until the job is complete.

3.10 AIR SAMPLING SCHEDULE

- a. At a minimum, air sampling by the East Hartford Board of Education's Project Monitor will be conducted in accordance with the following schedule:

Abatement Activity	Pre- Abatement	During Abatement	Post Abatement
Greater than 160 s.f./260 l.f.	PCM	PCM	TEM
Tent and Glovebag Procedures	PCM	PCM	PCM

- B. Frequency and duration of the air sampling during abatement will be representative of the actual conditions during the abatement. The size of the asbestos project will be a factor in the number of samples required to monitor the abatement activities. In addition to OSHA compliance monitoring (personal sampling accomplished by the Contractor) the following minimum schedule of samples will be required:

- 1. Background Samples:
 - a. Outside of Work Area - 2.
 - b. Work Area - 3
- 2. During Abatement:
 - a. Outside of building at the exhaust of air filtering device – 1 per shift.
 - b. Work Area – 1 per shift.
 - c. Adjacent to Work Area - 1 per shift.
 - d. Outside of the Equipment Decontamination Enclosure System - 1 during removal of ACM waste.
- 3. Post-Abatement:
 - a. Work Area - At least five (5) per homogenous work site

- C. Post-abatement clearance air monitoring requirements are as follows:

- 1. Air sampling will not begin until at least 12 hours after wet cleaning has been completed and no visible water or condensation remain.
- 2. Sampling equipment will be placed at random around the Work Area.
- 3. The representative samplers placed outside the Work Area but within the building will be located to avoid any air that might escape through the isolation

- barriers and will be approximately 50 feet from the entrance to the Work Area, and 25 feet from the isolation barriers.
4. The following aggressive air sampling procedures will be used within the Work Area during all air clearance monitoring:
 - a. Before starting the sampling pumps, direct the exhaust from forced air equipment (such as a 1 horsepower leaf blower) against all walls, ceilings, floors, ledges and other surfaces in the Work Area. This should take at least 5 minutes per 1000 SF of floor area.
 - b. Place a 20-inch fan in the center of the room. (Use one fan per 10,000 cubic feet of room space.) Place the fan on slow speed and point it toward the ceiling.
 - c. Start the sampling pumps and sample for the required time.
 - d. Turn off the pump and then the fan(s) when sampling is complete.
 5. Air volumes taken for clearance sampling shall be sufficient to accurately determine (to a 95 percent probability) fiber concentrations to 0.010 f/cc of air.
 6. Each homogeneous Work Area, which does not meet the clearance criteria, shall be thoroughly re-cleaned using HEPA vacuuming and/or wet cleaning, with the negative pressure ventilation system in operation. New samples shall be collected in the Work Area as described above. The process shall be repeated until the Work Area passes the test, with the **cost of repeat sampling being borne entirely by the Contractor.**
 7. For an asbestos abatement project with more than one homogeneous Work Area, the release criterion shall be applied independently to each Work Area.

3.11 ACTION CRITERIA

- A. If air samples collected outside of the Work Area during abatement activities indicate airborne fiber concentrations greater than original background levels or greater than 0.050 f/cc, as determined by Phase Contrast Microscopy, whichever is larger, an examination of the Work Area perimeter shall be conducted and the integrity of barriers shall be restored. Cleanup of surfaces outside the Work Area using HEPA vacuum equipment or wet cleaning techniques shall be done prior to resuming abatement activities.

END OF SECTION

Department of Construction Services
Bureau of School Facilities

INDOOR AIR QUALITY CERTIFICATION

Pursuant to Section 10-291 of the Connecticut General Statutes (C.G.S.)

District	State Project No.	Facility
East Hartford	043-0235CV Asbestos Floor Tile	Barnes School

C.G.S. 10-291(a) In projects involving new construction, extensions, or replacement of a building, the town or regional board of education and the building committee of such town or district has completed a Phase I Environmental Site Assessment in accordance with the American Society for Testing and Materials Standard # E-1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, or similar subsequent standards. Phase II and Phase III assessments have been completed when determined to be necessary by a previous assessment, and any additional work required to be performed as a result of these assessments has been incorporated into the project contract documents or has been completed prior to the start of this project. (See attached report conclusions)

C.G.S. 10-291(b)(1) This site is not in an area of moderate or high radon potential, as indicated in the Department of Environmental Protection's Radon Potential Map, or similar subsequent publications or the school building project plan incorporates construction techniques to mitigate levels in the air of the facility. In the case of existing buildings without floor slab replacement, C.G.S. 10-220 requires the local board of education to monitor radon levels in the air instead.

