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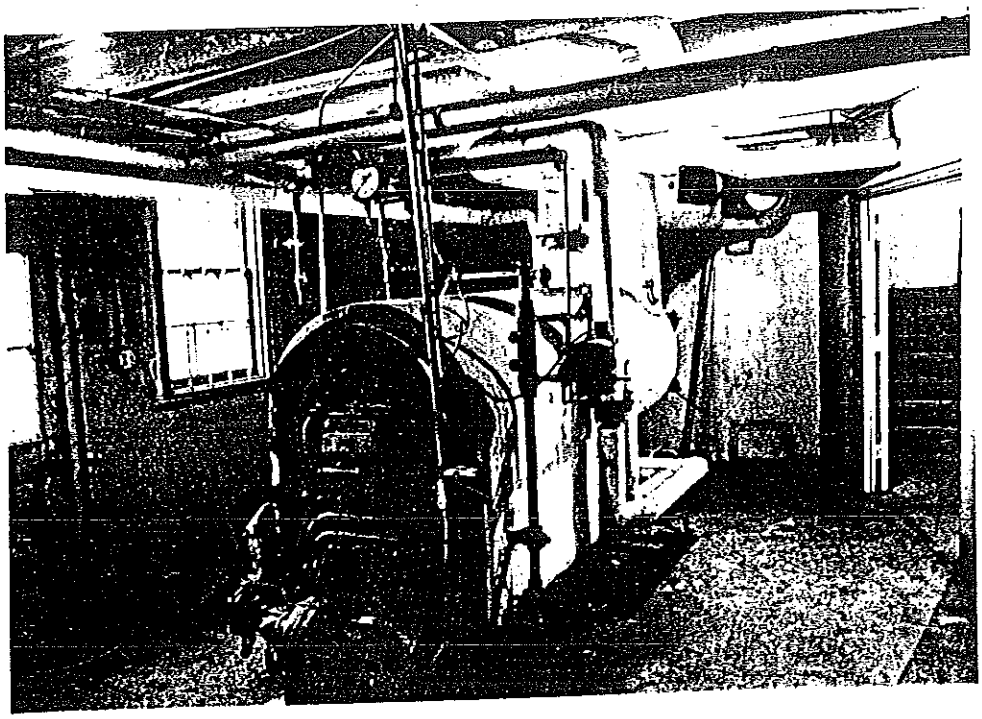
ASBESTOS MANAGEMENT PLANS



NEW MILFORD PUBLIC SCHOOLS

PREPARED BY :

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Returned

ASBESTOS MANAGEMENT PLAN
HILL AND PLAIN SCHOOL

Prepared By :
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Consulting Services
November, 1986

CONTENTS

Each section of this document contains a separate asbestos management plan for each building owned by the New Milford Public Schools, in accordance with Public Act 85-541.

A. School Buildings

(1) Hill and Plain School.

(2) John Pettibone School.

(3) New Milford High School.

(4) Northville School.

(5) Schaghticoke Middle School.

B. Administration and Maintenance Buildings.

(1) Bridge St. Maintenance Building.

(2) East St. Administration Building.

ASBESTOS MANAGEMENT PLAN : THE HILL AND PLAIN SCHOOL

The Hill and Plain School was surveyed and evaluated for asbestos containing materials in August and September, 1986. The New Milford School District has developed a series of management strategies for each location where asbestos was identified in the building. The remedial action prescribed for each of these areas is the foundation for this asbestos management plan.

The purpose of the plan which follows is to provide the documentation of the asbestos surveys and to describe the management strategies for each area where asbestos is present in the school. The specific objectives of this plan are as follows :

(1) Provide a description of the school buildings which highlights the locations where asbestos containing materials are present ;

(2) Describe the methodology which was used for surveying and evaluating materials in the school which were suspected to contain asbestos ;

(3) Summarize the locations and conditions of materials which were confirmed as asbestos ;

(4) Describe the remedial strategy selected for each site which has asbestos present in the school with a justification for selecting this course of action ;

(5) Develop a system for implementing the plan which includes the following elements :

   a. Timetable for implementing remediation strategy ;

   b. Interim strategies for minimizing fiber release from the areas with asbestos until a permanent method of remediation can be implemented ;

   c. Procedure for implementing the remedial strategy ;

   d. Specifications for removal of asbestos containing materials;

(6) Establish an ongoing management and monitoring program for all asbestos containing materials which are left in place.

This asbestos management plan is submitted to the State Department of Education in accordance with Public Act 85-541 of the Connecticut General Statutes.

TABLE OF CONTENTS FOR ASBESTOS MANAGEMENT PLAN

Laboratory Reports are in the Appendix at the End of the Plan.

A. GENERAL DESCRIPTION OF BUILDING.

The Hill and Plain School was built in 1967, with a new addition constructed in 1986. The general layout of the building is illustrated on figure 1.

The Hill and Plain School is a primary educational facility which includes grades K - 3. In addition to education, extra curricular events may periodically be conducted in the gymnasium and the music area.

The school employs a staff of 60 and has a student body which numbers 606.

The building is constructed on a slab foundation, with brick outer walls and a corrugated steel frame. The inner walls are constructed of cinder blocks. A suspended ceiling exists in most of the building, resulting in a ceiling plenum, with water pipes and air ducts located near the true ceiling.

Ventilation is provided by an air handling system which draws air into return ducts and supplies air by means of air handling units which are located on the roof, forcing air into each room by means of supply ducts.

All areas of the school are serviced by a central boiler room. Heat is provided by two oil burning boilers which convey heat through steam pipes that traverse the building through the pipe tunnels. The pipe tunnels begin at the boiler room and are located below grade, throughout the perimeter of the building, branching up to basebard radiators which are located in each of the rooms.

B. DELINEATION OF AREAS

For the purpose of this evaluation, the school was divided into 9 sections of similar design, construction or function. Table 1, below, lists these areas and indicates whether asbestos was identified in each location.

TABLE 1 : AREAS OF HILL AND PLAIN SCHOOL SURVEYED FOR ASBESTOS

location	materials evaluated	prescence of asbestos
boiler room *	boilers, h.w. tank, pipes	YES
pipe tunnels *	pipe insulation	YES
ceiling plenum	ceiling, ducts, pipe insulation	NO
cafeteria	ceiling, floor	NO
office area	ceiling, floor, walls	NO
gymnasium	floor, ceiling, curtains	NO
kindergarten	floor, ceiling, assessory mat'ls	NO
music room	floor, ceiling, curtains	NO
classrooms	room by room search : floor, ceiling, walls, assessory mat'ls	NO

* The specific locations which contain asbestos are described in more detail on Table 2 and in narrative text.

C. METHOD OF EVALUATION

The Hill and Plain School was surveyed for asbestos containing materials and evaluated in the following manner :

(1) Blueprints of the building were examined to determine the layout of specific sections of the building and to determine whether asbestos was specified for use in any area of the building ;

(2) An inspection of each room of the building was conducted to provide a descriptive documentation of design, construction, and building materials to identify substances which are positively asbestos, non asbestos materials and materials which are suspected to contain asbestos, which require an analytical confirmation of its constituency. The maintenance staff of the School District was consulted with regard to specific locations of areas (such as pipe tunnels) and regarding recent construction activities affecting insulation and other asbestos containing materials.

(3) All asbestos suspect materials (identified above) were sampled in accordance with the State Department of Health Services guidelines for identification of asbestos. These samples were submitted to the State Department of Health Services Laboratory for analysis of asbestos content.

(4) Following receipt of the laboratory reports, all locations in the building where asbestos was confirmed to be present were inspected again and evaluated with respect to its condition in accordance with the State Health Department's "decision protocol" process.

D. LOCATIONS WHERE ASBESTOS IS PRESENT IN THE HILL AND PLAIN SCHOOL

Table 2 indicates the location where asbestos was positively identified in the Hill and Plain School. The table also describes the the condition, the degree of friability, and the potential for future deterioration of each asbestos product in the building. The asbestos materials were confirmed, in all cases, by a laboratory analysis of bulk samples which were taken from the building. The analytical reports are attached to the appendix at the end of this document.

Exhibits A - C are the "school facility" and "area reports" (EDO75A and EDO75B), which provide information on the specific locations where asbestos is present in the building.

The diagrams on the following pages illustrate the areas where asbestos is present in the building. Figure 1 is an overall diagram of the school building, illustrating the general locations of the areas described on table 2. Figures 2 - 3 are site specific illustrations of each asbestos area in the building, specifying the total area of asbestos at each location.

E. AREA REMEDIATION STRATEGIES.

This section outlines the management strategies which will be used for each location in the building where asbestos is present. This narrative also includes a justification for the remediation option which was selected.

(1) Boiler room.

The insulation on the boilers, breeching, stack, hot water tank, and the pipe elbows contains asbestos. The insulation on the boilers, stack and the hot water tank are characterized in a different manner than the pipe elbow insulation.

The asbestos on the elbows is cloth wrapped and in generally good condition. The cloth wrap limits the friability of this material. However, if the wrap is punctured or if it delaminates from the asbestos over the elbow, the asbestos will become friable. Such damage can be caused by mechanical impact or by water damage. Due to the large number of elbows in this room and the maintenance operations which occur in this area, there is a potential for future damage to the elbow insulation.

The asbestos insulation on the boiler surfaces, the breeching, the stack and the water tank is friable, has deteriorated in several areas to a poor condition and will only get worse in time. The large surface areas of friable asbestos results in a high potential for chronic exposure to the maintenance and janitorial staff who work in this room.

All of the asbestos in this location will be removed during the summer of 1987. The large amount of friable asbestos which is present in this area poses an ongoing potential for asbestos exposure to employees and contractors who work in this room. Therefore, the removal of asbestos under contract specifications is the permanent solution of choice. Contract specifications for the removal project are described in Section G.

Due to the large scope of this job, and the importance of performing the work when school is not in session, the work is scheduled for the summer 1987 school recess. In the interim period, the management program described in Section F will be instituted.

(2) Pipe tunnels.

The pipe elbows in the tunnels are insulated with asbestos which is covered with a cloth wrap, as in the boiler room. The elbows in the pipe tunnel are much more susceptible to water damage; there are more of them, the conditions in the tunnel are more damp, and a minor water leak is likely to go unnoticed for a long period of time causing the outer wrap and the asbestos insulation to deteriorate over a protracted period of time.

Although the elbows which were observed were in good condition, there is a strong likelihood that some of the elbow insulation, in some part of the vast tunnel area, are damaged and friable. The tunnel area is used by the maintenance staff for emergency repairs. The tunnels are relatively isolated and access is limited by metal doors located in the boiler room.

Removal of asbestos from the tunnels is a difficult operation, complicated by tight working conditions and the dirt floor. Asbestos removal in the pipe tunnels was not selected as a remedial option at this time for the following reasons :

a. It is feasible to control and limit access to the tunnels and minimize employee exposure through a management and monitoring program ;

b. The high priority of removing asbestos from the boiler room in the building (as well as major removal projects from other schools in the District) will involve a large workload for the contractor who is selected. It is imperative that these jobs are performed carefully without a pressure schedule.

c. Removal from the pipe tunnels involves unique conditions which require specialized procedures to prevent further contamination of the entire area. If this project is scheduled in the future, it should be done as a single removal job for a given summer.

Therefore, the remedial strategy for this area involves a management and monitoring program, as described in Section F. This process includes measures for isolating the tunnels from the remainder of the building, methods for controlling access to the tunnels, and a system for protecting employees who must enter the tunnels for repairs. The effectiveness of the management program and the condition of the asbestos in the tunnel will be evaluated prior to the summer, 1988 school recess (and annually thereafter). If the system for controlling access and reducing exposures is not functioning effectively, a removal of asbestos from the tunnels under contract specifications will be implemented during that summer.

F. MANAGEMENT AND MONITORING PROGRAM FOR ASBESTOS REMAINING IN SCHOOL BUILDING.

The management strategy for the pipe tunnels involves keeping the asbestos in place without an active remediation project. Also, there will be a short period of time during which the asbestos in the boiler room will remain in place until a removal project is initiated.

A "passive remedial option" has been developed for the pipe tunnels along with interim measures for the boiler room. This management program focusses on staff training, control over assigned work in these areas, and a periodic inspection of the asbestos.

The specific details of the staff training which is referenced throughout this section are described in the document, titled :

" Inservice Training Program for Maintenance Staff : Mininizing Asbestos Exposure to Staff and Building Occupants

New Milford Public Schools
(November, 1986). "

(1) Pipe Tunnels.

The first task for this area is to isolate the tunnels from the remainder of the building. This will be accomplished by the following measures :

a) All holes leading from the pipe tunnels to the classrooms above will be sealed ;

b) All accessways to the tunnels will be locked, except for one entrance behind the boiler. The tunnel entrance in the boiler room will be placarded with a warning notice and access will be controlled by limiting the use of the boiler room to maintenance personnel ;

c) Entrance into the tunnel will be restricted to maintenance personnel or contractors with assigned tasks.

The control of access to the tunnels will be instituted immediately. The sealing of holes which lead from the tunnels to the radiators will be accomplished during the summer of 1987.

The major aspect of minimizing exposures to asbestos in this area is through education of the staff. An initial inservice training session will be conducted in November, 1986, which will cover the following topics :

. Hazards associated with asbestos on pipe elbows.
. Equipment and clothing required for safe entry and work in this area
. Procedures for the proper use of asbestos respirators.
. Emergency cleanup procedures for asbestos which has become dislodged or delaminated from the pipe elbows.
. Decontamination procedures for personnel after work is complete in the pipe tunnels.

By January 1, 1987, the New Milford School District will purchase a sufficient number of respirators for the employees designated to work in the tunnels. Also, the District will purchase a glove bag enclosure system which will be used for emergency repair of pipe elbows which have become damaged.

The asbestos coordinator will designate specific maintenance personnel to conduct emergency work in the pipe tunnels. These individuals will be the only staff who are allowed access

EXHIBIT A (76)

CONNECTICUT DEPARTMENT OF EDUCATION

ED 075B
SCHOOL FACILITY ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

SCHOOL DISTRICT: NEW MILFORD — DISTRICT CODE: 096

FACILITY NAME: HILL AND PLAIN SCHOOL — FACILITY ADDRESS: OLD TOWN PARK ROAD

Year of Construction 1967 — Year of Additions (if any) _____

CERTIFICATION:

Attached are 3 Area Asbestos Inspection Reports (ED 075A) for the above referenced school facility.

☒ Check this box if this school facility has been inspected according to Public Act 85-541, state regulations enacted pursuant thereto and decision protocols.

☒ Check this box if this school facility has been inspected prior to January 1, 1988 in order to comply with Environmental Protection Agency (EPA) School Asbestos Inspection Rule.

Name of Inspector JACK S. KOZUCHOWSKI — Phone 203-792-361

Signature of Inspector Jack S. Kozuchowski — Date 11/26/86

☐ Check this box if this building had been previously inspected and was found to have asbestos containing materials which have subsequently been removed. Please submit documentation supporting this fact.

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p. 4a

TABLE 2 : SUMMARY OF ASBESTOS LOCATIONS - HILL AND PLAIN SCHOOL

location of asbestos	friability	condition	damage potential	management strategy selected
Boiler Room: - boilers - stacks - breeching - h.w. tank	high	poor - deteriorated and delamination	potential for impact and vibration.	Removal under contract specifications.
Boiler Room: - pipe elbows	low	fair-good: cloth wrap on elbows is intact.	potential for water damage and impact.	Implement management & monitoring program.

EXHIBIT B

0075A

CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
HILL AND PLAIN SCHOOL	OLD TOWN PARK ROAD; NEW MILFORD	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
1: BOILER ROOM	895	6

1. Samples: Description of material sampled BOILER/TANK: FIBROUS INSULATION WITH OUTER WRAP; ELBOWS: FIBROUS INSULATION WITH CLOTH WRAP
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Trowled on ___ Boiler Lagging ✓
   Pipe Insulation ✓ Duct ___ Other (please explain) ___ {SEE COMMENT}
3. Friability: High ✓ Moderate ___ Low ✓ Not Friable ___
   Sq. Footage Area 395 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ___ None ✓
   Physical Damage: High ___ Moderate ✓ Low ___ None ___
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ___
   Contact Potential: High ___ Moderate ___ Low ✓ None ___
   Distance to items needing maintenance:
   Electrical ___ Plumbing 5 feet Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ✓ Carpet ___ Tile ___ Wood ___ Other ___
   Ceiling Type: Concrete ___ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ___
   Suspended metal lath ___ Other ___
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other LOCKING DOORS None ___
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area MECHANICAL - BOILER MAINTENANCE Activity: High ___ Moderate ___ Low ✓
   What is adjacent to the area? KITCHEN
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	___ hrs/day	___ days/week
Staff 6	1 hrs/day	2 days/week

Comments: ASBESTOS INSULATION ON BOILERS AND TANK IS CRACKED, LOOSE, DELAMINATED AND, HENCE, HIGHLY FRIABLE INSULATION ON ELBOWS IS WRAPPED WITH NEW ASBESTOS OUTER CLOTH, ~~WHICH~~ ALL OF WHICH ARE IN GOOD CONDITION.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS ON BOILERS AND TANK IS IN BAD CONDITION. ASBESTOS INSULATION ON PIPE ELBOWS IS NOT IN BAD CONDITION, BUT POTENTIAL EXISTS FOR FUTURE IMPACT DAMAGE.
ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL AND REPLACEMENT. INTERIM MANAGEMENT MEASURES TO BE IMMEDIATELY IMPLEMENTED.

-0 075A

CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME: HILL AND PLAIN SCHOOL
FACILITY ADDRESS: OLD TOWN PARK RD., NEW MILFORD, CT.
INSPECTED BY (Name and Telephone): JACK S.
DATE:

AREA DESCRIPTION: PIPE TUNNELS
AREA SQUARE FEET: 2880
AREA POPULATION: 0

2.

1. Samples: Description of material sampled ~~FIBROUS~~ FIBROUS MATERIAL WITH OUTER CLOT WRAP
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Trowled on ___ Boiler Lagging ___
   Pipe Insulation ✓ Duct ___ Other (please explain) ___
3. Friability: High ___ Moderate ___ Low ✓ Not Friable ___ (SEE COMMENT)
   Sq. Footage Area 1258 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ✓ None ___ (SEE COMMEN
   Physical Damage: High ___ Moderate ___ Low ✓ None ___
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ___
   Contact Potential: High ___ Moderate ___ Low ✓ None ___
   Distance to items needing maintenance:
   Electrical ___ Plumbing 1-5' Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ✓ Carpet ___ Tile ___ Wood ___ Other ___
   Ceiling Type: Concrete ✓ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ___
   Suspended metal lath ___ Other ___
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other ___ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) ___ Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area ~~EMERGENCY~~ PLUMBING REPAIRS Activity: High ___ Moderate ___ Low ✓
   What is adjacent to the area? ___
   What is above the area? ___
10. Population Exposed:
    Number of Individuals: Length of Exposure: Frequency of Exposure:
    Students 0 ___ hrs/day ___ days/week
    Staff 0 [EXCEPT FOR RARE ENTRIES] ___ hrs/day ___ days/week

Comments: ~~INSULATION~~ INSULATION ON PIPE ELBOWS OBSERVED WAS INTACT ~~WITH~~ IN A NON FRIABLE CONDITION. HOWEVER, THERE IS A STRONG PROBABILITY THAT THE INSULATION ON SOME ELBOW IN THE VAST TUNNEL AREA HAS BECOME DAMAGED.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS ON PIPE ELBOWS OBSERVED WAS NOT IN BAD CONDITION; NO CURRENT HAZARD WAS FOUND, ~~AND~~ HOWEVER, THE CONDITIONS IN THIS AREA SUGGEST A STRONG POTENTIAL FOR MOISTURE DAMAGE.

ASBESTOS MANAGEMENT PLAN SPECIFIES IMPLEMENTATION OF A MANAGEMENT / MONITORING PROGRAM.

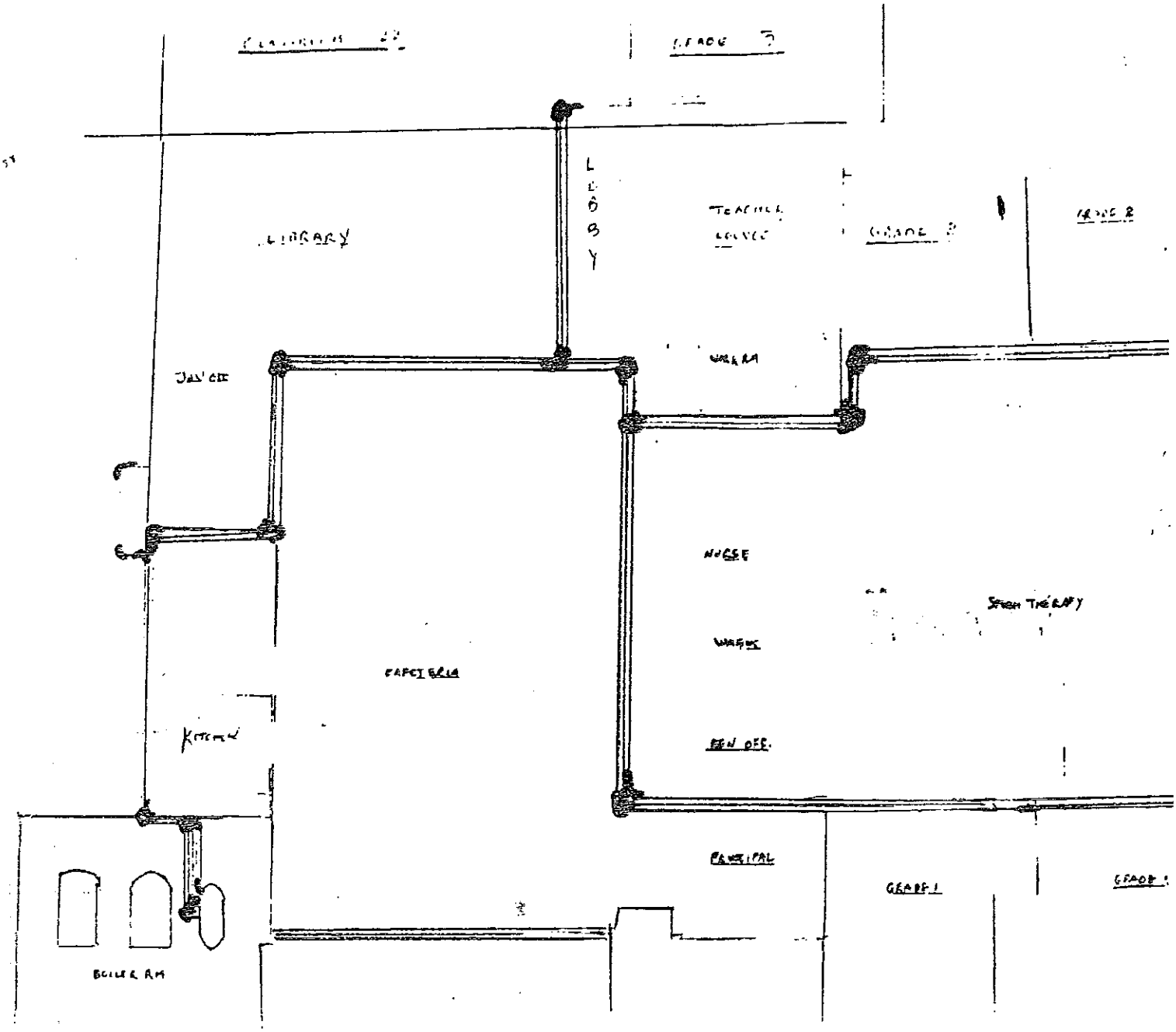
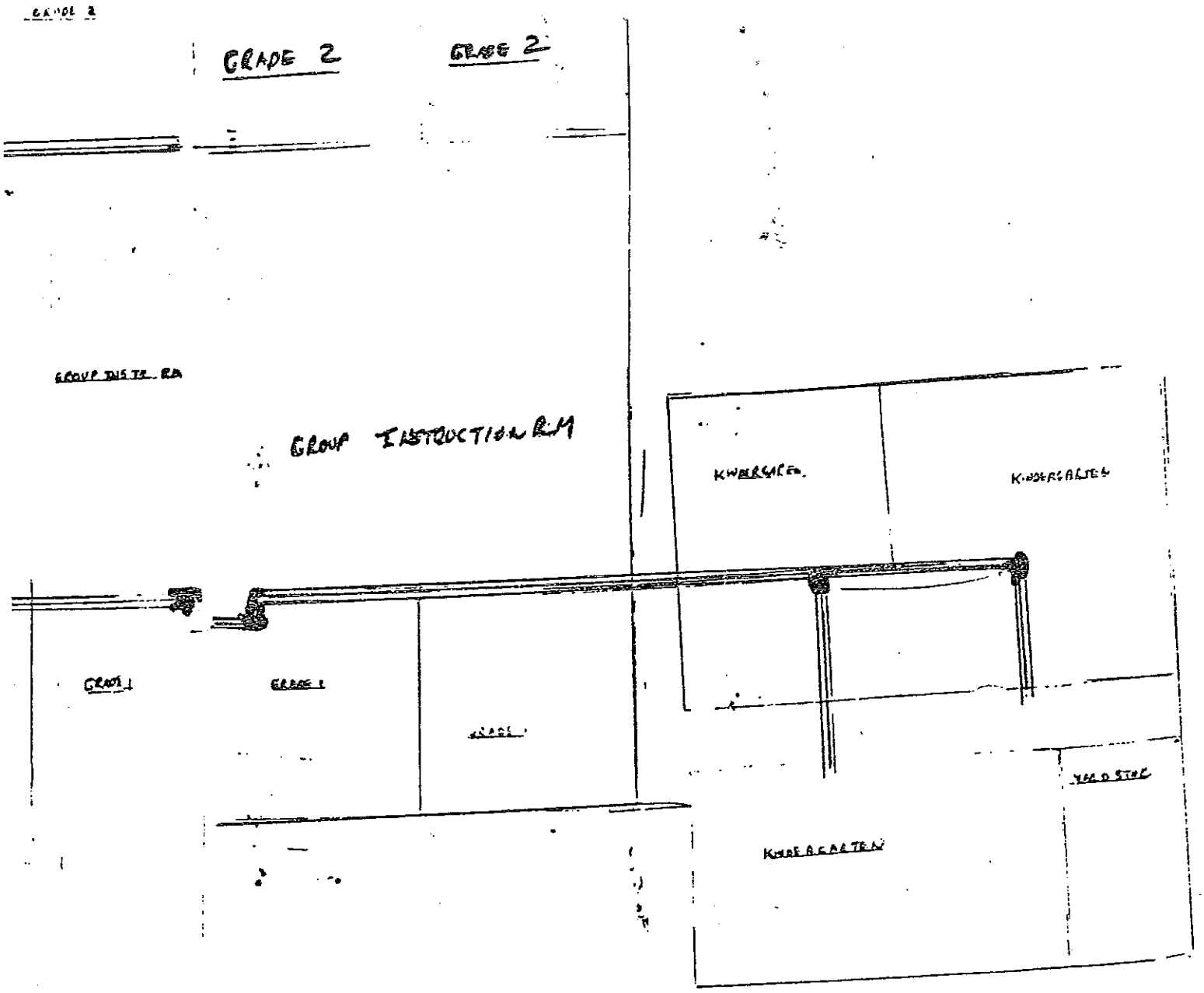


FIGURE 1 : General Diagram of the Hill and Plain School Bui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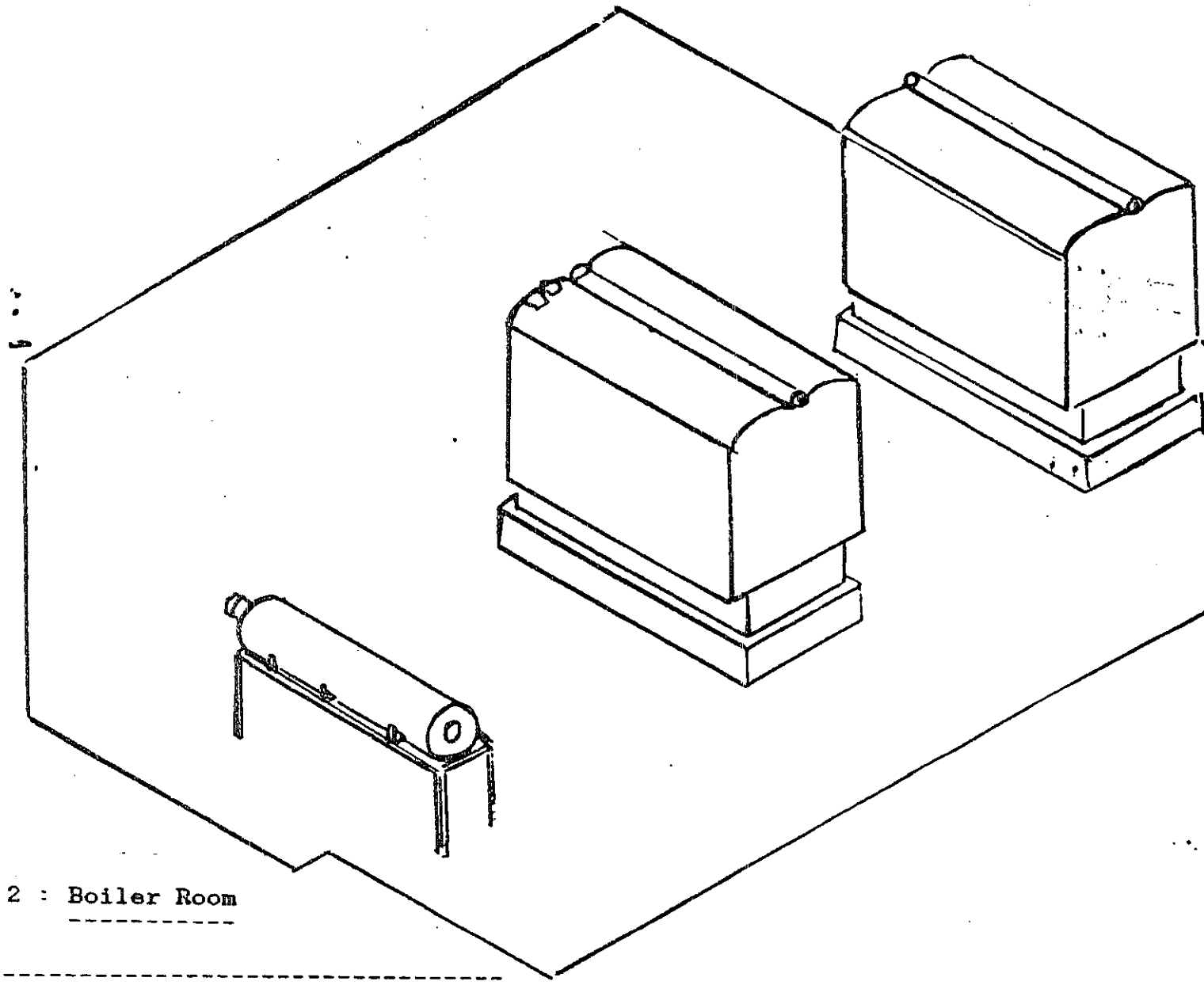


FIGURE 2 : Boiler Room

Area of Asbestos (square feet)	Boilers	245
	Hot water tank	100
	Pipe elbows	50
	Total	395

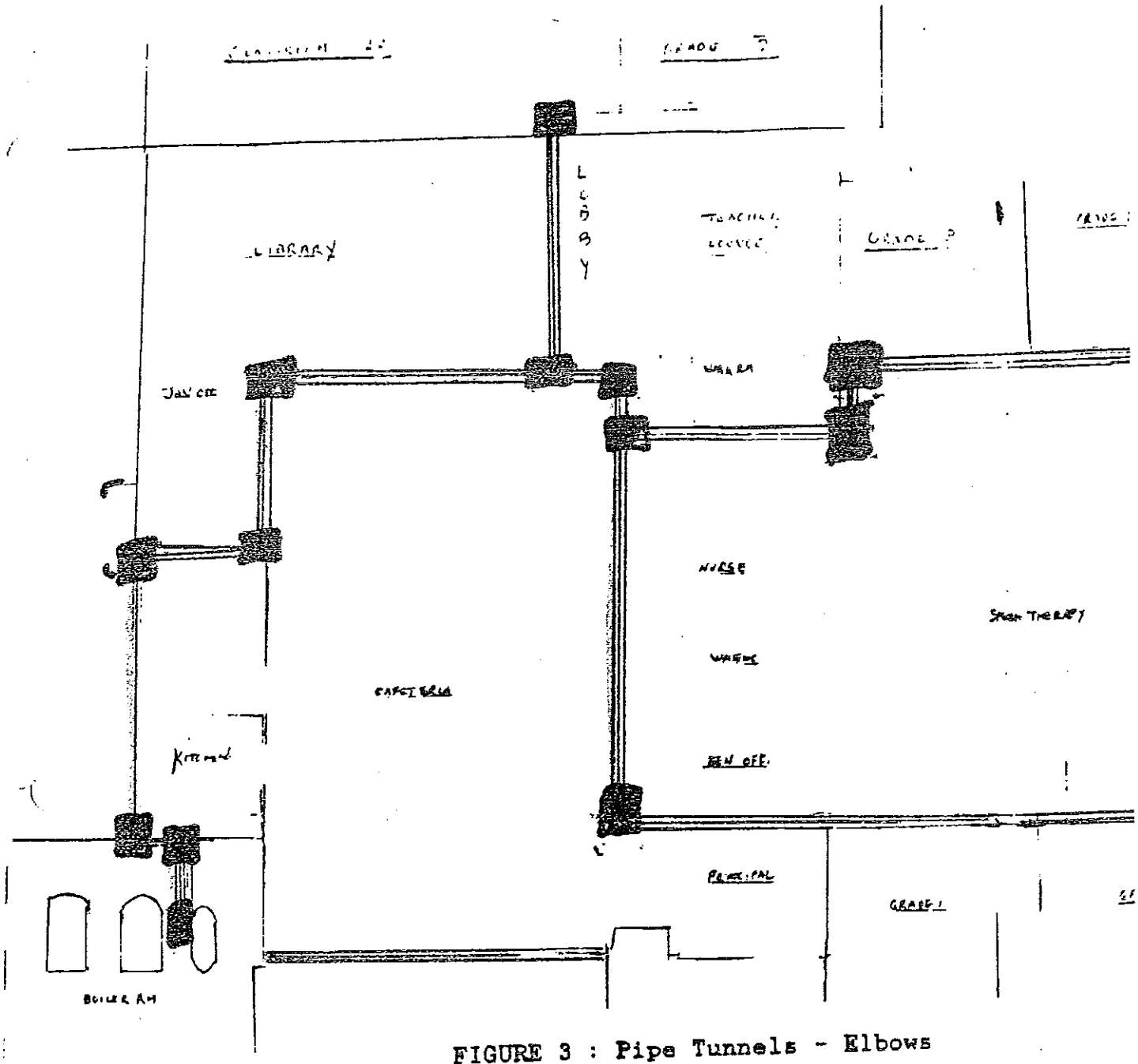


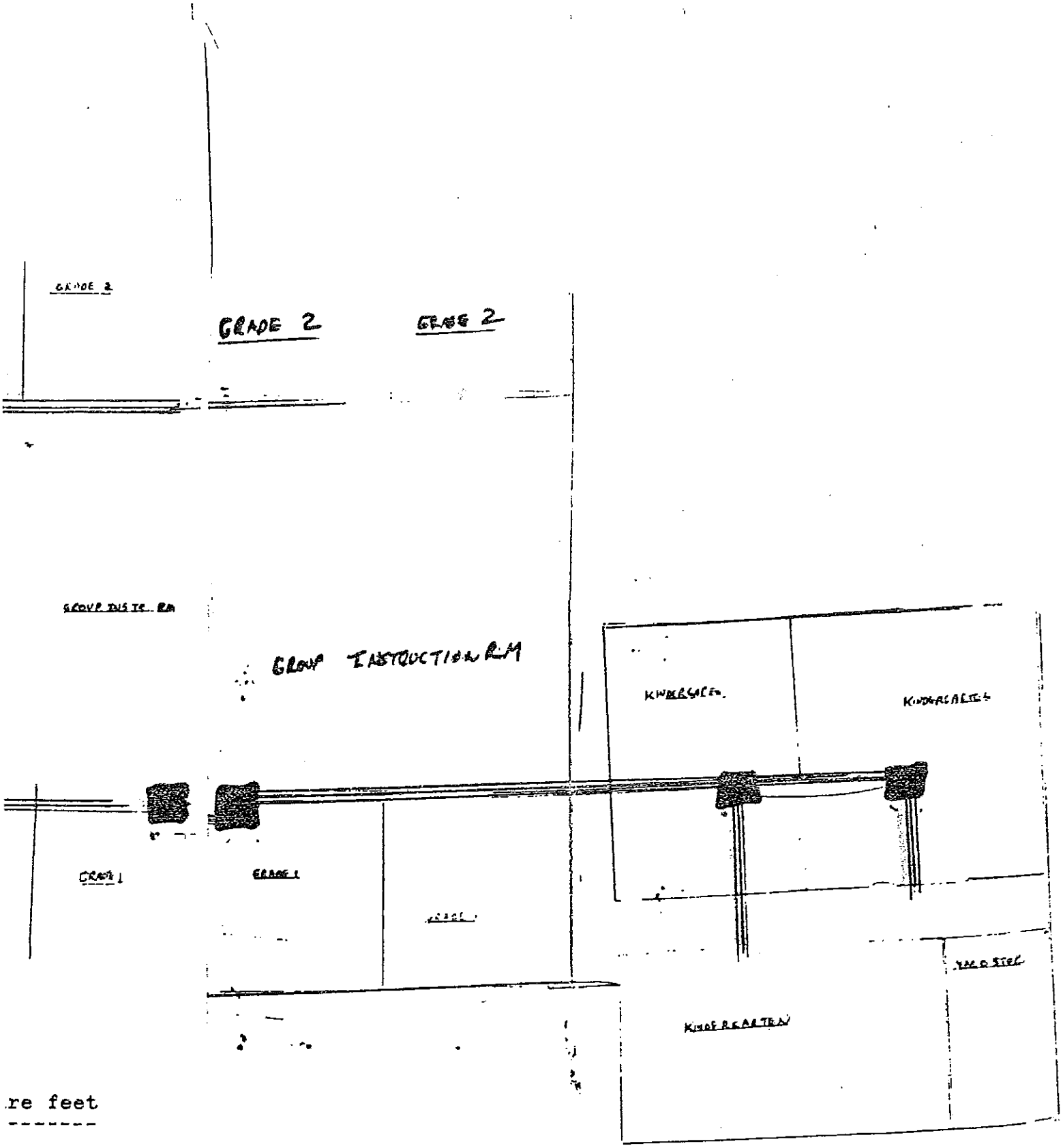
FIGURE 3 : Pipe Tunnels - Elbows

Tunnels highlighted, elbows shown in red.

Total estimated area of asbestos on elbows -

AREA SAMPLES

PIPE ELBOW (#1947-1)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re feet

into this area. These employees will have the following qualifications :

. They must participate in the employee training sessions regarding emergency operations and the use of asbestos respirators ;

. They must be medically fit to wear a respirator and able to work in the pipe tunnels ;

. They must be willing to work in the pipe tunnels to perform the assigned tasks with the proper safety precautions.

A list of the individuals designated to work in the pipe tunnels will be maintained in the main administrative office and in the maintenance office of the School District.

The final aspect of the remediation program in the tunnels is monitoring. Once per year, the management system described above, will be evaluated, the pipe tunnels will be inspected and air samples will be collected within the tunnels. These inspections will assess the degree of friability and employee exposure to the asbestos in this area. The conditions will be documented and maintained on file at the School District's main administrative office. The report of the conditions will also include an assessment of the effectiveness of the management system and a recommendation for either continuing the management/monitoring program, modifying it in some way, or abandoning the system and removing the asbestos from the tunnel area.

(2) Boiler Room.

The following interim strategy has been developed for the boiler room. These management procedures will be instituted immediately and will remain in effect until the asbestos is removed in the summer of 1987.

The management process for this area centers on work procedures and staff training. This includes the following measures :

. STAFF TRAINING. An overview on the recognition of asbestos hazards and safety precautions regarding work around large surface areas of asbestos containing materials will be emphacized.

. CONTROLLED ACCESS. Access to the boiler room will be restricted by the asbestos coordinator. Entrance into the boiler room will be restricted to maintenance personnel with assigned tasks. The doors of the boiler room will remain locked and will be placarded with a warning notice. Smoking in the boiler room will be absolutely prohibited.

. WORK PROCEDURES - BOILER ROOM. Any employee who works directly

on the boiler, stack, hot water tank, pipe elbows or any assigned task in the boiler room which requires more than a short (i.e., 15 - 30 minutes) period of time will be equipped with respiratory protection. Dry sweeping of the floors in this room will be prohibited.

G. CONTRACT SAFETY SPECIFICATIONS FOR ASBESTOS REMOVAL PROJECTS.

All of the asbestos in the boiler room in the Hill and Plain School will be removed and replaced by a contractor : this project will be conducted during the summer of 1987. This section outlines the safety specifications which will be required for the removal project in this area and describes selection criteria for hiring a contractor to do the asbestos abatement work.

PART I. GENERAL

1.1 Introduction.

Asbestos has been classified by the federal government as a carcinogenic material. These specifications are designed to maintain compliance with all governmental regulations regarding asbestos work, minimize employee exposures to airborne asbestos, and protect the building and its occupants from asbestos contamination.

1.2 Scope.

These specifications cover all safety and environmental controls and procedures which will be used during the removal of asbestos from the New Milford High School. The extent of asbestos removal is confined to the rooms and areas described in Section 6. All aspects of the removal work shall be conducted in strict accordance with these specifications.

1.3 Applicable Codes.

The contractor shall be solely responsible for conducting each project, supervising all work in a manner which will be in conformance with all federal, state and local regulations and guidelines pertaining to asbestos abatement. Specifically, the contractor shall comply with the requirements of the following agencies :

1.3.1 EPA Regulations (40 CFR Part 763) ;

1.3.2 NESHAPS Regulations (40 CFR 61, Subpart M) ;

1.3.3 OSHA Regulations (29 CFR 1910.1001 and 1926.58) ;

1.3.4 Connecticut DEP Regulations (Section 22a-209-8(i) and Section 22a-220 of the Connecticut General Statutes).

1.3.5 Connecticut Regulations regarding asbestos inspection and abatement ;

1.3.6 Connecticut Basic Building Code ;

1.3.7 Connecticut Fire Safety Code ;

1.3.8 Local health and safety codes, ordinances or regulations pertaining to asbestos remediation.

1.4 Exemptions.

Any deviations from these specifications requires the written approval and authorization from the building owner.

1.5 Contractor Qualificatiioms.

All bidders shall submit a record of prior experience in asbestos removal projects, listing no less than 10 completed jobs in the past 5 years.

PART 2 : TERMINOLOGY

2.1 ABATEMENT - Procedures to control fiber release from asbestos-containing materials; includes removal, encapsulation, and enclosure.

2.2 AIRLOCK - A system for permitting ingress and egress while assuring air movement to contaminated area from an uncontaminated area. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.3 AIR MONITORING - The process of measuring the fiber content of a specific volume of air in a stated period of time.

2.4 AIR SAMPLING PROFESSIONAL - A professional capable of conducting air monitoring and analysis schemes. This indivvidual should be a certified industrial hygienist or an environmental scientist or engineer with equivalent experience in asbestos air monitoring and worker protection equipment and procedures. This individual should have demonstrated proficiency in conducting air sample collection in accordance with 29 CFR 1910.1001 and 1926.58.

2.5 AMMENDED WATER - Water to which a surfactant has been added.

2.6 ASBESTOS - the name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles.

2.7 ASBESTOS CONTROL AREA - An area where asbestos abatement operations are performed which is isolated by physical boundaries to prevent the spread of asbestos dust, fibers, or debris.

2.8 ASBESTOS FIBERS - Those particles with a length greater than five (5) microns and a length to diameter ratio of 3 : 1 or greater.

2.9 ASBESTOS FIBERS PERMISSABLE EXPOSURE LIMIT (PEL) - The max-

imum concentration of asbestos fibers which is allowed in a work area where employees are present. The current level established by OSHA is 0.2 fibers per cubic centimeter of air as an eight (8) hour time weighted average. An employer is responsible for maintaining work areas in a manner that this standard is not exceeded.

2.10 AUTHORIZED VISITOR - Any person authorized by the building owner to enter the premises of the school building.

2.11 BUILDING OWNER - The New Milford School District. The Superintendent of the New Milford Schools (or his designee) shall represent the owner in all transactions with the contractor.

2.12 CLEAN ROOM - An uncontaminated area or room which is a part of the worker decontamination enclosure with provisions for storage of workers' street clothes and protective equipment.

2.13 CURTAINED DOORWAY - A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.14 DECONTAMINATED ENCLOSURE SYSTEM - A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers and equipment. A decontamination enclosure system always contains at least one airlock.

2.15 ENCAPSULANT - A liquid material which can be applied to asbestos-containing material and which controls the possible release of asbestos fibers from the materials either by creating a membrane over the surface (bridging encapsulant) or penetrating the material and binding its components together (penetrating encapsulant).

2.16 ENCAPSULATION - A specified asbestos remediation strategy involving the application of an encapsulant to asbestos-containing materials to control the release of asbestos fibers into the ambient air.

2.17 EQUIPMENT DECONTAMINATION ENCLOSURE - That portion of a decontamination enclosure system designed for controlling the transfer of materials and equipment, typically consisting of a washroom and a holding area.

2.18 EQUIPMENT ROOM - A contaminated area or a room which is part of the worker decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.19 FIXED OBJECT - A unit of equipment or furniture in the work areas which cannot be removed from the work area.

2.20 FRIABLE ASBESTOS MATERIAL - Any material that contains more than 1% asbestos by weight, that can be crumbled, pulverized

or reduced to powder by hand pressure, and, which releases asbestos particles to the environment. Covering by an impermeable, intact surface precludes friability.

2.21 GLOVEBAG TECHNIQUE - A method for removing small amounts of asbestos-containing materials from HVAC ducts, short piping runs, elbows, valves, joints and other non-planar surfaces in a self-contained work area.

2.22 HEPA FILTER - A high efficiency particulate air (HEPA) filter in compliance with ANSI Z9.2-1979.

2.23 HEPA VACUUM EQUIPMENT - Vacuum equipment with a HEPA filter system for filtering the effluent air from the unit.

2.24 HOLDING AREA - A chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area. The holding area comprises an airlock.

2.25 INSPECTOR - An individual, retained by the Owner, who is a "qualified asbestos inspector" as defined by the State of Connecticut Department of Health Services, and who will be responsible for overseeing and enforcing all of the specifications during the asbestos remediation projects.

2.26 MOVABLE OBJECT - A unit of equipment or furniture in the work area which can be removed from the work area.

2.27 NEGATIVE AIR PRESSURE EQUIPMENT - A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a contaminated area (negative with respect to adjacent uncontaminated areas) and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.

2.28 NOTICE OF DISCHARGE - A formal discharge of the contractor by the building owner and nullification of the contract.

2.29 NOTICE OF NON-COMPLIANCE - A process to be followed in the course of a violation hearing, whereby the building owner, upon determining that the specifications have been breached, informs the contractor that he (she) has 24 hours to correct the violations noted by the inspector, subsequent to a discharge procedure.

2.30 NOTICE OF VIOLATION - An enforcement procedure by which the inspector informs the contractor to immediately cease all removal or remediation work in the building and to immediately implement clean-up procedures. The notice of violation will be followed by a hearing with the building owner within 24 hours.

2.31 PLASTICIZE - To cover floors and walls with plastic sheeting as specified herein.

2.32 REMOVAL - All procedures, specified herein, which are

necessary to remove asbestos-containing materials from the designated areas and to transport and dispose of these materials at an acceptable site.

2.33 SHOWER ROOM - A room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between the contaminated area and the clean area.

2.34 STRIPPING - Taking off asbestos materials from any structural member, pipe surface or HVAC equipment.

2.35 SURFACTANT - A chemical wetting agent added to water to improve penetration into asbestos-containing materials.

2.36 VIOLATION HEARING - A formal process whereby the building owner holds a conference with the contractor and the inspector to review violations of the specifications noted during the project, in order to ascertain whether the project contract has been breached.

2.37 WASHROOM - A room between the work area and the holding area in the equipment decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.38 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 by water, and by afterwards disposing these cleaning items as asbestos contaminated waste.

2.39 WORK AREA - Designated rooms, spaces, or areas of the project in which asbestos abatement actions are occurring and which may become contaminated as a result of such abatement actions. The work area must be totally self contained by sealing, plasticizing and equipping the area with a decontamination enclosure system.

2.40 WORKER DECONTAMINATION ENCLOSURE SYSTEM - That portion of a decontamination enclosure system designated for controlled passage of workers, and other personnel and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room.

2.41 WORK STOPPAGE CLEANUP PROCEDURE - A process following the completion of the project or following the issuance of a notice of violation, whereby the contractor thoroughly cleans and decontaminates the work area, the decontamination enclosure system, and any other areas of the building affected by the removal project, to the satisfaction of the inspector.

2.42 WORK ZONE - The area of the decontamination enclosure sys-

tem where asbestos is being removed.

PART 3 : DESCRIPTION OF WORK

3.1 Locations and Work Statement

The specific sites for asbestos remediation are described in Part 6 of these specifications. The contractor shall retain full ownership of all asbestos containing materials in these specific locations and is responsible for removal, transport, and disposal of the asbestos in accordance with these specifications.

3.2 Chain of Command

3.2.1 Responsible Authority.

The Owner, represented by the Superintendent of Schools, (or his designee), is the ultimate authority in the discharge of this contract. All deliberations regarding the contract or the degree of compliance with the specifications, shall be ultimately decided by the owner.

3.2.2 Inspector.

The owner shall retain an asbestos inspector to oversee all work performed under this contract and to enforce the provisions of these specifications. The inspector shall have the authority to issue a notice of violation to the contractor and temporarily stop all further work if the air quality of the building is affected by the removal operation. The inspector may also function as the air sampling professional, if he/she is qualified under the terms defined herein.

3.2.3 Air Sampling Professional.

The owner shall retain an air sampling professional to conduct the air monitoring tasks outlined in section 5.4.3.1 of these specifications. If the owner retains a separate individual as the air sampling professional (in addition to the inspector), he/she shall report directly to the inspector. All determinations of air quality contamination shall be made by the air sampling professional.

3.2.4 Project Supervision.

With the exception of the process outlined in part 3.5.3 - 3.5.5 of these specifications, the contractor shall report to the inspector as the School District's manager of the project.

3.3 Contractor Responsibilities.

The work specified in this contract entails the remov-

al of asbestos-containing materials and the replacement of such materials with a suitable non asbestos product. This work shall be done by persons who are knowledgeable, qualified, and experienced in the removal, treatment, handling, and disposal of asbestos-containing materials and the subsequent cleaning of the environment. The contractor selected must comply with all applicable federal, state, and local regulations which mandate work practices and shall be capable of performing the work of this contract within the specified timeframe.

The contractor shall supply all labor, materials, equipment, services, insurance, and incidentals which are necessary or required to perform the work in accordance with all applicable governmental regulations and the specifications of this contract.

3.4 Performance Bond.

Before commencing work, the contractor shall post a performance bond in the amount and form specified in the general contract. In the event of an issuance of a notice of discharge, the owner reserves the right to use the bond to complete any unfinished work specified by this contract and adequately clean and/or decontaminate the work area and the building of asbestos to make it fit for occupancy.

3.5 Procedure for Resolving Documented Violations.

In the event that the inspector determines a violation of these specifications, the following procedures shall be employed to resolve and correct the areas of non compliance :

3.5.1 The inspector shall adequately document deviations from these specifications and immediately inform the contractor of the conditions which require correction. The contractor shall be given a reasonable period of time to correct these conditions.

3.5.2 If the violations continue unabated, the inspector shall issue a notice of violation to the contractor. After receiving the notice of violation, the contractor shall immediately cease all removal operations and effectuate a work stoppage cleanup procedure.

3.5.3 Within 24 hours of the issuance of a notice of violation, a hearing shall be conducted by the owner, with the contractor and the inspector in attendance. The owner shall review the documented violations with the objective of resolving the problems which resulted in the violations noted by the inspector. When the issues are fully resolved, removal work can resume under the conditions established by the building owner.

3.5.4 If the building owner sets conditions to correct the

violations which the contractor is unwilling or unable to accomplish, the owner shall issue a notice of non-compliance.

3.5.5 If the correction conditions established by the owner are not initiated within 24 hours, the building owner shall issue a notice of discharge to the contractor, which immediately abrogates the contract.

PART 4 : WORK PREPARATION.

Prior to the initiation of the removal work, the following tasks must be completed by the contractor :

4.1 Work Site Safety Plan.

The contractor shall establish a set of emergency procedures and shall post them in a conspicuous place at the work site. The safety plan should include provisions for the following :

4.1.1 Evacuation of injured workers.

4.1.2 Emergency and fire exit routes from all work areas.

The contractor is responsible for training all workers in these procedures.

4.2 Notifications, Postings, and Submittals.

The contractor will make the following notifications, and provide the following submittals 10 days prior to the commencement of removal work :

4.2.1 Environmental Protection Agency (EPA)

Submit notification to the Regional EPA NESHAPS Coordinator at this address :

Director, Enforcement Division
Air and Hazardous Materials Division
Pesticides and Toxic Substances Branch
USEPA Region 1
Boston, Massachusetts 02203

The minimum information required in the notification includes the following :

. Name and address of the owner ;
. Building Location ;
. Building size, age, and use ;
. Amount of friable asbestos ;
. Work schedule, including proposed start and completion dates ;
. Asbestos removal procedures ;

. Name and location of disposal site for generated friable asbestos waste.

4.2.2 State Department of Education.

Send written notice of any project which involves the removal of more than 160 linear feet or 260 square feet of asbestos containing material to the Connecticut State Department of Education at the following address :

Chief, Bureau of Grants Processing
Room 325, State Office Building
State Department of Education
165 Capitol Avenue
Hartford, Connecticut 06106

The following information must be submitted :

. Name and address of building owner ;
. Building location ;
. Building size, age and use ;
. Amount of friable asbestos ;
. Work schedule, including proposed start and completion dates ;
. Asbestos removal procedures ;
. Name and location of disposal site for generated friable asbestos.

4.2.3 Transport and Disposal.

Submit proof, satisfactory to the owner, that all required permits, site locations, arrangements for transport and disposal of asbestos containing or asbestos contaminated materials and supplies have been obtained.

4.2.4 Work Zone Construction Plan.

Submit to the owner plans and/or shop drawings for the construction of decontamination enclosure systems and for the isolation of work areas as may be necessary in compliance with these specifications and applicable regulations.

4.2.5 Certification of Compliance Record for Past Projects.

Contractor must submit a written statement regarding whether he/she has ever been found out-of compliance with pertinent Federal and State asbestos regulations pertaining to removal. transport, disposal or other environmental or safety considerations.

4.2.6 Employee Training.

Submit documentation to the owner indicating that each employee has had instruction on the hazards of asbestos exposure, on the proper use and fitting of respirators, on protect-

ive dress, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures. This documentation must include a signed statement by each employee who will perform the removal work in the School that he/she understands these instructions and is willing to comply with these procedures and perform all work in accordance with these specifications.

The contractor must also submit verification that all employees have received medical examinations as required by OSHA regulations.

4.2.7 Postings.

The contractor shall post signs in and around the work area to comply with 29 CFR 1910.1001 and 1926.58. Post one copy of each of the following documents at the work site :

- Title 29, Code of Federal Regulations, Part 1910.1001 and 1926.58 OSHA Asbestos Standards.
- Title 40, Code of Federal Regulations, Part 61, Subparts A and B, NESHAPS.

4.2.8 Condition of Fixtures.

The owner and contractor must agree, in writing, on the condition of the building and fixtures. A photograhic record of major fixtures is required.

4.2.9 Certification of Exhaust Equipment.

The contractor must submit the manufacturer's certification that vacuums, negative air pressure equipment, and other local exhaust / ventilation equipment conform to ANSI Z9.2-1979.

4.2.10 Rental Equipment.

When rental equipment is to be used in removal areas or to transport waste materials, the contractor shall provide documentation to the owner that written notification has been provided to the rental company informing them of the nature of use of the rented materials.

4.2.11 Equipment and Supplies.

The contractor shall provide a list of all essential materials, equipment and supplies which have been purchased to conduct the remediation project. This list shall also include the insulation material which will be used by the contractor to replace the asbestos which will be stripped from all surfaces in the boiler room.

All materials, equipment, and supplies shall be adequate to conduct the remediation project in accordance with these spec-

ifications and shall be acceptable to the owner.

4.3 Preliminary Conference

Prior to the commencement of asbestos removal work, a conference will be held between the owner, the contractor, and the inspector. The objectives of this conference are as follows :

. Contractor submits to the owner copies of all submittals and notifications outlined above ;

. Contractor and inspector review the work plan and inspection procedures established in the specifications ;

. All parties agree to work standards, roles and time schedules established in contract specifications.

Asbestos removal work may proceed when the owner specifically authorizes the initiation of the project, in writing.

PART 5 : EXECUTION OF WORK.

5.1 Work Standards.

The contractor is responsible for maintaining work conditions at all times in conformance with OSHA standards and asbestos removal guidelines established by the Connecticut Department of Health Services. This includes the following :

5.1.1 Personnel Protection Equipment.

All employees shall be provided with and trained in the proper use of all equipment, respirators and supplies to minimize exposure to asbestos during work operations as specified in Section 1.6.1 - 1.6.7 of the document entitled "CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the Connecticut Department of Health Services.

5.1.2 Worker Protection Procedures.

All employees, inspectors, authorized visitors, or any individual who enters the work zone shall conform to the procedures established in Section 1.6.8.1 - 1.6.8.3 of the document entitled " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ".

A copy of these procedures shall be posted at all points of entry to the work zone. The contractor is responsible for limiting access to the work zone to individuals who abide by these procedures. The inspector shall oversee the control over entry into the work zone and shall enforce these procedures

when necessary.

5.2 Decontamination Enclosure System.

Before initiating work on any given day, a properly constructed decontamination enclosure system shall be in place at all points of entry into the work zone. The inspector shall evaluate and approve the integrity of the enclosure system(s) prior to the commencement of asbestos removal work on any given day.

5.2.1 Features.

The enclosure system shall be constructed with suitable Building Code conforming framing and built according to the drawings specified in the contractor's "Work Zone Construction Plan" as submitted according to part 4.2.4 of these specifications. The contractor shall, at all times, maintain the decontamination enclosure system with a proper functioning worker decontamination enclosure (with an integral equipment room, shower room, and a clean room), an equipment decontamination enclosure (with an integral washroom and holding area) and highly visible, controlled, and properly posted entry points.

In all cases, access between contaminated and uncontaminated areas shall be through an airlock. In all cases, access between any two rooms within the decontamination enclosure system shall be through a curtained doorway.

5.2.2 Maintenance and Monitoring of Enclosure Systems.

The contractor shall create and maintain a pressure differential between work areas and occupied areas by the use of negative air pressure equipment. Such equipment shall be maintained at the work site at all times in a properly functioning condition. This equipment shall be equipped with a high efficiency particulate filtration system, shall be sized to provide four air changes per area in the work area and shall conform to ANSI Z9.2 - 1979. The equipment shall feature an automatic shutdown of the system and/or warning lights to indicate improper pressure drop across the filters.

The air sampling professional shall periodically monitor the integrity of the negative air pressure equipment and shall conduct periodic chemical smoke tests to verify the effectiveness of the enclosure system. If any of these tests indicate a breakdown in the integrity of the decontamination enclosure system's negative pressure system, the inspector shall immediately inform the contractor to cease all removal operations. The contractor shall take immediate steps to reestablish negative pressure in the enclosure system. When the air sampling proffessional verifies the proper functioning of pressure in the enclosure system, asbestos removal work can resume.

5.3 Sequence of Work.

The removal project shall proceed in accordance with the sequence of work established during the preliminary conference as mutually agreed upon between the contractor and the owner, and in accordance with the schedule delineated in part 7 of these specifications.

5.4 Control Over Removal Work.

All work procedures shall be continuously controlled and monitored to assure that the building will not be contaminated. The following controls shall be instituted on each working day :

5.4.1 Start-Up.

Prior to work on any given day, the contractor's designated project foreman shall discuss the day's work schedule with the inspector to evaluate job tasks with respect to safety procedures and requirements specified to prevent contamination of the building or the employees. This includes a visual survey of the work area and the decontamination enclosure systems.

5.4.2 Access.

The contractor shall maintain control of access to all work areas to ensure the following requirements :

. Unauthorized personnel are prohibited from entering the area ;

. All authorized personnel entering the work area shall read the "worker protection procedures" which are posted at the entry points to the enclosure system, and shall be equipped with properly fitted respirators and protective clothing ;

. All personnel who are exiting from the decontamination enclosure system shall be properly decontaminated ;

. Asbestos waste which is taken out of the work area must be properly bagged and labelled in accordance with these specifications. The surface of the bags shall be decontaminated. Asbestos leaving the enclosure system must be immediately transported off site or immediately placed in temporary storage on site, in accordance with the requirements described in part 5.4.5 of these specifications.

. Any material, equipment, or supplies which are brought out of the decontamination enclosure system shall be cleaned and decontaminated by wet cleaning and/or HEPA vacuuming of all surfaces.

The inspector shall be responsible for monitoring the integrity of this system of access control and shall immediately inform the contractor of any deviations from the above requirements. The inspector shall also have the authority to mandate

immediate corrections to the control of access which are necessary to prevent the building from becoming contaminated with asbestos.

5.4.3 Air Quality Monitoring.

Air sampling shall be conducted by the owner to ascertain the integrity of controls which protect the building from asbestos contamination. Independently, the contractor shall monitor air quality within the work zone to ascertain the protection of employees and to comply with OSHA regulations.

5.4.3.1 Owner's Responsibility.

The owner's air sampling professional shall collect and analyze air samples during three time periods :

. Pre-abatement Sampling Period. The air sampling professional shall collect a sufficient number of air samples, inside and outside of the work area, to establish background air quality conditions. At least one sample will be taken outside of the building.

. Abatement Period. Samples shall be taken on a daily basis during the work period. A sufficient number of area samples shall be taken inside the work area and decontamination enclosure system, outside of the work area, at the exhaust of the negive pressure system, and outside of the building to judge the degree of cleanliness or contamination of the building during removal.

The air sampling professional shall provide a continual evaluation of the air quality of the building during removal, using his/her best professional judgements in perspective of the State Department of Health Services guideline of .01 fibers/cc. and the background air quality established during the pre-abatement period. If the air sampling professional determines that the building air quality has become contaminated from the project, the inspector shall immediately inform the contractor to cease all removal operations and implement a work stoppage clean-up procedure. The contractor shall conduct a thorough cleanup of areas of the building designated by the inspector. No further removal work can take place until the air sampling professional has determined that the building air has been decontaminated.

. Post Abatement Period. The air sampling professional shall conduct air sampling following the final cleanup phase of the project, once the "no visible residue" criterion has been met. A sufficient number of samples, collected aggressively, will be taken to determine the final air concentration, in perspective of the "clearance guideline" of .01 fibers / cc.

5.4.3.2 Contractor Responsibility.

The contractor shall independently retain an air sampling professional to monitor airborne asbestos concentrations in the work zone and to establish conditions and work procedures for maintaining compliance with OSHA regulations 29 CFR 1910.1001 and 1926.58.

The contractor's air sampling professional shall document all air sampling results and provide a report to the inspector within 24 hours after each work day.

5.4.3.3 Air Sampling Methods.

All air sampling shall be conducted in accordance with methods described in OSHA standards 29 CFR 1910.1001 and 1926.58. All air samples shall be conducted in a manner that will provide a minimum detection limit of .01 fibers / cc.

5.4.4 Asbestos Removal Procedures.

The contractor shall be responsible for the safe and methodical removal of asbestos from the work zone. All removal procedures shall be in conformance with section 3.2.2 - 3.2.5 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS REMOVAL AT PUBLIC BUILDINGS ", published by the Connecticut Department of Health Services. At all times, negative pressure shall be maintained in the work zone, relative to the building outside of the decontamination enclosure system.

The inspector shall make periodic evaluations of removal work procedures and shall enforce all safety procedures which are outlined (or referenced) in these specifications.

5.4.5 Asbestos Waste.

All asbestos waste shall be bagged in 6 mil plastic, labeled with danger placards as specified in 29 CFR 1910.1001 (g) (2), and transported to a landfill facility which is approved by the Department of Environmental Protection for disposal of asbestos.

Asbestos may be temporarily stored on the owner's premises outside of the work zone under the following circumstances :

. The bagged asbestos is thoroughly cleaned off by wet sponging the surface of the bag in the washroom of the decontamination enclosure system ;

. The bagged asbestos taken out of the decontamination enclosure system shall be immediately placed in a dumpster with a locking metal cover. At the end of each work day the top of the dump-

ster shall be closed and locked ;

. The dumpsters are placed in an area of the property designated by the owner. The owner reserves the right to require the contractor to move the dumpster to a different location or to order them to be removed from the premises. In no case shall the asbestos remain on the owner's premises longer than 72 hours after the completion of the project.

The asbestos shall be transported and disposed in accordance with Section 22a-209-8(i) of the administrative regulations of the Department of Environmental Protection and Section 3.7.1 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the State of Connecticut Department of Health Services.

5.4.6 End of Day Clean-up.

At the completion of each work day, a work stoppage clean-up procedure will be conducted by the contractor. The purpose of this clean-up is to remove all loose asbestos from the work zone and to inhibit the release of fibers to the air in the work room. This procedure should include the following steps :

. Bagging of all loose asbestos and decontamination of the bag surfaces in the washroom of the decontamination enclosure ;

. Wet cleaning of the floor of the work zone ;

. Visual inspection of the entire work zone for areas of loose asbestos ;

. Securing the work zone. This entails the sealing and posting of the decontamination enclosure system and locking the doors of the room where the removal is taking place.

5.5 Final Clean-up of Work Zone.

Following the completion of all asbestos removal work in a given area, the following clean-up, inspection and clearance procedure will be followed by the contractor and the inspector :

5.5.1 Initial Clean-up.

Following the last day of asbestos removal, the work stoppage clean-up procedure will be instituted, followed by a wet cleaning of all surfaces in the work zone. All visible accumulations of asbestos material and debris will be removed at this stage.

5.5.2 HEPA Vacuum Clean-up.

After the initial clean-up, the contractor shall allow all areas of the work zone to dry, and will clean all surfaces with a HEPA filtered vacuum. After this clean-up, the contractor shall wait 24 hours and then shall reclean all surfaces with a HEPA filtered vacuum.

After the second clean-up, the inspector shall evaluate the adequacy of the decontamination process. If the inspector finds visible accumulations of dust or bulk asbestos containing materials in the work zone, the contractor shall repeat the cleaning, at his/her expense, until the area is declared as clear of visible accumulations of dust and asbestos.

Following the inspector's initial clearance of the work zone, the contractor shall remove the outer layer of plastic from the walls and floors, but shall keep the windows, doors and HVAC vents sealed. The decontamination enclosure system and the negative pressure system shall remain in place. Other equipment, materials, and sealed drums (previously cleaned as above) shall be removed from the equipment decontamination enclosure system at an appropriate time in the cleaning sequence.

5.5.3 Initial Clearance Test.

Twenty four hours after the work zone is totally dismantled, after all of the contractor's equipment, supplies and waste (including the outer layer of plastic) have been removed from the room, the inspector shall make a final visual inspection of the work area. If this inspection reveals no visible dust, the contractor shall remove the second layer of plastic sheeting and all barriers, with the exception of the plastic over the windows and the barrier between the work zone and the outside.

The air sampling professional shall, at this stage, conduct the post abatement air monitoring. The maximum acceptable levels for these air samples shall be .01 fibers / cc. or less, or a level equal to or less than the average asbestos level determined in the initial background samples taken outside the building.

Areas which do not comply with the standards specified above shall continue to be cleaned by the contractor at his / her expense until the specified standard is achieved as evidenced by the results of air testing.

5.5.4 Reinstallation of Displaced Equipment.

After the inspector has cleared the work area as clean from visible dust, and after the air sampling professional has determined that the area has achieved background air quality relative to the standards specified above, all remaining seals and barriers shall be dismantled by the contractor.

The contractor shall relocate all objects, which were

moved to temporary locations during the course of the work, back to their proper positions. The contractor shall resecure mounted objects, which were removed during the course of the project, back to their former positions. The contractor shall reestablish HVAC, mechanical and electrical systems, which were temporarily shut down during the project, in conformance with all applicable building, mechanical and electrical codes. All existing filters shall be disposed, as asbestos contaminated, and replaced with new filters.

PART 6 : LOCATIONS OF ASBESTOS REMOVAL PROJECT IN THE HIll AND PLAIN SCH
OOL,

Asbestos is to be removed in in the boiler room of the building. The contractor is responsible for removing all asbestos from this location.

6.1 Boiler Room.

Figure 2 illustrates the sites and approximate areas where asbestos was discovered in this room. The contractor is responsible for removing all of the asbestos in this room. All of the asbestos in this room shall be removed in accordance with the specifications described in this document.

Following the removal of asbestos, the boilers, the hot water tank, the pipe elbows, and all surfaces where asbestos was stripped shall be reinsulated by the contractor with a suitable replacement material.

PART 7 : SCHEDULE.

Asbestos removal shall commence after July 1, 1987, after the building owner authorizes the initiation of the project. The removal projects shall take place when school classes are out of session. Under no circumstances shall asbestos be removed while non essential staff are present in the building.

All asbestos shall be removed from the building by August, 1, 1987. All cleaning and inspections, air sampling, and recleaning shall be completed no later than August 15, 1987. The contractor shall not be released from the job until the following clearances have been obtained :

7.1 Inspection Clearance.

The inspector shall declare the project areas and all areas in the building that were affected by the project as "clean", when all visible accumulation of asbestos and dust have been removed from these locations.

7.2 Air Quality Clearance.

The air sampling professional shall declare the air quality in the building as acceptable for occupancy when the post abatement air sample analyses indicate that airborne asbestos have achieved background levels (or better) according to the standards established in these specifications.

7.3 Final Reoccupancy Clearance.

The building owner will perform a reoccupancy inspection of all work areas to ascertain the general condition of the rooms and the fixtures and to evaluate the quality of any reinsulation, restoration or replacement of materials required where the asbestos has been removed.

The owner shall declare the areas as acceptable for reoccupancy when he is satisfied that all aspects of the contractor's work have been completed to his satisfaction.

The entire building shall be ready for reoccupancy by no later than August 24, 1987. Any deviations or extensions of this schedule shall require the written authorization from the building owner.

GUIDE FOR THE SELECTION OF A CONTRACTOR

The thoroughness and the degree of safety involved in an asbestos removal project depend largely upon the experience and competence of an asbestos remediation contractor. There are currently no state or federal regulations which review or license the contractors who perform this work. Therefore, it is extremely important that the School District thoroughly reviews the qualifications of prospective bidders for the removal project. This section outlines criteria for selecting the best contractor to perform the work. There are two phases involved in the process : the initial screening of companies interested in submitting a proposal for the work and the detailed review of contractors qualifications.

PHASE I : INITIAL REVIEW OF APPLICATIONS FOR A PROPOSAL.

This stage pertains to the initial screening of contractors who are interested in submitting a proposal to perform the asbestos remediation in the schools. The School District should initially advertise for a qualifications statement from prospective bidders. The qualifications statement should include the following information :

A. Record of experience in asbestos removal with names of the building owners of past projects;

B. Names and training of personnel who would perform the removal work;

C. Any record of violations of federal or state asbestos regulations over the past ten years ;

D. Affadavit regarding any projects which were prematurely terminated due to contract violations or building contamination incidents.

E. Statement of liability insurance coverage ;

F. Other information pertinent to asbestos removal.

The School District should carefully scrutinize these qualifications and select a list of qualified firms to submit a full proposal for the removal projects. The review should include a check of all references from previous projects which includes phone contacts to the building owners or the clerk of the works or inspectors of these projects to discuss the quality of work performed by the contractor. The affadavit regarding past violations should be checked by contacting the Environmental Protection Agency's Region I Asbestos Coordinator, OSHA, and the Connecticut Department of Health Services.

PHASE II : SELECTION OF THE CONTRACTOR.

When a list of qualified contractors is obtained, the School District should invite these firms to review all areas of the buildings which are scheduled for remediation. After a tour of all of the areas, followed by a question and answer period, the contractors will be instructed to develop a full proposal for all asbestos remediation described in the contract specifications with a bid quote for the project.

The final stage of screening before selection occurs is an interview process with one or more firms whose proposals are considered superior to the School District. The screening committee should be composed of 3 - 5 individuals including the Superintendent of Schools, the School District's Business Manager, and an asbestos inspector. The interview should include a discussion of the scope of the projects, the schedule, strategies for remediation, equipment available and other issues pertinent to completing the project in accordance with the specifications of the contract.

The selection should be based both on the competetiveness of the cost and the competence of the firm in safely completing each project in a timely manner. However, in no case should any question regarding the contractor's qualifications be superceded by a relatively lower cost.

ASBESTOS MANAGEMENT PLAN
JOHN PETTIBONE SCHOOL

Prepared By :

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Consulting Services

November, 1986

APPENDIX II

UPDATE TO ASBESTOS MANAGEMENT PLAN : JOHN PETTIBONE SCHOOL

The asbestos management plan prepared for the John Pettibone School identifies the presence of friable asbestos in the kitchen of the building, located on the surface of the broiler duct which is located across the ceiling of this room. The friable asbestos is identified on Table 2 (page4a), the EDO 75A inspection report (page 4g) and is described in the narrative of the asbestos management plan, on page 7.

The friability of the asbestos on the broiler duct was modified by a remedial project conducted on January 3 and January 17, 1987. The asbestos surface on the kitchen duct was sealed in place using two separate processes :

(1) Each of the pitted areas on the surface of the tank were sealed with a bonding material designed for asbestos remediation ("Lag-Kap", manufactured by Fiberlock Technologies).

(2) After the fabric cloth dried, the outer surface of the fabric was sealed with a penetrating encapsulant ("Lag-Kap", manufactured by Fiberlock Technologies).

As a result of this project, friable asbestos is no longer exposed in the kitchen.

The remediation project was properly supervised and inspected and is certified to be completed in a manner that is consistent with the procedures outlined in the "asbestos training manual" developed for the New Milford Schools.

Jack Kozuchowski

Jack S. Kozuchowski
Asbestos Planner
January 21, 1987

TABLE OF CONTENTS FOR ASBESTOS MANAGEMENT PLAN

Laboratory Reports are in the Appendix at the End of the Plan.

ASBESTOS MANAGEMENT PLAN : JOHN PETTIBONE SCHOOL

The John Pettibone School was surveyed and evaluated for asbestos containing materials in August and September, 1986. The New Milford School District has developed a series of management strategies for each location where asbestos was identified in the building. The remedial action prescribed for each of these areas is the foundation for this asbestos management plan.

The purpose of the plan which follows is to provide the documentation of the asbestos surveys and to describe the management strategies for each area where asbestos is present in the school. The specific objectives of this plan are as follows :

(1) Provide a description of the school buildings which highlights the locations where asbestos containing materials are present ;

(2) Describe the methodology which was used for surveying and evaluating materials in the school which were suspected to contain asbestos ;

(3) Summarize the locations and conditions of materials which were confirmed as asbestos ;

(4) Describe the remedial strategy selected for each site which has asbestos present in the school with a justification for selecting this course of action ;

(5) Develop a system for implementing the plan which includes the following elements :

   a. Timetable for implementing remediation strategy ;

   b. Interim strategies for minimizing fiber release from the areas with asbestos until a permanent method of remediation can be implemented ;

   c. Procedure for implementing the remedial strategy ;

   d. Specifications for removal of asbestos containing materials;

(6) Establish an ongoing management and monitoring program for all asbestos containing materials which are left in place.

This asbestos management plan is submitted to the State Department of Education in accordance with Public Act 85-541 of the Connecticut General Statutes.

A. GENERAL DESCRIPTION OF BUILDING.

The John Pettibone School was built in 1955, with new additions constructed in 1958 and 1964. The general layout of the building is illustrated on figure 1.

The School is an educational facility for grades 3 - 5. There are four wings to the building, all located on the ground floor.

The school employs a staff of 78 and has a student body which numbers 630. In addition to education, the school sponsors several extra curricular activities which take place in the gymnasium, the cafeteria, and the meeting room.

The building is constructed on a slab foundation, with brick outer walls and a corrugated steel frame. The inner walls are constructed of cinder blocks. A suspended ceiling exists in most of the building, resulting in a ceiling space, with water pipes, air ducts, and roof drains located near the true ceiling.

Ventilation is provided by an air handling system which draws air into return ducts and supplies air by means of air handling units which are located on the roof, forcing air into each room by means of supply ducts.

All areas of the school are serviced by a central boiler room. Heat is provided by two oil burning boilers which convey heat through steam pipes that traverse the building through the pipe tunnels. The pipe tunnels begin at the boiler room and are located below grade, throughout the perimeter of the building, branching up to basebard radiators which are located in each of the rooms.

B. DELINEATION OF AREAS

For the purpose of this evaluation, the school was divided into 13 sections of similar design, construction or function. Table 1, below, lists these areas and indicates whether asbestos was identified in each location.

TABLE 1 : AREAS OF JOHN PETTIBONE SCHOOL
SURVEYED FOR ASBESTOS

location	materials evaluated	prescence of asbestos
boiler room *	boilers, h.w. tank, pipes	YES
pipe tunnels *	pipe insulation	YES
kitchen *	exhaust duct, floor tiles	YES
ceiling space throughout bldg*	roof drains, true ceiling, pipe insulation, duct insulation	YES
Classrooms - old section of bldg*	room by room survey : ceiling, floor, wall.	YES
Floor tiles - throughout bldg.	analysis of numerous floor tile samples throughout building.	YES
Gymnasium	ceiling, curtains, walls, floor	NO
Cafeteria	ceiling, wall, floor tiles	NO
Halls - throughout building	ceiling, floor tiles	NO
1958 wing of building	room by room survey : ceilings, walls, floor tiles.	NO
New wing of building (1964)	room by survey ; ceilings, floor tiles, walls, assessory mat'ls.	NO
Offices	ceiling, walls, floor tiles, ventilation ducts.	NO
Storage shed.	floors, walls, ceiling.	NO

* The specific locations which contain asbestos are described in more detail on Table 2 and in the narrative text.

C. METHOD OF EVALUATION

The John Pettibone School was surveyed for asbestos containing materials and evaluated in the following manner :

(1) Blueprints of the building were examined to determine the layout of specific sections of the building and to determine whether asbestos was specified for use in any area of the building ;

(2) An inspection of each room of the building was conducted to provide a descriptive documentation of design, construction, and building materials to identify substances which are positively asbestos, non asbestos materials and materials which are suspected to contain asbestos, which require an analytical confirmation of its constituency. The maintenance staff of the School District was consulted with regard to specific locations of areas (such as pipe tunnels) and regarding recent construction activities affecting insulation and other asbestos containing materials.

(3) All asbestos suspect materials (identified above) were sampled in accordance with the State Department of Health Services guidelines for identification of asbestos. These samples were submitted to the State Department of Health Services Laboratory for analysis of asbestos content.

(4) Following receipt of the laboratory reports, all locations in the building where asbestos was confirmed to be present were inspected again and evaluated with respect to its condition in accordance with the State Health Department's "decision protocol" process.

D. LOCATIONS WHERE ASBESTOS IS PRESENT IN THE JOHN PETTIBONE SCHOOL

Table 2 indicates the location where asbestos was positively identified in the School. The table also describes the condition, the degree of friability, and the potential for future deterioration of each asbestos product in the building. The asbestos materials were confirmed, in all cases, by a laboratory analysis of bulk samples which were taken from the building. The analytical reports are attached to the appendix at the end of this document.

Exhibits A - G are the "school facility" and "area reports" (EDO75A and EDO75B), which provide information on the specific locations where asbestos is present in the building.

The diagrams on the following pages illustrate the areas where asbestos is present in the building. Figure 1 is an overall diagram of the school building, illustrating the general locations of the areas described on table 2. Figures 2 - 6 are site specific illustrations of each asbestos area in the building, specifying the total area of asbestos at each location.

(4a)

TABLE 2 : SUMMARY OF ASBESTOS LOCATIONS - JOHN PETTIBONE SCHOOL

location of asbestos	friability	condition	damage potential	management strategy selected
Boiler Room: - boilers - breeching - stack - hw tank	moderate-high	poor	subject to physical impact, vibration & continued deterioration.	removal under contract specifications.
Kitchen - exhaust duct	low	fair-good: pitted in spots.	further deterioration from vibration.	removal under contract specifications.
Pipe tunnels - pipe insulation in old section of building	low-moderate friable where cloth covering is loose or punctured & at end of pipes	fair-good Some damaged pipe insulation throughout.	subject to water damage & deterioration.	removal from walk-through; management program for crawl spaces
Ceiling plenum -roof drains -pipes	low - moderate.	fair-good	only damage possible is impact from	removal under contract specifications.
Classrooms-old bldg.: behind radiators.	low	fair	subject to impact damage.	Encapsulation under contract specifications.
floor tiles - selected areas of building floor.	non-friable	fair - poor	abrasive operations will result in friable condition.	implement management & monitoring program.

EXHIBIT A

CONNECTICUT DEPARTMENT OF EDUCATION

ED 075B
SCHOOL FACILITY ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

SCHOOL DISTRICT DISTRICT CODE 096

NEW MILFORD

FACILITY NAME FACILITY ADDRESS

JOHN PETTIBONE SCHOOL; E PICKETT DISTRICT RD; NEW MILFORD, CT

Year of Construction 1955 Year of Additions (if any) 1958, 1964

CERTIFICATION:

Attached are 16 Area Asbestos Inspection Reports (ED 075A) for the above referenced school facility.

☒ Check this box if this school facility has been inspected according to Public Act 85-541, state regulations enacted pursuant thereto and decision protocols.

☒ Check this box if this school facility has been inspected prior to January 1, 1987 in order to comply with Environmental Protection Agency (EPA) School Asbestos Inspection Rule.

Name of Inspector JACK S. KOZUCHOWSKI Phone 792-3613

Signature of Inspector Jack S. Kozuchowski Date 11/19/86

☐ Check this box if this building had been previously inspected and was found to have asbestos containing materials which have subsequently been removed. Please submit documentation supporting this fact.

19181

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EXHIBIT B

075 A
ED XXX

CONNECTICUT DEPARTMENT OF EDUCATION

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SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
JOHN PETTIBONE SCHOOL	2 PICKETT RIDGE RD. NEW MILFORD, CT.	JACK S. KOZUKHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
1. BOILER ROOM	690	6

1. Samples: Description of material sampled LOOSE FIBROUS MATERIAL WRAP ON BOILERS, STACK, HOT WATER TANK, PIPES, WITH OUTER
Type of sample: Bulk ✓ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ✓
Pipe Insulation ✓ Duct ____ Other (please explain) ____
3. Friability: High ____ Moderate ✓ Low ____ Not Friable ____
Sq. Footage Area 1200 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
Physical Damage: High ____ Moderate ✓ Low ____ None ____
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
Contact Potential: High ____ Moderate ✓ Low ____ None ____
Distance to items needing maintenance:
Electrical ____ Plumbing 10 Feet Ventilation ____ Other ____
6. Internal Building Description:
Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
Floor Type: Concrete ✓ Carpet ____ Tile ____ Wood ____ Other ____
Ceiling Type: Concrete ✓ Acoustical Tile ____ Plaster ____ Metal Deck ____
Suspended lay in panels ____ Concrete joist and beam ____
Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
Railing ____ Other ✓ (SEE COMMENT) None ____
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
Outflow vents near friable materials(y/n) N Distance ft. ____
Plenum (y/n) N Air Erosion Evident (y/n) N
Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
Use of Area MECHANICAL - BOILER RM Activity: High ____ Moderate ____ Low ✓
What is adjacent to the area? HALLWAY
What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	____ hrs/day	____ days/week
Staff 6	1 hrs/day	2 days/week

Comments: THERE ARE NO BARRIERS BETWEEN THE ASBESTOS INSULATION AND EMPLOYEES WHO WORK IN ROOM. HOWEVER, THE ENTIRE ROOM IS ISOLATED FROM THE OTHER BUILDING OCCUPANTS BY LOCKING DOORS.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS ON BOILERS AND TANK IS IN BAD CONDITION. INSULATION IS DELAMINATED IN ~~ARE~~ SPOTS. ASBESTOS ON PIPES AND ELBOWS IS DAMAGED IN AREAS AND, THEREFORE, IN BAD CONDITION

ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL OF ASBESTOS FROM ROOM,

(p. 4d)

EXHIBIT C.1

075A

CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME: JOHN PETTIBONE SCHOOL | FACILITY ADDRESS: 2 PICKETT RIDGE RD. NEW MILFORD, CT | INSPECTED BY (Name and Telephone): JACK S. KOZUCHOWSKI 792-3613 | DATE:

AREA DESCRIPTION: PIPE TUNNEL - WALK THROUGH AREA | AREA SQUARE FEET: 928 | AREA POPULATION: 6

2A

1. Samples: Description of material sampled AIR-CELL INSULATION ON RUNS, LOOSE FIBROUS MAT'L WITH OUTER CLOTH WRAP ON ELBOWS.
   Type of sample: Bulk ____ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ____
   Pipe Insulation ✓ Duct ____ Other (please explain) ____
3. Friability: High ✓ Moderate ____ Low ____ Not Friable ____ (SEE COMMENT)
   Sq. Footage Area 362 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ✓ Moderate ____ Low ____ None ____ (SEE COMMENT)
   Physical Damage: High ____ Moderate ✓ Low ____ None ____
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
   Contact Potential: High ____ Moderate ____ Low ✓ None ____
   Distance to items needing maintenance:
   Electrical ____ Plumbing 1-2' Ventilation ____ Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
   Floor Type: Concrete ✓ Carpet ____ Tile ____ Wood ____ Other ____
   Ceiling Type: Concrete ✓ Acoustical Tile ____ Plaster ____ Metal Deck ____
   Suspended lay in panels ____ Concrete joist and beam ____
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
   Railing ____ Other ____ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
   Use of Area ACCESSWAY TO TRANSFORMER ROOM Activity: High ____ Moderate ____ Low ✓
   What is adjacent to the area? BOILER ROOM
   What is above the area? KITCHEN
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	____ hrs/day	____ days/week
Staff 6	1 hrs/day	1 days/week MONTH

Comments: INSULATION ON PIPES IN THIS AREA IS VARIABLE IN CONDITION; SOME INSULATION VERY INTACT, OTHER AREAS ARE LOOSE AND VERY FRIABLE.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS INSULATION ON PIPES IS IN BAD CONDITION.
HIGH WATER DAMAGE IN TRANSFORMER ROOM.
ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL OF ASBESTOS
INTERIM MANAGEMENT MEASURES WILL BE IMPLEMENTED UNTIL REMOVAL OCCURS.

(p. 4e)

EXHIBIT C 2

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School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME: JOHN PETTIBONE SCHOOL
FACILITY ADDRESS: 2 PICKETT RIDGE RD. NEW MILFORD, CT.
INSPECTED BY (Name and Telephone): JACK S. KOZUCHOWSKI 792-3613
DATE:

AREA DESCRIPTION: 2B's PIPE TUNNELS - CRAWL SPACE
AREA SQUARE FEET: 6400
AREA POPULATION: 6

1. Samples: Description of material sampled AIR-CELL INSULATION ON RUNS; LOOSE FIBROUS MAT'L ON ELBOWS WITH OUTER CLOTH WRAP.
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Trowled on ___ Boiler Lagging ___
   Pipe Insulation ✓ Duct ___ Other (please explain) ___
3. Friability: High ___ Moderate ___ Low ___ Not Friable ___
   Sq. Footage Area 4840 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ✓ None ___
   Physical Damage: High ___ Moderate ✓ Low ___ None ___
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ___
   Contact Potential: High ___ Moderate ✓ Low ___ None ___
   Distance to items needing maintenance:
   Electrical ___ Plumbing 1-2 Feet Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ___ Carpet ___ Tile ___ Wood ___ Other DIRT
   Ceiling Type: Concrete ✓ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ___
   Suspended metal lath ___ Other ___
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other ___ None ✓ (SEE COMMENT)
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area MECHANICAL - EMERGENCY REPAIRS Activity: High ___ Moderate ___ Low ✓
   What is adjacent to the area? NOTHING - BELOW GRADE
   What is above the area? CLASSROOMS AND OTHER AREAS OF BLDG.
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	___ hrs/day	___ days/week
Staff 6	1 hrs/day	1 days/~~week~~ MONTH

Comments: NO BARRIER FOR EMPLOYEES WHO ENTER AND WORK IN CRAWL SPACE. HOWEVER, THIS AREA IS ISOLATED FROM OTHER BUILDING OCCUPANTS BY METAL DOORS.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
THE ASBESTOS INSULATION ON THE PIPES IN THE VAST CRAWL SPACE IS LIKELY TO HAVE SOME AREAS WITH A DETERIORATED CONDITION.

ASBESTOS MANAGEMENT PLAN SPECIFIES IMPLEMENTATION OF MANAGEMENT / MONITORING PROGRAM (SEE TEXT FOR DETAILS).

EXHIBIT D

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JOHN PETTIBONE SCHOOL	2 PICKETT RIDGE RD NEW MILFORD, CT	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
3: KITCHEN	1110	14

1. Samples: Description of material sampled LOOSE FIBROUS MATT WITH OUTER WRAP
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ✓ Trowled on ___ Boiler Lagging ___
   Pipe Insulation ___ Duct ___ Other (please explain) ___
3. Friability: High ___ Moderate ___ Low ✓ Not Friable ___ (SEE COMMENT)
   Sq. Footage Area 190 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ___ None ✓
   Physical Damage: High ___ Moderate ___ Low ✓ None ___ (SEE COMMENT)
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ___
   Contact Potential: High ___ Moderate ✓ Low ___ None ___
   Distance to items needing maintenance:
   Electrical ___ Plumbing ___ Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ___ Carpet ___ Tile ✓ Wood ___ Other ___
   Ceiling Type: Concrete ___ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ___
   Suspended metal lath ___ Other TEXTURED CEILING MATERIAL
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other ___ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area FOOD PREPARATION Activity: High ___ Moderate ✓ Low ___
   What is adjacent to the area? HALLWAY, CAFETERIA,
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	___ hrs/day	___ days/week
Staff 14	7 hrs/day	5 days/week

Comments: INSULATION ON DUCT IS INHERENTLY NON-FRIABLE, HOWEVER, ISOLATED PITTED SPOTS ON DUCT HAVE PENETRATED OUTER WRAP. DAMAGED AREAS DUE TO IMPACT FROM SCAFFOLDING.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ISOLATED SPOTS ON DUCT ARE DAMAGED (SEE COMMENT) AND, THEREFORE FRIABLE AND IN BAD CONDITION.
ASBESTOS MGMT. PLAN SPECIFIES REMOVAL IN SUMMER, 1987.
* IMMEDIATE ENCAPSULATION OF PITTED SPOTS AND INTERIM MANAGEMENT MEASURES

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EXHIBIT E

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P.A. 85-541

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School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
JOHN PETTIBONE SCHOOL	2 PICKETT RIDGE RD. NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
4: CEILING SPACE: ROOF DRAINS AND PIPES ABOVE SUSPENDED TILES.	8800	6

1. Samples: Description of material sampled AIR CELL INSULATION ON PIPES, FOAM WRAPS FIBROUS MAT'L ON ELBOWS, CEMENTIOUS MAT'L ON ROOF DRAINS
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Trowled on ___ Boiler Lagging ___
   Pipe Insulation ✓ Duct ___ Other (please explain) INSULATION ON ROOF DRAINS.
3. Friability: High ___ Moderate ___ Low ✓ Not Friable ___
   Sq. Footage Area 630 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ___ None ✓
   Physical Damage: High ___ Moderate ___ Low ✓ None ___
5. Accessibility: Less than 10 ft. ___ More than 10 ft. ✓
   Contact Potential: High ___ Moderate ___ Low ✓ None ___
   Distance to items needing maintenance:
   Electrical 5-10' Plumbing 1-5' Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ___ Carpet ___ Tile ✓ Wood ___ Other ___
   Ceiling Type: Concrete ___ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ___
   Suspended metal lath ___ Other TEXTURED INSULATION ON STEEL BEAMS
7. Barriers: Suspended Ceiling ✓ Encapsulation ___ Enclosure ___
   Railing ___ Other ___ None ___
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area MAINTENANCE: ELECTRICAL & PLUMBING Activity: High ___ Moderate ___ Low ✓
   What is adjacent to the area? HALLWAY, CLASSROOMS
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	___ hrs/day	___ days/week
Staff 6	1 hrs/day	1 days/week MONTH

Comments: ___

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
INSULATION ON ROOF DRAINS AND PIPES IS NOT IN BAD CONDITION, BUT BUILDING CONDITIONS SUGGEST POTENTIAL FOR IMPACT DAMAGE.

ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL AND REPLACEMENT. INTERIM IMPLEMENTED (SEE TEXT FOR DETAILS)

EXHIBIT F

075A

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SCHEDULE A - AREA ASBESTOS INSPECTION REPORT

P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
JOHN BETTIBONE SCHOOL	2 PICKETT RIDGE RD. NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
5. OUTER WALL - OLD SECTION OF BUILDING	1920	708

1. Samples: Description of material sampled HARD, CONCRETE ~~TEXTURED~~ TEXTURED MATERIAL
   Type of sample: Bulk ✓ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ____
   Pipe Insulation ____ Duct ____ Other (please explain) WALL
3. Friability: High ____ Moderate ____ Low ____ Not Friable ✓ (SEE COMMENT)
   Sq. Footage Area 770 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
   Physical Damage: High ____ Moderate ____ Low ✓ None ____
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
   Contact Potential: High ✓ Moderate ____ Low ____ None ____
   Distance to items needing maintenance:
   Electrical ____ Plumbing 2' Ventilation 20' Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
   Floor Type: Concrete ____ Carpet ____ Tile ✓ Wood ____ Other ____
   Ceiling Type: Concrete ____ Acoustical Tile ____ Plaster ____ Metal Deck ____
   Suspended lay in panels ✓ Concrete joist and beam ____
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
   Railing ____ Other ____ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
   Use of Area CLASSROOMS & LIBRARY Activity: High ✓ Moderate ____ Low ____
   What is adjacent to the area? HALLWAY, CLASSROOMS
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 630	7 hrs/day	5 days/week
Staff 78	7 hrs/day	5 days/week

Comments: WALL MATERIAL IS INHERENTLY NON FRIABLE. HOWEVER, ISOLATED SPOTS HAVE BECOME CHIPPED DUE TO ABRASIVE IMPACT.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
OUTER WALL IS NOT FRIABLE EXCEPT IN ISOLATED SPOTS WHERE CHIPPED. WALL IS NOT IN BAD CONDITION AND PRESENCE OF RADIATOR IN FRONT OF WALL WILL LIMIT IMPACT POTENTIAL.

ASBESTOS MANAGEMENT PLAN SPECIFIES ENCAPSULATION OF CHIPPED SURFACES AND INSTITUTION OF MANAGEMENT/MONITORING PROCESS.