C.G.S. 10-291(b)(2) Where plans incorporate new roof construction or total replacement of an existing roof, they provide for the following:

- (A) A minimum roof pitch of one-half inch per foot, or a roof pitch waiver has been received from the Deputy Commissioner of the Department of Construction Services;
- (B) A minimum 20-year unlimited manufacturer's guarantee for water tightness covering material and workmanship on the entire roofing system;
- (C) The inclusion of vapor retarders, insulation, bitumen, felts, membranes, flashings, metals, decks and any other feature required by the roof design; and
- (D) All manufacturers' materials to be used in the roofing system are specified to meet the latest standards for individual components of the roofing systems of the American Society for Testing and Materials.

C.G.S. 10-291(b)(3) In the case of a major alteration, renovation or extension of a building to be used for public school purposes, the plans incorporate the guidelines set forth in the Sheet Metal and Air Conditioning Contractors National Association's publication entitled "Indoor Air Quality Guidelines for Occupied Buildings Under Construction" or similar subsequent publications; or

C.G.S. 10-291(b)(4) In the case of a new construction, extension, renovation or replacement, the building maintenance staff responsible for this facility are trained or are receiving training, or that the applicant plans to provide training in the appropriate areas of plant operations including, but not limited to, heating, ventilation and air conditioning systems pursuant to C.G.S. Section 10-231e, with specific training relative to indoor air quality.

We, the undersigned, certify for the above noted project that the statements above are true.

Superintendent of Schools _____ Date 1/13/14
(print name) Nathan Quesnel

Architect _____ Date _____
(print name) _____ Professional Seal: _____

Engineer Robert Romejko Date 1/15/14
(print name) Robert Romejko Professional Seal: _____



**East
Hartford
Public
Schools**

"Schools that are the Pride of our Community"

Nathan D. Quesnel, Superintendent of Schools

January 8, 2014

Mr. Rich Snedeker
State of Connecticut
Division of Construction Services
Department of Administrative Services
165 Capitol Avenue, Room 483
Hartford, CT 06106

Re: Natural Light Letter-
Project 043-0235CV Barnes School Removal of Asbestos Floor Tile

Dear Mr. Snedeker:

As required by Connecticut General Statutes Section 10-283(a)(1) as amended, I offer the following:

I affirm that, during the processes involved in applying for the grant for this project, our school district considered the maximum of natural light and the use and feasibility of wireless connectivity technology in any areas of new school construction and areas where alteration or renovation of a school building are scheduled to occur.

If you have any questions please contact Albert Costa, Director of Facilities at 622-5952.

Sincerely,

Nathan D. Quesnel
Superintendent of Schools

CC: Mr. Costa





**East
Hartford
Public
Schools**

"Schools that are the Pride of our Community"

Nathan D. Quesnel, Superintendent of Schools

January 8, 2014

Mr. Rich Snedeker
State of Connecticut
Division of Construction Services
Department of Administrative Services
165 Capitol Avenue, Room 483
Hartford, CT 06106

Re: Phasing Letter – Project 043-0235CV
Barnes School Removal of Asbestos Floor Tiles

Dear Mr. Snedeker:

As required by your department, this serves to inform you that this project will not require multiple phasing and will therefore be submitted as a single phase project.

If you have any questions please contact Albert Costa, Director of Facilities at 622-5952.

Sincerely,

Nathan D. Quesnel
Superintendent of Schools

CC: Mr. Costa





**East
Hartford
Public
Schools**

"Schools that are the Pride of our Community"

Nathan D. Quesnel, Superintendent of Schools

January 8, 2014

Mr. Rich Snedeker
State of Connecticut
Division of Construction Services
Department of Administrative Services
165 Capitol Avenue, Room 483
Hartford, CT 06106

Re: Designated Accessible Schools Letter-
Project 043-0235CV Barnes School Removal of Asbestos Floor Tiles.

Dear Mr. Snedeker:

This letter will serve to inform you that the following is a complete list of the East Hartford Public School facilities by grade levels, indicating which are and which are not designated accessible to persons with disabilities per Federal Law Regulations, including Section 504 of the Rehabilitation Act of 1973.

Designated Accessible Schools		
School ID	School Name	Grade Level
01	Barnes School	K-2
04	Goodwin	K-6
05	Hockanum	K-5
06	Mayberry	K-5
08	Norris	K-6
09	O'Brien	K-6
10	O'Connell	3-6
12	Silver Lane	K-6
19	Pitkin	K-6
20	Langford	K-6
15	Sunset Ridge	4-6
25	Woodland/TEP Program	1-12
31	East Hartford Middle	6-8
32	East Hartford High	9-12
36	CIBA	9-12
63	Stevens School / Synergy	9-12
16	Willowbrook	B3/HS
41	Central Administration	
50	Department of Facilities	

If you have any questions please contact Albert Costa, Director of Facilities at 622-5952.

Sincerely,


Nathan D. Quesnel
Superintendent of Schools

CC: Mr. Costa