EO 675A EXHIBIT G CONNECTICUT DEPARTMENT OF EDUCATION Page 1 of 1

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

JOHN BOTTIGLIERI SCHOOL

FACILITY NAME: JOHN BOTTIGLIERI SCHOOL
FACILITY ADDRESS: 2 PICKETT RIDGE RD.
INSPECTED BY (Name and Telephone): JACK S. KOZUCHOWSKI 792-3613
DATE: 12/

AREA DESCRIPTION: FLOOR TILES - PROTECTED AREAS OF BLDG
AREA SQUARE FEET: 708
AREA POPULATION: 6

1. Samples: Description of material sampled HARD, NON-FRIABLE TILES
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Trowled on ___ Boiler Lagging ___
   Pipe Insulation ___ Duct ___ Other (please explain) ___
3. Friability: High ___ Moderate ___ Low ___ Not Friable ___
   Sq. Footage Area ___ Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ___ None ✓
   Physical Damage: High ___ Moderate ___ Low ✓ None ___
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ___
   Contact Potential: High ___ Moderate ✓ Low ___ None ___
   Distance to items needing maintenance:
   Electrical 10-30 Ft Plumbing 10-50 Ft Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ___ Carpet ___ Tile ✓ Wood ___ Other ___
   Ceiling Type: Concrete ___ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ✓ Concrete joist and beam ___
   Suspended metal lath ___ Other ___
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other ___ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) N Air Erosion Evident (y/n) ___
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area ~~OFF~~ FLOOR OF BUILDING Activity: High ✓ Moderate ___ Low ___
   What is adjacent to the area? ___
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 630	7 hrs/day	5 days/week
Staff 78	7 hrs/day	5 days/week

Comments: ~~ASB~~ ONE OF 10 FLOOR TILES SAMPLED CONTAINED ASBESTOS TILE ~~FROM~~ IN CAFETERIA. NUMEROUS DIFFERENT TYPES OF FLOOR TILE THROUGHOUT BUILDING. ASSUME THAT ENTIRE FLOOR SURFACE MAY CONTAIN ASBESTOS.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS IN FLOOR TILE IS NOT FRIABLE
ASBESTOS MANAGEMENT PLAN SHOULD MANAGEMENT PROGRAM FOCUSING ON STAFF TRAINING TO PREVENT ABRASIVE OPERATIONS ON TILES

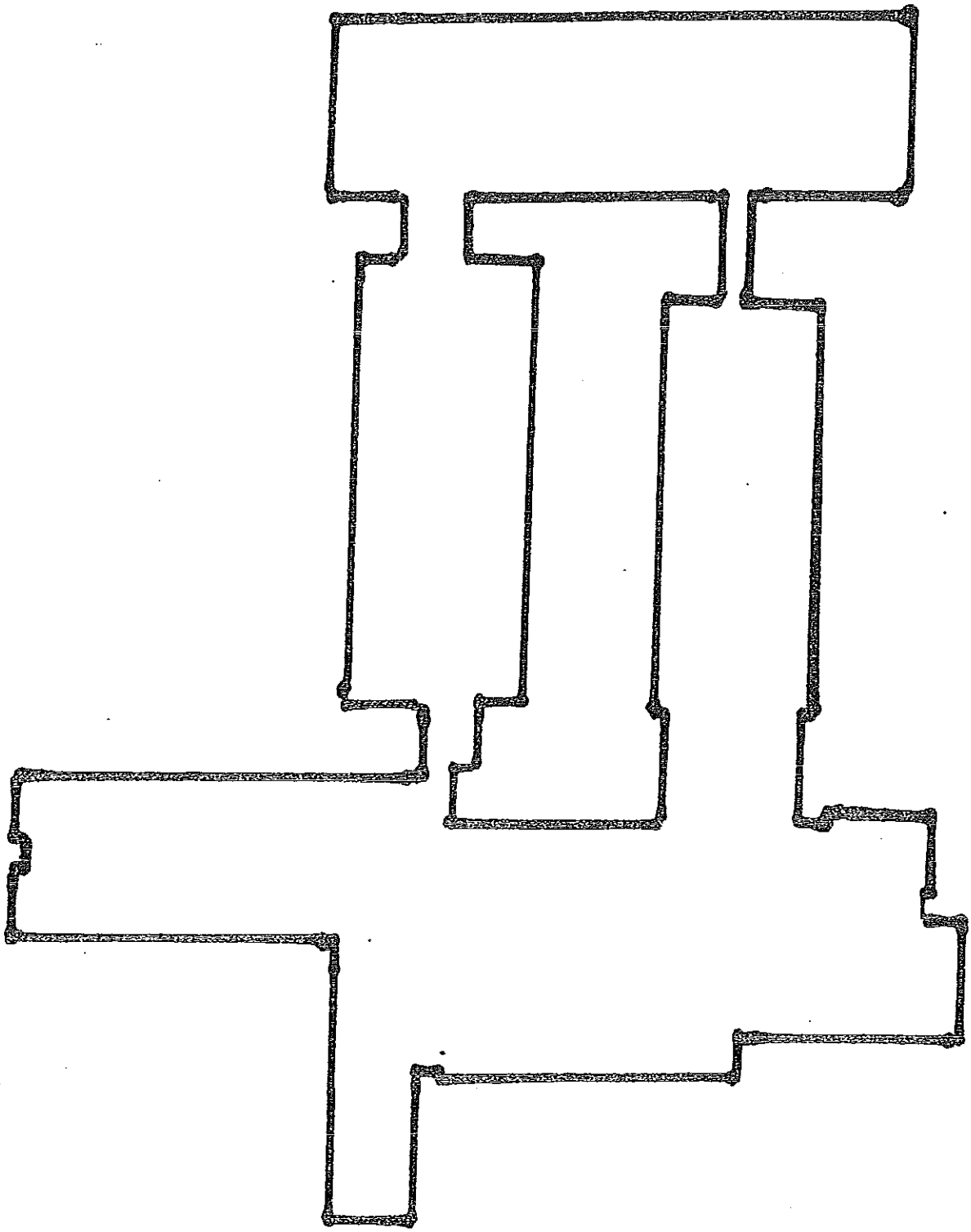
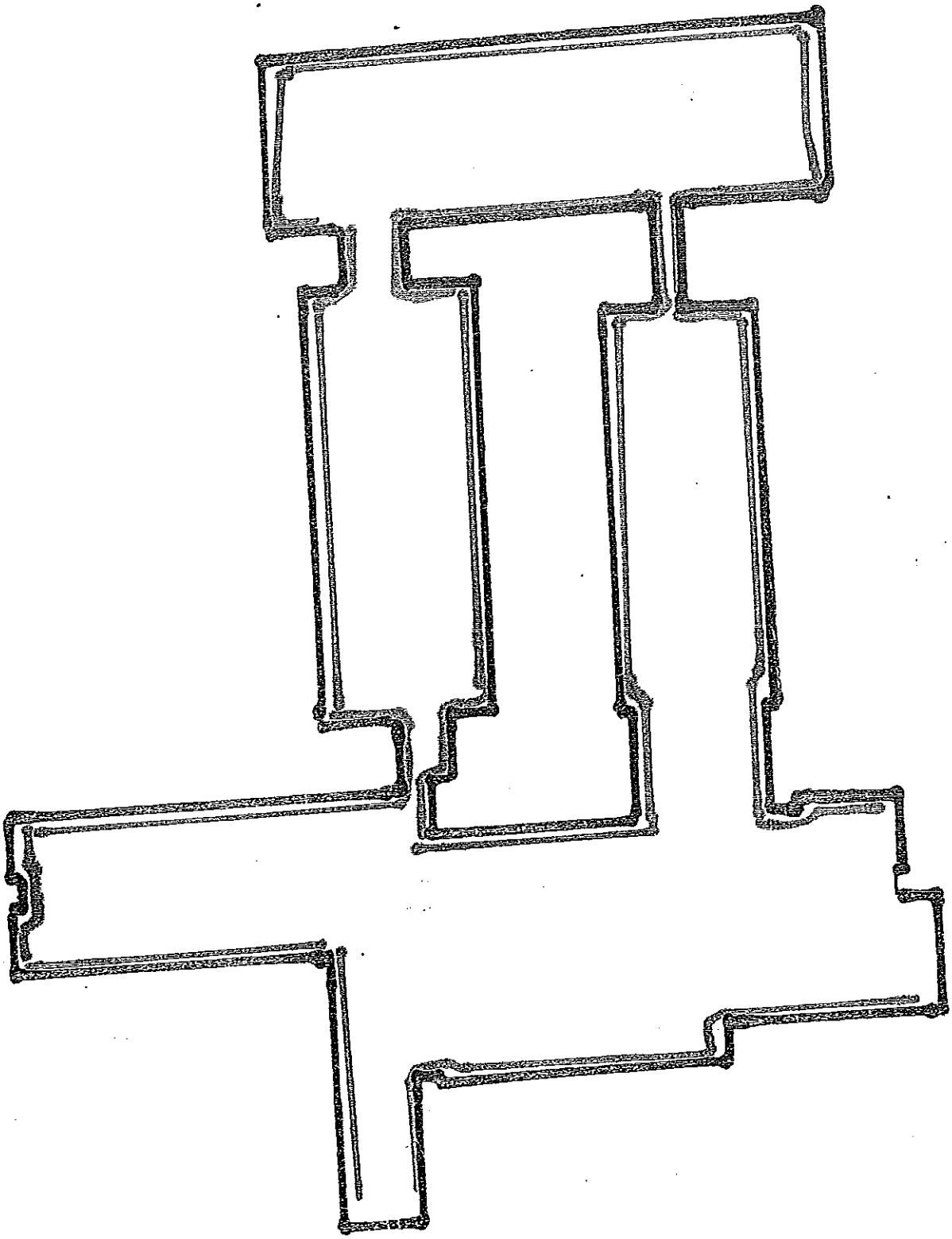
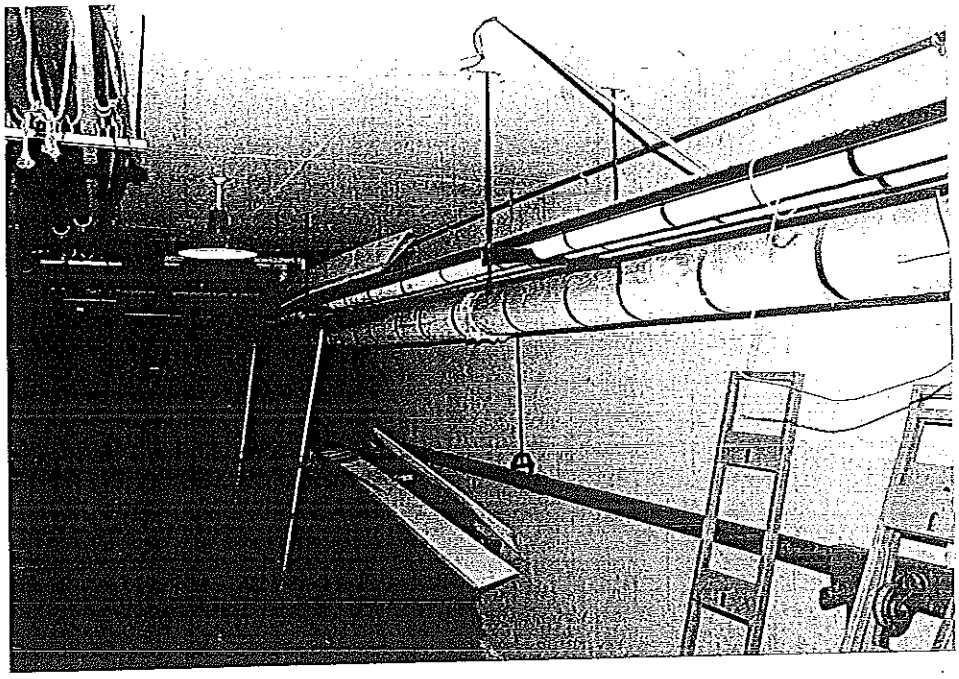


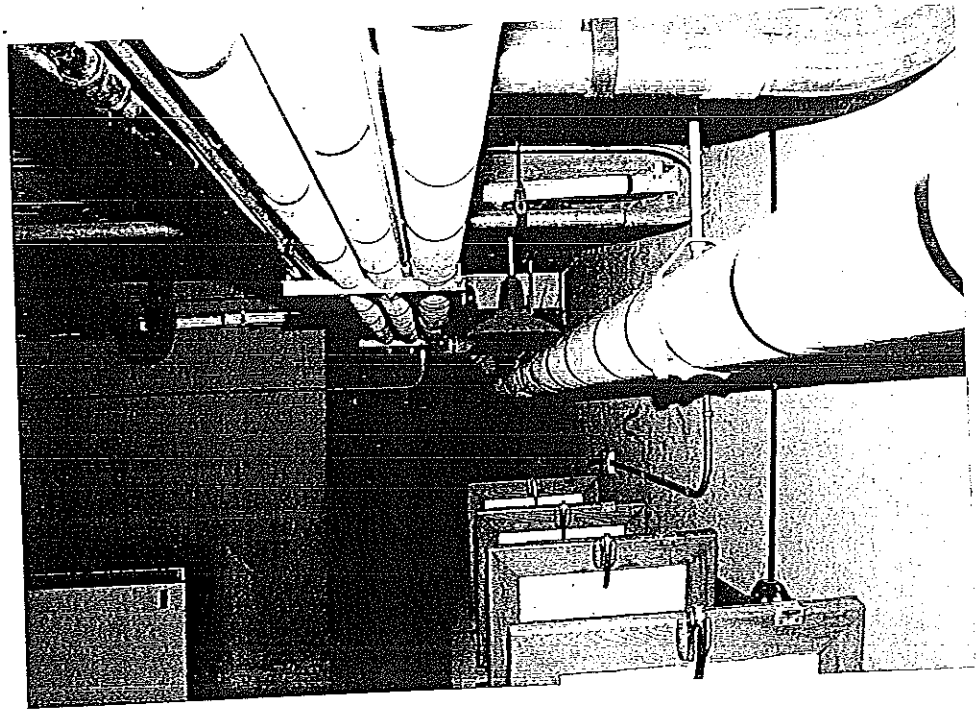
FIGURE 1 : GENERAL DIAGRAM OF THE JOHN PETTIBONE SCHOOL



area of pipe tunnel shown in red

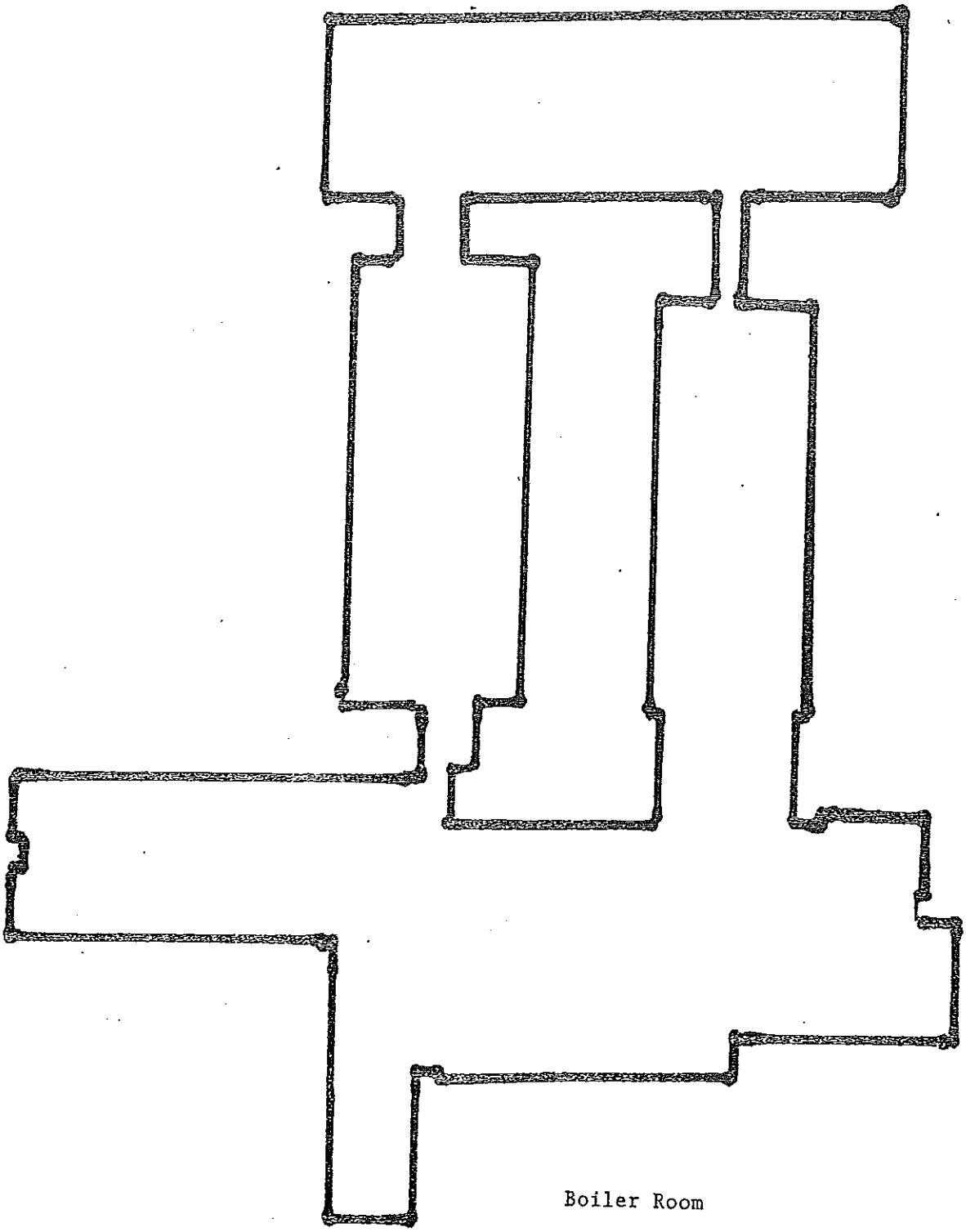


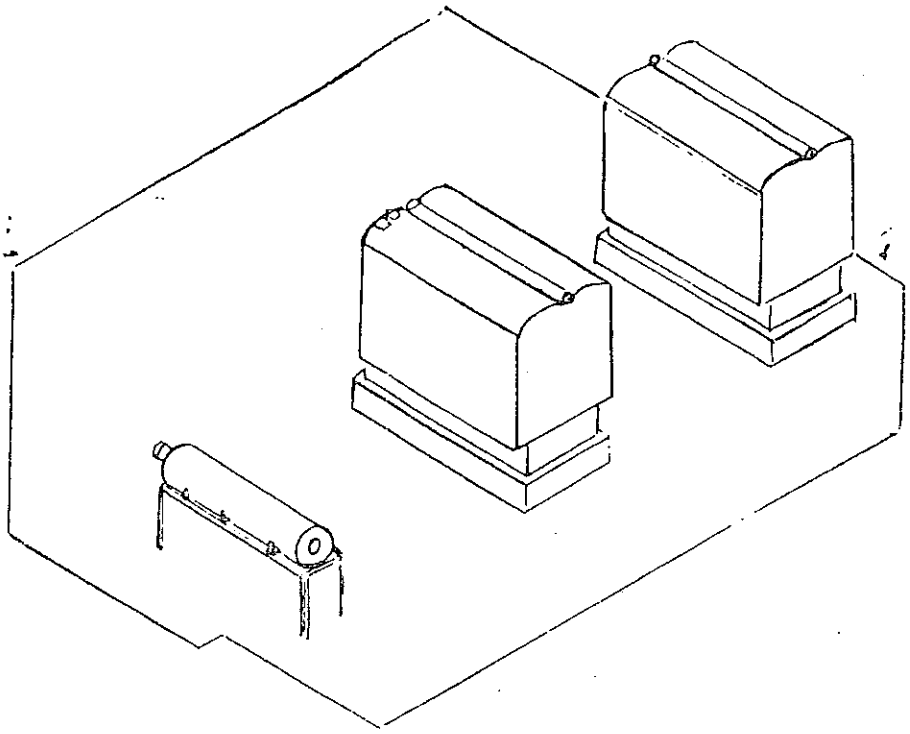
3A : Pipe Tunnel walk through area between boiler room and transformer room



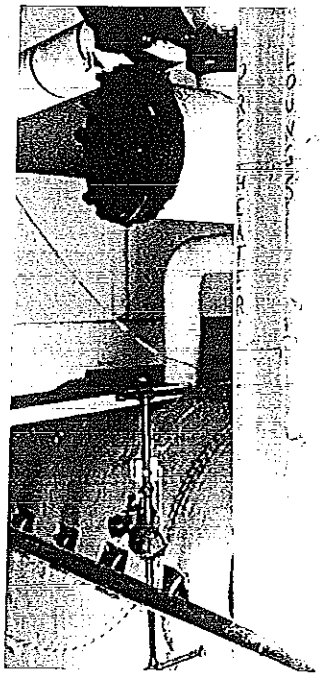
3B : Pipe Tunnel behind boiler room

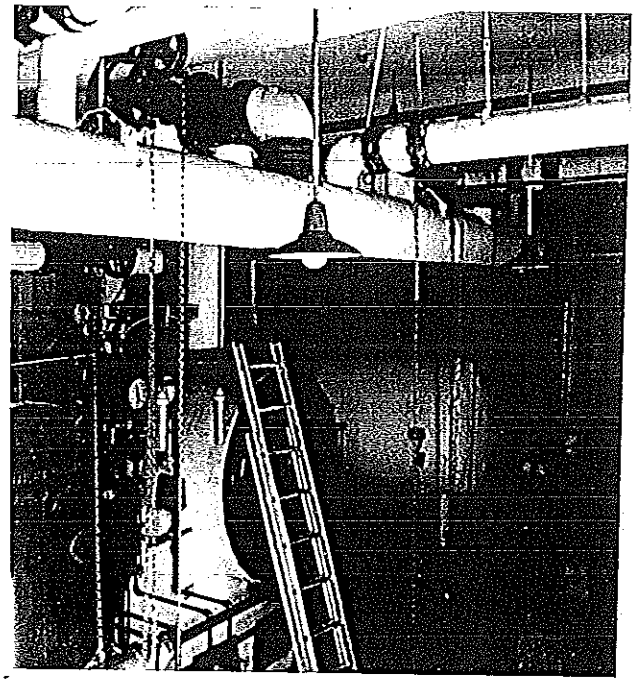
FIGURE 3 : PIPE TUNNELS


Boiler Room



2A : Sketch of boiler room

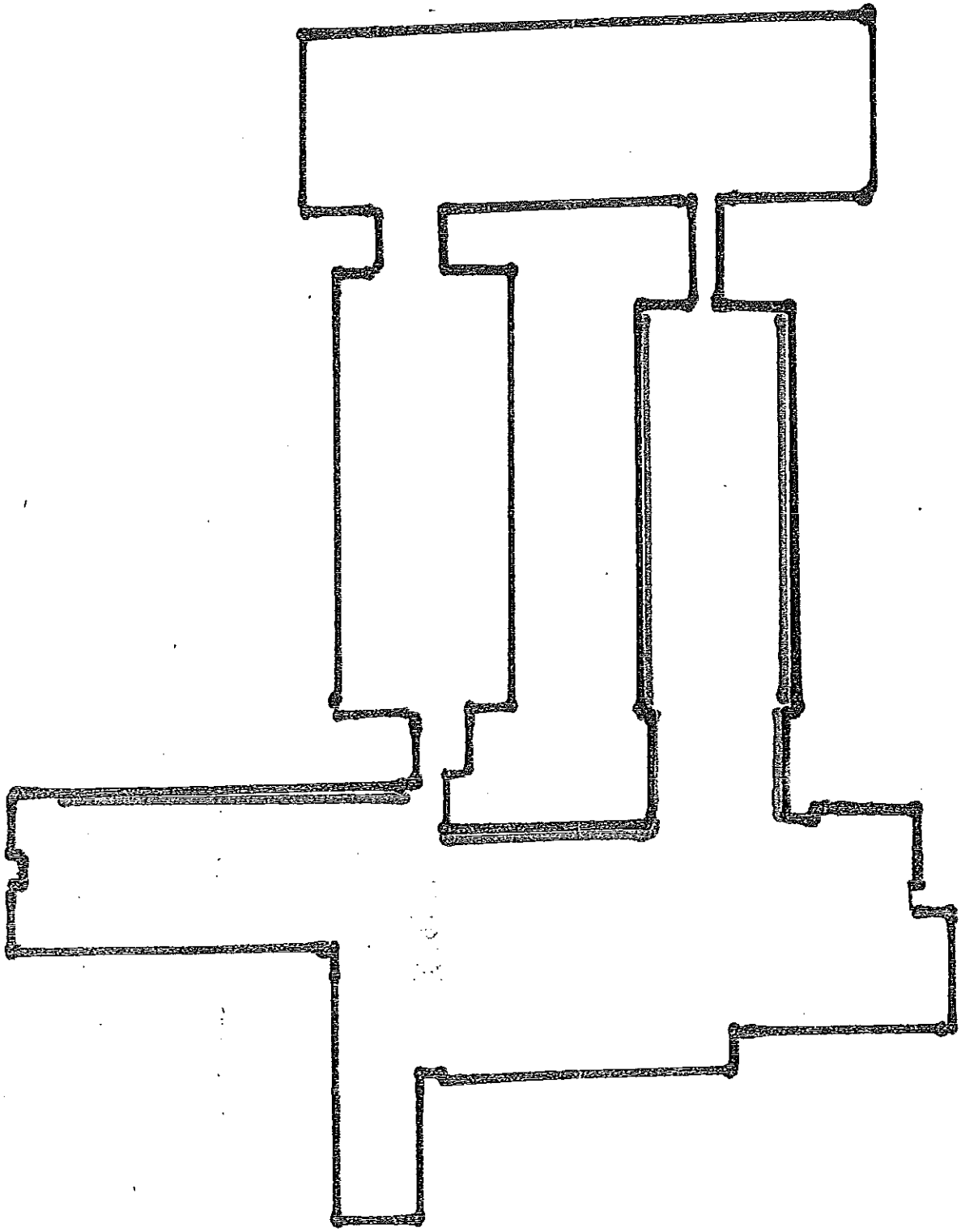




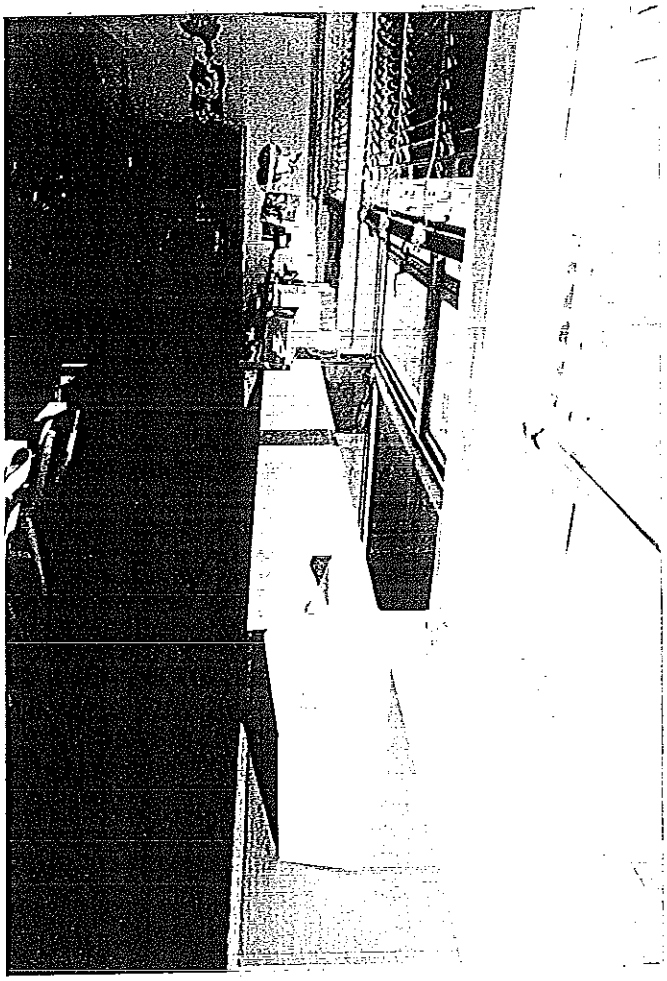
2B : Photogragh illustrating front view of boilers and hot water tank.

FIGURE 2 : BOILER ROOM

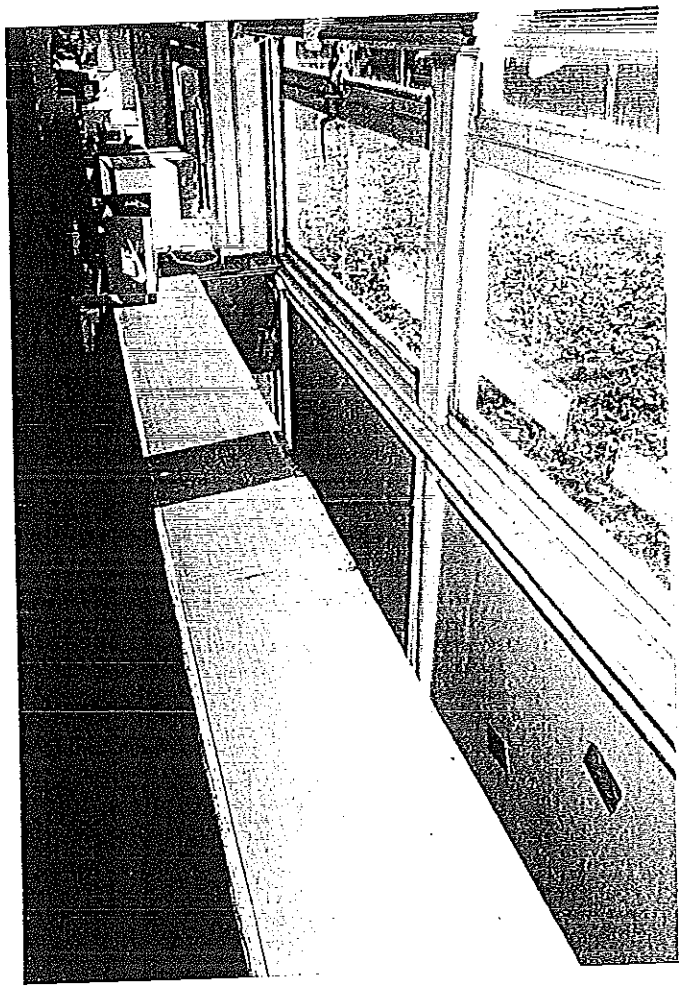
Area of Asbestos	:	Boilers	: 530 square feet
		hot water tank	: 160 square feet
		pipes	: 410 square feet
		TOTAL AREA ----	1200 square feet



Outer asbestos wall illustrated in red



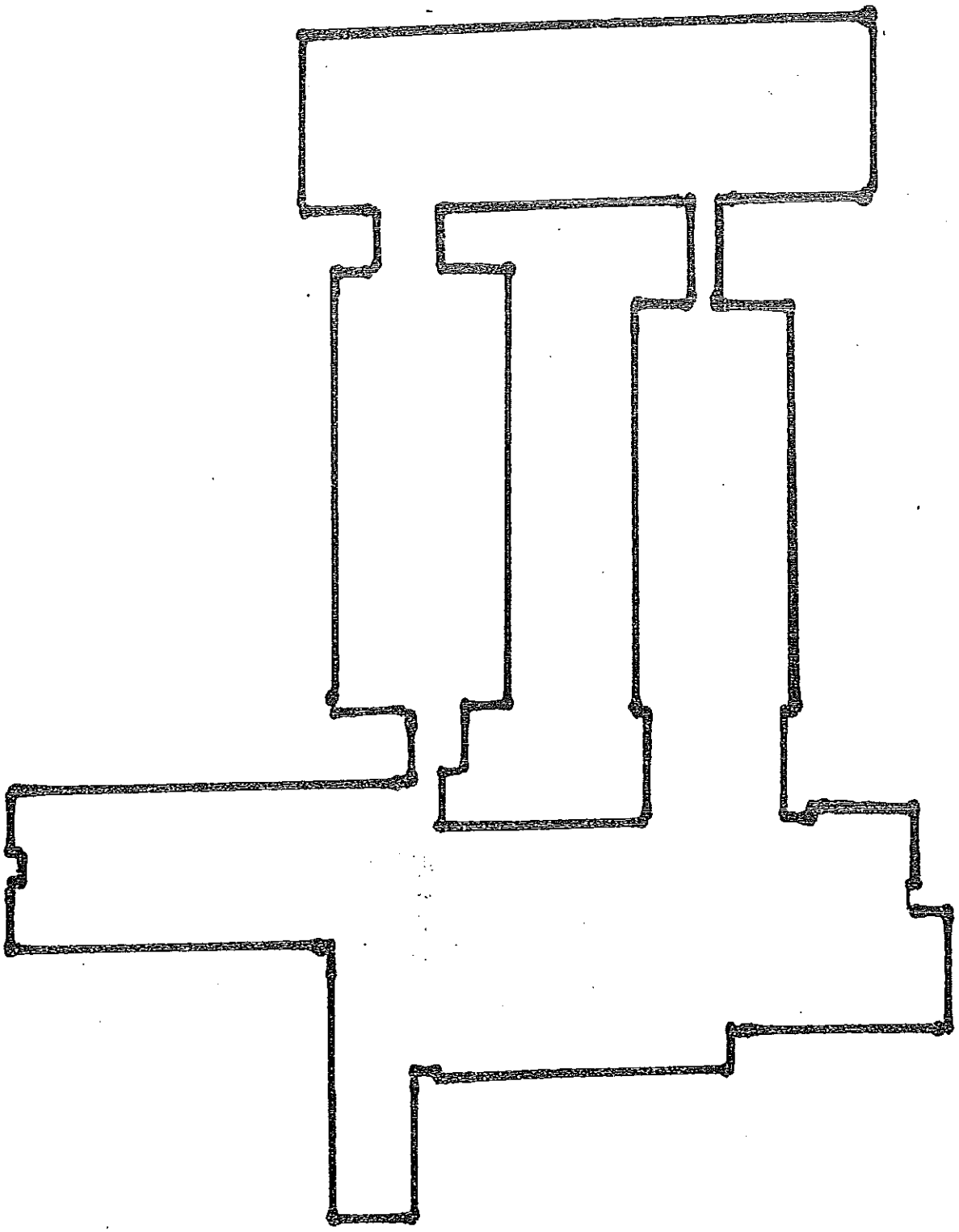
6A : Photograph showing outer wall in library.



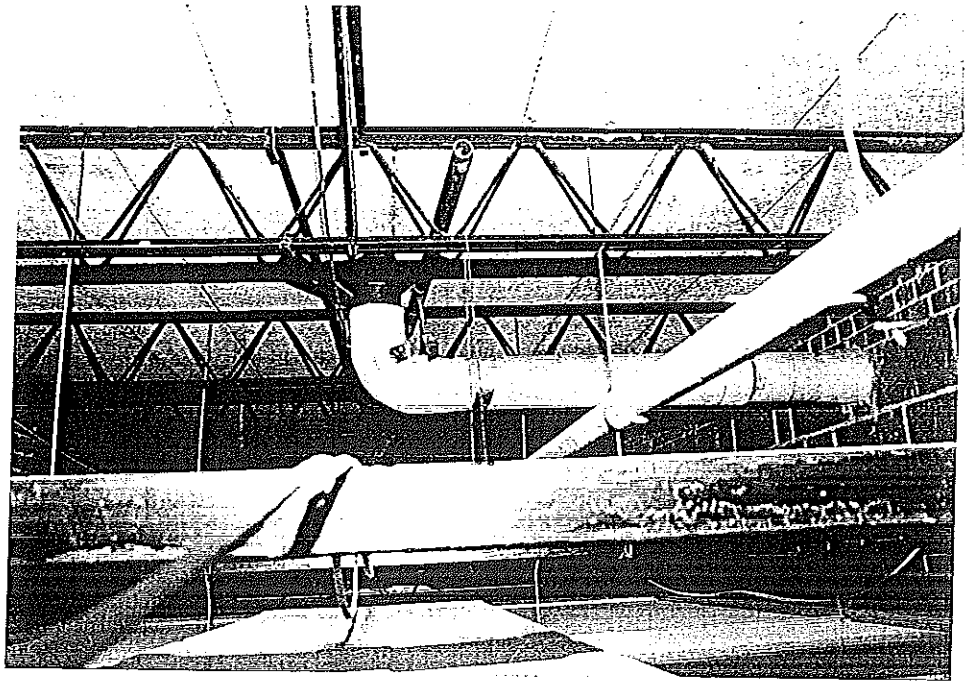
6B : Close-up of asbestos wall showing chipped areas of wall covered by tape

FIGURE 6 : CLASSROOM WALLS - OLD SECTION OF BUILDING.

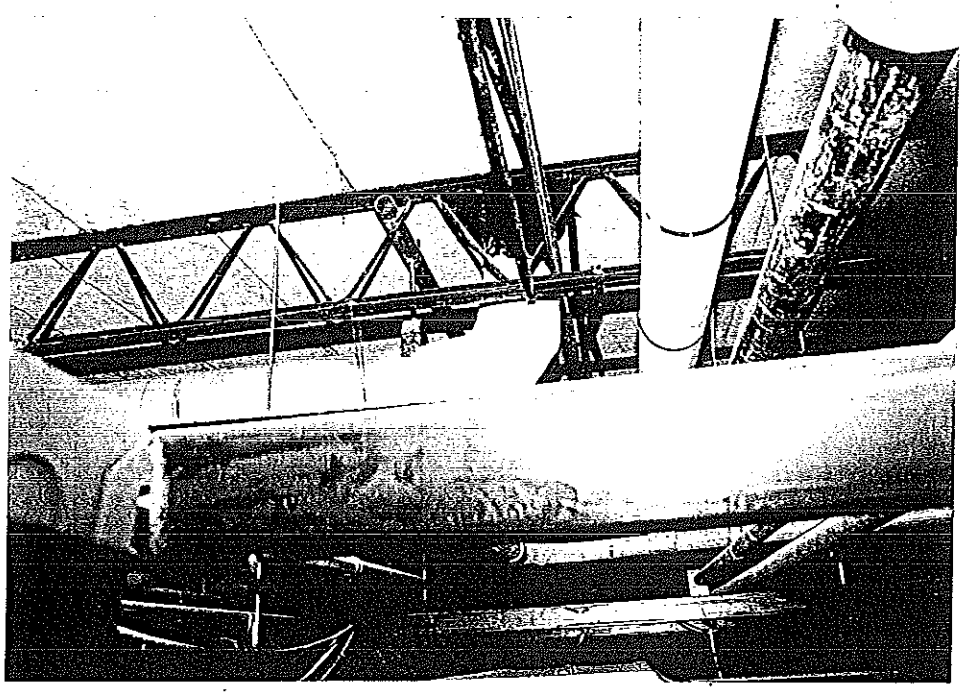
Area of Asbestos : 77o square feet



Ceiling Plenum - located between suspended ceiling and roof throughout building



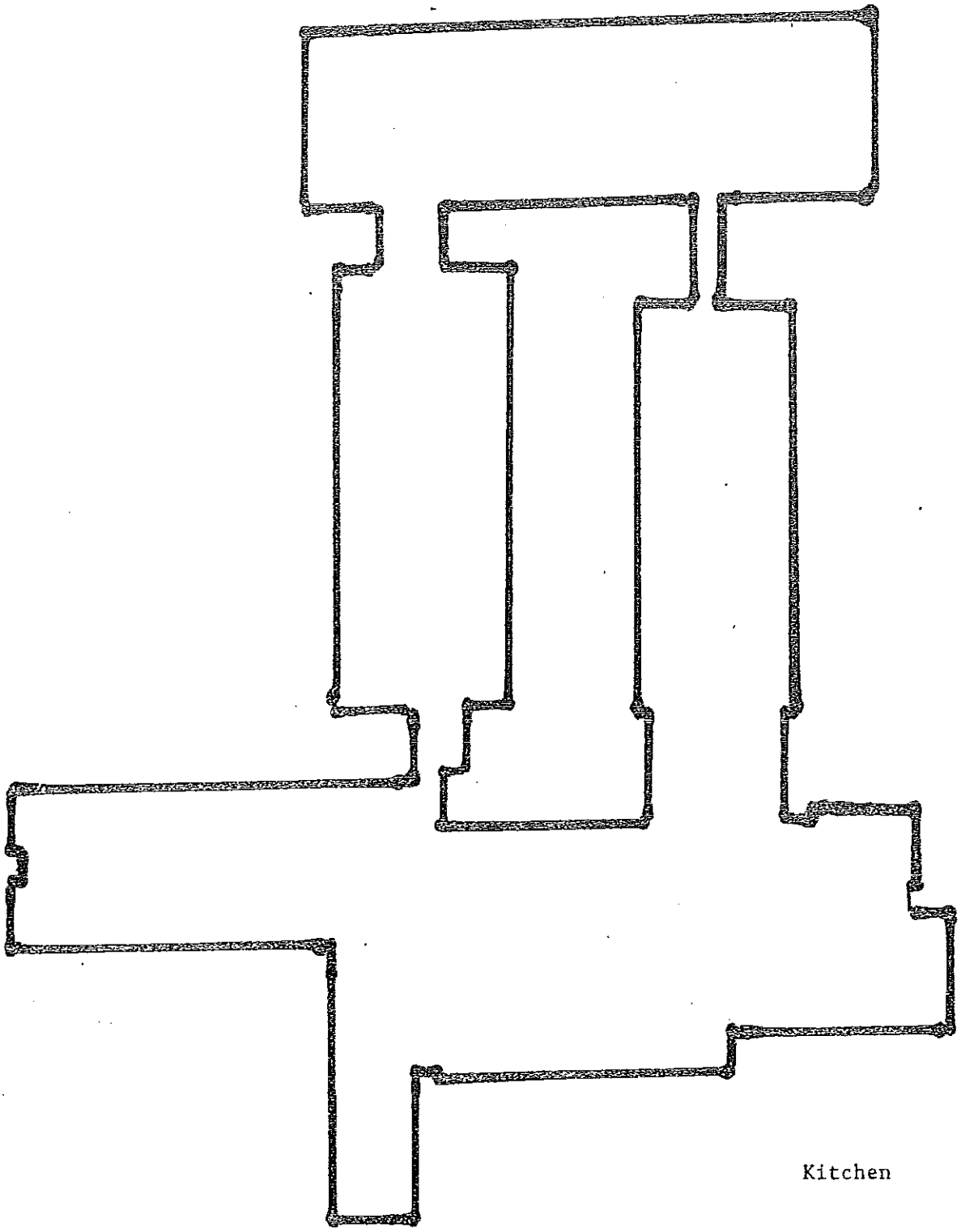
5A : Photograph showing asbestos insulated roof drain

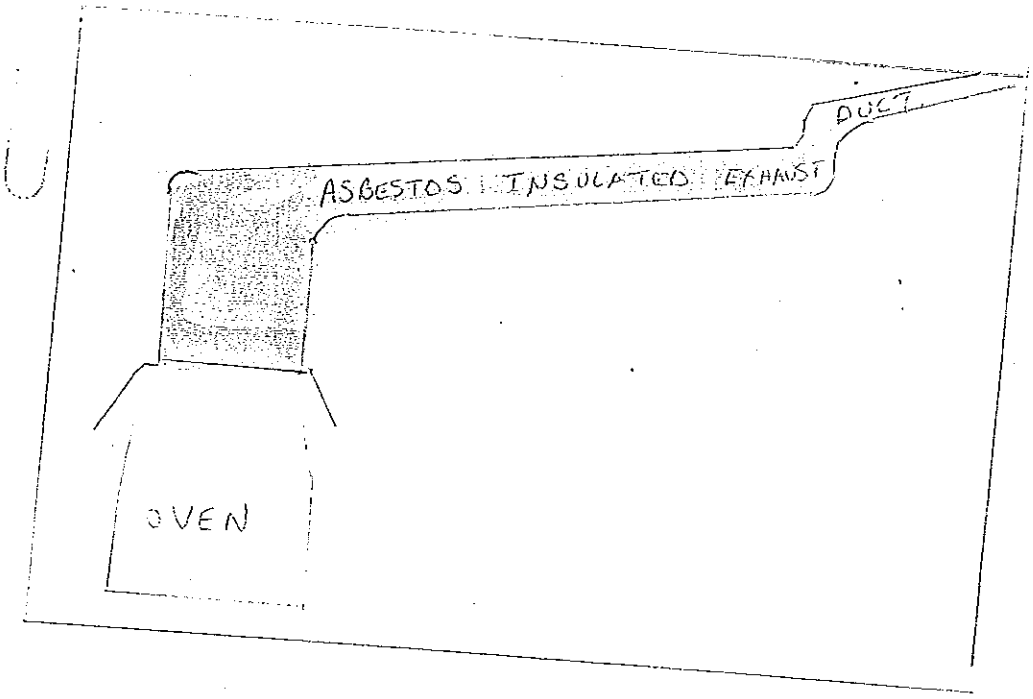


5B: Insulated roof drain (left) and steam pipe (right)

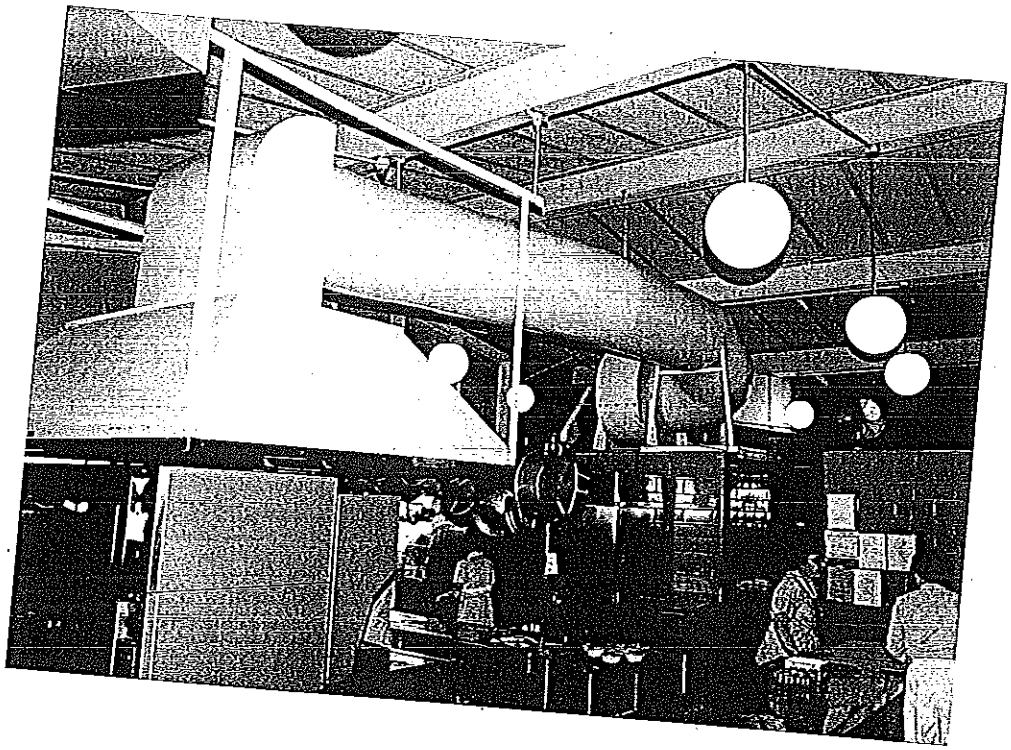
FIGURE 5 : CEILING PLENUM

Area of Asbestos	:	Roof Drains	: 300 square feet
		Pipe insulation	: 330 square feet


Kitchen



4A : Sketch of kitchen area



4B : Photograph showing broiler duct.

E. AREA REMEDIATION STRATEGIES.

This section outlines the management strategies which will be used for each location in the building where asbestos is present. This narrative also includes a justification for the remediation option which was selected.

(1) Boiler room.

The insulation on the boilers, breeching, stack, hot water tank, and the steam pipes contains asbestos. The insulation on the boilers, stack and the hot water tank are characterized in a different manner than the pipe insulation.

The steam pipes in this room are covered with air cell insulation. The asbestos is sandwiched on the surface of "cells" of corrugated fiber material which encloses pockets of air. The outer surface of this insulation is covered with a non asbestos fiber wrap. Pipe elbows are insulated with asbestos which are cloth wrapped. As long as the outer wrap of the pipe runs and elbows remain intact, the asbestos is non friable. The insulation is susceptible to damage from impact or water. If the insulation becomes torn or delaminated from the surface of the pipes, the asbestos will become friable. In several areas of the room, the insulation has deteriorated and is, therefore, friable.

The asbestos insulation on the boiler surfaces, the breeching, the stack and the water tank is friable, has deteriorated in several areas to a poor condition and will only get worse in time. The large surface areas of friable asbestos results in a high potential for chronic exposure to the maintenance and janitorial staff who work in this room.

All of the asbestos in the boiler room will be removed during the summer of 1987. The large amount of friable asbestos which is present in this area poses an ongoing potential for asbestos exposure to employees and contractors who work in this room. Therefore, the removal of asbestos under contract specifications is the permanent solution of choice. Contract specifications for the removal project are described in Section G.

Due to the large scope of this job, and the importance of performing the work when school is not in session, the work is scheduled for the summer 1987 school recess. In the interim period, the management program described in Section F will be instituted.

(2) Pipe tunnels.

There are two separate areas of pipe tunnels which, for the purpose of this document, are classified and evaluated on the basis of access and exposure.

(a) Hall between Boiler Room and Transformer Room.

A "walk through" area exists between the boiler room and the transformer room, which is accessible from the kitchen (by the back stairs) and the boiler room (doorway behind the boilers). This area has 7 foot ceilings, a concrete floor and is traversed by several asbestos insulated steam pipes.

It is not feasible to isolate this area; access is available to the kitchen staff due to the presence of the back stairway which leads to a kitchen storage room, which is adjacent to the pipe runs. The asbestos insulation on several of the pipe surfaces - particularly in the transformer room - is very friable.

Therefore all of the asbestos will be removed from this area. The removal project is scheduled for the summer, 1987 school recess. Contract specifications for the removal project are presented in Section G. In the interim period, the management program described in Section F will be instituted.

(b) Crawl Space.

The remainder of the pipe tunnel is a crawl space which traverses the perimeter of the building. The straight lengths of the pipes in the tunnels are covered with air cell insulation. Although there is a fiber covering over the asbestos, the ends of the pipe run insulation are exposed and, therefore, friable. The elbows are asbestos insulated with a cloth wrap. As long as the outer wrap on the pipe runs and elbows stays intact, the underlying asbestos will not be friable. However, the pipes are susceptible to water damage. It is very likely that the insulatin some part of the vast crawl space has deteriorated due to water damage, and which is, therefore, in a friable condition. The crawl space is used by the maintenance staff for emergency repairs. The tunnels are relatively isolated and access is limited by metal doors located in various locations in the building.

Removal of asbestos from the tunnels is a difficult operation, complicated by tight working conditions and the dirt floor. Asbestos removal in the crawl spaces was not selected as a remedial option at this time for the following reasons :

a. It is feasible to control and limit access to the tunnels and minimize employee exposure through a management and monitoring program ;

b. The high priority of removing asbestos from the major open areas in the building (as well as major removal projects from other schools in the District) will involve a large workload for the contractor who is selected. It is imperative that these jobs are performed carefully without a pressure schedule.

c. Removal from the pipe tunnels involves unique conditions which require specialized procedures to prevent further contamination of the entire area. If this project is sched-

uled in the future, it should be done as a single removal job for a given summer.

Therefore, the remedial strategy for this area involves a management and monitoring program, as described in Section F. This process includes measures for isolating the tunnels from the remainder of the building, methods for controlling access to the tunnels, and a system for protecting employees who must enter the crawl space for repairs. The effectiveness of the management program and the condition of the asbestos in the tunnel will be evaluated prior to the summer, 1988 school recess (and annually thereafter). If the system for controlling access and reducing exposures is not functioning effectively, a removal of asbestos from the tunnels under contract specifications will be implemented during that summer.

(3) Kitchen

Asbestos is present in the kitchen on the duct which is located near the ceiling, which leads from the broiler to the end of the room. The asbestos is covered with a non asbestos fabric wrap which is intact and in generally good condition. There are, however, several pitted areas on the insulation, where the outer fabric material has been punctured, which has exposed the asbestos on the duct. The exposed asbestos, at these pitted areas on the duct, is friable.

Although the damaged (and friable) areas are isolated sites on the duct, the presence of friable asbestos on an overhead surface presents a potential exposure of airborne asbestos to the kitchen staff. This condition, combined with the aesthetic consideration of having friable asbestos present in a food preparation area, predicates an active remediation process.

The asbestos in the kitchen will be removed during the spring recess of 1987. The removal project will be conducted under the contract specifications which are described in Section G. Before removal, the interim measures which are outlined in Section F will be instituted.

(4) Ceiling Space.

The steam pipes in the space between the suspended ceiling and the roof are covered with air cell insulation, which contains asbestos. The asbestos on this insulation is covered with a fiber wrap. However, the ends of each section of the insulation on the pipe runs is exposed. The pipe elbows are asbestos insulated with a non asbestos cloth wrap. The insulation on the pipes are subject to the potential of future water or impact damage.

Also present in the ceiling space are roof drains, which are insulated with asbestos which is unwrapped, and friable.

Although the ceiling space is partially enclosed by rem-

ovable ceiling tiles, the action of taking down the tiles for maintenance work has the potential for spreading asbestos throughout the area directly below the removed tile.

Removing all of the asbestos from the ceiling space is the most permanent remedial option available for this area. The project is feasible and would eliminate the need for cumbersome management and monitoring procedures which would be necessary every time maintenance work would be conducted in the ceiling space.

All of the asbestos which is present in the ceiling space will be removed in the summer of 1987. The removal project will be conducted under contract specifications described in Section G. The interim measures described in Section F will be implemented immediately and will remain in effect until the asbestos is removed.

(5) Outer Wall of Classrooms - Old Section of the Building.

The lower section of the outer wall of the original building (i.e., that portion of school built in 1955) is constructed of asbestos. The outside wall of this section of the school is faced with a non asbestos material. However, behind the baseboard radiators of the classrooms which are located in the original section of the building, the asbestos on this wall is exposed. The asbestos which is present - a hard, non-malleable wall - is not, in itself, friable. There are, however, isolated sites on the wall behind the radiator which are chipped, and, therefore, friable. The wall is not subject to any potential for future abrasion, damage, or deterioration, unless work is performed on the radiators or the wall which involves drilling, sawing, hammering or other abrasive operations directly on the outer wall. The asbestos on this wall is in good condition and the degree of friability is low. The potential for exposure to airborne asbestos in these rooms is minimal.

Total removal of the asbestos in this area entails the removal and replacement of the lower section of the outside wall in this section of the building. This management strategy was not selected for the following reasons :

(a) The removal and replacement of the outer wall is a project which requires a major reconstruction of the building ;

(b) The asbestos in the wall is not likely to deteriorate to a more friable condition in the future. Its current level of friability can be controlled.

(c) There are other remedial alternatives which are available to prevent the release of asbestos from the wall.

Encapsulation is the simplest method of minimizing the relese of asbestos from the wall. Due to the nature of the asb-

estos in the wall, the limited area requiring encapsulation and the ability to inspect and reencapsulate spots on the wall which may become chipped in the future, this is the remedial strategy of choice.

The entire surface of this wallboard will be encapsulated during the summer of 1987. The project will be conducted under contract specifications described in Section G, page .

(6) Floor Tiles.

There are several different types of floor tiles throughout the building. One of the ten samples collected (the sample taken in the cafeteria) tested positive for asbestos. Asbestos in the floor tiles is non friable.

The logical management strategy for the floor tiles is to leave them in place and institute a management program. Asbestos release from the floor tiles can be prevented by educating the maintenance and custodial staff in proper procedures of working with the tiles (as outlined in Section F).

F. MANAGEMENT AND MONITORING PROGRAM FOR ASBESTOS REMAINING IN SCHOOL BUILDING.

A management and monitoring program has been developed for the two areas of the school where asbestos will remain in place - the pipe tunnel crawl spaces and the outer wall of the old section of the building. Additionally, interim management procedures have been developed for those areas in the school where asbestos is scheduled for removal within the next several months. The management/monitoring program developed for all of these areas centers on implementing procedures for minimizing exposure and access to asbestos containing materials, training of maintennace and janitorial staff in these procedures, and conducting periodic inspections of the asbestos containing materials.

The specific details of the staff training which is referenced throughout this section are described in the document, titled :

" Inservice Training Program for Maintenance Staff :
Mininizing Asbestos Exposure to Staff and Building Occupants

New Milford Public Schools
(November, 1986). "

(1) Pipe Tunnels - Crawl Space.

The first task for this area is to isolate the tunnels from the remainder of the building. This will be accomplished by the following measures :

a) All holes leading from the pipe tunnels to the classrooms

above will be sealed ;

b) All accessways to the tunnels will be locked, except for the main entrance behind the boiler. The tunnel entrance in the boiler room will be placarded with a warning notice and access will be controlled by limiting the use of the boiler room to maintenance personnel ;

c) Entrance into the tunnel will be restricted to maintenance personnel or contractors with assigned tasks.

The control of access to the tunnels will be instituted immediately. The sealing of holes which lead from the tunnels to the radiators will be accomplished during the summer of 1987.

The major aspect of minimizing exposures to asbestos in this area is through education of the staff. An initial inservice training session will be conducted in November, 1986, which will cover the following topics :

. Hazards associated with asbestos insulation on pipes.
. Equipment and clothing required for safe entry and work in this area
. Procedures for the proper use of asbestos respirators.
. Emergency cleanup procedures for asbestos which has become dislodged or delaminated from the pipes.
. Decontamination procedures for personnel after work is complete in the pipe tunnels.

By January 1, 1987, the New Milford School District will purchase a sufficient number of respirators for the employees designated to work in the tunnels. Also, the District will purchase a glove bag enclosure system which will be used for emergency repair of pipe elbows which have become damaged.

The asbestos coordinator will designate specific maintenance personnel to conduct emergency work in the pipe tunnels. These individuals will be the only staff who are allowed access into this area. These employees will have the following qualifications :

. They must participate in the employee training sessions regarding emergency operations and the use of asbestos respirators ;

. They must be medically fit to wear a respirator and able to work in the pipe tunnels ;

. They must be willing to work in the pipe tunnels to perform the assigned tasks with the proper safety precautions.

A list of the individuals designated to work in the pipe tunnels will be maintained in the main administrative office and in the maintenance office of the School District.

The final aspect of the remediation program in the tunnels

is monitoring. Once per year, the management system described above, will be evaluated, the pipe tunnels will be inspected and air samples will be collected within the tunnels. These inspections will assess the degree of friability and employee exposure to the asbestos in this area. The conditions will be documented and maintained on file at the School District's main administrative office. The report of the conditions will also include an assessment of the effectiveness of the management system and a recommendation for either continuing the management/monitoring program, modifying it in some way, or abandoning the system and removing the asbestos from the tunnel area.

(2) Outer Wall - Old Section of the Building.

The low friability of the asbestos in the outer wall necessitates a simple ongoing system of management and monitoring. After the encapsulation of the wall, the entire surface of the outer wall will be inspected and evaluated on an annual basis. Any areas on the wall which have become chipped, pitted or cracked will be immediately repaired and/or encapsulated.

Any maintenance operations on the radiator or the outer wall will be authorized and supervised by the asbestos coordinator who will assure that the proper precautions for preventing fiber release, limiting exposures of employees and proper clean-up of the area will occur.

(3) Boiler Room.

The following interim strategy has been developed for the boiler room. These management procedures will be instituted immediately and will remain in effect until the asbestos is removed in the summer of 1987.

The management process for these areas centers on work procedures and staff training. This includes the following measures :

. STAFF TRAINING. An overview on the recognition of asbestos hazards and safety precautions regarding work around large surface areas of asbestos containing materials will be presented to the maintenance and janitorial staff.

. CONTROLLED ACCESS. Access to the boiler room will be restricted by the asbestos coordinator. Entrance into the boiler room will be restricted to maintenance personnel with assigned tasks. The doors of the boiler room will remain locked and will be placarded with a warning notice. Smoking in the boiler room will be absolutely prohibited.

. WORK PROCEDURES . Any employee who works directly on the boiler, breeching, stack, pipe elbows, hot water tank, or any assigned task in the boiler room which requires more than a short (i.e., 15 - 30 minutes) period of time will be equipped with respiratory protection. Dry sweeping of the floors in this room will

be prohibited.

(4) Kitchen.

The following procedures will be implemented in the kitchen as interim measures, which will remain in effect until the asbestos has been removed from the room.

face of the duct will be sealed with an encapsulant during the school recess of December, 1986.

be informed of the presence of the asbestos on the duct and cautioned against the use of tools or implements which may cause further damage to the insulation on the duct.

face of the kitchen duct unless it is an emergency operation which is authorized and supervised by the asbestos coordinator. No ladders or scaffolding will be used in this room until the asbestos is removed.

(5) Ceiling Space.

The following interim procedures pertaining to the ceiling space will be instituted immediately and remain in effect until all asbestos is removed from this location (summer, 1987).

. REPLACEMENT OF TILES. The asbestos coordinator will assure that all areas of the suspended ceiling will remain intact. Any missing or damaged tiles will be replaced by January 1, 1987. Any other tiles which are removed during this interim period will be immediately replaced.

. CONTROLLED ACCESS. No work will be performed in the ceiling space, nor will any ceiling tiles be removed during the interim period unless it is specifically authorized by the asbestos coordinator. Such work will be conducted outside of normal school hours by designated maintenance staff who have been trained in work procedures around asbestos containing materials.

. STAFF TRAINING. The maintenance staff will be trained in procedures for safe operations around asbestos, including work in the ceiling space. This includes limiting access to the work area, proper respiratory protection, and clean-up of the floor area after the ceiling tiles have been replaced.

(6) Floor Tiles - throughout building.

Although only one of the floor tile samples collected from the building tested positive for asbestos, it will be assumed that the entire floor surface may contain some asbestos. The management strategy selected for the floor focusses entirely on restrictions of specific work operations on the floor surface and staff training :

(a) Control of Work Operations on the Floor Tiles.

Any work performed directly on the floor tiles (other than sweeping or wet cleaning) will require the specific authorization and supervision by the asbestos coordinator. Abrasive operations such as drilling, sanding or cutting of tiles, will be prohibited. Any tiles requiring removal will be conducted with proper respiratory protection and with adequate clean-up procedures.

(b) Staff Training.

All maintenance and custodial staff who service the Pettibone School will be instructed of the restrictions outlined above and the proper procedures for removal of single floor tiles which require replacement.

and abatement ;

1.3.6 Connecticut Basic Building Code ;

1.3.7 Connecticut Fire Safety Code ;

1.3.8 Local health and safety codes, ordinances or regulations pertaining to asbestos remediation.

1.4 Exemptions.

Any deviations from these specifications requires the written approval and authorization from the building owner.

1.5 Contractor Qualificatiioms.

All bidders shall submit a record of prior experience in asbestos removal projects, listing no less than 10 completed jobs in the past 5 years.

PART 2 : TERMINOLOGY

2.1 ABATEMENT - Procedures to control fiber release from asbestos-containing materials; includes removal, encapsulation, and enclosure.

2.2 AIRLOCK - A system for permitting ingress and egress while assuring air movement to contaminated area from an uncontaminated area. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.3 AIR MONITORING - The process of measuring the fiber content of a specific volume of air in a stated period of time.

2.4 AIR SAMPLING PROFESSIONAL - A professional capable of conducting air monitoring and analysis schemes. This individual should be a certified industrial hygienist or an environmental scientist or engineer with equivalent experience in asbestos air monitoring and worker protection equipment and procedures. This individual should have demonstrated proficiency in conducting air sample collection in accordance with 29 CFR 1910.1001 and 1926.58.

2.5 AMMENDED WATER - Water to which a surfactant has been added.

2.6 ASBESTOS - the name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles.

2.7 ASBESTOS CONTROL AREA - An area where asbestos abatement operations are performed which is isolated by physical boundaries to prevent the spread of asbestos dust, fibers, or debris.

2.8 ASBESTOS FIBERS - Those particles with a length greater than five (5) microns and a length to diameter ratio of 3 : 1 or greater.

2.9 ASBESTOS FIBERS PERMISSABLE EXPOSURE LIMIT (PEL) - The maximum concentration of asbestos fibers which is allowed in a work area where employees are present. The current level established by OSHA is 0.2 fibers per cubic centimeter of air as an eight (8) hour time weighted average. An employer is responsible for maintaining work areas in a manner that this standard is not exceeded.

2.10 AUTHORIZED VISITOR - Any person authorized by the building owner to enter the premises of the school building.

2.11 BUILDING OWNER - The New Milford School District. The Superintendent of the New Milford Schools (or his designee) shall represent the owner in all transactions with the contractor.

2.12 CLEAN ROOM - An uncontaminated area or room which is a part of the worker decontamination enclosure with provisions for for storage of workers' street clothes and protective equipment.

2.13 CURTAINED DOORWAY - A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.14 DECONTAMINATED ENCLOSURE SYSTEM - A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers and equipment. A decontamination enclosure system always contains at least one airlock.

2.15 ENCAPSULANT - A liquid material which can be applied to asbestos-containing material and which controls the possible release of asbestos fibers from the materials either by creating a membrane over the surface (bridging encapsulant) or penetrating the material and binding its components together (penetrating encapsulant).

2.16 ENCAPSULATION - A specified asbestos remediation strategy involving the application of an encapsulant to asbestos-containing materials to control the release of asbestos fibers into the ambient air.

2.17 EQUIPMENT DECONTAMINATION ENCLOSURE - That portion of a decontamination enclosure system designed for controlling the transfer of materials and equipment, typically consisting of a washroom and a holding area.

2.18 EQUIPMENT ROOM - A contaminated area or a room which is part of the worker decontamination enclosure with provisions for

storage of contaminated clothing and equipment.

2.19 FIXED OBJECT - A unit of equipment or furniture in the work areas which cannot be removed from the work area.

2.20 FRIABLE ASBESTOS MATERIAL - Any material that contains more than 1% asbestos by weight, that can be crumbled, pulverized or reduced to powder by hand pressure, and, which releases asbestos particles to the environment. Covering by an impermeable, intact surface precludes friability.

2.21 GLOVEBAG TECHNIQUE - A method for removing small amounts of asbestos-containing materials from HVAC ducts, short piping runs, elbows, valves, joints and other non-planar surfaces in a self-contained work area.

2.22 HEPA FILTER - A high efficiency particulate air (HEPA) filter in compliance with ANSI Z9.2-1979.

2.23 HEPA VACUUM EQUIPMENT - Vacuum equipment with a HEPA filter system for filtering the effluent air from the unit.

2.24 HOLDING AREA - A chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area. The holding area comprises an airlock.

2.25 INSPECTOR - An individual, retained by the Owner, who is a "qualified asbestos inspector" as defined by the State of Connecticut Department of Health Services, and who will be responsible for overseeing and enforcing all of the specifications during the asbestos remediation projects.

2.26 MOVABLE OBJECT - A unit of equipment or furniture in the work area which can be removed from the work area.

2.27 NEGATIVE AIR PRESSURE EQUIPMENT - A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a contaminated area (negative with respect to adjacent uncontaminated areas) and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.

2.28 NOTICE OF DISCHARGE - A formal discharge of the contractor by the building owner and nullification of the contract.

2.29 NOTICE OF NON-COMPLIANCE - A process to be followed in the course of a violation hearing, whereby the building owner, upon determining that the specifications have been breached, informs the contractor that he (she) has 24 hours to corr- the violations noted by the inspector, subsequent to a discharge procedure.

2.30 NOTICE OF VIOLATION - An enforcement procedure by which the inspector informs the contractor to immediately cease all removal or remediation work in the building and to immediate-

ly implement clean-up procedures. The notice of violation will be followed by a hearing with the building owner within 24 hours.

2.31 PLASTICIZE - To cover floors and walls with plastic sheeting as specified herein.

2.32 REMOVAL - All procedures, specified herein, which are necessary to remove asbestos-containing materials from the designated areas and to dispose of these materials at an acceptable site.

2.33 SHOWER ROOM - A room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between the contaminated area and the clean area.

2.34 STRIPPING - Taking off asbestos materials from any structural member, pipe surface or HVAC equipment.

2.35 SURFACTANT - A chemical wetting agent added to water to improve penetration into asbestos-containing materials.

2.36 VIOLATION HEARING - A formal process whereby the building owner holds a conference with the contractor and the inspector to review violations of the specifications noted during the project, in order to ascertain whether the project contract has been breached

2.37 WASHROOM - A room between the work area and the holding area in the equipment decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.38 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 by water, and by afterwards disposing these cleaning items as asbestos contaminated waste.

2.39 WORK AREA - Designated rooms, spaces, or areas of the project in which asbestos abatement actions are occurring and which may become contaminated as a result of such abatement actions. The work area must be totally self contained by sealing, plasticizing and equipping the area with a decontamination enclosure system.

2.40 WORKER DECONTAMINATION ENCLOSURE SYSTEM - That portion of a decontamination enclosure system designated for controlled passage of workers, and other personnel and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room.

2.41 WORK STOPPAGE CLEANUP PROCEDURE - A process following the completion of the project or following the issuance of a

notice of violation, whereby the contractor thoroughly cleans and decontaminates the work area, the decontamination enclosure system, and any other areas of the building affected by the removal project, to the satisfaction of the inspector.

2.42 WORK ZONE - The area of the decontamination enclosure system where asbestos is being removed.

PART 3 : DESCRIPTION OF WORK

3.1 Locations and Work Statement

The specific sites for asbestos removal are described in Part 6 of these specifications. The contractor shall retain full ownership of all asbestos containing materials in these specific locations and is responsible for removal, transport, and disposal of the asbestos in accordance with these specifications.

Part 7 specifies the area of the building where asbestos will be encapsulated. The contractor is responsible for conducting the encapsulation operation to the satisfaction of the inspector and the building owner.

3.2 Chain of Command

3.2.1 Responsible Authority.

The Owner, represented by the Superintendent of Schools, (or his designee) is the ultimate authority in the discharge of this contract. All deliberations regarding the contract or the degree of compliance with the specifications, shall be ultimately decided by the owner.

3.2.2 Inspector.

The owner shall retain an asbestos inspector to oversee all work performed under this contract and to enforce the provisions of these specifications. The inspector shall have the authority to issue a notice of violation to the contractor and temporarily stop all further work if the air quality of the building is affected by the removal operation. The inspector may also function as the air sampling professional, if he/she is qualified under the terms defined herein.

3.2.3 Air Sampling Professional.

The owner shall also retain an air sampling professional to conduct the air monitoring tasks outlined in section 5.4.3.1 of these specifications. If the owner retains a separate individual as the air-sampling professional (in addition to

the inspector), he/she shall report directly to the inspector. All determinations of air quality contamination shall be made by the air sampling professional.

3.2.4 Project Supervision.

With the exception of the process outlined in part 3.5.3 - 3.5.5 of these specifications, the contractor shall report to the inspector as the owner's designated project manager.

3.3 Contractor Responsibilities.

The work specified in this contract entails the removal of asbestos-containing materials and the replacement of such materials with a suitable non asbestos product. This contract also specifies areas in the building where asbestos is to be properly and thoroughly encapsulated. All of the work specified shall be done by persons who are knowledgeable, qualified, and experienced in the removal, treatment, handling, and disposal of asbestos-containing materials and the subsequent cleaning of the environment. The contractor selected must comply with all applicable federal, state, and local regulations which mandate work practices and shall be capable of performing the work of this contract within the specified timeframe.

The contractor shall supply all labor, materials, equipment, services, insurance, and incidentals which are necessary or required to perform the work in accordance with all applicable governmental regulations and the specifications of this contract.

3.4 Performance Bond.

Before commencing work, the contractor shall post a performance bond in the amount and form specified in the general contract. In the event of an issuance of a notice of discharge, the owner reserves the right to use the bond to complete any unfinished work specified by this contract and adequately clean and/or decontaminate the work area and the building of asbestos to make it fit for occupancy.

3.5 Procedure for Resolving Documented Violations.

In the event that the inspector determines a violation of these specifications, the following procedures shall be employed to resolve and correct the areas of non compliance :

3.5.1 The inspector shall adequately document deviations from these specifications and immediately inform the contractor of the conditions which require correction. The contractor shall be given a reasonable period of time to correct these conditions.

3.5.2 If the violations continue unabated, the inspector shall

issue a notice of violation to the contractor. After receiving the notice of violation, the contractor shall immediately cease all removal operations and effectuate a work stoppage cleanup procedure.

3.5.3 Within 24 hours of the issuance of a notice of violation, a hearing shall be conducted by the owner, with the contractor and the inspector in attendance. The owner shall review the documented violations with the objective of resolving the problems which resulted in the violations noted by the inspector. When the issues are fully resolved, removal work can resume under the conditions established by the building owner.

3.5.4 If the building owner sets conditions to correct the violations which the contractor is unwilling or unable to accomplish, the owner shall issue a notice of non-compliance.

3.5.5 If the correction conditions established by the owner are not initiated within 24 hours, the building owner shall issue a notice of discharge to the contractor, which immediately abrogates the contract.

PART 4 : WORK PREPARATION.

Prior to the initiation of the removal work, the following tasks must be completed by the contractor :

4.1 Work Site Safety Plan.

The contractor shall establish a set of emergency procedures and shall post them in a conspicuous place at the work site. The safety plan should include provisions for the following :

4.1.1 Evacuation of injured workers.

4.1.2 Emergency and fire exit routes from all work areas.

The contractor is responsible for training all workers in these procedures.

4.2 Notifications, Postings, and Submittals.

The contractor will make the following notifications, and provide the following submittals 10 days prior to the commencement of removal work :

4.2.1 Environmental Protection Agency (EPA)

Submit notification to the Regional EPA NESHAPS Coordinator at this address :

Director, Enforcement Division
Air and Hazardous Materials Division
Pesticides and Toxic Substances Branch
USEPA Region 1
Boston, Massachusetts 02203

The minimum information required in the notification includes the following :

. Name and address of the owner ;
. Building Location ;
. Building size, age, and use ;
. Amount of friable asbestos ;
. Work schedule, including proposed start and completion dates ;
. Asbestos removal procedures ;
. Name and location of disposal site for generated friable asbestos waste.

4.2.2 State Department of Education.

Send written notice of any project which involves the removal of more than 160 linear feet or 260 square feet of asbestos containing material to the Connecticut State Department of Education at the following address :

Chief, Bureau of Grants Processing
Room 325, State Office Building
State Department of Education
165 Capitol Avenue
Hartford, Connecticut 06106

The following information must be submitted :

. Name and address of building owner ;
. Building location ;
. Building size, age and use ;
. Amount of friable asbestos ;
. Work schedule, including proposed start and completion dates ;
. Asbestos removal procedures ;
. Name and location of disposal site for generated friable asbestos.

4.2.3 Transport and Disposal.

Submit proof, satisfactory to the owner, that all required permits, site locations, arrangements for transport and disposal of asbestos containing or asbestos contaminated materials and supplies have been obtained.

4.2.4 Work Zone Construction Plan.

Submit to the owner plans and/or shop drawings for the construction of decontamination enclosure systems and for the isolation of work areas as may be necessary in compliance with

these specifications and applicable regulations.

4.2.5 Certification of Compliance Record for Past Projects.

Contractor must submit a written statement regarding whether he/she has ever been found out-of compliance with pertinent Federal and State asbestos regulations pertaining to removal, transport, disposal or other environmental or safety considerations.

4.2.6 Employee Training.

Submit documentation to the owner indicating that each employee has had instruction on the hazards of asbestos exposure, on the proper use and fitting of respirators, on protective dress, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures. This documentation must include a signed statement by each employee who will perform the removal work in the School that he/she understands these instructions and is willing to comply with these procedures and perform all work in accordance with these specifications.

The contractor must also submit verification that all employees have received medical examinations as required by OSHA regulations.

4.2.7 Postings.

The contractor shall post signs in and around the work area to comply with 29 CFR 1910.1001 and 1926.58. Post one copy of each of the following documents at the work site :

. Title 29, Code of Federal Regulations, Part 1910.1001 and 1926.58 OSHA Asbestos Standards.

. Title 40, Code of Federal Regulations, Part 61, Subparts A and B, NESHAPS.

4.2.8 Condition of Fixtures.

The owner and contractor must agree, in writing, on the condition of the building and fixtures. A photograhic record of major fixtures is required.

4.2.9 Certification of Exhaust Equipment.

The contractor must submit the manufacturer's certification that vacuums, negative air pressure equipment, and other local exhaust / ventilation equipment conform to ANSI Z9.2-1979.

4.2.10 Rental Equipment.

When rental equipment is to be used in removal areas or to transport waste materials, the contractor shall provide doc-

umentation to the owner that written notification has been provided to the rental company informing them of the nature of use of the rented materials.

4.2.11 Equipment and Supplies.

The contractor shall provide a list of equipment, materials and supplies which will be used for the remediation projects. This list shall include the encapsulant which will be used for the classroom walls and the replacement materials which will be used for the areas where asbestos will be stripped. All materials, supplies and equipment shall be suitable to conduct the remediation projects in accordance with these specifications.

4.3 Preliminary Conference

Prior to the commencement of asbestos removal work, a conference will be held between the owner, the contractor, and the inspector. The objectives of this conference are as follows :

. Contractor submits to the owner copies of all submittals and notifications outlined above ;

. Contractor and inspector review the work plan and inspection procedures established in the specifications ;

. All parties agree to work standards, roles and time schedules established in contract specifications.

Asbestos remediation work may proceed when the owner specifically authorizes the initiation of the project, in writing.

PART 5 : EXECUTION OF WORK.

5.1 Work Standards.

The contractor is responsible for maintaining work conditions at all times in conformance with OSHA standards and asbestos removal guidelines established by the Connecticut Department of Health Services. This includes the following :

5.1.1 Personnel Protection Equipment.

All employees shall be provided with and trained in the proper use of all equipment, respirators and supplies to minimize exposure to asbestos during work operations as specified in Section 1.6.1 - 1.6.7 of the document entitled "CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the Connecticut Department of Health Services.

5.1.2 Worker Protection Procedures.

All employees, inspectors, authorized visitors, or any individual who enters the work zone shall conform to the procedures established in Section 1.6.8.1 - 1.6.8.3 of the document entitled " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ".

A copy of these procedures shall be posted at all points of entry to the work zone. The contractor is responsible for limiting access to the work zone to individuals who abide by these procedures. The inspector shall oversee the control over entry into the work zone and shall enforce these procedures when necessary.

5.2 Decontamination Enclosure System.

Before initiating work on any given day, a properly constructed decontamination enclosure system shall be in place at all points of entry into the work zone. The inspector shall evaluate and approve the integrity of the enclosure system(s) prior to the commencement of asbestos removal work on any given day.

5.2.1 Features.

The enclosure system shall be constructed with suitable Building Code conforming framing and built according to the drawings specified in the contractor's "Work Zone Construction Plan" as submitted according to part 4.2.4 of these specifications. The contractor shall, at all times, maintain the decontamination enclosure system with a proper functioning worker decontamination enclosure (with an integral equipment room, shower room, and a clean room), an equipment decontamination enclosure (with an integral washroom and holding area) and highly visible, controlled, and properly posted entry points.

In all cases, access between contaminated and uncontaminated areas shall be through an airlock. In all cases, access between any two rooms within the decontamination enclosure system shall be through a curtained doorway.

5.2.2 Maintenance and Monitoring of Enclosure Systems.

The contractor shall create and maintain a pressure differential between work areas and occupied areas by the use of negative air pressure equipment. Such equipment shall be maintained at the work site at all times in a properly functioning condition. This equipment shall be equipped with a high efficiency particulate filtration system, shall be sized to provide four air changes per area in the work area and shall conform to ANSI Z9.2 - 1979. The equipment shall feature an automatic shutdown of the system and/or warning lights to indicate improper pressure drop across the filters.

The air sampling professional shall periodically monitor the integrity of the negative air pressure equipment and shall conduct periodic chemical smoke tests to verify the effectiveness of the enclosure system. If any of these tests indicate a breakdown in the integrity of the decontamination enclosure system's negative pressure system, the inspector shall immediately inform the contractor to cease all removal operations. The contractor shall take immediate steps to reestablish negative pressure in the enclosure system. When the air sampling proffessional verifies the proper functioning of pressure in the enclosure system, asbestos removal work can resume.

5.3 Sequence of Work.

The removal project shall proceed in accordance with the sequence of work established during the preliminary conference as mutually agreed upon between the contractor and the owner. Work is divided into three areas - the boiler room, the kitchen, and the ceiling space - each of which will be completed as a separate unit by the schedule delineated in part 7 of these specifications.

5.4 Control Over Asbestos Remediation Work.

All work procedures shall be continuously controlled and monitored to assure that the building will not be contaminated. The following controls shall be instituted on each working day :

5.4.1 Start-Up.

Prior to work on any given day, the contractor's designated project foreman shall discuss the day's work schedule with the inspector to evaluate job tasks with respect to safety procedures and requirements specified to prevent contamination of the building or the employees. This includes a visual survey of the work area and the decontamination enclosure systems.

5.4.2 Access.

The contractor shall maintain control of access to all work areas to ensure the following requirements :

. Non essential personnel are prohibited from entering the area ;

. All authorized personnel entering the work area shall read the "worker protection procedures" which are posted at the entry points to the enclosure system, and shall be equipped with properly fitted respirators and protective clothing ;

. All personnel who are exiting from the decontamination enclosure system shall be properly decontaminated ;

. Asbestos waste which is taken out of the work area must be properly bagged and labelled in accordance with these specifications. The surface of the bags shall be decontaminated.

Asbestos leaving the enclosure system must be immediately transported off site or immediately placed in temporary storage on site, in accordance with the requirements described in part 5.4.5 of these specifications.

. Any material, equipment, or supplies which are brought out of the decontamination enclosure system shall be cleaned and decontaminated by wet cleaning and/or HEPA vacuuming of all surfaces.

The inspector shall be responsible for monitoring the integrity of this system of access control and shall immediately inform the contractor of any deviations from the above requirements. The inspector shall also have the authority to mandate immediate corrections to the control of access which are necessary to prevent the building from becoming contaminated with asbestos.

5.4.3 Air Quality Monitoring.

Air sampling shall be conducted by the owner to ascertain the integrity of controls which protect the building from asbestos contamination. Independently, the contractor shall monitor air quality within the work zone to ascertain the protection of employees and to comply with OSHA regulations.

5.4.3.1 Owner's Responsibility.

The owner's air sampling professional shall collect and analyze air samples during three time periods :

. Pre-abatement Sampling Period. The air sampling professional shall collect a sufficient number of air samples, inside and outside of the work area, to establish background air quality conditions. At least one sample will be taken outside of the building.

. Abatement Period. Samples shall be taken on a daily basis during the work period. A sufficient number of area samples shall be taken inside the work area and decontamination enclosure system, outside of the work area, at the exhaust of the negive pressure system, and outside of the building to judge the degree of cleanliness or contamination of the building during removal.

The air sampling professional shall provide a continual evaluation of the air quality of the building during removal, using his/her best professional judgements in perspective of the State Department of Health Services guideline of .01 fibers/cc. and the background air quality established during the pre-abatement period. If the air sampling professional determines that the building air quality has become contaminated from the project, the inspector shall immediately inform the contractor to cease all removal operations and implement a work stoppage clean-up procedure. The contractor shall conduct

a thorough cleanup of areas of the building designated by the inspector. No further removal work can take place until the air sampling professional has determined that the building air has been decontaminated.

. Post Abatement Period. The air sampling professional shall conduct air sampling following the final cleanup phase of the project, once the "no visible residue" criterion has been met. A sufficient number of samples, collected aggressively, will be taken to determine the final air concentration, in perspective of the "clearance guideline" of .01 fibers / cc.

5.4.3.2 Contractor Responsibility.

The contractor shall independently retain an air sampling professional to monitor airborne asbestos concentrations in the work zone and to establish conditions and work procedures for maintaining compliance with OSHA regulations 29 CFR 1910.1001 and 1926.58.

The contractor's air sampling professional shall document all air sampling results and provide a report to the inspector within 24 hours after each work day.

5.4.3.3 Air Sampling Methods.

All air sampling shall be conducted in accordance with methods described in OSHA standards 29 CFR 1910.1001 and 1926.58. All air samples shall be conducted in a manner that will provide a minimum detection limit of .01 fibers / cc.

5.4.4 Asbestos Removal Procedures.

The contractor shall be responsible for the safe and methodical removal of asbestos from the work zone. All removal procdures shall be in conformance with section 3.2.2 - 3.2.5 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS REMOVAL AT PUBLIC BUILDINGS ", published by the Connecticut Department of Health Services. At all times, negative pressure shall be maintained in the work zone, relative to the building outside of the decontamination enclosure system.

The inspector shall make periodic evaluations of removal work procedures and shall enforce all safety procedures which are outlined (or referenced) in these specifications.

5.4.5 Asbestos Encapsulation Procedures.

The encapsulation of the areas designated in Part 7 of these specifications shall be conducted in accordance with the following procedures :

5.4.5.1 The contractor shall use the encapsulant designated in the preliminary conference. Any change of the encapsulant will be approved by the inspector.

5.4.5.2 Before proceeding with full encapsulation of the areas designated in Part 7, the contractor shall apply the encapsulant on a small, designated test area. The test area shall be reinspected over several days by the contractor and the inspector to determine if it has adequately adhered to the building structure.

5.4.5.3 All containment, inspection, and air sampling procedures previously specified shall apply to the encapsualtion project.

5.4.5.4 The encapsulant shall be applied with airless spray equipment.

5.4.5.5 The encapsulant shall be initially applied with a light mist coat. After the first coat has dried, apply a full coat of the encapsulant at a 90 degree angle to the direction of the first coat.

5.4.6 Asbestos Waste.

All asbestos waste shall be bagged in 6 mil plastic, labeled with danger placards as specified in 29 CFR 1910.1001 (g) (2), and transported to a landfill facility which is approved by the Department of Environmental Protection for disposal of asbestos.

Asbestos may be temporarily stored on the owner's premises outside of the work zone under the following circumstances :

. The bagged asbestos is thoroughly cleaned off by wet sponging the surface of the bag in the washroom of the decontamination enclosure system ;

. The bagged asbestos taken out of the decontamination enclosure system shall be immediately placed in a dumpster with a locking metal cover. At the end of each work day the top of the dumpster shall be closed and locked ;

. The dumpsters are placed in an area of the property designated by the owner. The owner reserves the right to require the contractor to move the dumpster to a different location or to order them to be removed from the premises. In no case shall the asbestos remain on the owner's premises longer than 72 hours after the completion of the project.

The asbestos shall be transported and disposed in accordance with Section 22a-209-8(i) of the administrative regulations of the Department of Environmental Protection and Section 3.7.1

of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the State of Connecticut Department of Health Services.

5.4.7 End of Day Clean-up.

At the completion of each work day, a work stoppage clean-up procedure will be conducted by the contractor. The purpose of this clean-up is to remove all loose asbestos from the work zone and to inhibit the release of fibers to the air in the work room. This procedure should include the following steps :

. Bagging of all loose asbestos and decontamination of the bag surfaces in the washroom of the decontamination enclosure ;

. Wet cleaning of the floor of the work zone ;

. Visual inspection of the entire work zone for areas of loose asbestos ;

. Securing the work zone. This entails the sealing and posting of the decontamination enclosure system and locking the doors of the room where the removal is taking place.

5.5 Final Clean-up of Work Zone.

Following the completion of all asbestos removal work in a given area, the following clean-up, inspection and clearance procedure will be followed by the contractor and the inspector :

5.5.1 Initial Clean-up.

Following the last day of asbestos removal, the work stoppage clean-up procedure will be instituted, followed by a wet cleaning of all surfaces in the work zone. All visible accumulations of asbestos material and debris will be removed at this stage.

5.5.2 HEPA Vacuum Clean-up.

After the initial clean-up, the contractor shall allow all areas of the work zone to dry, and will clean all surfaces with a HEPA filtered vacuum. After this clean-up, the contractor shall wait 24 hours and then shall reclean all surfaces with a HEPA filtered vacuum.

After the second clean-up, the inspector shall evaluate the adequacy of the decontamination process. If the inspector finds visible accumulations of dust or bulk asbestos containing materials in the work zone, the contractor shall repeat the cleaning, at his/her expense, until the area is declared as clear of visible accumulations of dust and asbestos.

Following the inspector's initial clearance of the work zone, the contractor shall remove the outer layer of plastic from the walls and floors, but shall keep the windows, doors and HVAC vents sealed. The decontamination enclosure system and the negative pressure system shall remain in place. Other equipment, materials, and sealed drums (previously cleaned as above) shall be removed from the equipment decontamination enclosure system at an appropriate time in the cleaning sequence.

5.5.3 Initial Clearance Test.

Twenty four hours after the work zone is totally dismantled, after all of the contractor's equipment, supplies and waste (including the outer layer of plastic) have been removed from the room, the inspector shall make a final visual inspection of the work area. If this inspection reveals no visible dust, the contractor shall remove the second layer of plastic sheeting and all barriers, with the exception of the plastic over the windows and the barrier between the work zone and the outside.

The air sampling professional shall, at this stage, conduct the post abatement air monitoring. The maximum acceptable levels for these air samples shall be .01 fibers / cc. or less, or a level equal to or less than the average asbestos level determined in the initial background samples taken outside the building.

Areas which do not comply with the standards specified above shall continue to be cleaned by the contractor at his / her expense until the specified standard is achieved as evidenced by the results of air testing.

5.5.4 Reinstallation of Displaced Equipment.

After the inspector has cleared the work area as clean from visible dust, and after the air sampling professional has determined that the area has achieved background air quality relative to the standards specified above, all remaining seals and barriers shall be dismantled by the contractor.

The contractor shall relocate all objects, which were moved to temporary locations during the course of the work, back to their proper positions. The contractor shall resecure mounted objects, which were removed during the course of the project, back to their former positions. The contractor shall reestablish HVAC, mechanical and electrical systems, which were temporarily shut down during the project, in conformance with all applicable building, mechanical and electrical codes. All existing filters shall be disposed, as asbestos contaminated, and replaced with new filters.

PART 6 : LOCATIONS OF ASBESTOS REMOVAL PROJECTS IN THE SCHOOL.

Asbestos is to be removed in three areas in the building - the boiler room, the kitchen, and the ceiling space. The contractor is responsible for removing all asbestos from these locations.

6.1 Boiler Room.

Figure 2 illustrates the sites and approximate areas where asbestos was discovered in this room. The contractor is responsible for removing all of the asbestos in this room. All of the asbestos in this room shall be removed in accordance with the specifications described in this document.

Following the removal of asbestos, the boilers, hot water tank, pipes and all surfaces which were stripped during the project will be reinsulated with a material which is acceptable to the owner.

6.2 Kitchen.

Figure 4 shows the approximate location of asbestos in the kitchen. Asbestos is present on the exhaust duct located across the ceiling, leading from the broiler to the end of the room.

The contractor is responsible for removing all of the asbestos in the kitchen in accordance with the specifications described in this document.

The insulation on the exhaust duct shall be replaced with a suitable, non-asbestos insulating material.

6.3 Ceiling Space.

The ceiling space is defined as the entire space between the suspended ceiling and the true ceiling (interfacing with the roof) throughout the school building. Asbestos was found to be present on the surface of roof drains and on steam pipes above the hallway adjacent to the gymnasium. The contractor is responsible for removing all of the asbestos which is present in the ceiling space, in accordance with these specifications.

Following removal, the contractor shall reinsulate all roof drains and steam pipes with a suitable replacement material.

PART 7 : LOCATION OF AREAS TO BE ENCAPSULATED.

The outer wall of the original wing of the building, illustrated on figure 6, is constructed of asbestos. The contractor

shall encapsulate all surfaces of the asbestos wall which are exposed and unenclosed, inside the building.

The contractor shall encapsulate this wall in accordance with the specications and in the schedule outlined in this document.

PART 8 : SCHEDULE.

Asbestos remediation shall commence after July 1, 1987, after the building owner authorizes the initiation of the projects. The remediation projects shall take place when school classes are out of session. Under no circumstances shall asbestos be removed while non essential staff are present in the building.

All asbestos shall be removed from the building by August, 8, 1987. All cleaning and inspections, air sampling, and reclean-ing shall be completed no later than August 20, 1987. The con-tractor shall not be released from the job until the following clearances have been obtained :

7.1 Inspection Clearance.

The inspector shall declare the project areas and all areas in the building that were affected by the project as "clean", when all visible accumulation of asbestos and dust have been removed from these locations.

7.2 Air Quality Clearance.

The air sampling professional shall declare the air quality in the building as acceptable for occupancy when the post abatement air sample analyses indicate that airborne asbestos have achieved background levels (or better) accord-ing to the standards established in these specifications.

7.3 Final Reoccupancy Clearance.

The building owner will perform a reoccupancy inspection of all work areas to ascertain the general condition of the rooms and the fixtures and to evaluate the quality of any reinsulation, restoration or replacement of materials required where the asb-estos has been removed.

The owner shall declare the areas as acceptable for reocc-upancy when he is satisfied that all aspects of the contractor's work have been completed to his satisfaction.

The entire building shall be ready for reoccupancy by no later than August 24, 1987. Any deviations or extensions of this schedule shall require the written authorization from the buil-ding owner.

GUIDE FOR THE SELECTION OF A CONTRACTOR

The thoroughness and the degree of safety involved in an asbestos removal project depend largely upon the experience and competence of an asbestos remediation contractor. There are currently no state or federal regulations which review or license the contractors who perform this work. Therefore, it is extremely important that the School District thoroughly reviews the qualifications of prospective bidders for the removal project. This section outlines criteria for selecting the best contractor to perform the work. There are two phases involved in the process : the initial screening of companies interested in submitting a proposal for the work and the detailed review of contractors qualifications.

PHASE I : INITIAL REVIEW OF APPLICATIONS FOR A PROPOSAL.

This stage pertains to the initial screening of contractors who are interested in submitting a proposal to perform the asbestos remediation in the schools. The School District should initially advertise for a qualifications statement from prospective bidders. The qualifications statement should include the following information :

A. Record of experience in asbestos removal with names of the building owners of past projects;

B. Names and training of personnel who would perform the removal work;

C. Any record of violations of federal or state asbestos regulations over the past ten years ;

D. Affadavit regarding any projects which were prematurely terminated due to contract violations or building contamination incidents.

E. Statement of liability insurance coverage ;

F. Other information pertinent to asbestos removal.

The School District should carefully scrutinize these qualifications and select a list of qualified firms to submit a full proposal for the removal projects. The review should include a check of all references from previous projects which includes phone contacts to the building owners or the clerk of the works or inspectors of these projects to discuss the quality of work performed by the contractor. The affadavit regarding past violations should be checked by contacting the Environmental Protection Agency's Region I Asbestos Coordinator, OSHA, and the Connecticut Department of Health Services.

PHASE II : SELECTION OF THE CONTRACTOR.

When a list of qualified contractors is obtained, the School District should invite these firms to review all areas of the buildings which are scheduled for remediation. After a tour of all of the areas, followed by a question and answer period, the contractors will be instructed to develop a full proposal for all asbestos remediation described in the contract specifications with a bid quote for the project.

The final stage of screening before selection occurs is an interview process with one or more firms whose proposals are considered superior to the School District. The screening committee should be composed of 3 - 5 individuals including the Superintendent of Schools, the School District's Business Manager, and an asbestos inspector. The interview should include a discussion of the scope of the projects, the schedule, strategies for remediation, equipment available and other issues pertinent to completing the project in accordance with the specifications of the contract.

The selection should be based both on the competetiveness of the cost and the competence of the firm in safely completing each project in a timely manner. However, in no case should any question regarding the contractor's qualifications be superceded by a relatively lower cost.

ASBESTOS MANAGEMENT PLAN
NEW MILFORD HIGH SCHOOL

Prepared By :
Jack S. Kozuchowski
Consulting Services
November, 1986

APPENDIX II

UPDATE TO ASBESTOS MANAGEMENT PLAN : NEW MILFORD HIGH SCHOOL

The asbestos management plan for this building identified the presence of a small area of asbestos in the music area, on cracked sections of wallboard in the tuba room. This area is identified on Table 2 (page 4a) and on the inspection report (EDO 75A)on page 4i. The condition of the asbestos in this area is further described on page 7 of the plan.

On January 17, 1987, all of the cracked wallboards were removed from the tuba room and disposed. This satisfies the remediation strategy identified on page 10 of the asbestos management plan.

The removal project was properly supervised and inspected and is certified to be completed in a manner that is consistent with the procedures outlined in the "asbestos training manual" developed for the New Milford Schools.

Jack Kozuchowski

Jack S. Kozuchowski
Asbestos Planner
January 21, 1987

TABLE OF CONTENTS FOR ASBESTOS MANAGEMENT PLAN

Laboratory Reports are in the Appendix at the End of the Plan.

ASBESTOS MANAGEMENT PLAN : NEW MILFORD HIGH SCHOOL

The New Milford High School was surveyed and evaluated for asbestos containing materials in August and September, 1986. The New Milford School District has developed a series of management strategies for each location where asbestos was identified in the building. The remedial action prescribed for each of these areas is the foundation for this asbestos management plan.

The purpose of the plan which follows is to provide the documentation of the asbestos surveys and to describe the management strategies for each area where asbestos is present in the school. The specific objectives of this plan are as follows :

(1) Provide a description of the school buildings which highlights the locations where asbestos containing materials are present ;

(2) Describe the methodology which was used for surveying and evaluating materials in the school which were suspected to contain asbestos ;

(3) Summarize the locations and conditions of materials which were confirmed as asbestos ;

(4) Describe the remedial strategy selected for each site which has asbestos present in the school with a justification for selecting this course of action ;

(5) Develop a system for implementing the plan which includes the following elements :

   a. Timetable for implementing remediation strategy ;

   b. Interim strategies for minimizing fiber release from the areas with asbestos until a permanent method of remediation can be implemented ;

   c. Procedure for implementing the remedial strategy ;

   d. Specifications for removal of asbestos containing materials;

(6) Establish an ongoing management and monitoring program for all asbestos containing materials which are left in place.

This asbestos management plan is submitted to the State Department of Education in accordance with Public Act 85-541 of the Connecticut General Statutes.

A. GENERAL DESCRIPTION OF BUILDING.

New Milford High School was built in 1962, with new additions constructed in 1969 and 1986. The general layout of the building is illustrated on figure 1.

The High School is a two story multi-faceted educational facility with four distinct functional units as described below :

. Unit A : Offices, gymnasium, lockers, auditorium, music area.

. Unit B : Cafeteria, boiler room, industrial shops, science area

. Unit C : Classroom wing - rooms 102 - 113 and 201 - 214.

. Unit D : Classroom wing - rooms 121-141, 221-231, and library.

The school employs a staff of 147 and has a student body which numbers 1350. In addition to education, the school sponsors several extra curricular and community functions such as plays, meetings, ceremonies and sporting events. These events are usually held in the gymnasium, auditorium or cafeteria.

The building is constructed on a slab foundation, with brick outer walls and a corrugated steel frame. The inner walls are constructed of cinder blocks. A suspended ceiling exists in most of the building, resulting in a ceiling space, with water pipes and air ducts located near the true ceiling.

Ventilation is provided by an air handling system which draws air into return ducts and supplies air by means of air handling units which are located on the roof, forcing air into each room by means of supply ducts. The administrative offices are serviced by a central air conditioning system, independent of the air handling system.

All areas of the school are serviced by a central boiler room. Heat is provided by three oil burning boilers which convey heat through steam pipes that traverse the building through the pipe tunnels. The upper gymnasium and the administrative offices are heated by a separate system of hot water heat. The pipe tunnels begin at the boiler room and are located below grade, throughout the perimeter of the building, branching up to basebard radiators which are located in each of the rooms.

B. DELINEATION OF AREAS

For the purpose of this evaluation, the school was divided into 18 sections of similar design, construction or function. Table 1, below, lists these areas and indicates whether asbestos was identified in each location.

TABLE 1 : AREAS OF NEW MILFORD HIGH SCHOOL SURVEYED FOR ASBESTOS

location	materials evaluated	prescence of asbestos
boiler room *	boilers, h.w. tank, pipes	YES
pipe tunnels *	pipe insulation	YES
music room *	wallboard	YES
auditorium *	ceiling	YES
mechanical shop*	vibration eliminator - air duct	YES
ceiling space 1969 addition *	suspended tiles, true ceiling, pipe insulation, duct insulation	YES
maintenance workshop *	ceiling, pipes, walls	YES
Unit A - offices	floor tile	NO
Unit A - halls	floor tile	NO
Unit A - gym	duct insulation	NO
Unit A - old locker room	plaster ceiling in shower	NO
Unit A - new phys. ed. area	floor tiles, pipe elbow	NO
Unit B- kitchen and cafeteria	floor tiles	NO
Unit B - shops and classrooms	room by room survey ¦ floors, ceilings, assessory materials	NO
Unit C - all rooms	room by room survey ¦ floors, ceilings, assessory materials	NO
Unit D - all rooms	room by room survey ¦ floors, ceilings, assessory materials	NO
maintenance shop	pipe elbows, ceiling	NO
storage building	ceiling, walls, floor	NO

* The specific locations which contain asbestos are described in more detail on Table 2 and in narrative text.

C. METHOD OF EVALUATION

The High School was surveyed for asbestos containing materials and evaluated in the following manner :

(1) Blueprints of the building were examined to determine the layout of specific sections of the building and to determine whether asbestos was specified for use in any area of the building ;

(2) An inspection of each room of the building was conducted to provide a descriptive documentation of design, construction, and building materials to identify substances which are positively asbestos, non asbestos materials and materials which are suspected to contain asbestos, which require an analytical confirmation of its constituency. The maintenance staff of the School District was consulted with regard to specific locations of areas (such as pipe tunnels) and regarding recent construction activities affecting insulation and other asbestos containing materials.

(3) All asbestos suspect materials (identified above) were sampled in accordance with the State Department of Health Services guidelines for identification of asbestos. These samples were submitted to the State Department of Health Services Laboratory for analysis of asbestos content.

(4) Following receipt of the laboratory reports, all locations in the building where asbestos was confirmed to be present were inspected again and evaluated with respect to its condition in accordance with the State Health Department's "decision protocol" process.

D. LOCATIONS WHERE ASBESTOS IS PRESENT IN THE NEW MILFORD HIGH SCHOOL

Table 2 indicates the locations where asbestos was positively identified in the High School. The table also describes the condition, the degree of friability, and the potential for future deterioration of each asbestos product in the building. The asbestos materials were confirmed, in most cases, by a laboratory analysis of bulk samples which were taken from the building. The analytical reports are attached to the appendix at the end of this document.

Exhibits A - G are the "school facility" and "area reports" (EDO75A and EDO75B), which provide information on the specific locations where asbestos is present in the building.

(p. 4a)

TABLE 2 : SUMMARY OF ASBESTOS LOCATIONS - NEW MILFORD HIGH SCHOOL

location of asbestos	friability	condition	damage potential	management strategy selected
Music Room: masonite pegboard on walls	Only where chipped, as in tuba room.	good	potential for impact from music instruments	repair wall in tuba room, implement management program
Boiler room - boilers - breeching - stacks - h.w. tank - pipe elbow	moderate	fair-poor pitted, cracked & delaminated in spots	further deterioration and cracking.	removal under contract specifications.
Pipe tunnels - pipe elbows	low-moderate friable where cloth covering is loose or punctured.	generally good. Some damaged elbows throughout.	subject to water damage & deterioration.	implement management & monitoring program.
Auditorium-ceiling in back of room.	low	generally good, some indentations in back of auditorium	low ceiling in back is subject to physical impact.	removal under contract specifications
Mechanical workshop	low	fair	subject to air erosion	removal and replacement.
Ceiling space - new p.e. wing	low	good	subject to impact & deterioration.	removal and replacement
ceiling - mechanical workshop	non-friable	good	impact from abrasive operations.	implement management & monitoring program

CONNECTICUT DEPARTMENT OF EDUCATION

ED 075B
SCHOOL FACILITY ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

SCHOOL DISTRICT: NEW MILFORD
DISTRICT CODE: 096

FACILITY NAME: NEW MILFORD HIGH SCHOOL
FACILITY ADDRESS: 25 SUNNY VALLEY DR. NEW MILFORD, CT.

Year of Construction 1962 Year of Additions (if any) 1968, 1984

CERTIFICATION:

Attached are 6 Area Asbestos Inspection Reports (ED 075A) for the above referenced school facility.

[X] Check this box if this school facility has been inspected according to Public Act 85-541, state regulations enacted pursuant thereto and decision protocols.

[X] Check this box if this school facility has been inspected prior to January 1, 1986 in order to comply with Environmental Protection Agency (EPA) School Asbestos Inspection Rule.

Name of Inspector JACK S. KOZUCHOWSKI Phone 203-792-361

Signature of Inspector Jack S. Kozuchowski Date 11/20/84

[ ] Check this box if this building had been previously inspected and was found to have asbestos containing materials which have subsequently been removed. Please submit documentation supporting this fact.

1918I

(P. 4C)

EXHIBIT B

075A
ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

CONNECTICUT DEPARTMENT OF EDUCATION

Page 1 of 1

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
NEW MILFORD HIGH SCHOOL	25 SUNNY VALLEY RD. NEW MILFORD, CT	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
1: BOILER ROOM	1386	6

1. Samples: Description of material sampled FIBROUS INSULATION (WITH OUTER COATS) ON BOILER, H.W. TANK, PIPE ELBOWS.
   Type of sample: Bulk ✓ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ✓
   Pipe Insulation ✓ Duct ____ Other (please explain) ____
3. Friability: High ____ Moderate ✓ Low ____ Not Friable ____
   Sq. Footage Area 400 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
   Physical Damage: High ____ Moderate ✓ Low ____ None ____
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
   Contact Potential: High ____ Moderate ✓ Low ____ None ____
   Distance to items needing maintenance:
   Electrical ____ Plumbing 1-10 Feet Ventilation ____ Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
   Floor Type: Concrete ✓ Carpet ____ Tile ____ Wood ____ Other ____
   Ceiling Type: Concrete ____ Acoustical Tile ____ Plaster ____ Metal Deck ____
   Suspended lay in panels ____ Concrete joist and beam ✓
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
   Railing ____ Other ✓ (SEE COMMENT) None ____
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
   Use of Area MECHANICAL - BOILER ROOM Activity: High ____ Moderate ____ Low ✓
   What is adjacent to the area? HALLWAYS
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	____ hrs/day	____ days/week
Staff 6	1 hrs/day	2 days/week

Comments: THERE IS NO BARRIER TO THE 6 MAINTENANCE EMPLOYEES WHO WORK IN THIS ROOM. HOWEVER, THE ROOM IS ISOLATED FROM OTHER BUILDING OCCUPANTS BY LOCKING DOORS.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS ON BOILER, HOT WATER TANK AND STACK IS IN BAD CONDITION ... SEVERAL AREAS DELAMINATED. ASBESTOS ON PIPE ELBOWS IS NOT IN BAD CONDITION, BUT POTENTIAL EXISTS FOR DAMAGE.

ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL OF ALL ASBESTOS FROM ROOM. INTERIM MANAGEMENT PROGRAM WILL BE IMPLEMENTED IMMEDIATELY

(4d)

EXHIBIT C.

CONNECTICUT DEPARTMENT OF EDUCATION

075A
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SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

Page 1 of 1

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School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
NEW MILFORD HIGH SCHOOL	25 SUNNY VALLEY RD. NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
2: PIPE TUNNELS	1206	6

1. Samples: Description of material sampled LOOSE FIBROUS INSULATION WITH CLOTH WRAP
   Type of sample: Bulk ✓ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ____
   Pipe Insulation ✓ Duct ____ Other (please explain) ____
3. Friability: High ____ Moderate ____ Low ✓ Not Friable ____
   Sq. Footage Area 507 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓ {SEE COMMENT (a)}
   Physical Damage: High ____ Moderate ____ Low ____ None ✓
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
   Contact Potential: High ✓ Moderate ____ Low ____ None ____
   Distance to items needing maintenance:
   Electrical ____ Plumbing 1-2 Feet Ventilation ____ Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
   Floor Type: Concrete ✓ Carpet ____ Tile ____ Wood ____ Other ____
   Ceiling Type: Concrete ✓ Acoustical Tile ____ Plaster ____ Metal Deck ____
   Suspended lay in panels ____ Concrete joist and beam ____
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
   Railing ____ Other ✓ {SEE COMMENT (b)} None ____
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
   Use of Area MECHANICAL - EMERGENCY REPAIRS Activity: High ____ Moderate ____ Low ✓
   What is adjacent to the area? NOTHING
   What is above the area? ROOMS IN SCHOOL BUILDING.
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	____ hrs/day	____ days/week
Staff 6	2 hrs/day	1 days/~~week~~ MONTH

Comments: (a) NO DAMAGE TO PIPE ELBOWS WAS OBSERVED. HOWEVER, THERE IS A HIGH LIKELIHOOD THAT SOME INSULATION IN VAST TUNNEL AREA IS DAMAGED.
b) NO BARRIER FOR EMPLOYEES WHO WORK IN TUNNEL. HOWEVER, THE AREA IS ISOLATED FROM OTHER BUILDING OCCUPANTS.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS COVERED BY CLOTH WRAP. INSULATION AND OUTER WRAP ON ELBOWS OBSERVED NOT IN BAD CONDITION; BUILDING CONDITIONS SUGGEST POTENTIAL FOR FUTURE DAMAGE.

ASBESTOS MANAGEMENT PLAN SPECIFIES IMPLEMENTATION OF MANAGEMENT AND MONITORING PROGRAM (SEE TEXT FOR DETAILS).

EXHIBIT D

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SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
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Page 1 of 1

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FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
NEW MILFORD HIGH SCHOOL	25 SUNNY VALLEY RD. NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
3: AUDITORIUM	8200	

1. Samples: Description of material sampled ACCOUSTICAL PLASTER - SOFT, CEMENTIOUS
   Type of sample: Bulk ✓ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ____
   Pipe Insulation ____ Duct ____ Other (please explain) ACCOUSTICAL PLASTER
3. Friability: High ____ Moderate ____ Low ✓ Not Friable ____
   Sq. Footage Area 1150 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
   Physical Damage: High ____ Moderate ____ Low ✓ None ____ (SEE COMMENT)
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
   Contact Potential: High ✓ Moderate ____ Low ____ None ____
   Distance to items needing maintenance:
   Electrical ____ Plumbing 10' Ventilation 20-30' Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ____ Smooth ✓
   Floor Type: Concrete ____ Carpet ✓ Tile ____ Wood ____ Other ____
   Ceiling Type: Concrete ____ Acoustical Tile ____ Plaster ✓ Metal Deck ____
   Suspended lay in panels ____ Concrete joist and beam ____
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
   Railing ____ Other ____ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
   Use of Area STUDENT USE / SPECIAL EVENTS Activity: High ✓ Moderate ____ Low ____
   What is adjacent to the area? MUSIC AREA, MAINTENANCE GARAGE
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students ____	____ hrs/day	____ days/week
Staff 6	7 hrs/day	5 days/week

Comments: ISOLATED SPOTS ON CEILING ARE DAMAGED; INDENTATIONS DUE TO IMPACT.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS IN ACCOUSTICAL CEILING IS DAMAGED IN ISOLATED AREAS WHERE INDENTATIONS HAVE OCCURRED FROM IMPACT.

ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL DURING SUMMER OF 87.

(p. 4f)

EXHIBIT E

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SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

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FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
NEW MILFORD HIGH SCHOOL	25 SUNNY VALLEY RD. NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
4: MUSIC ROOMS	1664	187

1. Samples: Description of material sampled HARD, NON-FRIABLE WALLBOARD
   Type of sample: Bulk ✓ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ____
   Pipe Insulation ____ Duct ____ Other (please explain) WALLBOARD. ✓ (SEE COMMENT)
3. Friability: High ____ Moderate ____ Low ____ Not Friable ✓ (SEE COMMENT)
   Sq. Footage Area 2500 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
   Physical Damage: High ____ Moderate ____ Low ✓ None ____ (SEE COMMENT)
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
   Contact Potential: High ____ Moderate ✓ Low ____ None ____
   Distance to items needing maintenance:
   Electrical ____ Plumbing ____ Ventilation ____ Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ____ Smooth ✓
   Floor Type: Concrete ____ Carpet ____ Tile ✓ Wood ____ Other ____
   Ceiling Type: Concrete ____ Acoustical Tile ____ Plaster ____ Metal Deck ____
   Suspended lay in panels ✓ Concrete joist and beam ____
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
   Railing ____ Other ____ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ✓ Low ✓
9. Activity/Movement:
   Use of Area CLASSROOM & PRACTICE ROOMS Activity: High ____ Moderate ✓ Low ____
   What is adjacent to the area? AUDITORIUM, GYMN
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 185	1 hrs/day	5 days/week
Staff 2	8 hrs/day	5 days/week

Comments: MATERIAL IS INHERENTLY NON-FRIABLE. HOWEVER, ONE AREA (TUBA PRACTICE ROOM) HAS A 20 SQUARE FOOT AREA WHERE THE WALL BOARD IS CRACKED.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
WALLBOARD IS CURRENTLY DAMAGED (SEE COMMENT ABOVE), BUT IT CAN BE REMEDIED WHEN BROKEN WALLBOARD IS REPLACED. REMAINDER OF ASBESTOS WALLBOARD IS NOT FRIABLE AND IN GOOD CONDITION.

ASBESTOS MANAGEMENT PLAN SPECIFIES IMMEDIATE REPAIR OF BROKEN WALLBOARD AND IMPLEMENTATION OF MANAGEMENT/MONITORING PROGRAM

EXHIBIT 1 (79)

:0 075A

CONNECTICUT DEPARTMENT OF EDUCATION

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SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
NEW MILFORD HIGH SCHOOL	25 SUNNY VALLEY ROAD, NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	12/1/86

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
CEILING SPACE - NEW WING OF BUILDING	1110 Square Feet	6

1. Samples: Description of material sampled ~~CEILING~~ LOOSE FIBROUS MATERIAL
   Type of sample: Bulk ✓ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ____
   Pipe Insulation ✓ Duct ____ Other (please explain) ____
3. Friability: High ____ Moderate ____ Low ✓ Not Friable ____
   Sq. Footage Area ____ Pipe Insulation ____ Linear Feet 60 Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
   Physical Damage: High ____ Moderate ____ Low ____ None ✓
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
   Contact Potential: High ____ Moderate ____ Low ✓ None ____
   Distance to items needing maintenance:
   Electrical 5 Feet Plumbing PIPES Ventilation ____ Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
   Floor Type: Concrete ____ Carpet ____ Tile ✓ Wood ____ Other ____
   Ceiling Type: Concrete ____ Acoustical Tile ____ Plaster ____ Metal Deck ____
   Suspended lay in panels ____ Concrete joist and beam ____
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ✓ Encapsulation ____ Enclosure ____
   Railing ____ Other ____ None ____
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
   Use of Area MAINTENANCE Activity: High ____ Moderate ____ Low ✓
   What is adjacent to the area? HALLWAY BETWEEN LOCKER ROOM AND GYMNASIUM
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	____ hrs/day	____ days/week
Staff 6	1 hrs/day	1 days/week MONTH

Comments: ____

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
ASBESTOS ON PIPE FIBROUS AND VALVES IS INTACT, NOT IN BAD CONDITION BUT BUILDING CONDITIONS OFFER POTENTIAL FOR FUTURE DETERIORATION FROM IMPACT.
ASBESTOS MANAGEMENT STAR SUGGESTS REMOVAL AND REPLACEMENT OF ~~DAMAGED~~ ALL PIPE FIBER INSULATION ABOVE CEILING

4A

EO 675A

CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

Page ___ of ___

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
NEW MILFORD HIGH SCHOOL	25 SUNNY VALLEY RD NEW MILFORD, CT	JACK S KOZUCHOWSKI 792-3613	12/18

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
MAINTENANCE WORKSHOP	1387	6

6

1. Samples: Description of material sampled HARD TEXTURED CEILING
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Troweled on ___ Boiler Lagging ___
   Pipe Insulation ___ Duct ___ Other (please explain) ACCOUSTICAL MAT'L ON CEILING
3. Friability: High ___ Moderate ___ Low ___ Not Friable ✓
   Sq. Footage Area 1387 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ___ None ✓
   Physical Damage: High ___ Moderate ___ Low ___ None ✓
5. Accessibility: Less than 10 ft. ___ More than 10 ft. ✓
   Contact Potential: High ___ Moderate ___ Low ✓ None ___
   Distance to items needing maintenance:
   Electrical 10 Feet Plumbing 10-20 Feet Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ✓ Carpet ___ Tile ___ Wood ___ Other ___
   Ceiling Type: Concrete ___ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ___
   Suspended metal lath ___ Other CORRUGATED STEEL WITH TEXTURED MAT
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other ___ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area WORK & STORAGE AREA Activity: High ___ Moderate ___ Low ✓
   What is adjacent to the area? CORRIDOR, AUDITORIUM
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	___ hrs/day	___ days/week
Staff 6	4 hrs/day	5 days/week

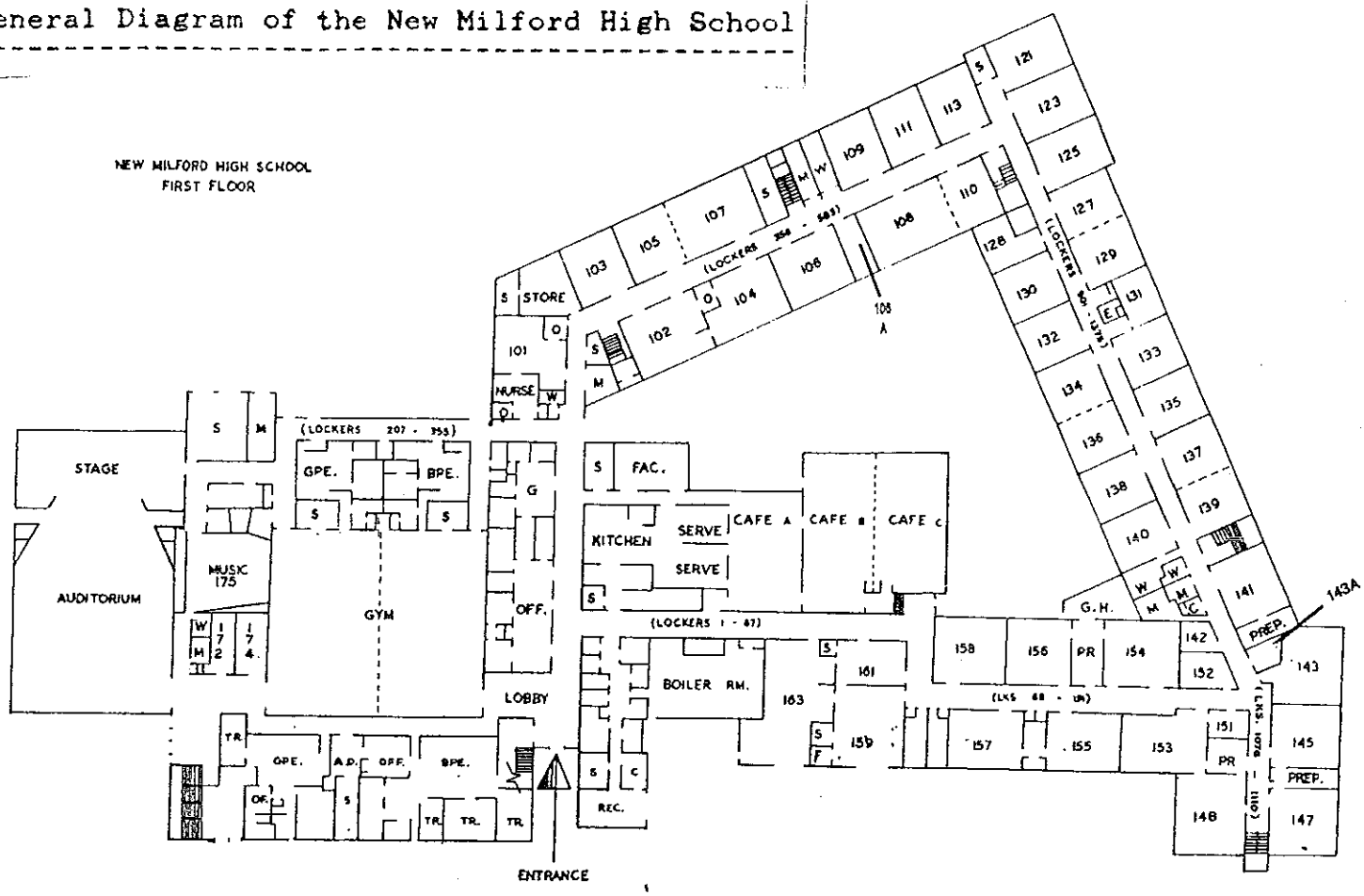
Comments: ___

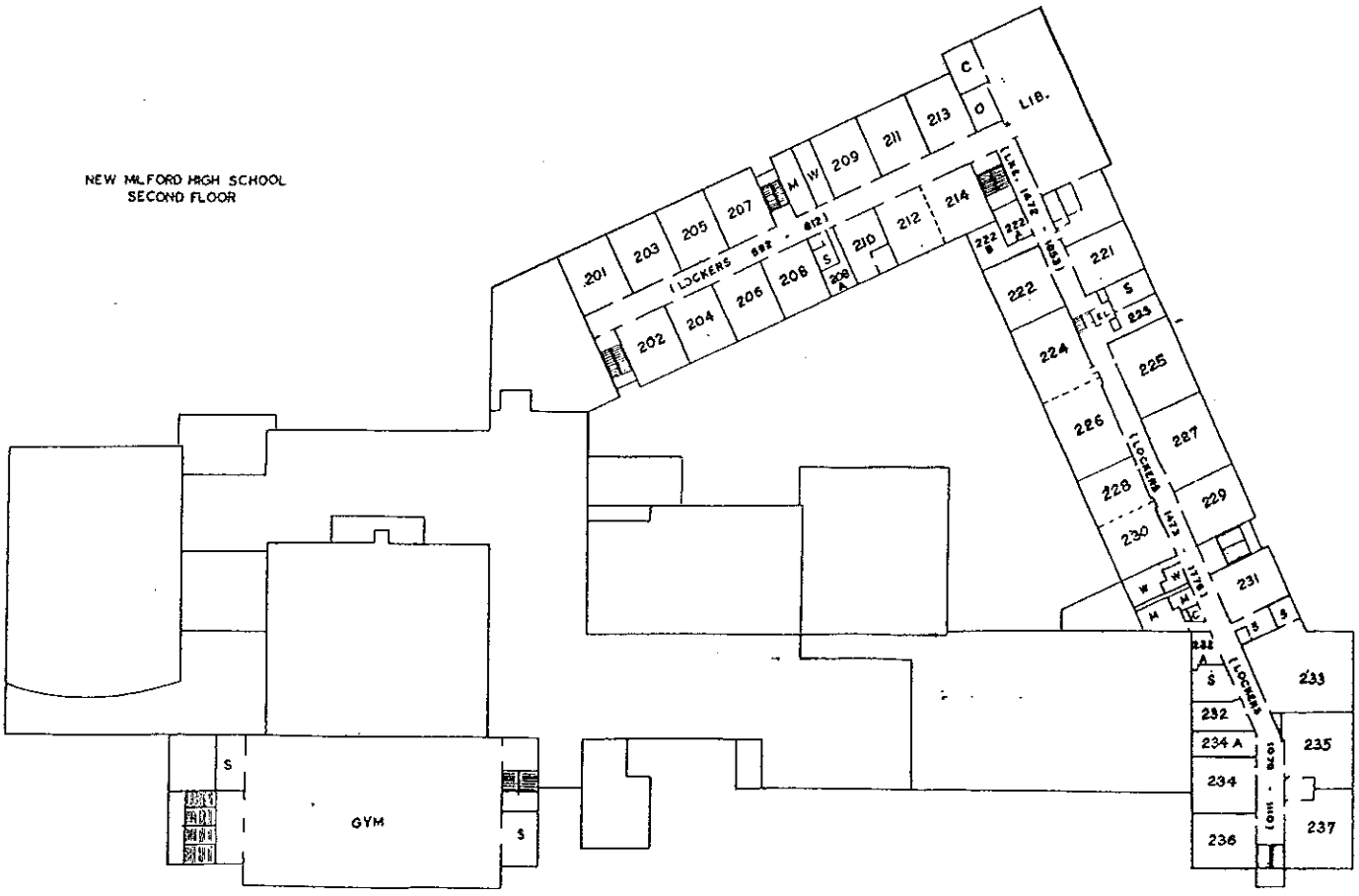
Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
MATERIAL IS NOT FRIABLE. ~~WITH~~ THERE ARE NO ACTIVITIES CARRIED ON IN THIS AREA WHICH WOULD RESULT IN DAMAGE TO CEILING.

ASBESTOS MANAGEMENT PLAN SPECIFICS MANAGEMENT AND MONITORING PROGRAM TO INFORM EMPLOYEES OF PRECAUTIONS AGAINST ABRASIVE ACTIVITIES TO CEILING.

FIGURE 1 :

General Diagram of the New Milford High School





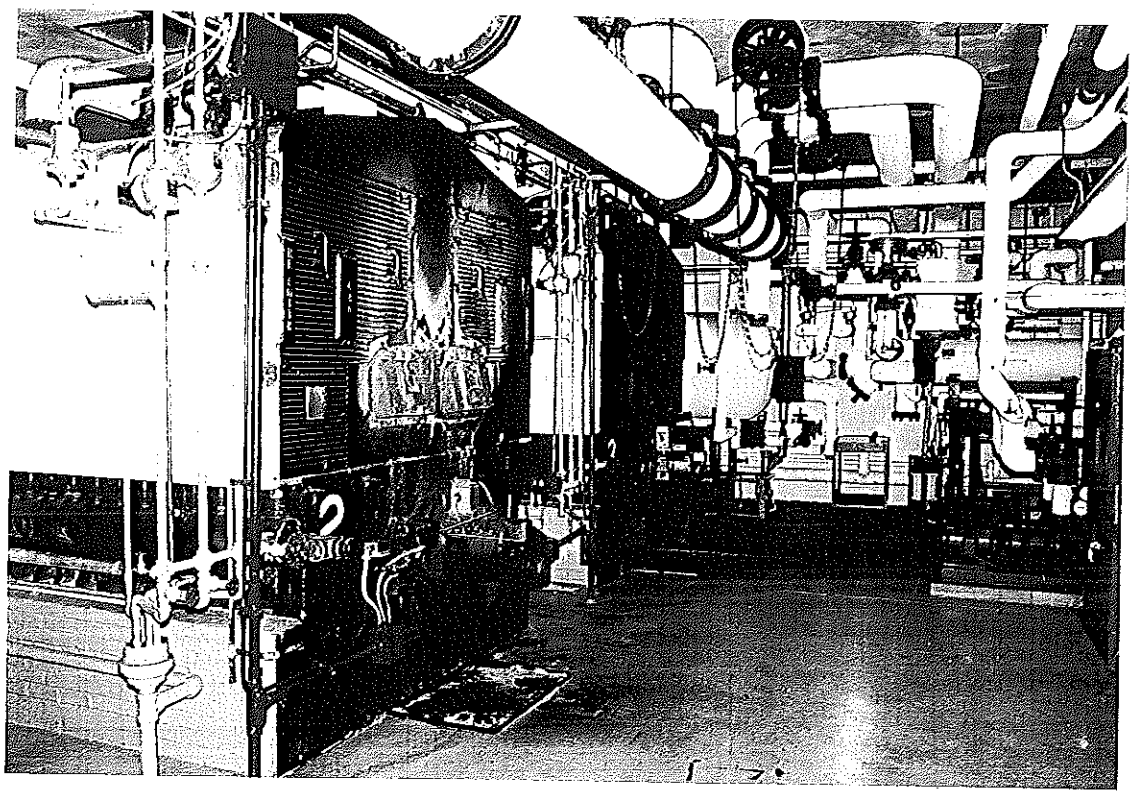


FIGURE 2A : Photograph of Boiler Room

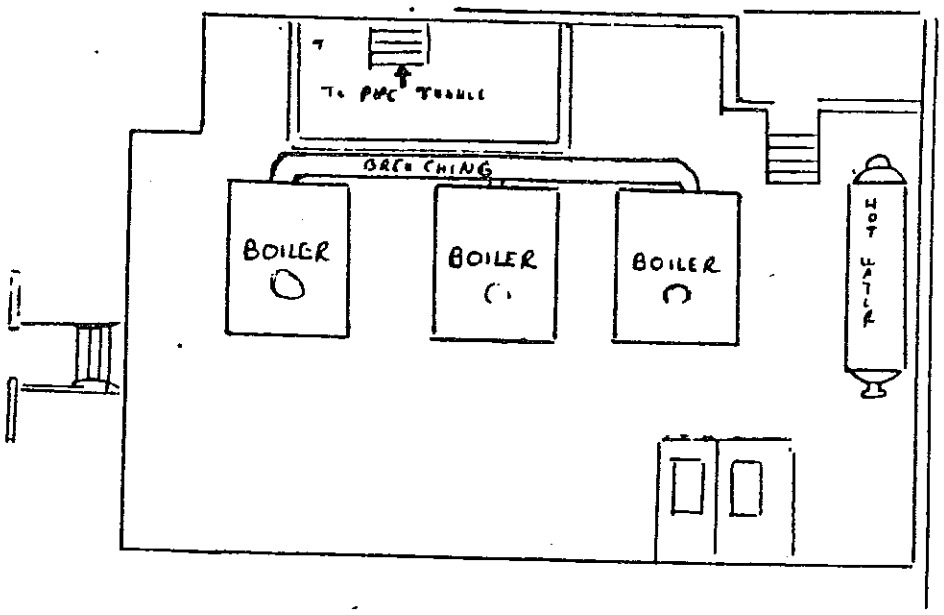
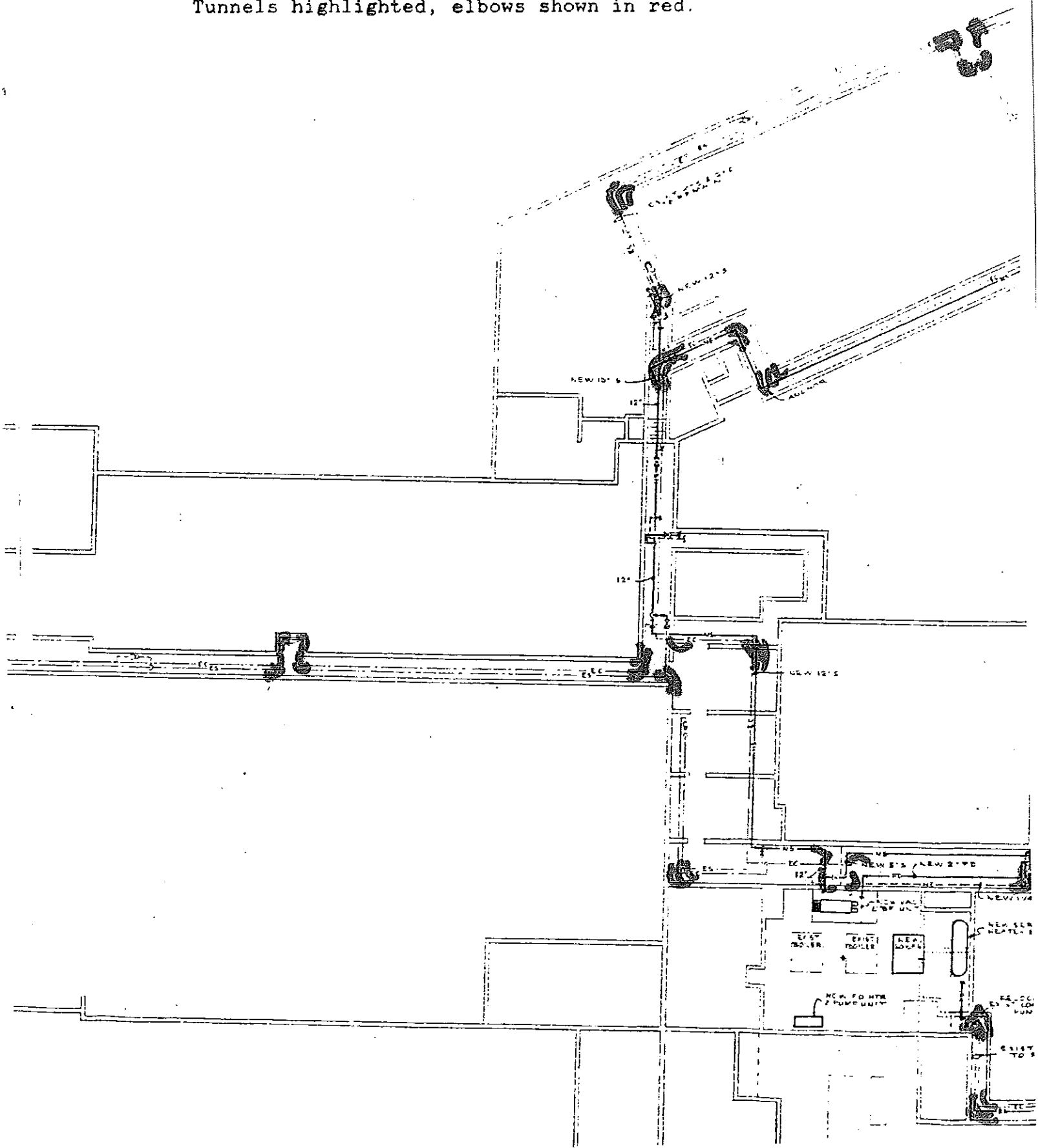


FIGURE 2 : Boiler Room

Area of Asbestos : 400
(square feet)

FIGURE 3 : Pipe Tunnels - Elbows

Tunnels highlighted, elbows shown in red.



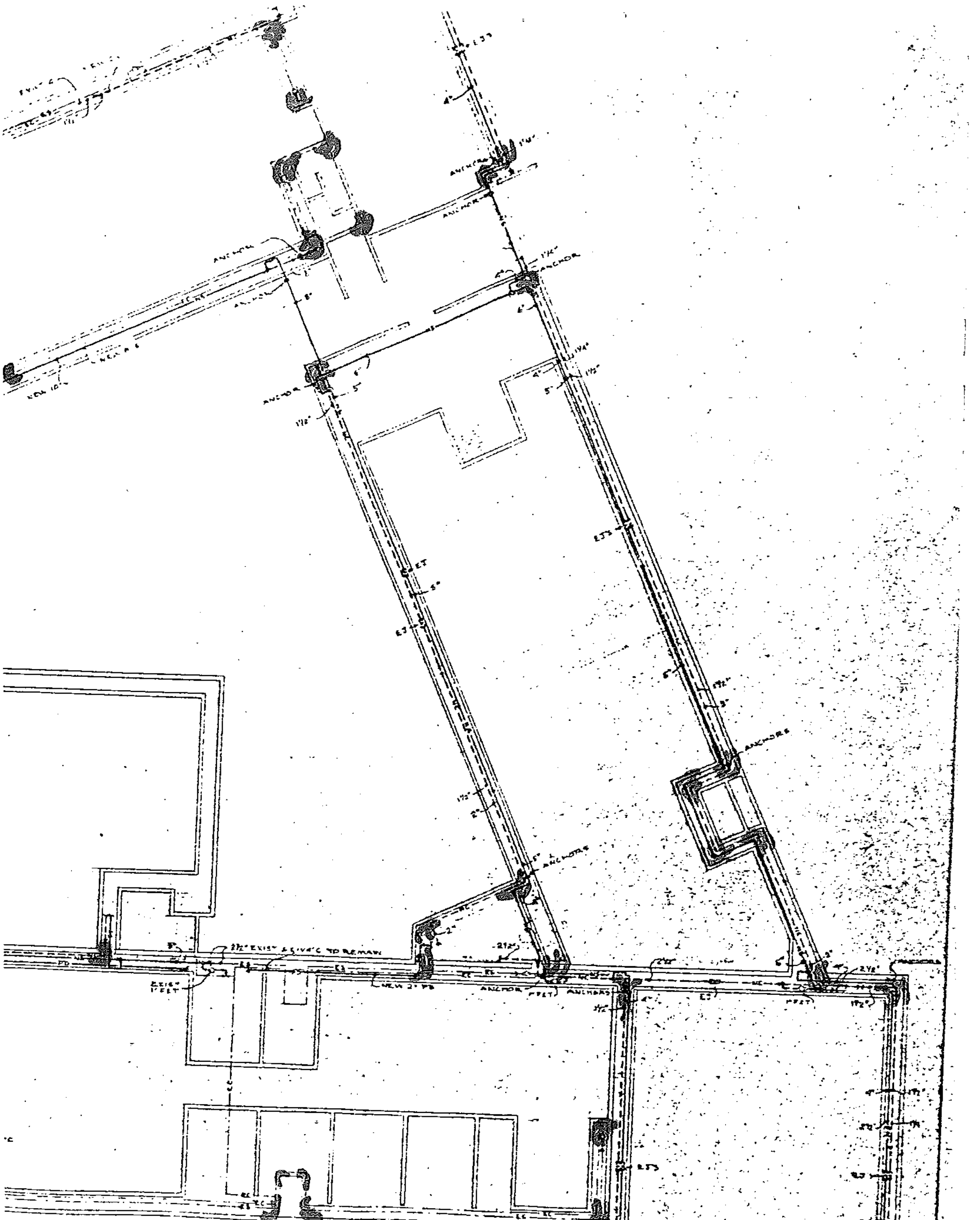

ANCHOR
ANCHORS
NEW 2" PB

FIGURE 4 : Auditorium (low ceiling in rear of room)

Total area of asbestos present : 1150 square feet

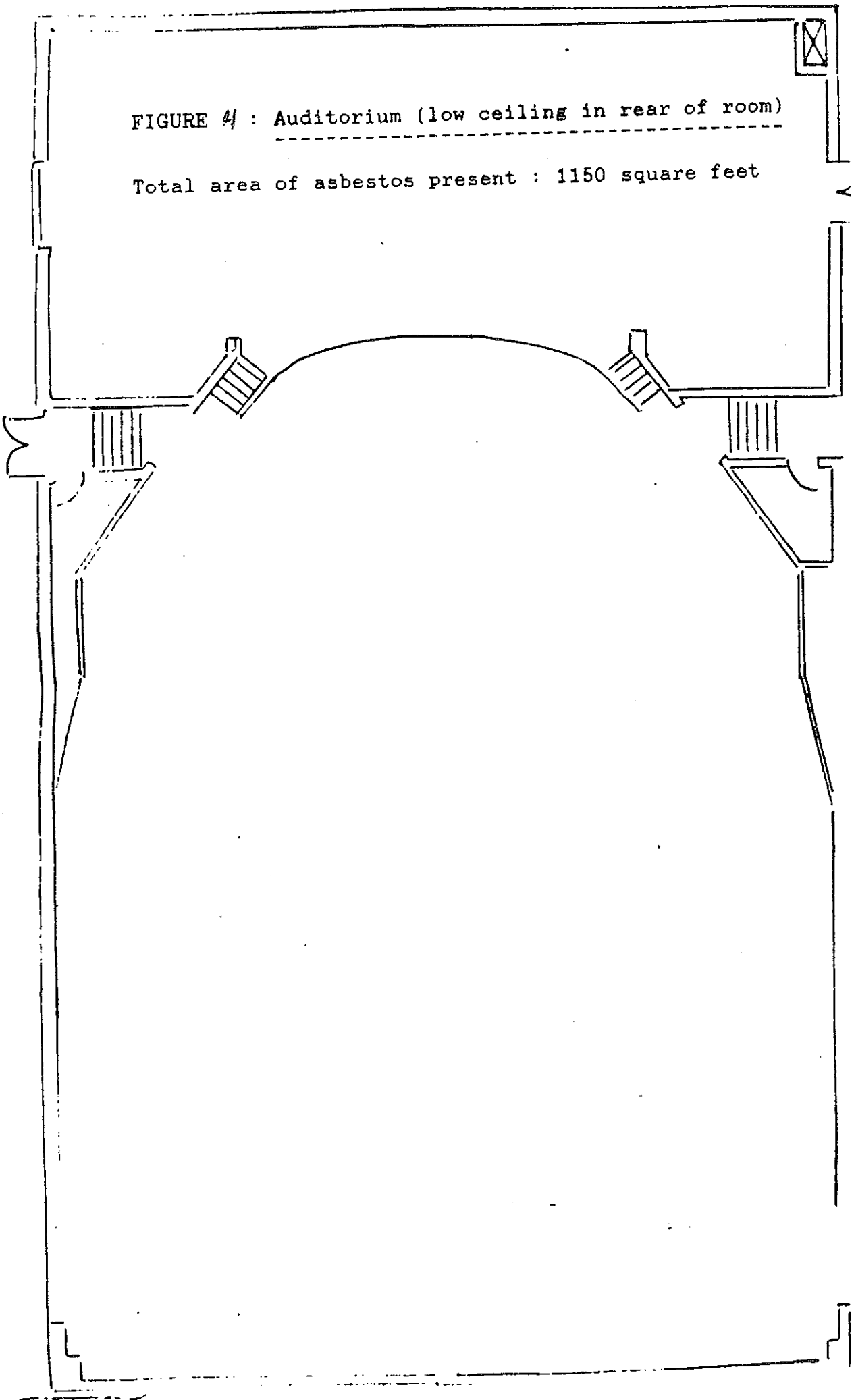
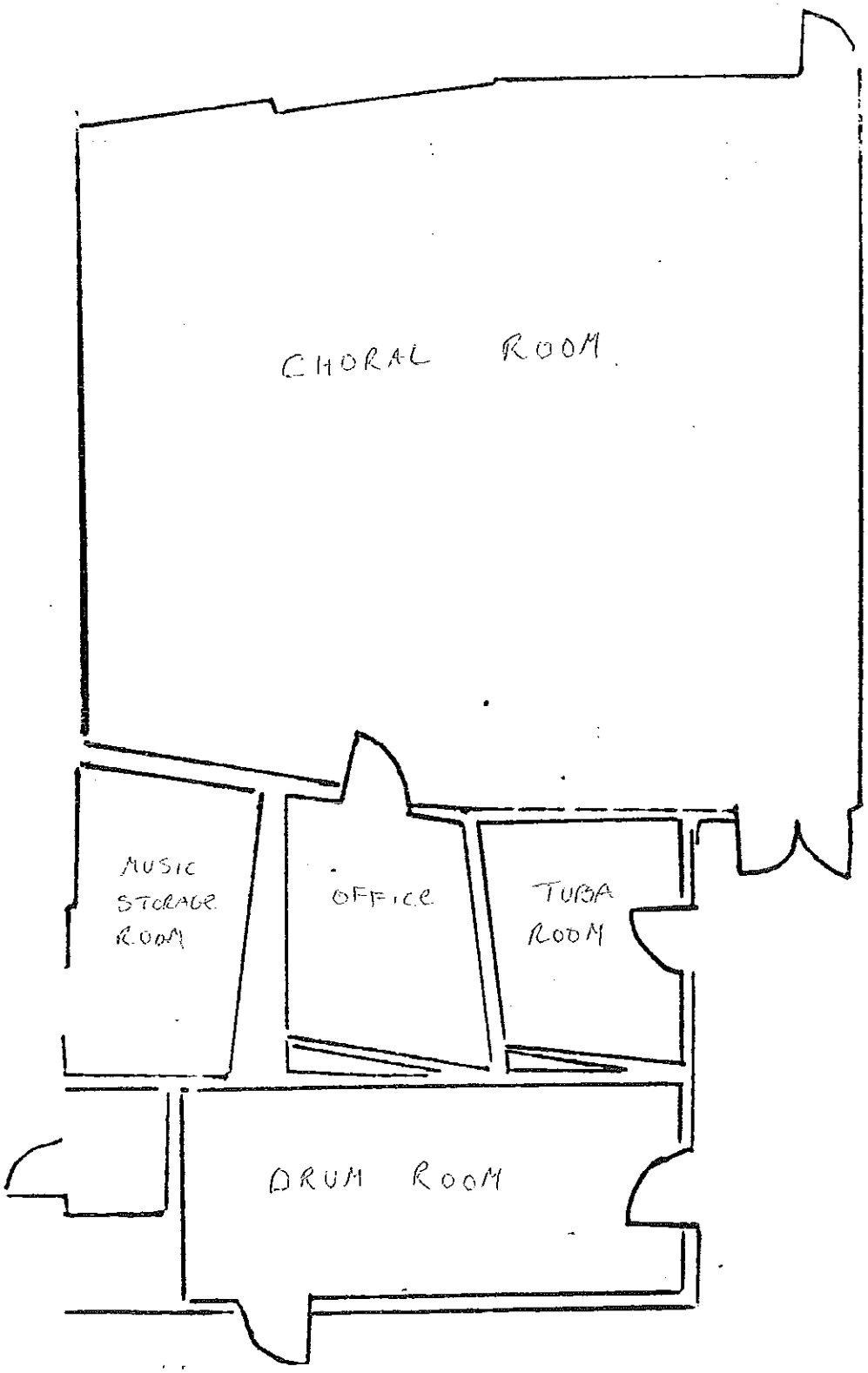
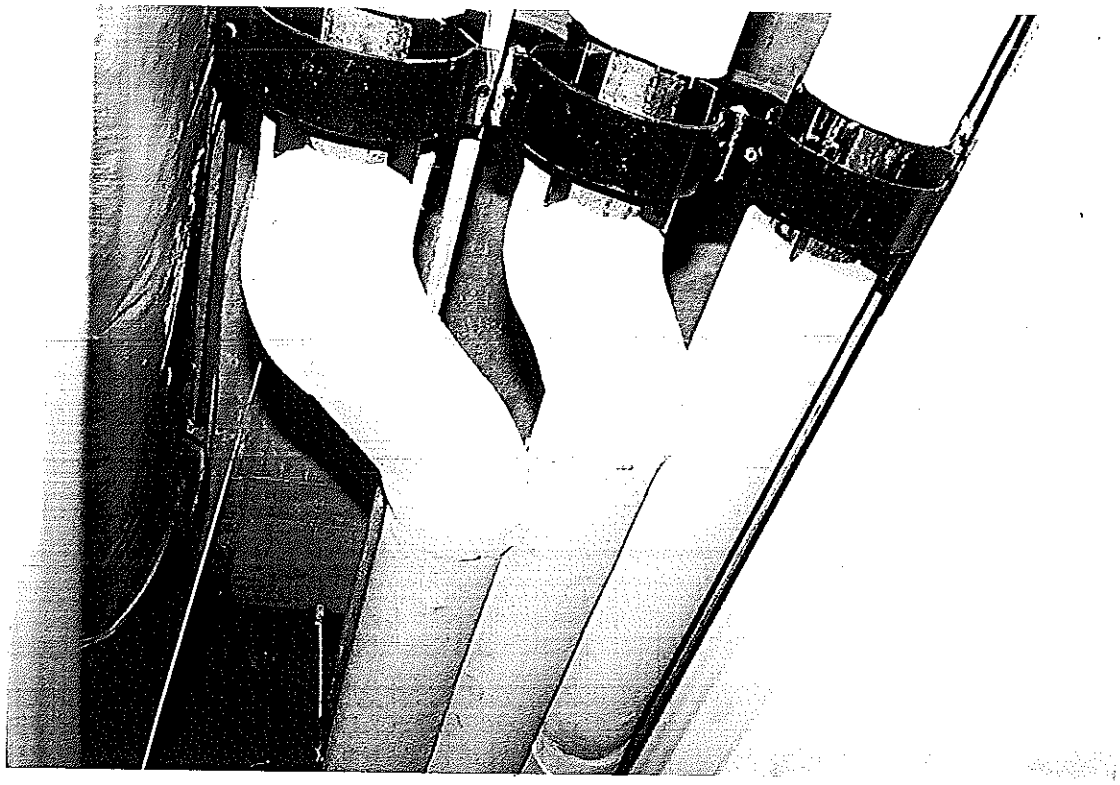


FIGURE 5 : MUSIC AREA - WALLBOARD IN CHORAL ROOM, MUSIC OFFICE AND MUSIC PRACTICE ROOMS.

Area of Asbestos : 2500 square feet





6A : Photograph showing pipe elbows above ceiling.

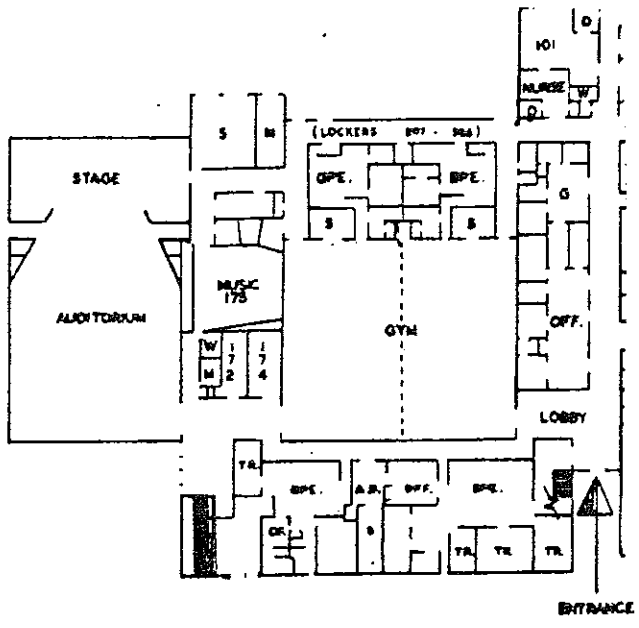
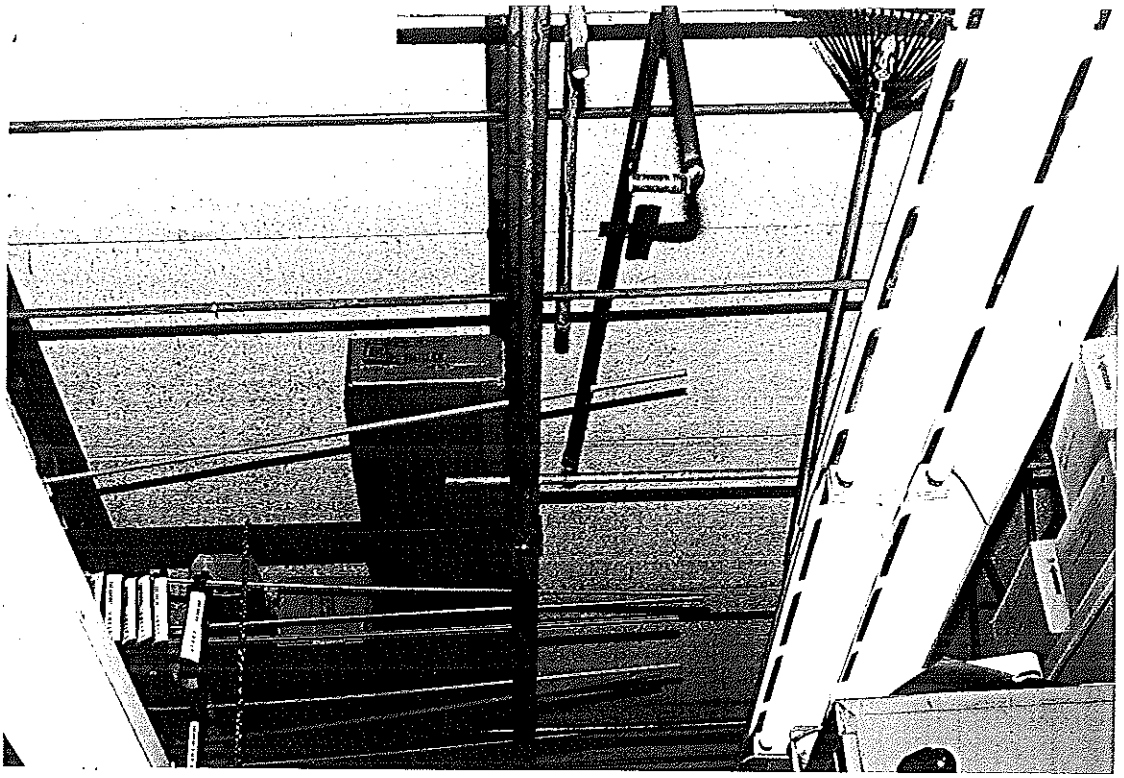


FIGURE 6 : CEILING SPACE ABOVE HALLWAY OUTSIDE LOCKER ROOMS

Area of Asbestos : 20 elbows and valves



7A : Photograph of textured ceiling.

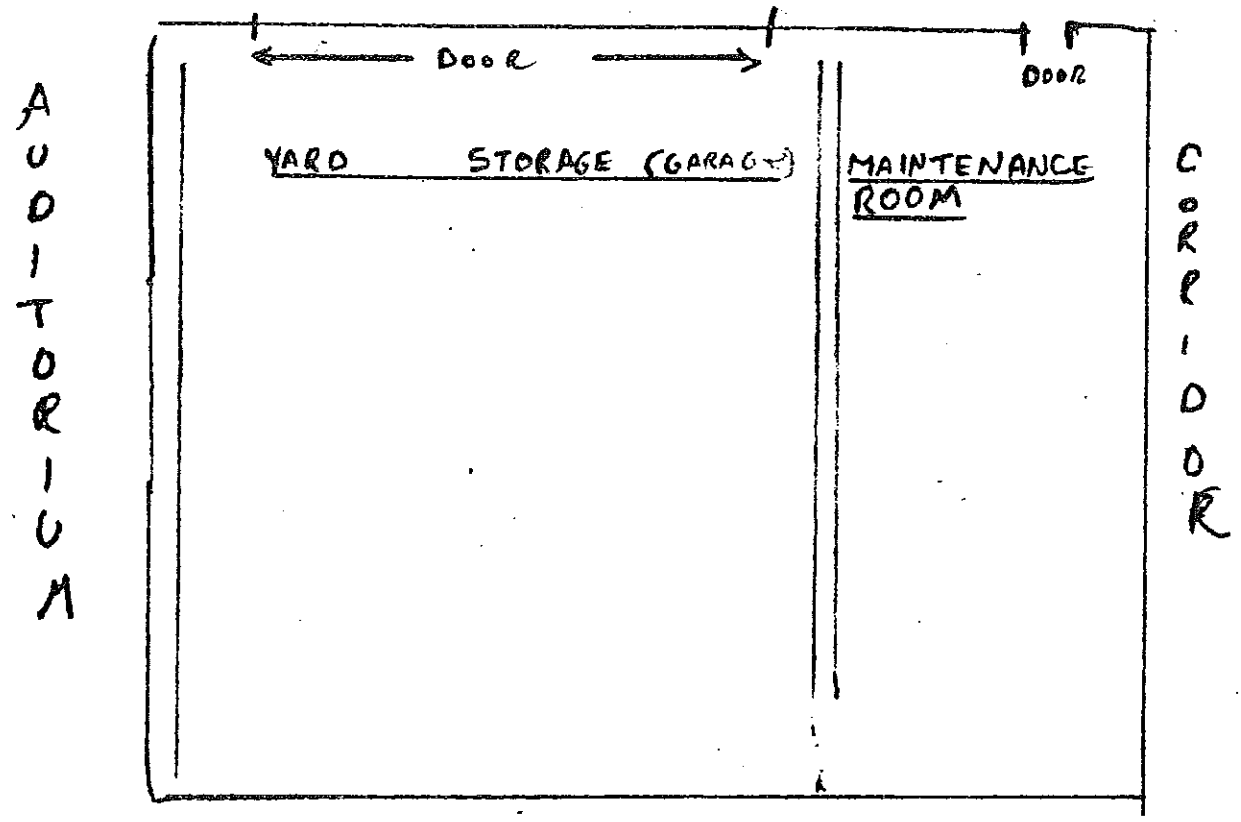


FIGURE 7 : TEXTURED CEILING ABOVE MAINTENANCE WORKSHOP AREA

Area of Asbestos : 1387 square feet

The diagrams on the following pages illustrate the areas where asbestos is present in the building. Figure 1 is an overall diagram of the school building, illustrating the general locations of the areas described on table 2. Figures 2 - 5 are site specific illustrations of each asbestos area in the building, specifying the total area of asbestos at each location.

E. AREA REMEDIATION STRATEGIES.

This section outlines the management strategies which will be used for each location in the building where asbestos is present. This narrative also includes a justification for the remediation option which was selected.

(1) Boiler room.

The insulation on the boilers, breeching, stack, hot water tank, and the pipe elbows contains asbestos. The insulation on the boilers, stack and the hot water tank are characterized in a different manner than the pipe elbow insulation.

The asbestos on the elbows is cloth wrapped and in generally good condition. The cloth wrap limits the friability of this material. However, if the wrap is punctured or if it delaminates from the asbestos over the elbow, the asbestos will become friable. Such damage can be caused by mechanical impact or by water damage. Due to the large number of elbows in this room and the maintenance operations which occur in this area, there is a high potential for future damage to the elbow insulation.

The asbestos insulation on the boiler surfaces, the breeching, the stack and the water tank is friable, has deteriorated in several areas to a poor condition and will only get worse in time. The large surface areas of friable asbestos results in a high potential for chronic exposure to the maintenance and janitorial staff who work in this room.

All of the asbestos in this location will be removed during the summer of 1987. The large amount of friable asbestos which is present in this area poses an ongoing potential for asbestos exposure to employees and contractors who work in this room. Therefore, the removal of asbestos under contract specifications is the permanent solution of choice. Contract specifications for the removal project are described in Section G.

Due to the large scope of this job, and the importance of performing the work when school is not in session, the work is scheduled for the summer 1987 school recess. In the interim period, the management program described in Section F will be instituted.

(2) Pipe tunnels.

The pipe elbows in the tunnels are insulated with asbestos which is covered with a cloth wrap, as in the boiler room. The elbows in the pipe tunnel are much more susceptible to water damage; there are more of them, the conditions in the tunnel are more damp, and a minor water leak is likely to go unnoticed for a long period of time causing the outer wrap and the asbestos insulation to deteriorate over a protracted period of time. Although the elbows which were observed were in good condition, there is a strong likelihood that some of the elbow insulation, in some part of the vast tunnel area, are damaged and friable. The tunnel area is used by the maintenance staff for emergency repairs. The tunnels are relatively isolated and access is limited by metal doors located in various locations in the building.

Removal of asbestos from the tunnels is a difficult operation, complicated by tight working conditions and the dirt floor. Asbestos removal in the pipe tunnels was not selected as a remedial option at this time for the following reasons :

a. It is feasible to control and limit access to the tunnels and minimize employee exposure through a management and monitoring program ;

b. The high priority of removing asbestos from two major open areas in the building (as well as major removal projects from other schools in the District) will involve a large workload for the contractor who is selected. It is imperative that these jobs are performed carefully without a pressure schedule.

c. Removal from the pipe tunnels involves unique conditions which require specialized procedures to prevent further contamination of the entire area. If this project is scheduled in the future, it should be done as a single removal job for a given summer.

Therefore, the remedial strategy for this area involves a management and monitoring program, as described in Section F. This process includes measures for isolating the tunnels from the remainder of the building, methods for controlling access to the tunnels, and a system for protecting employees who must enter the tunnels for repairs. The effectiveness of the management program and the condition of the asbestos in the tunnel will be evaluated prior to the summer, 1988 school recess (and annually thereafter). If the system for controlling access and reducing exposures is not functioning effectively, a removal of asbestos from the tunnels under contract specifications will be implemented during that summer.

(3) Auditorium Ceiling.

The back ceiling of the auditorium is coated with accoustical plaster which contains 2 - 3 % asbestos. The material is friable due to several indentations which were evident in the plaster and the relatively soft character of the material which is susceptible to pulverization from hand pressure.

Although the friability of the accoustical plaster is low, the option of removal was selected for the following reasons :

(a) A large and varied population of students, staff, and community groups use this area for various functions ;

(b) The auditorium is used on a regular basis through the year ;

(c) The area of the ceiling with the asbestos is low and assessible. There is a high potential for future impact damage resulting from vandalism and maintenance operations.

The removal of the accoustical ceiling will take place during the summer of 1987. This job will be conducted by a contractor who is experienced in asbestos removal under the specifications which are listed in Section G.

(4) Music Area.

The wallboard which is present in the music lecture room, the practice rooms and the music room office contains 1 - 3 % asbestos. This wallboard is not friable unless it becomes chipped, cracked or mechanically perforated. With one exception, all of the wallboard is non-friable. The one exception is a small area in the "tuba room" (see highlighted location illustrated on figure 5), where the wallboard is cracked.

In the tuba room, all damaged wallboards will be removed and replaced prior to January 1, 1987, by employees who have participated in inservice training programs regarding work around asbestos containing materials.

Due to the good condition and the non-friability of the wallboard in the remainder of the room, it will be kept in place. An asbestos management program, which is described in Section F, will be instituted to prevent any operations which will cause the wallboard to become friable.

(5) Mechanical Workshop.

One of the vibration eliminators off the end of the air handling unit in this room is a canvas material that is commonly impregnated with asbestos. Although such material is inherently non-friable, it is continuously subjected to air erosion from the ventilation system. The potential friability of this material poses a a potential for asbestos exposure to the entire building, since it is present in the air handling system.

This vibration eliminator will be removed by the maintenance staff by January 1, 1987. Prior to removal, the air handling system will be turned off.

(6) Ceiling Space - New Wing of the Building.

The 1969 addition to the building consists of a hallway and two locker rooms outside of the lower gymnasium. The elbows on the pipes and the valves in the space between the suspended ceiling and the roof in the hallway are insulated with a cementious asbestos material. The asbestos insulation is intact and in good condition. However, a potential exists for damage to this insulation from impact due to maintenance operations.

As long as the suspended ceiling tiles below the asbestos insulation remain in place, there is no exposure hazard to the staff and other building occupants. However, whenever the ceiling tiles are removed for routine maintenance work, there is a potential for spreading asbestos to the hallway beneath the removed tiles.

The asbestos in this location will be removed during the December school recess of 1987, using safety specifications described in Section G. Until the asbestos is removed, an interim management and monitoring program will be implemented for this area.

7) Ceiling - Maintenance Workshop.

The maintenance workshop consists of a work room and an adjoining garage. The ceiling of this area is coated with a textured material which is composed of 8% asbestos. The material is not friable; it is a hard substance which will not release asbestos fibers to the air unless it is cut or mechanically abraded.

The workshop and the garage is assessible to the maintenance staff only; the garage and workshop doors are locked at all times. There is no work activities which occur on or near the ceiling. There is no exposure hazard to the employees from the asbestos in this ceiling material and there is very little potential for damaging the ceiling which would cause the asbestos to become friable.

Removal of the asbestos material would be a difficult operation due to the hard character of the textured coating. Removal was not selected as a management strategy for three reasons :

(a) Removal would be a difficult operation, which would cause the non-friable material to be friable in the process of chipping it from the ceiling.

(b) The current condition of the ceiling material does not present a hazard to the employees who use this room.

(c) Any potential hazard can be prevented by staff training and periodic monitoring of the condition of the ceiling.

The management strategy selected for this area is an asbestos management and monitoring program, as described in Section F.

F. MANAGEMENT AND MONITORING PROGRAM FOR ASBESTOS REMAINING IN SCHOOL BUILDING.

Three areas in the building - the pipe tunnels, the music area and the maintenance workshop - have management strategies which involve keeping the asbestos in place without an active remediation project. The other areas, which are scheduled for removal (i.e. boiler room, the hallway ceiling space in the new locker room are and the auditorium ceiling), will have the asbestos temporarily remaining in place for several months until the projects begin in the summer of 1987.

A "passive remedial option" has been developed for each of the locations where asbestos will not be removed. This management program focusses on staff training, control over assigned work in these areas, and a periodic inspection of the asbestos.

The specific details of the staff training which is referenced throughout this section are described in the document, titled :

" Inservice Training Program for Maintenance Staff : Mininizing Asbestos Exposure to Staff and Building Occupants

New Milford Public Schools (November, 1986). "

(1) Pipe Tunnels.

The first task for this area is to isolate the tunnels from the remainder of the building. This will be accomplished by the following measures :

a) All holes leading from the pipe tunnels to the classrooms above will be sealed ;

b) All accessways to the tunnels will be locked, except for the main entrance behind the boiler. The tunnel entrance in the boiler room will be placarded with a warning notice and access will be controlled by limiting the use of the boiler room to maintenance personnel ;

c) Entrance into the tunnel will be restricted to maintenance personnel or contractors with assigned tasks.

The control of access to the tunnels will be instituted immediately. The sealing of holes which lead from the tunnels to the radiators will be accomplished during the summer of 1987.

The major aspect of minimizing exposures to asbestos in this area is through education of the staff. An initial inservice training session will be conducted in November, 1986, which will cover the following topics :

. Hazards associated with asbestos on pipe elbows.

- Equipment and clothing required for safe entry and work in this area
- Procedures for the proper use of asbestos respirators.
- Emergency cleanup procedures for asbestos which has become dislodged or delaminated from the pipe elbows.
- Decontamination procedures for personnel after work is complete in the pipe tunnels.

By January 1, 1987, the New Milford School District will purchase a sufficient number of respirators for the employees designated to work in the tunnels. Also, the District will purchase a glove bag enclosure system which will be used for emergency repair of pipe elbows which have become damaged.

The asbestos coordinator will designate specific maintenance personnel to conduct emergency work in the pipe tunnels. These individuals will be the only staff who are allowed access into this area. These employees will have the following qualifications :

- They must participate in the employee training sessions regarding emergency operations and the use of asbestos respirators ;

- They must be medically fit to wear a respirator and able to work in the pipe tunnels ;

- They must be willing to work in the pipe tunnels to perform the assigned tasks with the proper safety precautions.

A list of the individuals designated to work in the pipe tunnels will be maintained in the main administrative office and in the maintenance office of the School District.

The final aspect of the remediation program in the tunnels is monitoring. Once per year, the management system described above, will be evaluated, the pipe tunnels will be inspected and air samples will be collected within the tunnels. These inspections will assess the degree of friability and employee exposure to the asbestos in this area. The conditions will be documented and maintained on file at the School District's main administrative office. The report of the conditions will also include an assessment of the effectiveness of the management system and a recommendation for either continuing the management/monitoring program, modifying it in some way, or abandoning the system and removing the asbestos from the tunnel area.

(2) Music Area.

The non friability of the wallboard in the music rooms predicates a simple system of management and monitoring. By January 1, 1987, the cracked wallboard in the tuba room will be removed and replaced. The remaining wallboard will hold no potential for exposure, unless it is mechanically perforated or cracked. Therefore, the management process for this area focusses on staff training and periodic inspections.

The training will be given to two groups of employees :

a) Maintenance Staff.
The maintenance personnel will be instructed in the following topics pertaining to the wallboard :

. Safety hazards associated with drilling, cutting, nailing or removing the accoustical wallboards ;

. Precautions required to minimize exposure to these hazards if the above operations are necessary in these rooms ;

. Process for reporting the presence of damaged wallboards to the asbestos coordinator.

(b) Teaching Staff.
All of the instructors who teach in these rooms will be given an informal informational session regarding the presence of the asbestos wallboard. This session will emphacize the following points :

. Location and type of asbestos, noting the absence of any degree of asbestos exposure hazard resulting from wallboards which are not damaged ;

. Importance of maintaining the wallboard in good condition and of instructing students about the hazards of breaking or cutting the wallboards ;

. Importance of notifying the asbestos coordinator of any areas which have become damaged.

Once per year, the entire surface of the wallboard in all of the music rooms will be inspected for damage and remediated where it is necessary.

(3) Maintenance Workshop.

Access to the mechanical workshop area is currently limited to the maintenance staff. All maintenance and custodial employees of the School District have been informed of the presence of asbestos in the ceiling and have been instructed in procedures, precautions and safety considerations regarding abrasive operations on non-friable asbestos materials.

Any work operations which are to be conducted directly on this ceiling material will be controlled by the asbestos coordinator. The maintenance staff designated for work around asbestos containing materials will perform these operations with respiratory protection and proper enclosure and clean-up procedures.

(3) Interim Control Measures : Boiler Room, Auditorium, New Hallway

The following interim strategy has been developed for the boiler room, the ceiling space above the hall outside the lower gymn and the auditorium. These management procedures will be instituted immediately and will remain in effect until the asbestos is removed.

The management process for these areas centers on work procedures and staff training. This includes the following measures :

- STAFF TRAINING. An overview on the recognition of asbestos hazards and safety precautions regarding work around large surface areas of asbestos containing materials will be emphacized.

- CONTROLLED ACCESS. Access to the boiler room will be restricted by the asbestos coordinator. Entrance into the boiler room will be restricted to maintenance personnel with assigned tasks. The doors of the boiler room will remain locked and will be placarded with a warning notice. Smoking in the boiler room will be absolutely prohibited.

- AUDITORIUM. Any maintenance work performed in the back of the auditorium near the low ceiling will be conducted with cautious procedures to prevent further damage to the accoustical plaster. In particular, all maintenance tasks in this area involving the use of ladders or other large implements will be carried in a manner that will not scrape or puncture the ceiling. Absolutely no work will be performed directly on the accoustical plaster.

- WORK PROCEDURES - BOILER ROOM. Any employee who works directly on the boiler, breeching, stack or pipe elbows or any assigned task in the boiler room which requires more than a short (i.e., 15 - 30 minutes) period of time will be equipped with respiratory protection. Dry sweeping of the floors in this room will be prohibited.

- MAINTENANCE OPERATIONS ABOVE CEILING IN NEW WING. Until the asbestos is removed from the pipe elbows and valves, access to the space above the ceiling in the new physical education area on the first floor will be limited to maintenance staff with assigned tasks. All such work shall be performed when school is out of session and with the proper procedures, including the use of asbestos respirators, proper job preparation and clean-up. All suspended tiles will remain in place in this area until the asbestos is removed.

G. CONTRACT SAFETY SPECIFICATIONS FOR ASBESTOS REMOVAL PROJECTS.

There are three areas in the New Milford High School where the asbestos will be removed and replaced by a contractor : the boiler room, the ceiling space above the hallway in the 1969 addition and the auditorium ceiling. These projects will be conducted during the summer and fall of 1987. This section outlines the safety specifications which will be required for the removal project in these three areas and describes selection criteria for hiring a contractor to do the asbestos abatement work.

PART I. GENERAL

1.1 Introduction.

Asbestos has been classified by the federal government as a carcinogenic material. These specifications are designed to maintain compliance with all governmental regulations regarding asbestos work, minimize employee exposures to airborne asbestos, and protect the building and its occupants from asbestos contamination.

1.2 Scope.

These specifications cover all safety and environmental controls and procedures which will be used during the removal of asbestos from the New Milford High School. The extent of asbestos removal is confined to the rooms and areas described in Section 6. All aspects of the removal work shall be conducted in strict accordance with these specifications.

1.3 Applicable Codes.

The contractor shall be solely responsible for conducting each project, supervising all work in a manner which will be in conformance with all federal, state and local regulations and guidelines pertaining to asbestos abatement. Specifically, the contractor shall comply with the requirements of the following agencies :

1.3.1 EPA Regulations (40 CFR Part 763) ;

1.3.2 NESHAPS Regulations (40 CFR 61, Subpart M) ;

1.3.3 OSHA Regulations (29 CFR 1910.1001 and 1926.58) ;

1.3.4 Connecticut DEP Regulations (Section 22a-209-8(i) and Section 22a-220 of the Connecticut General Statutes).

1.3.5 Connecticut Regulations regarding asbestos inspection and abatement ;

1.3.6 Connecticut Basic Building Code ;

1.3.7 Connecticut Fire Safety Code ;

1.3.8 Local health and safety codes, ordinances or regulations pertaining to asbestos remediation.

1.4 Exemptions.

Any deviations from these specifications requires the written approval and authorization from the building owner.

1.5 Contractor Qualificatiioms.

All bidders shall submit a record of prior experience in asbestos removal projects, listing no less than 10 completed jobs in the past 5 years.

PART 2 : TERMINOLOGY

2.1 ABATEMENT - Procedures to control fiber release from asbestos-containing materials; includes removal, encapsulation, and enclosure.

2.2 AIRLOCK - A system for permitting ingress and egress while assuring air movement to contaminated area from an uncontaminated area. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.3 AIR MONITORING - The process of measuring the fiber content of a specific volume of air in a stated period of time.

2.4 AIR SAMPLING PROFESSIONAL - A professional capable of conducting air monitoring and analysis schemes. This individual should be a certified industrial hygienist or an environmental scientist or engineer with equivalent experience in asbestos air monitoring and worker protection equipment and procedures. This individual should have demonstrated proficiency in conducting air sample collection in accordance with 29 CFR 1910.1001 and 1926.58.

2.5 AMMENDED WATER - Water to which a surfactant has been added.

2.6 ASBESTOS - the name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles.

2.7 ASBESTOS CONTROL AREA - An area where asbestos abatement operations are performed which is isolated by physical boundaries to prevent the spread of asbestos dust, fibers, or debris.

2.8 ASBESTOS FIBERS - Those particles with a length greater than five (5) microns and a length to diameter ratio of 3 : 1 or greater.

2.9 ASBESTOS FIBERS PERMISSABLE EXPOSURE LIMIT (PEL) - The maximum concentration of asbestos fibers which is allowed in a work area where employees are present. The current level established by OSHA is 0.2 fibers per cubic centimeter of air as an eight (8) hour time weighted average. An employer is responsible for maintaining work areas in a manner that this standard is not exceeded.

2.10 AUTHORIZED VISITOR - Any person authorized by the building owner to enter the premises of the school building.

2.11 BUILDING OWNER - The New Milford School District. The Superintendent of the New Milford Schools (or his designee) shall represent the owner in all transactions with the contractor.

2.12 CLEAN ROOM - An uncontaminated area or room which is a part of the worker decontamination enclosure with provisions for for storage of workers' street clothes and protective equipment.

2.13 CURTAINED DOORWAY - A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.14 DECONTAMINATED ENCLOSURE SYSTEM - A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers and equipment. A decontamination enclosure system always contains at least one airlock.

2.15 ENCAPSULANT - A liquid material which can be applied to asbestos-containing material and which controls the possible release of asbestos fibers from the materials either by creating a membrane over the surface (bridging encapsulant) or penetrating the material and binding its components together (penetrating encapsulant).

2.16 ENCAPSULATION - A specified asbestos remediation strategy involving the application of an encapsulant to asbestos-containing materials to control the release of asbestos fibers into the ambient air.

2.17 EQUIPMENT DECONTAMINATION ENCLOSURE - That portion of a decontamination enclosure system designed for controlling the transfer of materials and equipment, typically consisting of a washroom and a holding area.

2.18 EQUIPMENT ROOM - A contaminated area or a room which is part of the worker decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.19 FIXED OBJECT - A unit of equipment or furniture in the work areas which cannot be removed from the work area.

2.20 FRIABLE ASBESTOS MATERIAL - Any material that contains more than 1% asbestos by weight, that can be crumbled, pulverized or reduced to powder by hand pressure, and, which releases asbestos particles to the environment. Covering by an impermeable, intact surface precludes friability.

2.21 GLOVEBAG TECHNIQUE - A method for removing small amounts of asbestos-containing materials from HVAC ducts, short piping runs, elbows, valves, joints and other non-planar surfaces in a self-contained work area.

2.22 HEPA FILTER - A high efficiency particulate air (HEPA) filter in compliance with ANSI Z9.2-1979.

2.23 HEPA VACUUM EQUIPMENT - Vacuum equipment with a HEPA filter system for filtering the effluent air from the unit.

2.24 HOLDING AREA - A chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area. The holding area comprises an airlock.

2.25 INSPECTOR - An individual, retained by the Owner, who is a "qualified asbestos inspector" as defined by the State of Connecticut Department of Health Services, and who will be responsible for overseeing and enforcing all of the specifications during the asbestos remediation projects.

2.26 MOVABLE OBJECT - A unit of equipment or furniture in the work area which can be removed from the work area.

2.27 NEGATIVE AIR PRESSURE EQUIPMENT - A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a contaminated area (negative with respect to adjacent uncontaminated areas) and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.

2.28 NOTICE OF DISCHARGE - A formal discharge of the contractor by the building owner and nullification of the contract.

2.29 NOTICE OF NON-COMPLIANCE - A process to be followed in the course of a violation hearing, whereby the building owner, upon determining that the specifications have been breached, informs the contractor that he (she) has 24 hours to corr- the violations noted by the inspector, subsequent to a discharge procedure.

2.30 NOTICE OF VIOLATION - An enforcement procedure by which the inspector informs the contractor to immediately cease all removal or remediation work in the building and to immediately implement clean-up procedures. The notice of violation will be followed by a hearing with the building owner within 24 hours.

2.31 PLASTICIZE - To cover floors and walls with plastic sheeting as specified herein.

2.32 REMOVAL - All procedures, specified herein, which are necessary to remove asbestos-containing materials from the designated areas and to dispose of these materials at an acceptable site.

2.33 SHOWER ROOM - A room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between the contaminated area and the clean area.

2.34 STRIPPING - Taking off asbestos materials from any structural member, pipe surface or HVAC equipment.

2.35 SURFACTANT - A chemical wetting agent added to water to improve penetration into asbestos-containing materials.

2.36 VIOLATION HEARING - A formal process whereby the building owner holds a conference with the contractor and the inspector to review violations of the specifications noted during the project, in order to ascertain whether the project contract has been breached

2.37 WASHROOM - A room between the work area and the holding area in the equipment decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.38 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 by water, and by afterwards disposing these cleaning items as asbestos contaminated waste.

2.39 WORK AREA - Designated rooms, spaces, or areas of the project in which asbestos abatement actions are occurring and which may become contaminated as a result of such abatement actions. The work area must be totally self contained by sealing, plasticizing and equipping the area with a decontamination enclosure system.

2.40 WORKER DECONTAMINATION ENCLOSURE SYSTEM - That portion of a decontamination enclosure system designated for controlled passage of workers, and other personnel and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room.

2.41 WORK STOPPAGE CLEANUP PROCEDURE - A process following the completion of the project or following the issuance of a notice of violation, whereby the contractor thoroughly cleans and decontaminates the work area, the decontamination enclosure system, and any other areas of the building affected by the removal project, to the satisfaction of the inspector.

2.42 WORK ZONE - The area of the decontamination enclosure system where asbestos is being removed.

PART 3 : DESCRIPTION OF WORK

3.1 Locations and Work Statement

The specific sites for asbestos remediation are described in Part 6 of these specifications. The contractor shall retain full ownership of all asbestos containing materials in these specific locations and is responsible for removal, transport, and disposal of the asbestos in accordance with these specifications.

3.2 Chain of Command

3.2.1 Responsible Authority.

The Owner, represented by the Superintendent of Schools, (or his designee) is the ultimate authority in the discharge of this contract. All deliberations regarding the contract or the degree of compliance with the specifications, shall be ultimately decided by the owner.

3.2.2 Inspector.

The owner shall retain an asbestos inspector to oversee all work performed under this contract and to enforce the provisions of these specifications. The inspector shall have the authority to issue a notice of violation to the contractor and temporarily stop all further work if the air quality of the building is affected by the removal operation. The inspector may also function as the air sampling professional, if he/she is qualified under the terms defined herein.

3.2.3 Air Sampling Professional.

The owner shall retain an air sampling professional to conduct the air monitoring tasks outlined in section 5.4.3.1 and 5.4.3.3 of these specifications. If the owner retains a separate individual as the air sampling professional (in addition to the inspector), he/she shall report directly to the inspector. All determinations of air quality contamination shall be made by the air sampling professional.

3.2.4 Project Supervision.

With the exception of the process outlined in part 3.5.3 - 3.5.5 of these specifications, the contractor shall report to the inspector as the owner's designated project manager.

3.3 Contractor Responsibilities.

The work specified in this contract entails the removal of asbestos-containing materials and the replacement of such materials with a suitable non asbestos product. This work shall be done by persons who are knowledgeable, qualified, and experienced in the removal, treatment, handling, and disposal of asbestos-containing materials and the subsequent cleaning of the environment. The contractor selected must comply with all applicable federal, state, and local regulations which mandate work practices and shall be capable of performing the work of this contract within the specified timeframe.

The contractor shall supply all labor, materials, equipment, services, insurance, and incidentals which are necessary or required to perform the work in accordance with all applicable governmental regulations and the specifications of this contract.

3.4 Performance Bond.

Before commencing work, the contractor shall post a performance bond in the amount and form specified in the general contract. In the event of an issuance of a notice of discharge, the owner reserves the right to use the bond to complete any unfinished work specified by this contract and adequately clean and/or decontaminate the work area and the building of asbestos to make it fit for occupancy.

3.5 Procedure for Resolving Documented Violations.

In the event that the inspector determines a violation of these specifications, the following procedures shall be employed to resolve and correct the areas of non compliance :

3.5.1 The inspector shall adequately document deviations from these specifications and immediately inform the contractor of the conditions which require correction. The contractor shall be given a reasonable period of time to correct these conditions.

3.5.2 If the violations continue unabated, the inspector shall issue a notice of violation to the contractor. After receiving the notice of violation, the contractor shall immediately cease all removal operations and effectuate a work stoppage cleanup procedure.

3.5.3 Within 24 hours of the issuance of a notice of violation, a hearing shall be conducted by the owner, with the contractor and the inspector in attendance. The owner shall review the documented violations with the objective of resolving the problems which resulted in the violations noted by the inspector. When the issues are fully resolved, removal work can resume under the conditions established by the building owner.

3.5.4 If the building owner sets conditions to correct the violations which the contractor is unwilling or unable to accomplish, the owner shall issue a notice of non-compliance.

3.5.5 If the correction conditions established by the owner are not initiated within 24 hours, the building owner shall issue a notice of discharge to the contractor, which immediately abrogates the contract.

PART 4 : WORK PREPARATION.

Prior to the initiation of the removal work, the following tasks must be completed by the contractor :

4.1 Work Site Safety Plan.

The contractor shall establish a set of emergency procedures and shall post them in a conspicuous place at the work site. The safety plan should include provisions for the following :

4.1.1 Evacuation of injured workers.

4.1.2 Emergency and fire exit routes from all work areas.

The contractor is responsible for training all workers in these procedures.

4.2 Notifications, Postings, and Submittals.

The contractor will make the following notifications, and provide the following submittals 10 days prior to the commencement of removal work :

4.2.1 Environmental Protection Agency (EPA)

Submit notification to the Regional EPA NESHAPS Coordinator at this address :

Director, Enforcement Division
Air and Hazardous Materials Division
Pesticides and Toxic Substances Branch
USEPA Region 1
Boston, Massachusetts 02203

The minimum information required in the notification includes the following :

. Name and address of the owner ;
. Building Location ;
. Building size, age, and use ;
. Amount of friable asbestos ;

- Work schedule, including proposed start and completion dates ;
- Asbestos removal procedures ;
- Name and location of disposal site for generated friable asbestos waste.

4.2.2 State Department of Education.

Send written notice of any project which involves the removal of more than 160 linear feet or 260 square feet of asbestos containing material to the Connecticut State Department of Education at the following address :

Chief, Bureau of Grants Processing
Room 325, State Office Building
State Department of Education
165 Capitol Avenue
Hartford, Connecticut 06106

The following information must be submitted :

- Name and address of building owner ;
- Building location ;
- Building size, age and use ;
- Amount of friable asbestos ;
- Work schedule, including proposed start and completion dates ;
- Asbestos removal procedures ;
- Name and location of disposal site for generated friable asbestos.

4.2.3 Transport and Disposal.

Submit proof, satisfactory to the owner, that all required permits, site locations, arrangements for transport and disposal of asbestos containing or asbestos contaminated materials and supplies have been obtained.

4.2.4 Work Zone Construction Plan.

Submit to the owner plans and/or shop drawings for the construction of decontamination enclosure systems and for the isolation of work areas as may be necessary in compliance with these specifications and applicable regulations.

4.2.5 Certification of Compliance Record for Past Projects.

Contractor must submit a written statement regarding whether he/she has ever been found out-of compliance with pertinent Federal and State asbestos regulations pertaining to removal, transport, disposal or other environmental or safety considerations.

4.2.6 Employee Training.

Submit documentation to the owner indicating that each

employee has had instruction on the hazards of asbestos exposure, on the proper use and fitting of respirators, on protective dress, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures. This documentation must include a signed statement by each employee who will perform the removal work in the High School that he/she understands these instructions and is willing to comply with these procedures and perform all work in accordance with these specifications.

The contractor must also submit verification that all employees have received medical examinations as required by OSHA regulations.

4.2.7 Postings.

The contractor shall post signs in and around the work area to comply with 29 CFR 1910.1001 and 1926.58. Post one copy of each of the following documents at the work site :

- Title 29, Code of Federal Regulations, Part 1910.1001 and 1926.58 OSHA Asbestos Standards.
- Title 40, Code of Federal Regulations, Part 61, Subparts A and B, NESHAPS.

4.2.8 Condition of Fixtures.

The owner and contractor must agree, in writing, on the condition of the building and fixtures. A photograhic record of major fixtures is required.

4.2.9 Certification of Exhaust Equipment.

The contractor must submit the manufacturer's certification that vacuums, negative air pressure equipment, and other local exhaust / ventilation equipment conform to ANSI Z9.2-1979.

4.2.10 Rental Equipment.

When rental equipment is to be used in removal areas or to transport waste materials, the contractor shall provide documentation to the owner that written notification has been provided to the rental company informing them of the nature of use of the rented materials.

4.2.11 Equipment and Supplies.

The contractor shall provide a list of equipment, materials and supplies which will be used for the removal projects. This list shall also include the materials which the contractor will use to replace the asbestos which will be stripped from the surfaces in the boiler room and the auditorium.

4.3 Preliminary Conference

Prior to the commencement of asbestos removal work, a conference will be held between the owner, the contractor, and the inspector. The objectives of this conference are as follows :

. Contractor submits to the owner copies of all submittals and notifications outlined above ;

. Contractor and inspector review the work plan and inspection procedures established in the specifications ;

. All parties agree to work standards, roles and time schedules established in contract specifications.

Asbestos removal work may proceed when the owner specifically authorizes the initiation of the project, in writing.

PART 5 : EXECUTION OF WORK.

5.1 Work Standards.

The contractor is responsible for maintaining work conditions at all times in conformance with OSHA standards and asbestos removal guidelines established by the Connecticut Department of Health Services. This includes the following :

5.1.1 Personnel Protection Equipment.

All employees shall be provided with and trained in the proper use of all equipment, respirators and supplies to minimize exposure to asbestos during work operations as specified in Section 1.6.1 - 1.6.7 of the document entitled "CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the Connecticut Department of Health Services.

5.1.2 Worker Protection Procedures.

All employees, inspectors, authorized visitors, or any individual who enters the work zone shall conform to the procedures established in Section 1.6.8.1 - 1.6.8.3 of the document entitled " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ".

A copy of these procedures shall be posted at all points of entry to the work zone. The contractor is responsible for limiting access to the work zone to individuals who abide by these procedures. The inspector shall oversee the control over entry into the work zone and shall enforce these procedures when necessary.

5.2 Decontamination Enclosure System.

Before initiating work on any given day, a properly constructed decontamination enclosure system shall be in place at all points of entry into the work zone. The inspector shall evaluate and approve the integrity of the enclosure system(s) prior to the commencement of asbestos removal work on any given day.

5.2.1 Features.

The enclosure system shall be constructed with suitable Building Code conforming framing and built according to the drawings specified in the contractor's "Work Zone Construction Plan" as submitted according to part 4.2.4 of these specifications. The contractor shall, at all times, maintain the decontamination enclosure system with a proper functioning worker decontamination enclosure (with an integral equipment room, shower room, and a clean room), an equipment decontamination enclosure (with an integral washroom and holding area) and highly visible, controlled, and properly posted entry points.

In all cases, access between contaminated and uncontaminated areas shall be through an airlock. In all cases, access between any two rooms within the decontamination enclosure system shall be through a curtained doorway.

5.2.2 Maintenance and Monitoring of Enclosure Systems.

The contractor shall create and maintain a pressure differential between work areas and occupied areas by the use of negative air pressure equipment. Such equipment shall be maintained at the work site at all times in a properly functioning condition. This equipment shall be equipped with a high efficiency particulate filtration system, shall be sized to provide four air changes per area in the work area and shall conform to ANSI Z9.2 - 1979. The equipment shall feature an automatic shutdown of the system and/or warning lights to indicate improper pressure drop across the filters.

The air sampling professional shall periodically monitor the integrity of the negative air pressure equipment and shall conduct periodic chemical smoke tests to verify the effectiveness of the enclosure system. If any of these tests indicate a breakdown in the integrity of the decontamination enclosure system's negative pressure system, the inspector shall immediately inform the contractor to cease all removal operations. The contractor shall take immediate steps to reestablish negative pressure in the enclosure system. When the air sampling proffessional verifies the proper functioning of pressure in the enclosure system, asbestos removal work can resume.

5.3 Sequence of Work.

The removal project shall proceed in accordance with the sequence of work established during the preliminary conference

as mutually agreed upon between the contractor and the owner. Work is divided into two areas - the auditorium and the boiler room - each of which will be completed as a separate unit by the schedule delineated in part 7 of these specifications.

5.4 Control Over Removal Work.

All work procedures shall be continuously controlled and monitored to assure that the building will not be contaminated. The following controls shall be instituted on each working day :

5.4.1 Start-Up.

Prior to work on any given day, the contractor's designated project foreman shall discuss the day's work schedule with the inspector to evaluate job tasks with respect to safety procedures and requirements specified to prevent contamination of the building or the employees. This includes a visual survey of the work area and the decontamination enclosure systems.

5.4.2 Access.

The contractor shall maintain control of access to all work areas to ensure the following requirements :

. Unauthorized personnel are prohibited from entering the area ;

. All authorized personnel entering the work area shall read the "worker protection procedures" which are posted at the entry points to the enclosure system, and shall be equipped with properly fitted respirators and protective clothing ;

. All personnel who are exiting from the decontamination enclosure system shall be properly decontaminated ;

. Asbestos waste which is taken out of the work area must be properly bagged and labelled in accordance with these specifications. The surface of the bags shall be decontaminated. Asbestos leaving the enclosure system must be immediately transported off site or immediately placed in temporary storage on site, in accordance with the requirements described in part 5.4.5 of these specifications.

. Any material, equipment, or supplies which are brought out of the decontamination enclosure system shall be cleaned and decontaminated by wet cleaning and/or HEPA vacuuming of all surfaces.

The inspector shall be responsible for monitoring the integrity of this system of access control and shall immediately inform the contractor of any deviations from the above requirements. The inspector shall also have the authority to mandate immediate corrections to the control of access which are necessary to prevent the building from becoming contaminated with asbestos.

5.4.3 Air Quality Monitoring.

Air sampling shall be conducted by the owner to ascertain the integrity of controls which protect the building from asbestos contamination. Independently, the contractor shall monitor air quality within the work zone to ascertain the protection of employees and to comply with OSHA regulations.

5.4.3.1 Owner's Responsibility.

The owner's air sampling professional shall collect and analyze air samples during three time periods :

. Pre-abatement Sampling Period. The air sampling professional shall collect a sufficient number of air samples, inside and outside of the work area, to establish background air quality conditions. At least one sample will be taken outside of the building.

. Abatement Period. Samples shall be taken on a daily basis during the work period. A sufficient number of area samples shall be taken inside the work area and decontamination enclosure system, outside of the work area, at the exhaust of the negive pressure system, and outside of the building to judge the degree of cleanliness or contamination of the building during removal.

The air sampling professional shall provide a continual evaluation of the air quality of the building during removal, using his/her best professional judgements in perspective of the State Department of Health Services guideline of .01 fibers/cc. and the background air quality established during the pre-abatement period. If the air sampling professional determines that the building air quality has become contaminated from the project, the inspector shall immediately inform the contractor to cease all removal operations and implement a work stoppage clean-up procedure. The contractor shall conduct a thorough cleanup of areas of the building designated by the inspector. No further removal work can take place until the air sampling professional has determined that the building air has been decontaminated.

. Post Abatement Period. The air sampling professional shall conduct air sampling following the final cleanup phase of the project, once the "no visible residue" criterion has been met. A sufficient number of samples, collected aggressively, will be taken to determine the final air concentration, in perspective of the "clearance guideline" of .01 fibers / cc.

5.4.3.2 Contractor Responsibility.

The contractor shall independently retain an air sampling professional to monitor airborne asbestos concentrations in the

work zone and to establish conditions and work procedures for maintaining compliance with OSHA regulations 29 CFR 1910.1001 and 1926.58.

The contractor's air sampling professional shall document all air sampling results and provide a report to the inspector within 24 hours after each work day.

5.4.3.3 Air Sampling Methods.

All air sampling shall be conducted in accordance with methods described in OSHA standards 29 CFR 1910.1001 and 1926.58. All air samples shall be conducted in a manner that will provide a minimum detection limit of .01 fibers / cc.

5.4.4 Asbestos Removal Procedures.

The contractor shall be responsible for the safe and methodical removal of asbestos from the work zone. All removal procdures shall be in conformance with section 3.2.2 - 3.2.5 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS REMOVAL AT PUBLIC BUILDINGS ", published by the Connecticut Department of Health Services. At all times, negative pressure shall be maintained in the work zone, relative to the building outside of the decontamination enclosure system.

The asbestos on the pipe elbows and valves located above the ceiling in the hallway outside of the lockers (1969 addition) shall be removed using a glove bag enclosure which is acceptable to the inspector.

The inspector shall make periodic evaluations of removal work procedures and shall enforce all safety procedures which are outlined (or referenced) in these specifications.

5.4.5 Asbestos Waste.

All asbestos waste shall be bagged in 6 mil plastic, labeled with danger placards as specified in 29 CFR 1910.1001 (g) (2), and transported to a landfill facility which is approved by the Department of Environmental Protection for disposal of asbestos.

Asbestos may be temporarily stored on the owner's premises outside of the work zone under the following circumstances :

. The bagged asbestos is thoroughly cleaned off by wet sponging the surface of the bag in the washroom of the decontamination enclosure system ;

. The bagged asbestos taken out of the decontamination enclosure

system shall be immediately placed in a dumpster with a locking metal cover. At the end of each work day the top of the dumpster shall be closed and locked ;

. The dumpsters are placed in an area of the property designated by the owner. The owner reserves the right to require the contractor to move the dumpster to a different location or to order them to be removed from the premises. In no case shall the asbestos remain on the owner's premises longer than 72 hours after the completion of the project.

The asbestos shall be transported and disposed in accordance with Section 22a-209-8(i) of the administrative regulations of the Department of Environmental Protection and Section 3.7.1 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the State of Connecticut Department of Health Services.

5.4.6 End of Day Clean-up.

At the completion of each work day, a work stoppage clean-up procedure will be conducted by the contractor. The purpose of this clean-up is to remove all loose asbestos from the work zone and to inhibit the release of fibers to the air in the work room. This procedure should include the following steps :

. Bagging of all loose asbestos and decontamination of the bag surfaces in the washroom of the decontamination enclosure ;

. Wet cleaning of the floor of the work zone ;

. Visual inspection of the entire work zone for areas of loose asbestos ;

. Securing the work zone. This entails the sealing and posting of the decontamination enclosure system and locking the doors of the room where the removal is taking place.

5.5 Final Clean-up of Work Zone.

Following the completion of all asbestos removal work in a given area, the following clean-up, inspection and clearance procedure will be followed by the contractor and the inspector :

5.5.1 Initial Clean-up.

Following the last day of asbestos removal, the work stoppage clean-up procedure will be instituted, followed by a wet cleaning of all surfaces in the work zone. All visible accumulations of asbestos material and debris will be removed at this stage.

5.5.2 HEPA Vacuum Clean-up.

After the initial clean-up, the contractor shall allow all areas of the work zone to dry, and will clean all surfaces with a HEPA filtered vacuum. After this clean-up, the contractor shall wait 24 hours and then shall reclean all surfaces with a HEPA filtered vacuum.

After the second clean-up, the inspector shall evaluate the adequacy of the decontamination process. If the inspector finds visible accumulations of dust or bulk asbestos containing materials in the work zone, the contractor shall repeat the cleaning, at his/her expense, until the area is declared as clear of visible accumulations of dust and asbestos.

Following the inspector's initial clearance of the work zone, the contractor shall remove the outer layer of plastic from the walls and floors, but shall keep the windows, doors and HVAC vents sealed. The decontamination enclosure system and the negative pressure system shall remain in place. Other equipment, materials, and sealed drums (previously cleaned as above) shall be removed from the equipment decontamination enclosure system at an appropriate time in the cleaning sequence.

5.5.3 Initial Clearance Test.

Twenty four hours after the work zone is totally dismantled, after all of the contractor's equipment, supplies and waste (including the outer layer of plastic) have been removed from the room, the inspector shall make a final visual inspection of the work area. If this inspection reveals no visible dust, the contractor shall remove the second layer of plastic sheeting and all barriers, with the exception of the plastic over the windows and the barrier between the work zone and the outside.

The air sampling professional shall, at this stage, conduct the post abatement air monitoring. The maximum acceptable levels for these air samples shall be .01 fibers / cc. or less, or a level equal to or less than the average asbestos level determined in the initial background samples taken outside the building.

Areas which do not comply with the standards specified above shall continue to be cleaned by the contractor at his / her expense until the specified standard is achieved as evidenced by the results of air testing.

5.5.4 Reinstallation of Displaced Equipment.

After the inspector has cleared the work area as clean from visible dust, and after the air sampling professional has determined that the area has achieved background air quality relative to the standards specified above, all remaining seals and barriers shall be dismantled by the contractor.

The contractor shall relocate all objects, which were moved to temporary locations during the course of the work, back to their proper positions. The contractor shall resecure mounted objects, which were removed during the course of the project, back to their former positions. The contractor shall reestablish HVAC, mechanical and electrical systems, which were temporarily shut down during the project, in conformance with all applicable building, mechanical and electrical codes. All existing filters shall be disposed, as asbestos contaminated, and replaced with new filters.

PART 6 : LOCATIONS OF ASBESTOS REMOVAL PROJECTS IN HIGH SCHOOL,

Asbestos is to be removed in two rooms in the building - the boiler room and the auditorium. The contractor is responsible for removing all asbestos from these locations.

6.1 Boiler Room.

Figure 2 illustrates the sites and approximate areas where asbestos was discovered in this room. The contractor is responsible for removing all of the asbestos in this room and in the adjacent hallway between the freezers and the boiler room. All of the asbestos in this room shall be removed in accordance with the specifications described in this document.

Following the removal of asbestos, all surfaces in the boiler room shall be replaced with a non-asbestos insulating material which is acceptable to the building owner.

6.2 Auditorium.

Figure 4 shows the approximate location of asbestos in the auditorium. Asbestos was discovered on the low ceiling - as an accoustical plaster - in the back of the room.

The contractor is responsible for removing all of the asbestos in the auditorium in accordance with the specifications described in this document.

All areas of the accoustical ceiling shall be repaired and replastered with a suitable non-asbestos replacement material.

6.3 Ceiling Space above Hallway in New Wing of Building.

Figure 6 depicts the ceiling space in the 1969 addition of

the building, between the locker room and the lower gymnasium. Asbestos is located on the elbows and the valves of the pipes in the space above the suspended ceiling tiles.

The contractor is responsible for removing all of the asbestos from the ceiling space in accordance with these specifications.

Following the removal of asbestos, all stripped surfaces shall be reinsulated with a non-asbestos material which is acceptable to the owner.

PART 7 : SCHEDULE.

7.1 Auditorium and Boiler Room.

Asbestos removal shall commence after August 1, 1987, after the building owner authorizes the initiation of the projects. The removal projects shall take place when school classes are out of session. Under no circumstances shall asbestos be removed while non essential staff are present in the building.

All asbestos shall be removed from these areas by August, 15, 1987. All cleaning and inspections, air sampling, and recleaning shall be conducted during the week of August 15 - 22. The contractor shall not be released from the job until the following clearances have been obtained :

7.1.1 Inspection Clearance.

The inspector shall declare the project areas and all areas in the building that were affected by the project as "clean", when all visible accumulation of asbestos and dust have been removed from these locations.

7.1.2 Air Quality Clearance.

The air sampling professional shall declare the air quality in the building as acceptable for occupancy when the post abatement air sample analyses indicate that airborne asbestos have achieved background levels (or better) according to the standards established in these specifications.

7.1.3 Final Reoccupancy Clearance.

The building owner will perform a reoccupancy inspection of all work areas to ascertain the general condition of the rooms and the fixtures and to evaluate the quality of any reinsulation, restoration or replacement of materials required where the asbestos has been removed.

The owner shall declare the areas as acceptable for reoccupancy when he is satisfied that all aspects of the contractor's work have been completed to his satisfaction.

The entire building shall be ready for reoccupancy by no later than August 24, 1987. Any deviations or extensions of this schedule shall require the written authorization from the building owner.

7.2 Ceiling Space above Hallway in 1969 Addition.

Asbestos removal shall commence after December 25, 1987, when the building owner authorizes the initiation of the removal project in this area. Removal shall take place when school is out of session. Under no circumstances shall the asbestos be removed while non-essential staff are in the building.

All of the asbestos shall be removed, and all cleaning, inspections and recleaning shall be completed by December 30, 1987. The contractor shall not be released from the job until clearances described in Section 7.1.1 - 7.1.3 have been achieved. The area shall be ready for reoccupancy no later than January 3, 1987.

GUIDE FOR THE SELECTION OF A CONTRACTOR

The thoroughness and the degree of safety involved in an asbestos removal project depend largely upon the experience and competence of an asbestos remediation contractor. There are currently no state or federal regulations which review or license the contractors who perform this work. Therefore, it is extremely important that the School District thoroughly reviews the qualifications of prospective bidders for the removal project. This section outlines criteria for selecting the best contractor to perform the work. There are two phases involved in the process : the initial screening of companies interested in submitting a proposal for the work and the detailed review of contractors qualifications.

PHASE I : INITIAL REVIEW OF APPLICATIONS FOR A PROPOSAL.

This stage pertains to the initial screening of contractors who are interested in submitting a proposal to perform the asbestos remediation in the schools. The School District should initially advertise for a qualifications statement from prospective bidders. The qualifications statement should include the following information :

A. Record of experience in asbestos removal with names of the building owners of past projects;

B. Names and training of personnel who would perform the removal work;

C. Any record of violations of federal or state asbestos regulations over the past ten years ;

D. Affadavit regarding any projects which were prematurely terminated due to contract violations or building contamination incidents.

E. Statement of liability insurance coverage ;

F. Other information pertinent to asbestos removal.

The School District should carefully scrutinize these qualifications and select a list of qualified firms to submit a full proposal for the removal projects. The review should include a check of all references from previous projects which includes phone contacts to the building owners or the clerk of the works or inspectors of these projects to discuss the quality of work performed by the contractor. The affadavit regarding past violations should be checked by contacting the Environmental Protection Agency's Region I Asbestos Coordinator, OSHA, and the Connecticut Department of Health Services.

PHASE II : SELECTION OF THE CONTRACTOR.

When a list of qualified contractors is obtained, the School District should invite these firms to review all areas of the buildings which are scheduled for remediation. After a tour of all of the areas, followed by a question and answer period, the contractors will be instructed to develop a full proposal for all asbestos remediation described in the contract specifications with a bid quote for the project.

The final stage of screening before selection occurs is an interview process with one or more firms whose proposals are considered superior to the School District. The screening committee should be composed of 3 - 5 individuals including the Superintendent of Schools, the School District's Business Manager, and an asbestos inspector. The interview should include a discussion of the scope of the projects, the schedule, strategies for remediation, equipment available and other issues pertinent to completing the project in accordance with the specifications of the contract.

The selection should be based both on the competetiveness of the cost and the competence of the firm in safely completing each project in a timely manner. However, in no case should any question regarding the contractor's qualifications be superceded by a relatively lower cost.

ASBESTOS MANAGEMENT PLAN
NORTHVILLE PRIMARY SCHOOL

Prepared By :
Jack S. Kozuchowski
Consulting Services
November, 1986

TABLE OF CONTENTS FOR ASBESTOS MANAGEMENT PLAN

Laboratory Reports are in the Appendix at the End of the Plan.

ASBESTOS MANAGEMENT PLAN : THE NORTHVILLE SCHOOL

The Northville Elementary School was surveyed and evaluated for asbestos containing materials in August and September, 1986. The survey of the school determined that there is no asbestos present in the building.

The purpose of this plan is to describe the survey and to document the absence of asbestos in the building.

This asbestos management plan is submitted to the State Department of Education in accordance with Public Act 85-541 of the Connecticut General Statutes.

A. GENERAL DESCRIPTION OF BUILDING.

The Northville Elementary School is an educational facility which includes grades K - 2. The school was built in 1982.

The school employs a staff of 72 and has a student body which numbers 716.

The building is constructed on a slab foundation, with brick outer walls and a corrugated steel frame. The inner walls are constructed of cinder blocks. A suspended ceiling exists in most of the building, resulting in a ceiling plenum, with water pipes and air ducts located near the true ceiling.

Ventilation is provided by an air handling system which draws air into return ducts and supplies air by means of air handling units which are located above the ceiling, forcing air into each room by means of supply ducts.

All areas of the school are serviced by a central boiler room. Heat is provided by one oil burning boiler which conveys heat through hot water pipes that traverse the building through the ceiling plenum to radiators in the rooms.

B. DELINEATION OF AREAS

For the purpose of this evaluation, the school was divided into 10 sections of similar design, construction or function. Table 1, below, lists these areas and indicates whether asbestos was identified in each location.

TABLE 1 : AREAS OF NORTHVILLE ELEMENTARY SCHOOL SURVEYED FOR ASBESTOS

location	materials evaluated	prescence of asbestos
boiler room and mechanical area (yard storage, electrical rm., garage, custodian room)	boilers, h.w. tank, pipes, floor, walls, ceiling, radiators.	NO
cafetorium	stage curtains, floor, walls, ceiling.	NO
ceiling plenum	ceiling, ducts, pipe insulation, air handling units.	NO
kitchen area (including locker area, freezer & storage)	ceiling, exhaust ducts, walls, floor.	NO
gymnasium	floor, ceiling, vent. ducts	NO
foyer area	floor, ceiling, walls	NO
office area	floor, walls, ceiling.	NO
classrooms - kindergarten & first gr. wing.	room by room search : ceiling, walls, assessory materials, floor.	NO
center section (including nurses room, library, conference room).	ceiling, walls, floor, vent. ducts, assessory materials.	NO
second grade wing.	ceiling, walls, floor, assessory materials.	NO

C. METHOD OF EVALUATION

The Northville Elementary School was surveyed for asbestos containing materials and evaluated in the following manner :

(1) Blueprints of the building were examined to determine the layout of specific sections of the building and to determine whether asbestos was specified for use in any area of the building ;

(2) An inspection of each room of the building was conducted to provide a descriptive documentation of design, construction, and building materials to identify substances which are positively non-asbestos, and suspect materials (which include the boiler stack and stage curtains), which require an analytical confirmation of their constituency. The maintenance staff of the School District was consulted with regard to specific locations of areas.

(3) The manufacturers of the floor tiles and the ceiling tiles which were used throughout the building were contacted to verify (by lot # of the tiles used throughout the school) the absencee of asbestos in the floor and ceiling.

(4) All suspect materials (identified above) were sampled in accordance with the State Department of Health Services guidelines for identification of asbestos. These samples were submitted to the State Department of Health Services Laboratory for analysis of asbestos content.

(5) Following receipt of the laboratory reports, all locations in the building where asbestos was confirmed to be present were inspected again and evaluated with respect to its condition in accordance with the State Health Department's "decision protocol" process.

D. RESULTS OF BUILDING SURVEYS.

As a result of the room by room search of each of the areas described on Table 1, only four materials were suspected of containing asbestos :

(1) The insulation on the boiler stack ;

(2) The stage curtains in the cafetorium ;

(3) The ceiling tiles ;

(4) The floor tiles.

The boiler stack and curtains were sampled in triplicate for the analysis of asbestos content; asbestos was found to be absent from these samples.

The manufacturer of the ceiling tiles - The Armstrong Corporation was contacted regarding the constituency of the "Cortega Minaboard" (lot # 769A) and the Cortega Tegular Minatone (lot # 704A) suspended ceiling tiles which were used throughout the school. It was verified that neither product contained asbestos.

The manufacturer of the floor tile - The Armstrong-Marietta Corporation - was contacted regarding the asbestos content in each of the floor tiles used throughout the school*. The representative of the company, Terry Hackman, checked each lot number and determined that none of these floor tiles contained asbestos.

E. DOCUMENTATION OF THE ABSENCE OF ASBESTOS IN THE NORTHVILLE SCHOOL

The building survey, the review of building products, and the analysis of samples taken from the boiler room and the stage revealed that there is no asbestos present in the Northville School. Exhibit A is the school facility report, documenting that the building was surveyed for asbestos in accordance with P.A. 85-541. The laboratory reports on the following pages documents the analysis of the materials which were sampled in the boiler room and the cafetorium stage.

Although no remediation strategies are necessary for the school, all of the maintenance and janitorial staff who service the bulding will attend the inservice training session regarding safety procedures for working around asbestos containing materials.

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* Lot numbers as follows : Excelon tile #51855J8411, Pagoda Red # 51842P769, Casa orange - # 51843P815A, Imperial 22 # 51855 J8411, White # 51851J8311.

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EXHIBIT A

CONNECTICUT DEPARTMENT OF EDUCATION

ED 075B
SCHOOL FACILITY ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

SCHOOL DISTRICT: NEW MILFORD
DISTRICT CODE: 096
FACILITY NAME: NORTHVILLE SCHOOL
FACILITY ADDRESS: 141 AP ROAD, NEW MILFORD
Year of Construction: 1982
Year of Additions (if any): _____

CERTIFICATION:

Attached are _____ Area Asbestos Inspection Reports (ED 075A) for the above referenced school facility.

☒ Check this box if this school facility has been inspected according to Public Act 85-541, state regulations enacted pursuant thereto and decision protocols.

☒ Check this box if this school facility has been inspected prior to January 1, 198(in order to comply with Environmental Protection Agency (EPA) School Asbestos Inspectior Rule.

Name of Inspector: JACK S. KOZUCHOWSKI Phone: 792-561
Signature of Inspector: Jack S. Kozuchowski Date: 11/20/86

☐ Check this box if this building had been previously inspected and was found to have asbestos containing materials which have subsequently been removed. Please submit documentation supporting this fact.

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ASBESTOS MANAGEMENT PLAN
SCHAGHTICOKE MIDDLE SCHOOL

Prepared By :
Jack S. Kozuchowski
Consulting Services
November, 1986

APPENDIX II

UPDATE TO ASBESTOS MANAGEMENT PLAN : SCHAGTICOKE MIDDLE SCHOOL

The asbestos management plan prepared for the Schagticoke Middle School identifies the presence of friable asbestos in the boiler room of the building, located on the surface of the hot water tank. The friable asbestos is identified on Table 2 (page 4a), the EDO 75A form (page 4c) and is described in the narrative of the asbestos management plan, on page 5.

The character of the asbestos on the hot water tank was modified by a remedial project conducted on January 17, 1987. The asbestos surface on the hot water tank was sealed in place using three separate processes :

(1) Each of the pitted areas on the surface of the tank were sealed with a bonding material designed for asbestos remediation ("Lag-Kap", manufactured by Fiberlock Technologies).

(2) The entire length of the hot water tank (excluding the rounded ends of the cylinder) was covered with a non asbestos fabric wrap which was designed to provide a tight bond with the asbestos surface ("Lag-Kloth", manufactured by Fiberlock Technologies).

(3) After the fabric cloth dried (72 hours after application), the outer surface of the fabric was sealed with a penetrating encapsulant ("Lag-Kap", manufactured by Fiberlock Technologies).

As a result of this project, friable asbestos is no longer exposed in the boiler room. All of the asbestos in the School can now be be characterized as "non-friable".

The remediation project was properly supervised and inspected and is certified to be completed in a manner that is consistent with the procedures outlined in the "asbestos training manual" developed for the New Milford Schools.

Jack Kozuchowski

Jack S. Kozuchowski
Asbestos Planner
January 21, 1987

ASBESTOS MANAGEMENT PLAN : SCHAGHTICOKE MIDDLE SCHOOL

The Schaghticoke Middle School was surveyed and evaluated for asbestos containing materials in August and September, 1986. The New Milford School District has developed a series of management strategies for each location where asbestos was identified in the building. The remedial action prescribed for each of these areas is the foundation for this asbestos management plan.

The purpose of the plan which follows is to provide the documentation of the asbestos surveys and to describe the management strategies for each area where asbestos is present in the school. The specific objectives of this plan are as follows :

(1) Provide a description of the school buildings which highlights the locations where asbestos containing materials are present ;

(2) Describe the methodology which was used for surveying and evaluating materials in the school which were suspected to contain asbestos ;

(3) Summarize the locations and conditions of materials which were confirmed as asbestos ;

(4) Describe the remedial strategy selected for each site which has asbestos present in the school with a justification for selecting this course of action ;

(5) Develop a system for implementing the plan which includes the following elements :

   a. Timetable for implementing remediation strategy ;

   b. Interim strategies for minimizing fiber release from the areas with asbestos until a permanent method of remediation can be implemented ;

   c. Procedure for implementing the remedial strategy ;

(6) Establish an ongoing management and monitoring program for all asbestos containing materials which are left in place.

This asbestos management plan is submitted to the State Department of Education in accordance with Public Act 85-541 of the Connecticut General Statutes.

A. GENERAL DESCRIPTION OF BUILDING.

The Schaghticoke Middle School is an educational facility which includes grades 6 - 8. In addition to education, extra curricular events may periodically be conducted in the gymnasium and the cafeteria. The school was built in 1972.

The school employs a staff of 108 and has a student body which numbers 927.

The building is constructed on a slab foundation, with brick outer walls and a corrugated steel frame. The inner walls are constructed of cinder blocks. A suspended ceiling exists in most of the building, resulting in a ceiling plenum, with water pipes and air ducts located near the true ceiling.

Ventilation is provided by an air handling system which draws air into return ducts and supplies air by means of air handling units which are located on the roof, forcing air into each room by means of supply ducts.

All areas of the school are serviced by a central boiler room. Heat is provided by two oil burning boilers which convey heat through hot water pipes that traverse the building through the ceiling plenum to radiators in the rooms.

B. DELINEATION OF AREAS

For the purpose of this evaluation, the school was divided into 14 sections of similar design, construction or function. Table 1, below, lists these areas and indicates whether asbestos was identified in each location.

TABLE 1 : AREAS OF SCHAGHTICOKE MIDDLE SCHOOL SURVEYED FOR ASBESTOS

location	materials evaluated	prescence of asbestos
boiler room *	boilers, h.w. tank, pipes	YES
floor - entire school*	floor tiles	YES
ceiling plenum	ceiling, ducts, pipe insulation	NO
cafeteria	ceiling, floor, walls	NO
kitchen area	ceiling, broiler ducts, walls	NO
gymnasium	floor, ceiling, vent. ducts	NO
hallways	floor, ceiling	NO
classrooms - first floor	room by room search : ceiling, walls, assessory materials.	NO
music area	ceiling, walls, insulation beh- walls, assessory materials.	NO
art room	ceiling, walls, kiln, assessory materials.	NO
offices	ceiling, walls, room partitions	NO
industrial shops	ceiling, wall, floor, assessory materials	NO
classrooms - second floor	room by room search : ceiling, walls, floors, assessory mat'ls.	NO
Fan Rooms	ceiling, floor, air handling units, ventilation ducts	NO

* The specific locations which contain asbestos are described in more detail on Table 2 and in narrative text.

C. METHOD OF EVALUATION

Schaghticoke Middle School was surveyed for asbestos containing materials and evaluated in the following manner :

(1) Blueprints of the building were examined to determine the layout of specific sections of the building and to determine whether asbestos was specified for use in any area of the building ;

(2) An inspection of each room of the building was conducted to provide a descriptive documentation of design, construction, and building materials to identify substances which are positively asbestos, non asbestos materials and materials which are suspected to contain asbestos, which require an analytical confirmation of its constituency. The maintenance staff of the School District was consulted with regard to specific locations of areas and regarding recent construction activities affecting insulation and other asbestos containing materials.

(3) The manufacturer of the floor tiles was contacted to verify (by lot # of the tiles used throughout the school) the presence of asbestos in the floor.

(4) All asbestos suspect materials (identified above) were sampled in accordance with the State Department of Health Services guidelines for identification of asbestos. These samples were submitted to the State Department of Health Services Laboratory for analysis of asbestos content.

(5) Following receipt of the laboratory reports, all locations in the building where asbestos was confirmed to be present were inspected again and evaluated with respect to its condition in accordance with the State Health Department's "decision protocol" process.

D. LOCATIONS WHERE ASBESTOS IS PRESENT IN THE SCHAGHTICOKE SCHOOL

Table 2 indicates the locations where asbestos was positively identified in Schaghticoke Middle School. The table also describes the the condition, the degree of friability, and the potential for future deterioration of each asbestos product in the building. The asbestos materials were confirmed, in most cases, by a laboratory analysis of bulk samples which were taken from the building. The analytical reports are attached to the appendix at the end of this document.

Exhibits A - C are the "school facility" and "area reports" (ED075A and ED075B), which provide information on the specific locations where asbestos is present in the building.

The diagrams on the following pages illustrate the areas where asbestos is present in the building. Figures 1 and 2 are

TABLE 2 : SUMMARY OF ASBESTOS LOCATIONS - SCHAGHTICOKE MIDDLE SCHOOL

location of asbestos	friability	condition	damage potential	management strategy selected
Boiler Room: - h.w. tank - stack	low	good	potential for impact & further deterior-ation.	implement management & monitoring program.
Tile Floors-entire bldg.	non friable	good	potential for release from im-proper maintenance operations	implement management & monitoring program.

EXHIBIT A

CONNECTICUT DEPARTMENT OF EDUCATION

ED 075B
SCHOOL FACILITY ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

SCHOOL DISTRICT: NEW MILFORD
DISTRICT CODE: 096
FACILITY NAME: SCHAGHTICOKE MIDDLE SCHOOL
FACILITY ADDRESS: 11MP ROAD, NEW MILFORD
Year of Construction 1972 Year of Additions (if any) _____

CERTIFICATION:

Attached are 3 Area Asbestos Inspection Reports (ED 075A) for the above referenced school facility.

☒ Check this box if this school facility has been inspected according to Public Act 85-541, state regulations enacted pursuant thereto and decision protocols.

☒ Check this box if this school facility has been inspected prior to January 1, 1986 in order to comply with Environmental Protection Agency (EPA) School Asbestos Inspection Rule.

Name of Inspector JACK S. KOZUCHOWSKI Phone 792-5613
Signature of Inspector Jack S. Kozuchowski Date 11/20/86

☐ Check this box if this building had been previously inspected and was found to have asbestos containing materials which have subsequently been removed. Please submit documentation supporting this fact.

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EO 075A

CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
SCHAGTICOKE MIDDLE SCHOOL	4 HIPP RD, NEW MILFORD	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
1: BOILER ROOM	2080	6

1. Samples: Description of material sampled TANK: CEMENTIOUS, PLASTER MATTER; STACK: LOOSE FIBROUS MATERIAL IN OUTER CLOTH WRAP
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Trowled on ___ Boiler Lagging ___
   Pipe Insulation ___ Duct ___ Other (please explain) INSULATION ON HOT WATER TANK AND BOILER STACK
3. Friability: High ___ Moderate ___ Low ✓ Not Friable ✓ (SEE COMMENT)
   Sq. Footage Area 226 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ___ None ✓
   Physical Damage: High ___ Moderate ___ Low ✓ None ✓ (SEE COMMEN
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ___
   Contact Potential: High ___ Moderate ___ Low ✓ None ___
   Distance to items needing maintenance:
   Electrical ___ Plumbing 5 Feet Ventilation ___ Other 1-10 Feet FROM BOILER
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ✓ Carpet ___ Tile ___ Wood ___ Other ___
   Ceiling Type: Concrete ___ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ✓
   Suspended metal lath ___ Other ___
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other BOILER RM DOOR LOCKS None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) ___ Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area MECHANICAL - BOILER MAINTENANCE Activity: High ___ Moderate ___ Low ✓
   What is adjacent to the area? HALLWAY
   What is above the area? ROOF
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	___ hrs/day	___ days/week
Staff 6	1 hrs/day	2 days/week

Comments: INSULATION ON BOILER STACK IS ENCLOSED IN A TIGHTLY WOVEN OUTER WRAP AND IS NOT FRIABLE. INSULATION ON HOT WATER TANK IS A PLASTER / CEMENTIOUS TEXTURE WHICH IS UNWRAPPED AND WHICH HAS IMPACT PITTED SPOTS OF LOW FRIABILITY

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
INSULATION ON STACK IS NOT IN BAD CONDITION; NO POTENTIAL FOR FUTURE DAMAGE. INSULATION ON HOT WATER TANK HAS ISOLATED PITTED SPOTS ON SURFACE, WITH POTENTIAL FOR FUTURE IMPACT DAMAGE.

ASBESTOS MANAGEMENT PLAN SPECIFIES REPAIR OF PITTED AREAS ON HOT WATER TANK AND IMPLEMENTATION OF ~~ENTERCH~~ MANAGEMENT / MONITORING PROGRAM.

EO 075M

CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
SCHAGHTICOKE MIDDLE SCHOOL	HIPP ROAD NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
2: FLOOR TILES THROUGHOUT BUILDING	38,784	1035

1. Samples: Description of material sampled NO SAMPLES TAKEN - SEE COMMENT
   Type of sample: Bulk ____ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ____
   Pipe Insulation ____ Duct ____ Other (please explain) FLOOR TILES
3. Friability: High ____ Moderate ____ Low ____ Not Friable ____
   Sq. Footage Area 38,784 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
   Physical Damage: High ____ Moderate ____ Low ____ None ✓
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
   Contact Potential: High ✓ Moderate ____ Low ____ None ____
   Distance to items needing maintenance:,
   Electrical 5-15' Plumbing 10-15 Ventilation 10-15' Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
   Floor Type: Concrete ____ Carpet ____ Tile ✓ Wood ____ Other ____
   Ceiling Type: Concrete ____ Acoustical Tile ____ Plaster ____ Metal Deck ____
   Suspended lay in panels ✓ Concrete joist and beam ____
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
   Railing ____ Other ____ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
   Use of Area ENTIRE AREA OF BUILDING Activity: High ✓ Moderate ____ Low ____
   What is adjacent to the area? ALL AREAS OF BUILDING.
   What is above the area? ALL AREAS OF BUILDING.
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 927	7 hrs/day	5 days/week
Staff 108	7 hrs/day	5 days/week

Comments: CONTACTED MANUFACTURER OF FLOOR TILES (KENTILE CORP., N.Y., N.Y.) WHO VERIFIED (BY LOT # OF TILES) THAT ASBESTOS IS PRESENT IN THE TILES.

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
FLOOR TILES ARE NOT FRIABLE; NO CURRENT HAZARD EXISTS, THERE IS A POTENTIAL HAZARD FROM MAINTENANCE OPERATIONS WHICH CAN BE CONTROLLED BY A MANAGEMENT PROGRAM.

ASBESTOS MANAGEMENT PLAN SPECIFIES IMPLEMENTATION OF MANAGEMENT/MAINTENANCE PROGRAM, FOCUSSING ON STAFF TRAINING & CONTROL OF ABRASIVE OPERATIONS.

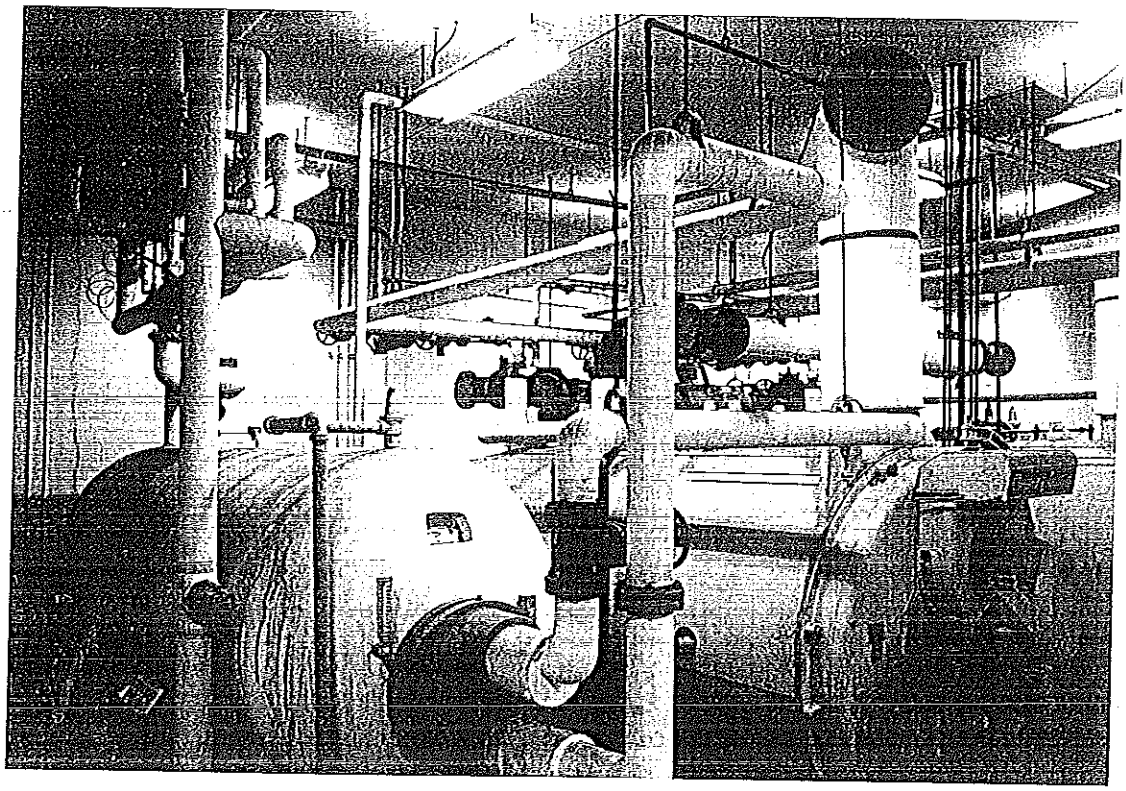

FIGURE 1 A : Photograph of Boiler Room

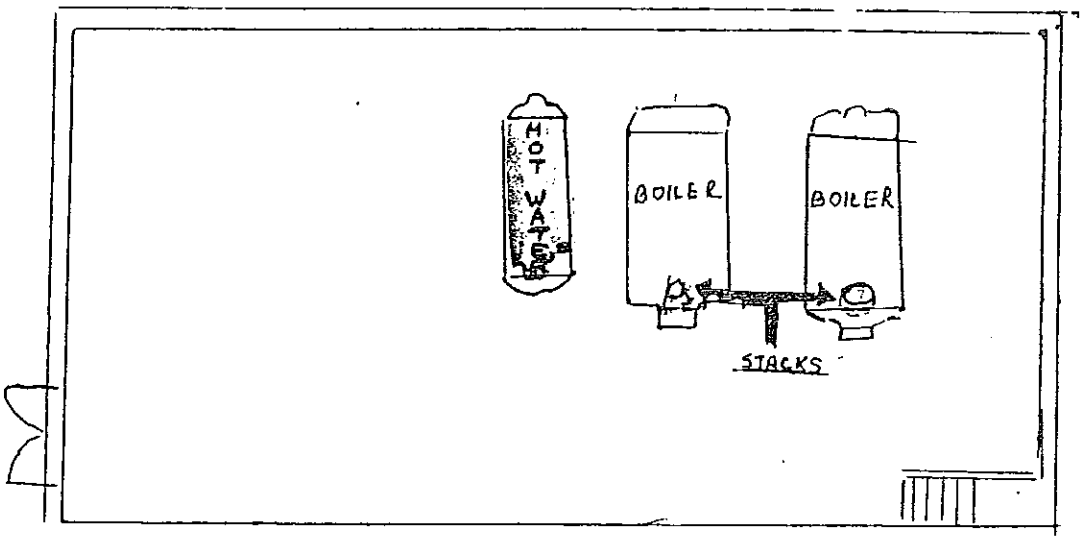

FIGURE 1 : BOILER ROOM

Area of asbestos : 226 square feet

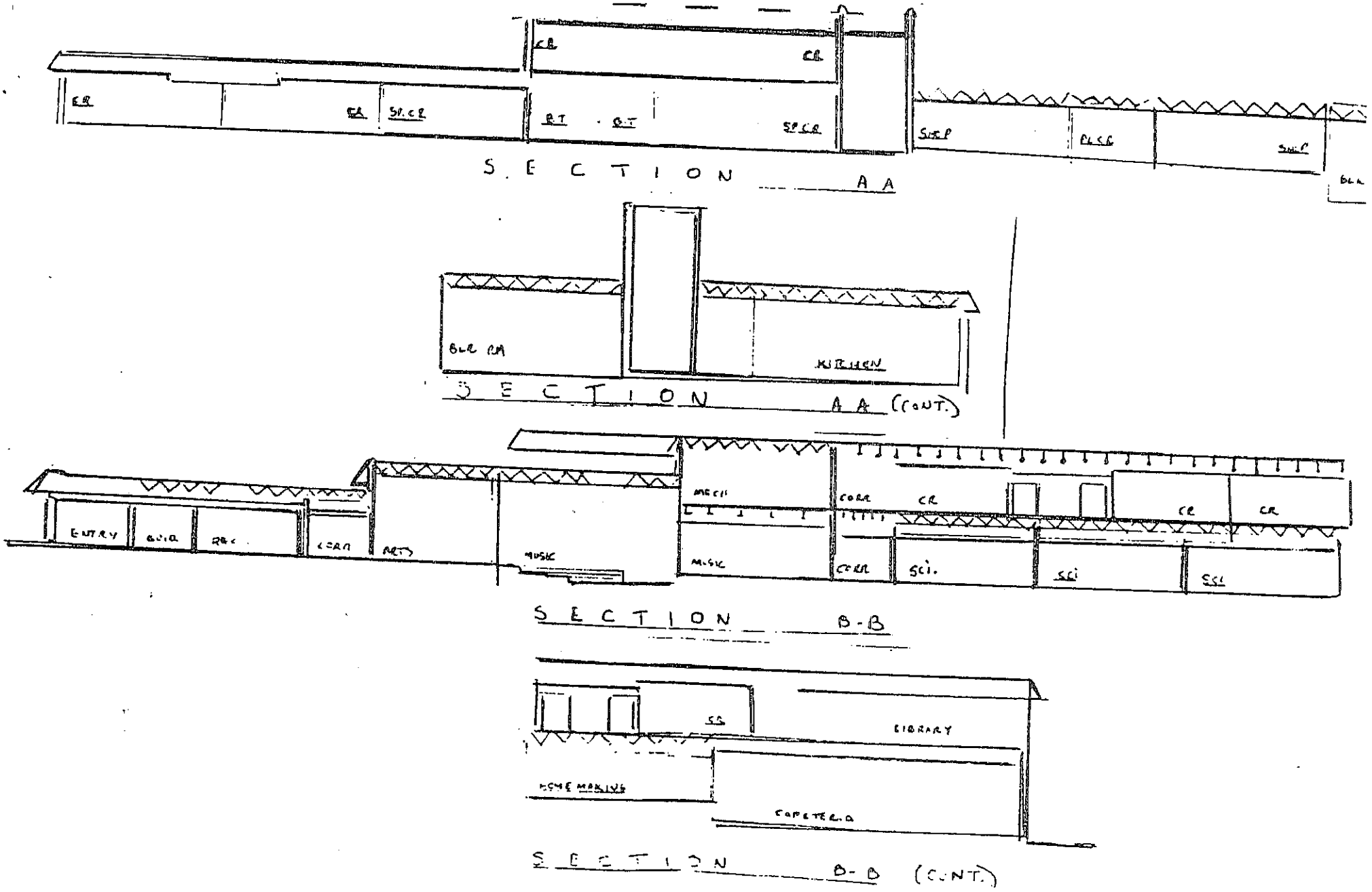

FIGURE 2 : FLOOR TILES

Area of asbestos : square feet

site specific illustrations of each asbestos area in the building, specifying the total area of asbestos at each location.

E. AREA REMEDIATION STRATEGIES.

This section outlines the management strategies which will be used for each location in the building where asbestos is present. This narrative also includes a justification for the remediation option which was selected.

(1) Boiler room.

Asbestos is present in two locations in the boiler room - the insulation on the boiler stack, and the insulation on the hot water tank.

The asbestos which is present on the boiler stack is covered with a cloth wrap. The non asbestos cloth covering is intact and in good condition along the entire length of the stack. As such, the asbestos is not friable. The only potential for this to become friable in the future is the remote possibility of a shearing or punturing impact occurring during maintenance or repair operations.

The asbestos insulation on the hot water tank is intact, and in generally good condition. However, there are isolated spots on the tank insulation which have become pitted and are, therefore, friable. There is a potential for future impact damage resulting from maintenance operations which occur in this area.

An ongoing management and monitoring program was selected as the remedial strategy for the asbestos which is present in the boiler room. This program - described in Section F - is a feasible and justifiable strategy for the boiler room area for the following reasons :

(a) The condition of the asbestos insulation in this area is good. The insulation on the boiler stack is cloth wrapped, and, therefore, non-friable. The friability of the insulation on the surface of the hot water tank is low, limited to isolated pitted areas.

(b) The only potential for future deterioration of the asbestos present in the boiler room is from impact due to maintenance operations - which can be controlled through the staff training program. These areas are not subject to vibration, and water damage is unlikely in this room. The visible and assessible location of the tank and the stack presents the opportunity for frequent inspections to detect and correct damage to the insulation.

(c) Employee exposure to airborne asbestos is very low, due to the good condition and limited friability of the insulation in this area. The employee training program described in

Section F will cover procedures to eliminate exposures to asbestos during work operations.

(d) The boiler room is used only by maintenance and janitorial staff and contractors with assigned tasks. Access to the room can be controlled by locking the doors to the room.

(e) The total area of the asbestos present in this room - 376 square feet - is manageable from the perspective of controlling operations and monitoring of the condition of the asbestos in the future.

(f) An ongoing inspection program, described in Section F, will routinely evaluate the condition of the asbestos containing material on the boiler stack and the hot water tank.

(2) Floor Tiles - Throughout Building.

The floor tiles used throughout the building contain a small percentage of asbestos. The floor tiles in all areas of the building are in good condition and are not friable. The only potential for fiber release occurs when the tiles are mechanically abraded, by operations such as cutting, cracking, drilling, or sanding the surface.

The logical management strategy for the floor tiles is to leave them in place and institute an ongoing management and monitoring program. This remedial option was selected over other alternatives for the following reasons :

(a) Removal of the tiles is likely to cause a fiber release due to the cracking of the tiles which is likely to occur. It is, therfore a counterproductive strategy.

(b) Enclosure would involve the placement of another floor surface (such as wall to wall carpetting or a non asbestos tile). over the existing floor surface. GIven the non friability and good condition of the floor tiles, the necessity of this strategy is very questionable.

(c) Asbestos release from the floor tiles can be prevented by educating the maintenance and janitorial staff in proper procedures for working with the tiles (as outlined in Section F).

(d) The asbestos in the floor tiles is not friable and presents no asbestos exposure hazard to the staff or other occupants of the building.

F. MANAGEMENT AND MONITORING PROGRAM FOR ASBESTOS REMAINING IN SCHOOL BUILDING.

The following management and monitoring program has been developed for all of the areas in the building where asbestos is present as outlined in Section E. The program focusses on staff training and periodic inspections of the condition of the asbestos.

The specific details of the staff training which is referenced throughout this section are described in the document, titled :

" Inservice Training Program for Maintenance Staff : Mininizing Asbestos Exposure to Staff and Building Occupants

New Milford Public Schools
(November, 1986). "

The remediation process for each of the locations is described below :

1) Boiler Room.

The procedural measures developed for the boiler room will be instituted to minimze fiber release and to prevent employee exposure to asbestos. These measures are summarized below :

CONTROLLED ACCESS. All doors to the boiler room will be locked at all times. Keys will be made available only to essential maintenance and janitorial staff. Access to the boiler room will be limited to employees or contractors with assigned tasks. Smoking in the boiler room will be absolutely prohibited. The outside door of the boiler room will be placarded with a notice, outlining these restrictions.

REPAIR OF DAMAGED ASBESTOS INSULATION. An encapsulant and emergency cleanup equipment will be made available in the boiler room for the immediate repair of any surface of the hot water tank or the boiler stacks which become damaged. Personnel who have access to this room will be knowledgeable of the location and proper use of the encapsulant and the emergency repair supplies.

All areas of the insulation which are currently pitted will be repaired with an encapsulant prior to January 1, 1987.

WORK OPERATIONS. The following operations will be performed by personnel who are equipped with protective clothing and respiratory protection :

(a) Any work which is conducted directly on the boiler stack or on the hot water tank ;

(b) Any assigned task in the vicinity of the hot water tank which

requires more than a short (i.e., 15 - 30 minutes) period of time.

Dry sweeping of the floors in the vicinity of the hot water tank will be prohibited.

STAFF TRAINING. The major aspect of minimizing employee exposures to asbestos in this area is through education of the staff who have access to this room. An initial inservice training session will be conducted in November, 1986 which will cover the following topics :

water tank and the boiler stack ;

has become punctured, dislodged, or otherwise damaged from the hot water tank or the boiler ;

INSPECTIONS. The surface of the hot water tank and the boiler stack will be periodically inspected by the asbestos coordinator of the School District. Any areas of insulation on the surface of these structures which has become damaged will be immediately repaired by trained personnel.

Once per year, a detailed evaluation of the condition of the asbestos on the hot water tank and the boiler stacks will be conducted. This evaluation will include aggressive air samples taken in the vicinity of the boiler stack and the hot water tank. All aspects of the management system will be evaluated during this annual inspection, including an assessment of the workability of all procedural controls.

The inspection will be documented in a report and presented to the Superintendent of Schools with a recommendation regarding the management strategy for the boiler room, which will advise one of the following courses of action :

(a) Continue the management/monitoring system ;

OR

(b) Schedule asbestos removal for the boiler room so that the management/monitoring system can be abandoned.

(2) Floor Tiles - throughout building.

The passive remedial option for the floor tiles focusses entirely on restrictions of specific work operations on the floor surface and staff training.

(a) Control of Work Operations on the Floor Tiles.

Any work performed directly on the floor tiles (other than sweeping) will require the specific authorization and supervision

by the asbestos coordinator. Abrasive actions, such as drilling, or sanding operations will be prohibited. Any tiles requiring removal will be conducted with proper respiratory protection and with adequate cleanup procedures.

(b) Staff Training.

All janitorial and maintenance staff who service the Schaghticoke School will be instructed of the restrictions outlined above and the proper procedures for removal of single floor tiles which require replacement.

ASBESTOS MANAGEMENT PLAN
MAINTENANCE BUILDING

Prepared By :
Jack S. Kozuchowski
Consulting Services
November, 1986

TABLE OF CONTENTS FOR ASBESTOS MANAGEMENT PLAN

Laboratory Reports are in the Appendix at the End of the Plan.

ASBESTOS MANAGEMENT PLAN : BRIDGE ST. MAINTENANCE BUILDING

The Bridge St. Maintenance Building was surveyed and evaluated for asbestos containing materials in September, 1986. The New Milford School District has developed a series of management strategies for each location where asbestos was identified in the building. The remedial action prescribed for each of these areas is the foundation for this asbestos management plan.

The purpose of the plan which follows is to provide the documentation of the asbestos surveys and to describe the management strategies for each area where asbestos is present in the school. The specific objectives of this plan are as follows :

(1) Provide a description of the building which highlights the locations where asbestos containing materials are present ;

(2) Describe the methodology which was used for surveying and evaluating materials in the school which were suspected to contain asbestos ;

(3) Summarize the locations and conditions of materials which were confirmed as asbestos ;

(4) Describe the remedial strategy selected for each site which has asbestos present in the school with a justification for selecting this course of action ;

(5) Develop a system for implementing the plan which includes the following elements :

   a. Timetable for implementing remediation strategy ;

   b. Interim strategies for minimizing fiber release from the areas with asbestos until a permanent method of remediation can be implemented ;

   c. Procedure for implementing the remedial strategy ;

   d. Specifications for removal of asbestos containing materials;

(6) Establish an ongoing management and monitoring program for all asbestos containing materials which are left in place.

This asbestos management plan is submitted to the State Department of Education in accordance with Public Act 85-541 of the Connecticut General Statutes.

A. GENERAL DESCRIPTION OF BUILDING.

The Maintenance Building was built approximately 80 - 100 years ago. The building is used by the New Milford School District as a storage area for blueprints and records and functions as the office of the Maintenance Supervisor. The building is only used on an occasional basis by the maintenance staff.

The building is constructed with a basement foundation, with brick outer walls and a wood frame. The inner walls and ceiling are made of plaster. The building is heated by one oil burning boiler which conveys heat through insulated steam pipes which traverse the ceilings of the rooms in the basement which branch up to hot water radiators which are located in each of the rooms. There is no active ventilation system serving the building.

B. DELINEATION OF AREAS

For the purpose of this evaluation, the school was divided into 4 sections of similar design, construction or function. Table 1, below, lists these areas and indicates whether asbestos was identified in each location.

TABLE 1 : AREAS OF BRIDGE ST. MAINTENANCE BUILDING WHICH WERE SURVEYED FOR ASBESTOS

location	materials evaluated	prescence of asbestos
boiler room *	boilers, pipes	YES
basement storage rooms *	pipe insulation	YES
first floor	ceiling, walls, floor	NO
second floor	ceiling, walls, floor	NO

* The specific locations which contain asbestos are described in more detail on Table 2 and in the narrative text.

C. METHOD OF EVALUATION

The Bridge St. Maintenance building was surveyed for asbestos containing materials and evaluated in the following manner :

(1) An inspection of each room of the building was conducted to provide a descriptive documentation of design, construction, and building materials to identify substances which are positively asbestos, non asbestos materials and materials which are suspected to contain asbestos, which require an analytical confirmation of its constituency. The maintenance staff of the School District was consulted with regard to specific locations of areas and regarding recent construction activities affecting insulation and other asbestos containing materials.

(2) All asbestos suspect materials (identified above) were sampled in accordance with the State Department of Health Services guidelines for identification of asbestos. These samples were submitted to the State Department of Health Services Laboratory for analysis of asbestos content.

(3) Following receipt of the laboratory reports, all locations in the building where asbestos was confirmed to be present were inspected again and evaluated with respect to its condition in accordance with the State Health Department's "decision protocol" process.

D. LOCATIONS WHERE ASBESTOS IS PRESENT IN THE MAINTENANCE BUILDING

Table 2 indicates the location where asbestos was positively identified in the building. The table also describes the condition, the degree of friability, and the potential for future deterioration of each asbestos product in the building. The asbestos materials were confirmed, in all cases, by a laboratory analysis of bulk samples which were taken from the building. The analytical reports are attached to the appendix at the end of this document.

Exhibits A - C are the "school facility" and "area reports" (ED075A and ED075B), which provide information on the specific locations where asbestos is present in the building.

The diagrams on the following pages illustrate the areas where asbestos is present in the building. Figures 1 and 2 are site specific illustrations of each asbestos area in the building, specifying the total area of asbestos at each location.

TABLE 2 : SUMMARY OF ASBESTOS LOCATIONS - BRIDGE ST. MAINTENANCE

location of asbestos	friability	condition	damage potential	management strategy selected
Boiler Room: - boilers - stacks - breeching	moderate	fair	potential for impact and vibration.	removal under contract specifications
Boiler Room: - pipe insulation.	low	fair- open at ends; some areas damaged	potential for water damage and impact.	removal under contract specifications
Basement rooms - pipe insulation	low	fair - open at ends; some insulation damaged.	subject to water damage and impact.	

EXHIBIT A

CONNECTICUT DEPARTMENT OF EDUCATION

ED 075B
SCHOOL FACILITY ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

SCHOOL DISTRICT	DISTRICT CODE
NEW MILFORD	096
FACILITY NAME	FACILITY ADDRESS
MAINTENANCE FACILITY	2 BRIDGE ST; NEW MILFORD, CT.

Year of Construction ? Year of Additions (if any) _____

CERTIFICATION:

Attached are 2 Area Asbestos Inspection Reports (ED 075A) for the above referenced school facility.

[X] Check this box if this school facility has been inspected according to Public Act 85-541, state regulations enacted pursuant thereto and decision protocols.

[X] Check this box if this school facility has been inspected prior to January 1, 1986 in order to comply with Environmental Protection Agency (EPA) School Asbestos Inspection Rule.

Name of Inspector JACK S. KOZUCHOWSKI Phone 203-792-361

Signature of Inspector Jack S. Kozuchowski Date 11/20/86

[ ] Check this box if this building had been previously inspected and was found to have asbestos containing materials which have subsequently been removed. Please submit documentation supporting this fact.

19181

F.O 075A

CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

Page 1 of 1

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
MAINTENANCE BUILDING	2 BRIDGE ST. NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	

	AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
1	BOILER ROOM	700	1

1. Samples: Description of material sampled BOILER : FIBROUS MAT'L WITH OUTER LAGGING CUT PIPES - AIR-CELL ENSULA
   Type of sample: Bulk ✓ Dust ____ Air ____
2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ✓
   Pipe Insulation ✓ Duct ____ Other (please explain) ____
3. Friability: High ____ Moderate ____ Low ____ Not Friable ____
   Sq. Footage Area 585 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
   Physical Damage: High ____ Moderate ✓ Low ____ None ____
5. Accessibility: Less than 10 ft. ____ More than 10 ft. ____
   Contact Potential: High ____ Moderate ____ Low ✓ None ____
   Distance to items needing maintenance:
   Electrical ____ Plumbing 5-10' Ventilation ____ Other ____
6. Internal Building Description:
   Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
   Floor Type: Concrete ✓ Carpet ____ Tile ____ Wood ____ Other ____
   Ceiling Type: Concrete ____ Acoustical Tile ____ Plaster ✓ Metal Deck ____
   Suspended lay in panels ____ Concrete joist and beam ____
   Suspended metal lath ____ Other ____
7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
   Railing ____ Other ____ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
   Outflow vents near friable materials(y/n) N Distance ft. ____
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ____ Moderate ____ Low ✓
9. Activity/Movement:
   Use of Area MECHANICAL - BOILER MAINTENANCE Activity: High ____ Moderate ____ Low ✓
   What is adjacent to the area? STORAGE ROOMS
   What is above the area? OPEN AREA - FIRST FLOOR
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	____ hrs/day	____ days/week
Staff 1	1 hrs/day	1 days/~~week~~ MONTH

Comments: ____

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
SOME AREAS ARE IN BAD CONDITION. CRACKS ON BOILER STACK, BREECHING BEGINNING TO DELAMINATE, SOME PIPES HAVE DAMAGED INSULATION.

ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL OF ASBESTOS IN 1987.

EXHIBIT C
0075A

CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
MAINTENANCE BUILDING	2 BRIDGE ST. NEW MILFORD, CT	JACK S. KOZUCHOWSKI 792-3613	

AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
2: BASEMENT STORAGE ROOMS	2100	1

1. Samples: Description of material sampled AIR CELL INSULATION ON PIPES,
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Trowled on ___ Boiler Lagging ___
   Pipe Insulation ✓ Duct ___ Other (please explain) ___
3. Friability: High ___ Moderate ___ Low ___ Not Friable ___
   Sq. Footage Area 100 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ✓ None ___
   Physical Damage: High ___ Moderate ___ Low ✓ None ___
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ___
   Contact Potential: High ___ Moderate ___ Low ✓ None ___
   Distance to items needing maintenance:
   Electrical ___ Plumbing ___ Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ✓ Carpet ___ Tile ___ Wood ___ Other ___
   Ceiling Type: Concrete ___ Acoustical Tile ___ Plaster ___ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ✓
   Suspended metal lath ___ Other ___
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other ___ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area STORAGE Activity: High ___ Moderate ___ Low ✓
   What is adjacent to the area? BOILER ROOM
   What is above the area? OPEN AREA — FIRST FLOOR
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	___ hrs/day	___ days/week
Staff 1	1 hrs/day	1 days/~~week~~ MONTH

Comments: ___

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
PIPE INSULATION NOT IN BAD CONDITION, BUT BUILDING CONDITIONS SUGGEST POTENTIAL ~~HAZARD~~ FOR FUTURE IMPACT DAMAGE.

ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL OF PIPE INSULATION IN STORAGE ROOMS

FIGURE 1 : BRIDGE ST. BOILER ROOM.

Area of Asbestos : 585 square feet

Fig. 1A : Photograph showing boilers, stack and pipes covered with insulation.

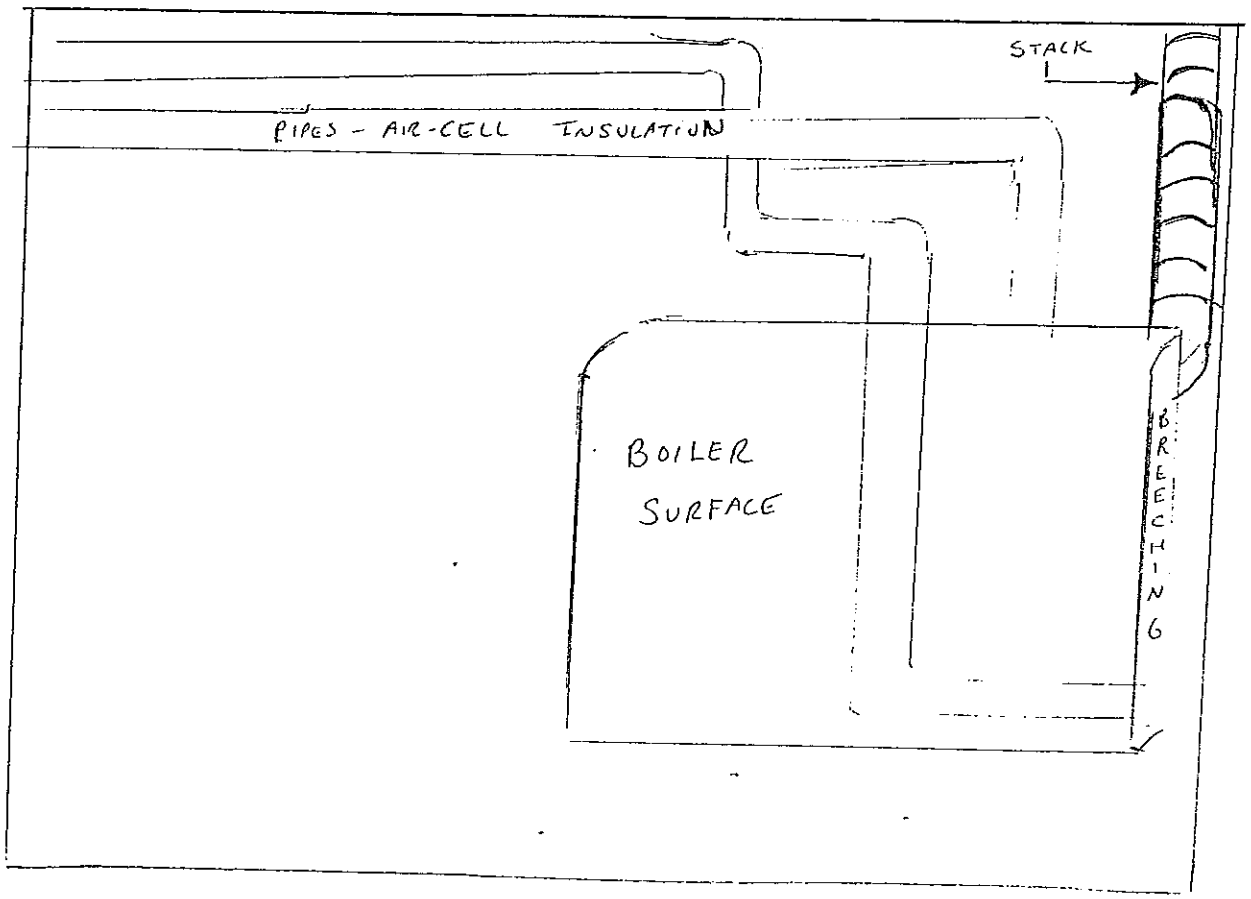

Fig. 1B: Sketch of boiler room. Not to scale.

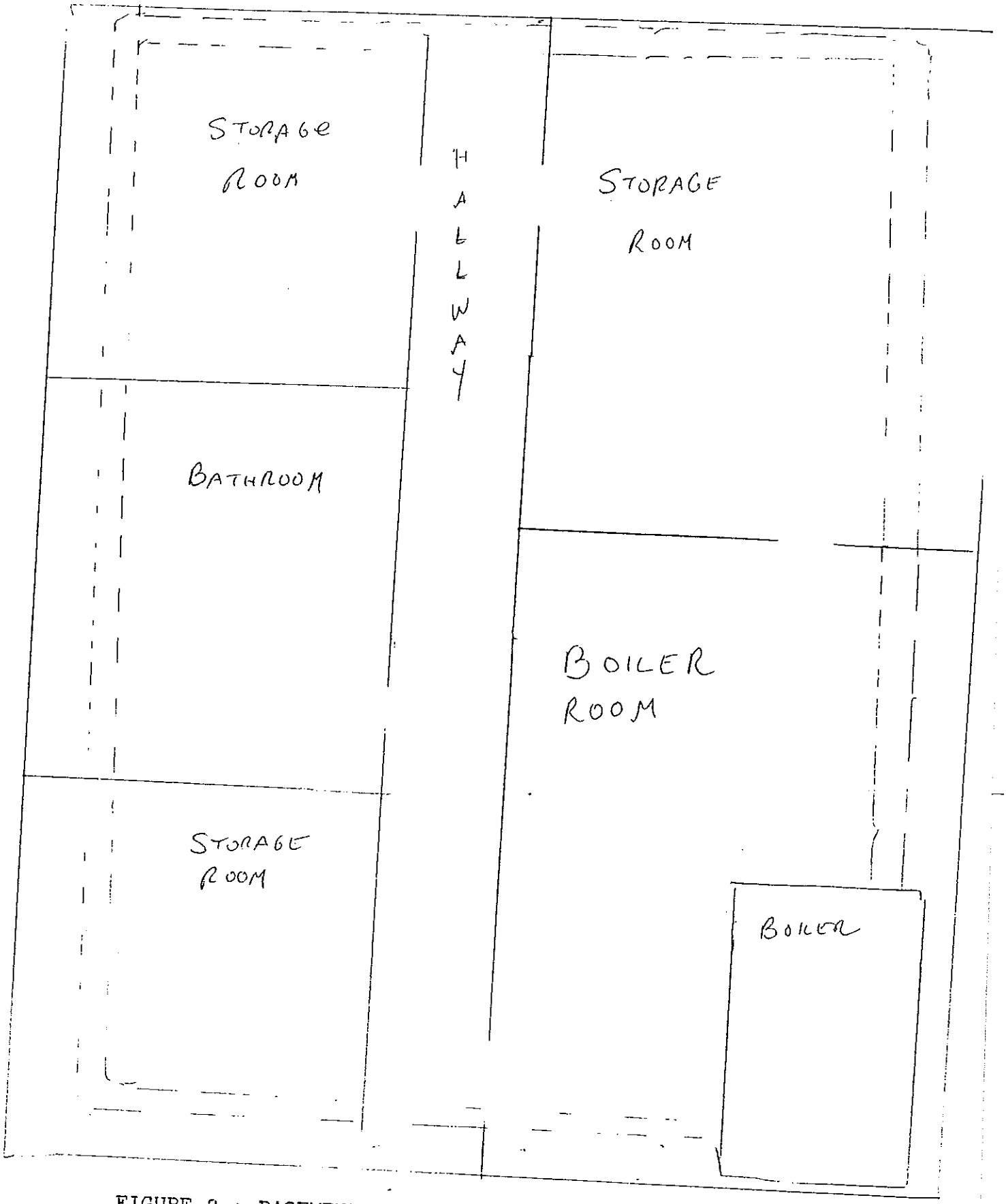

FIGURE 2 : BASEMENT STORAGE ROOMS OF MAINTENANCE FACILITY.

Area of asbestos : 100 square feet.

E. AREA REMEDIATION STRATEGIES.

This section outlines the management strategies which will be used for each location in the building where asbestos is present. This narrative also includes a justification for the remediation option which was selected.

(1) Boiler room.

The insulation on the oil furnace boiler (including the breeching and stack) and the steam pipes contains asbestos. The insulation on the boilers, breeching, and stack are characterized in a different manner than the pipe insulation.

The steam pipes in this room are covered with air cell insulation. The asbestos is sandwiched on the surface of "cells" of corrugated fiber material which encloses pockets of air. The outer surface of this insulation is wrapped with a non asbestos fiber wrap. Pipe elbows are insulated with asbestos which are cloth wrapped. As long as the outer wrap of the pipe runs and elbows remain intact, the asbestos is not friable. The insulation is susceptible to damage from impact or water. If the insulation becomes torn or delaminated from the surface of the pipes, the asbestos will become friable. In several areas of the room, the insulation has deteriorated and is, therefore, friable.

The asbestos insulation on the boiler surfaces, the breeching, and the stack is friable, and will only get worse in time. The surface areas of friable asbestos results in a potential for chronic exposure to the maintenance and janitorial staff who work in this room.

All of the asbestos in the boiler room will be removed during the autumn of 1987. The large amount of friable asbestos which is present in this area poses an ongoing potential for asbestos exposure to employees and contractors who work in this room. Therefore, the removal of asbestos under contract specifications is the permanent solution of choice. Contract specifications for the removal project are described in Section G. The asbestos will be removed after the completion of other removal projects in the School District. In the interim period, the management program described in Section F will be instituted.

(2) Pipe Runs - Basement Storage Room and Bathroom.

The steam pipes leading out of the boiler room run through the basement bathroom and the storage room before they branch up to the radiators on the first and second floor. Some of these steam pipes are insulated with air cell insulation with asbestos insulated elbows that are wrapped with a non asbestos cloth wrap. As long as the fiber wrap over the insulation on the straight runs of pipes and the cloth wrap on the elbows remains intact, there is no potential for exposure to airborne asbestos in these areas. However, there is a potential for future damage to this insulation result-

from impact damage resulting from maintenace operations or from the movement of articles in and out of the room by the staff. Removal of the asbestos from all pipes is the most permanent remedial strategy for removing the potential of asbestos exposure in the storage room and bathroom.

The asbestos insulation will be removed from all pipes in the basement of the building during the summer of 1987. The asbestos will be removed under the contract specifications described in Section G. Until the asbestos is removed, the interim management program, described in Section F, will be implemented in the basement area.

F. INTERIM MANAGEMENT MEASURES FOR ASBESTOS SCHEDULED FOR REMOVAL

Interim management procedures have been developed for the areas in the basement where asbestos is scheduled for removal within the next several months. The management/monitoring program developed for all of these areas centers on implementing procedures for minimizing exposure and access to asbestos containing materials, training of maintennace and janitorial staff in these procedures, and conducting periodic inspections of the asbestos containing materials.

The specific details of the staff training which is referenced throughout this section are described in the document, titled :

" Inservice Training Program for Maintenance Staff :
Mininizing Asbestos Exposure to Staff and Building Occupants

New Milford Public Schools
(November, 1986). "

(1) Boiler Room.

The following interim strategy has been developed for the boiler room. These management procedures will be instituted immediately and will remain in effect until the asbestos is removed in the summer of 1987.

The management process for these areas centers on work procedures and staff training. This includes the following measures :

STAFF TRAINING. An overview on the recognition of asbestos hazards and safety precautions regarding work around large surface areas of asbestos containing materials will be presented to the maintenance and janitorial staff.

CONTROLLED ACCESS. Access to the boiler room will be restricted by the asbestos coordinator. Entrance into the boiler room will be restricted to maintenance personnel with assigned tasks. The doors of the boiler room will remain locked and will be placarded with a warning notice. Smoking in the boiler room

will be absolutely prohibited.

WORK PROCEDURES . Any employee who works directly on the boiler, breeching, stack, pipe elbows, or any assigned task in the boiler room which requires more than a short (i.e., more than 15 - 30 minutes) period of time will be equipped with respiratory protection. Dry sweeping of the floors in this room will be prohibited.

(2) Basement Rooms with asbestos insulated pipes.

The following procedures apply to the bathroom and the storage room in the basement, where asbestos is present on the pipes.

WORK OPERATIONS. Any work that is required on these pipes must be specifically authorized by the asbestos coordinator. The maintenance staff, designated to work around asbestos, will conduct any operations which may disturb the pipe insulation. Employees performing these tasks must wear asbestos respirators. If any of the insulation on these pipes is punctured or dislodged from the surface, it will be immediately repaired and cleaned up by the maintenance staff in accordance with the procedures outlined in the employee training manual.

PROHIBITIONS. Access to these areas will be controlled by the asbestos coordinator. The asbestos coordinator will prohibit loitering or smoking in these areas.

G. CONTRACT SAFETY SPECIFICATIONS FOR ASBESTOS REMOVAL PROJECTS.

There are two areas in the Maintenance Building where the asbestos will be removed and replaced by a contractor : the boiler room and the basement steam pipes. Both projects will be conducted in 1987, after the completion of other removal projects in the New Milford School District. This section outlines the safety specifications which will be required for the removal project in these two areas and describes selection criteria for hiring a contractor to do the asbestos abatement work.

PART I. GENERAL

1.1 Introduction.

Asbestos has been classified by the federal government as a carcinogenic material. These specifications are designed to maintain compliance with all governmental regulations regarding asbestos work, minimize employee exposures to airborne asbestos, and protect the building and its occupants from asbestos contamination.

1.2 Scope.

These specifications cover all safety and environmental controls and procedures which will be used during the removal of asbestos from the Maintenance Building. The extent of asbestos removal is confined to the rooms and areas described in Section 6. All aspects of the removal work shall be conducted in strict accordance with these specifications.

1.3 Applicable Codes.

The contractor shall be solely responsible for conducting each project, supervising all work in a manner which will be in conformance with all federal, state and local regulations and guidelines pertaining to asbestos abatement. Specifically, the contractor shall comply with the requirements of the following agencies :

1.3.1 EPA Regulations (40 CFR Part 763) ;

1.3.2 NESHAPS Regulations (40 CFR 61, Subpart M) ;

1.3.3 OSHA Regulations (29 CFR 1910.1001 and 1926.58) ;

1.3.4 Connecticut DEP Regulations (Section 22a-209-8(i) and Section 22a-220 of the Connecticut General Statutes).

1.3.5 Connecticut Regulations regarding asbestos inspection and abatement ;

1.3.6 Connecticut Basic Building Code ;

1.3.7 Connecticut Fire Safety Code ;

1.3.8 Local health and safety codes, ordinances or regulations pertaining to asbestos remediation.

1.4 Exemptions.

Any deviations from these specifications requires the written approval and authorization from the building owner.

1.5 Contractor Qualificatiioms.

All bidders shall submit a record of prior experience in asbestos removal projects, listing no less than 10 completed jobs in the past 5 years.

PART 2 : TERMINOLOGY

2.1 ABATEMENT - Procedures to control fiber release from asbestos-containing materials; includes removal, encapsulation, and enclosure.

2.2 AIRLOCK - A system for permitting ingress and egress while assuring air movement to contaminated area from an uncontaminated area. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.3 AIR MONITORING - The process of measuring the fiber content of a specific volume of air in a stated period of time.

2.4 AIR SAMPLING PROFESSIONAL - A professional capable of conducting air monitoring and analysis schemes. This individual should be a certified industrial hygienist or an environmental scientist or engineer with equivalent experience in asbestos air monitoring and worker protection equipment and procedures. This individual should have demonstrated proficiency in conducting air sample collection in accordance with 29 CFR 1910.1001 and 1926.58.

2.5 AMMENDED WATER - Water to which a surfactant has been added.

2.6 ASBESTOS - the name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles.

2.7 ASBESTOS CONTROL AREA - An area where asbestos abatement operations are performed which is isolated by physical boundaries to prevent the spread of asbestos dust, fibers, or debris.

2.8 ASBESTOS FIBERS - Those particles with a length greater than five (5) microns and a length to diameter ratio of 3 : 1 or greater.

2.9 ASBESTOS FIBERS PERMISSABLE EXPOSURE LIMIT (PEL) - The maximum concentration of asbestos fibers which is allowed in a work area where employees are present. The current level established by OSHA is 0.2 fibers per cubic centimeter of air as an eight (8) hour time weighted average. An employer is responsible for maintaining work areas in a manner that this standard is not exceeded.

2.10 AUTHORIZED VISITOR - Any person authorized by the building owner to enter the premises of the school building.

2.11 BUILDING OWNER - The New Milford School District. The Superintendent of the New Milford Schools (or his designee) shall represent the owner in all transactions with the contractor.

2.12 CLEAN ROOM - An uncontaminated area or room which is a part of the worker decontamination enclosure with provisions for for storage of workers' street clothes and protective equipment.

2.13 CURTAINED DOORWAY - A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.14 DECONTAMINATED ENCLOSURE SYSTEM - A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers and equipment. A decontamination enclosure system always contains at least one airlock.

2.15 ENCAPSULANT - A liquid material which can be applied to asbestos-containing material and which controls the possible release of asbestos fibers from the materials either by creating a membrane over the surface (bridging encapsulant) or penetrating the material and binding its components together (penetrating encapsulant).

2.16 ENCAPSULATION - A specified asbestos remediation strategy involving the application of an encapsulant to asbestos-containing materials to control the release of asbestos fibers into the ambient air.

2.17 EQUIPMENT DECONTAMINATION ENCLOSURE - That portion of a decontamination enclosure system designed for controlling the transfer of materials and equipment, typically consisting of a washroom and a holding area.

2.18 EQUIPMENT ROOM - A contaminated area or a room which is part of the worker decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.19 FIXED OBJECT - A unit of equipment or furniture in the work areas which cannot be removed from the work area.

2.20 FRIABLE ASBESTOS MATERIAL - Any material that contains more than 1% asbestos by weight, that can be crumbled, pulverized or reduced to powder by hand pressure, and, which releases asbestos particles to the environment. Covering by an impermeable, intact surface precludes friability.

2.21 GLOVEBAG TECHNIQUE - A method for removing small amounts of asbestos-containing materials from HVAC ducts, short piping runs, elbows, valves, joints and other non-planar surfaces in a self-contained work area.

2.22 HEPA FILTER - A high efficiency particulate air (HEPA) filter in compliance with ANSI Z9.2-1979.

2.23 HEPA VACUUM EQUIPMENT - Vacuum equipment with a HEPA filter system for filtering the effluent air from the unit.

2.24 HOLDING AREA - A chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area. The holding area comprises an airlock.

2.25 INSPECTOR - An individual, retained by the Owner, who is a "qualified asbestos inspector" as defined by the State of Connecticut Department of Health Services, and who will be responsible for overseeing and enforcing all of the specifications during the asbestos remediation projects.

2.26 MOVABLE OBJECT - A unit of equipment or furniture in the work area which can be removed from the work area.

2.27 NEGATIVE AIR PRESSURE EQUIPMENT - A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a contaminated area (negative with respect to adjacent uncontaminated areas) and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.

2.28 NOTICE OF DISCHARGE - A formal discharge of the contractor by the building owner and nullification of the contract.

2.29 NOTICE OF NON-COMPLIANCE - A process to be followed in the course of a violation hearing, whereby the building owner, upon determining that the specifications have been breached, informs the contractor that he (she) has 24 hours to corr- the violations noted by the inspector, subsequent to a discharge procedure.

2.30 NOTICE OF VIOLATION - An enforcement procedure by which the inspector informs the contractor to immediately cease all removal or remediation work in the building and to immediately implement clean-up procedures. The notice of violation will be followed by a hearing with the building owner within 24 hours.

2.31 PLASTICIZE - To cover floors and walls with plastic sheeting as specified herein.

2.32 REMOVAL - All procedures, specified herein, which are necessary to remove asbestos-containing materials from the designated areas and to dispose of these materials at an acceptable site.

2.33 SHOWER ROOM - A room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between the contaminated area and the clean area.

2.34 STRIPPING - Taking off asbestos materials from any structural member, pipe surface or HVAC equipment.

2.35 SURFACTANT - A chemical wetting agent added to water to improve penetration into asbestos-containing materials.

2.36 VIOLATION HEARING - A formal process whereby the building owner holds a conference with the contractor and the inspector to review violations of the specifications noted during the project, in order to ascertain whether the project contract has been breached

2.37 WASHROOM - A room between the work area and the holding area in the equipment decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.38 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 by water, and by afterwards disposing these cleaning items as asbestos contaminated waste.

2.39 WORK AREA - Designated rooms, spaces, or areas of the project in which asbestos abatement actions are occurring and which may become contaminated as a result of such abatement actions. The work area must be totally self contained by sealing, plasticizing and equipping the area with a decontamination enclosure system.

2.40 WORKER DECONTAMINATION ENCLOSURE SYSTEM - That portion of a decontamination enclosure system designated for controlled passage of workers, and other personnel and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room.

2.41 WORK STOPPAGE CLEANUP PROCEDURE - A process following the completion of the project or following the issuance of a notice of violation, whereby the contractor thoroughly cleans and decontaminates the work area, the decontamination enclosure system, and any other areas of the building affected by the removal project, to the satisfaction of the inspector.

2.42 WORK ZONE - The area of the decontamination enclosure system where asbestos is being removed.

PART 3 : DESCRIPTION OF WORK

3.1 Locations and Work Statement

The specific sites for asbestos removal are described in Part 6 of these specifications. The contractor shall retain full ownership of all asbestos containing materials in these specific locations and is responsible for removal, transport, and disposal of the asbestos in accordance with these specifications.

3.2 Chain of Command

3.2.1 Responsible Authority.

The Owner, represented by the Superintendent of Schools, (or his designee) is the ultimate authority in the discharge of this contract. All deliberations regarding the contract or the degree of compliance with the specifications, shall be ultimately decided by the owner.

3.2.2 Inspector.

The owner shall retain an asbestos inspector to oversee all work performed under this contract and to enforce the provisions of these specifications. The inspector shall have the authority to issue a notice of violation to the contractor and temporarily stop all further work if the air quality of the building is affected by the removal operation. The inspector may also function as the air sampling professional, if he/she is qualified under the terms defined herein.

3.2.3 Air Sampling Professional.

The owner shall also retain an air sampling professional to conduct the air monitoring tasks outlined in section 5.4.3.1 of these specifications. If the owner retains a separate individual as the air sampling professional (in addition to the inspector), he/she shall report directly to the inspector. All determinations of air quality contamination shall be made by the air sampling professional.

3.2.4 Project Supervision.

With the exception of the process outlined in part 3.5.3 - 3.5.5 of these specifications, the contractor shall report to the inspector as the owner's designated project manager.

3.3 Contractor Responsibilities.

The work specified in this contract entails the removal of asbestos-containing materials and the replacement of such materials with a suitable non asbestos product. All of the work shall be done by persons who are knowledgeable, qualified, and experienced in the removal, treatment, handling, and disposal of asbestos-containing materials and the subsequent cleaning of the environment. The contractor selected must comply with all applicable federal, state, and local regulations which mandate work practices and shall be capable of performing the work of this contract within the specified timeframe.

The contractor shall supply all labor, materials, equipment, services, insurance, and incidentals which are necessary or required to perform the work in accordance with all applicable governmental regulations and the specifications of this contract.

3.4 Performance Bond.

Before commencing work, the contractor shall post a performance bond in the amount and form specified in the general contract. In the event of an issuance of a notice of discharge, the owner reserves the right to use the bond to complete any unfinished work specified by this contract and adequately clean and/or decontaminate the work area and the building of asbestos to make it fit for occupancy.

3.5 Procedure for Resolving Documented Violations.

In the event that the inspector determines a violation of these specifications, the following procedures shall be employed to resolve and correct the areas of non compliance :

3.5.1 The inspector shall adequately document deviations from these specifications and immediately inform the contractor of the conditions which require correction. The contractor shall be given a reasonable period of time to correct these conditions.

3.5.2 If the violations continue unabated, the inspector shall issue a notice of violation to the contractor. After receiving the notice of violation, the contractor shall immediately cease all removal operations and effectuate a work stoppage cleanup procedure.

3.5.3 Within 24 hours of the issuance of a notice of violation, a hearing shall be conducted by the owner, with the contractor and the inspector in attendance. The owner shall review the documented violations with the objective of resolving the problems which resulted in the violations noted by the inspector. When the issues are fully resolved, removal work can resume under the conditions est-

ablished by the building owner.

3.5.4 If the building owner sets conditions to correct the violations which the contractor is unwilling or unable to accomplish, the owner shall issue a notice of non-compliance.

3.5.5 If the correction conditions established by the owner are not initiated within 24 hours, the building owner shall issue a notice of discharge to the contractor, which immediately abrogates the contract.

PART 4 : WORK PREPARATION.

Prior to the initiation of the removal work, the following tasks must be completed by the contractor :

4.1 Work Site Safety Plan.

The contractor shall establish a set of emergency procedures and shall post them in a conspicuous place at the work site. The safety plan should include provisions for the following :

4.1.1 Evacuation of injured workers.

4.1.2 Emergency and fire exit routes from all work areas.

The contractor is responsible for training all workers in these procedures.

4.2 Notifications, Postings, and Submittals.

The contractor will make the following notifications, and provide the following submittals 10 days prior to the commencement of removal work :

4.2.1 Environmental Protection Agency (EPA)

Submit notification to the Regional EPA NESHAPS Coordinator at this address :

Director, Enforcement Division
Air and Hazardous Materials Division
Pesticides and Toxic Substances Branch
USEPA Region 1
Boston, Massachusetts 02203

The minimum information required in the notification includes the following :

. Name and address of the owner ;
. Building Location ;
. Building size, age, and use ;

. Amount of friable asbestos ;
. Work schedule, including proposed start and completion dates ;
. Asbestos removal procedures ;
. Name and location of disposal site for generated friable asbestos waste.

4.2.2 State Department of Education.

Send written notice of any project which involves the removal of more than 160 linear feet or 260 square feet of asbestos containing material to the Connecticut State Department of Education at the following address :

Chief, Bureau of Grants Processing
Room 325, State Office Building
State Department of Education
165 Capitol Avenue
Hartford, Connecticut 06106

The following information must be submitted :

. Name and address of building owner ;
. Building location ;
. Building size, age and use ;
. Amount of friable asbestos ;
. Work schedule, including proposed start and completion dates ;
. Asbestos removal procedures ;
. Name and location of disposal site for generated friable asbestos.

4.2.3 Transport and Disposal.

Submit proof, satisfactory to the owner, that all required permits, site locations, arrangements for transport and disposal of asbestos containing or asbestos contaminated materials and supplies have been obtained.

4.2.4 Work Zone Construction Plan.

Submit to the owner plans and/or shop drawings for the construction of decontamination enclosure systems and for the isolation of work areas as may be necessary in compliance with these specifications and applicable regulations.

4.2.5 Certification of Compliance Record for Past Projects.

Contractor must submit a written statement regarding whether he/she has ever been found out-of compliance with pertinent Federal and State asbestos regulations pertaining to removal. transport, disposal or other environmental or safety considerations.

4.2.6 Employee Training.

Submit documentation to the owner indicating that each employee has had instruction on the hazards of asbestos exposure, on the proper use and fitting of respirators, on protective dress, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures. This documentation must include a signed statement by each employee who will perform the removal work in the Building that he/she understands these instructions and is willing to comply with these procedures and perform all work in accordance with these specifications.

The contractor must also submit verification that all employees have received medical examinations as required by OSHA regulations.

4.2.7 Postings.

The contractor shall post signs in and around the work area to comply with 29 CFR 1910.1001 and 1926.58. Post one copy of each of the following documents at the work site :

- Title 29, Code of Federal Regulations, Part 1910.1001 and 1926.58 OSHA Asbestos Standards.
- Title 40, Code of Federal Regulations, Part 61, Subparts A and B, NESHAPS.

4.2.8 Condition of Fixtures.

The owner and contractor must agree, in writing, on the condition of the building and fixtures. A photograhic record of major fixtures is required.

4.2.9 Certification of Exhaust Equipment.

The contractor must submit the manufacturer's certification that vacuums, negative air pressure equipment, and other local exhaust / ventilation equipment conform to ANSI Z9.2-1979.

4.2.10 Rental Equipment.

When rental equipment is to be used in removal areas or to transport waste materials, the contractor shall provide documentation to the owner that written notification has been provided to the rental company informing them of the nature of use of the rented materials.

4.2.11 Equipment and Supplies.

The contractor shall provide a list of equipment, materials and supplies which will be used for the remediation projects. This list shall include the replacement materials which will be used for the areas where asbestos will be stripped. All materials, supplies and equipment shall be suitable to conduct the remediation projects in accordance with these

specifications.

4.3 Preliminary Conference

Prior to the commencement of asbestos removal work, a conference will be held between the owner, the contractor, and the inspector. The objectives of this conference are as follows :

- Contractor submits to the owner copies of all submittals and notifications outlined above ;
- Contractor and inspector review the work plan and inspection procedures established in the specifications ;
- All parties agree to work standards, roles and time schedules established in contract specifications.

Asbestos remediation work may proceed when the owner specifically authorizes the initiation of the project, in writing.

PART 5 : EXECUTION OF WORK.

5.1 Work Standards.

The contractor is responsible for maintaining work conditions at all times in conformance with OSHA standards and asbestos removal guidelines established by the Connecticut Department of Health Services. This includes the following :

5.1.1 Personnel Protection Equipment.

All employees shall be provided with and trained in the proper use of all equipment, respirators and supplies to minimize exposure to asbestos during work operations as specified in Section 1.6.1 - 1.6.7 of the document entitled "CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the Connecticut Department of Health Services.

5.1.2 Worker Protection Procedures.

All employees, inspectors, authorized visitors, or any individual who enters the work zone shall conform to the procedures established in Section 1.6.8.1 - 1.6.8.3 of the document entitled " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ".

A copy of these procedures shall be posted at all points of entry to the work zone. The contractor is responsible for limiting access to the work zone to individuals who abide by these procedures. The inspector shall oversee the control over entry into the work zone and shall enforce these procedures when necessary.

5.2 Decontamination Enclosure System.

Before initiating work on any given day, a properly constructed decontamination enclosure system shall be in place at all points of entry into the work zone. The inspector shall evaluate and approve the integrity of the enclosure system(s) prior to the commencement of asbestos removal work on any given day.

5.2.1 Features.

The enclosure system shall be constructed with suitable Building Code conforming framing and built according to the drawings specified in the contractor's "Work Zone Construction Plan" as submitted according to part 4.2.4 of these specifications. The contractor shall, at all times, maintain the decontamination enclosure system with a proper functioning worker decontamination enclosure (with an integral equipment room, shower room, and a clean room), an equipment decontamination enclosure (with an integral washroom and holding area) and highly visible, controlled, and properly posted entry points.

In all cases, access between contaminated and uncontaminated areas shall be through an airlock. In all cases, access between any two rooms within the decontamination enclosure system shall be through a curtained doorway.

5.2.2 Maintenance and Monitoring of Enclosure Systems.

The contractor shall create and maintain a pressure differential between work areas and occupied areas by the use of negative air pressure equipment. Such equipment shall be maintained at the work site at all times in a properly functioning condition. This equipment shall be equipped with a high efficiency particulate filtration system, shall be sized to provide four air changes per area in the work area and shall conform to ANSI Z9.2 - 1979. The equipment shall feature an automatic shutdown of the system and/or warning lights to indicate improper pressure drop across the filters.

The air sampling professional shall periodically monitor the integrity of the negative air pressure equipment and shall conduct periodic chemical smoke tests to verify the effectiveness of the enclosure system. If any of these tests indicate a breakdown in the integrity of the decontamination enclosure system's negative pressure system, the inspector shall immediately inform the contractor to cease all removal operations. The contractor shall take immediate steps to reestablish negative pressure in the enclosure system. When the air sampling proffessional verifies the proper functioning of pressure in the enclosure system, asbestos removal work can resume.

5.3 Sequence of Work.

The removal project shall proceed in accordance with the sequence of work established during the preliminary conference as mutually agreed upon between the contractor and the owner. Work is divided into two areas - the boiler room and the basement storage rooms- each of which will be completed as a separate unit by the schedule delineated in part 7 of these specifications.

5.4 Control Over Asbestos Remediation Work.

All work procedures shall be continuously controlled and monitored to assure that the building will not be contaminated. The following controls shall be instituted on each working day :

5.4.1 Start-Up.

Prior to work on any given day, the contractor's designated project foreman shall discuss the day's work schedule with the inspector to evaluate job tasks with respect to safety procedures and requirements specified to prevent contamination of the building or the employees. This includes a visual survey of the work area and the decontamination enclosure systems.

5.4.2 Access.

The contractor shall maintain control of access to all work areas to ensure the following requirements :

. Unauthorized personnel are prohibited from entering the area ;

. All authorized personnel entering the work area shall read the "worker protection procedures" which are posted at the entry points to the enclosure system, and shall be equipped with properly fitted respirators and protective clothing ;

. All personnel who are exiting from the decontamination enclosure system shall be properly decontaminated ;

. Asbestos waste which is taken out of the work area must be properly bagged and labelled in accordance with these specifications. The surface of the bags shall be decontaminated. Asbestos leaving the enclosure system must be immediately transported off site or immediately placed in temporary storage on site, in accordance with the requirements described in part 5.4.5 of these.specifications.

. Any material, equipment, or supplies which are brought out of the decontamination enclosure system shall be cleaned and decontaminated by wet cleaning and/or HEPA vacuuming of all surfaces.

The inspector shall be responsible for monitoring the integrity of this system of access control and shall immediately inform the contractor of any deviations from the above requirements. The inspector shall also have the authority to mandate

immediate corrections to the control of access which are necessary to prevent the building from becoming contaminated with asbestos.

5.4.3 Air Quality Monitoring.

Air sampling shall be conducted by the owner to ascertain the integrity of controls which protect the building from asbestos contamination. Independently, the contractor shall monitor air quality within the work zone to ascertain the protection of employees and to comply with OSHA regulations.

5.4.3.1 Owner's Responsibility.

The owner's air sampling professional shall collect and analyze air samples during three time periods :

. Pre-abatement Sampling Period. The air sampling professional shall collect a sufficient number of air samples, inside and outside of the work area, to establish background air quality conditions. At least one sample will be taken outside of the building.

. Abatement Period. Samples shall be taken on a daily basis during the work period. A sufficient number of area samples shall be taken inside the work area and decontamination enclosure system, outside of the work area, at the exhaust of the negative pressure system, and outside of the building to judge the degree of cleanliness or contamination of the building during removal.

The air sampling professional shall provide a continual evaluation of the air quality of the building during removal, using his/her best professional judgements in perspective of the State Department of Health Services guideline of .01 fibers/cc. and the background air quality established during the pre-abatement period. If the air sampling professional determines that the building air quality has become contaminated from the project, the inspector shall immediately inform the contractor to cease all removal operations and implement a work stoppage clean-up procedure. The contractor shall conduct a thorough cleanup of areas of the building designated by the inspector. No further removal work can take place until the air sampling professional has determined that the building air has been decontaminated.

. Post Abatement Period. The air sampling professional shall conduct air sampling following the final cleanup phase of the project, once the "no visible residue" criterion has been met. A sufficient number of samples, collected aggressively, will be taken to determine the final air concentration, in perspective of the "clearance guideline" of .01 fibers / cc.

5.4.3.2 Contractor Responsibility.

The contractor shall independently retain an air sampling professional to monitor airborne asbestos concentrations in the work zone and to establish conditions and work procedures for maintaining compliance with OSHA regulations 29 CFR 1910.1001 and 1926.58.

The contractor's air sampling professional shall document all air sampling results and provide a report to the inspector within 24 hours after each work day.

5.4.3.3 Air Sampling Methods.

All air sampling shall be conducted in accordance with methods described in OSHA standards 29 CFR 1910.1001 and 1926.58. All air samples shall be conducted in a manner that will provide a minimum detection limit of .01 fibers / cc.

5.4.4 Asbestos Removal Procedures.

The contractor shall be responsible for the safe and methodical removal of asbestos from the work zone. All removal procedures shall be in conformance with section 3.2.2 - 3.2.5 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS REMOVAL AT PUBLIC BUILDINGS ", published by the Connecticut Department of Health Services. At all times, negative pressure shall be maintained in the work zone, relative to the building outside of the decontamination enclosure system.

The inspector shall make periodic evaluations of removal work procedures and shall enforce all safety procedures which are outlined (or referenced) in these specifications.

5.4.5 Asbestos Waste.

All asbestos waste shall be bagged in 6 mil plastic, labeled with danger placards as specified in 29 CFR 1910.1001 (g) (2), and transported to a landfill facility which is approved by the Department of Environmental Protection for disposal of asbestos.

Asbestos may be temporarily stored on the owner's premises outside of the work zone under the following circumstances :

- The bagged asbestos is thoroughly cleaned off by wet sponging the surface of the bag in the washroom of the decontamination enclosure system ;

- The bagged asbestos taken out of the decontamination enclosure system shall be immediately placed in a dumpster with a locking metal cover. At the end of each work day the top of the dumpster shall be closed and locked ;

. The dumpsters are placed in an area of the property designated by the owner. The owner reserves the right to require the contractor to move the dumpster to a different location or to order them to be removed from the premises. In no case shall the asbestos remain on the owner's premises longer than 72 hours after the completion of the project.

The asbestos shall be transported and disposed in accordance with Section 22a-209-8(i) of the administrative regulations of the Department of Environmental Protection and Section 3.7.1 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the State of Connecticut Department of Health Services.

5.4.6 End of Day Clean-up.

At the completion of each work day, a work stoppage clean-up procedure will be conducted by the contractor. The purpose of this clean-up is to remove all loose asbestos from the work zone and to inhibit the release of fibers to the air in the work room. This procedure should include the following steps :

. Bagging of all loose asbestos and decontamination of the bag surfaces in the washroom of the decontamination enclosure ;

. Wet cleaning of the floor of the work zone ;

. Visual inspection of the entire work zone for areas of loose asbestos ;

. Securing the work zone. This entails the sealing and posting of the decontamination enclosure system and locking the doors of the room where the removal is taking place.

5.5 Final Clean-up of Work Zone.

Following the completion of all asbestos removal work in a given area, the following clean-up, inspection and clearance procedure will be followed by the contractor and the inspector :

5.5.1 Initial Clean-up.

Following the last day of asbestos removal, the work stoppage clean-up procedure will be instituted, followed by a wet cleaning of all surfaces in the work zone. All visible accumulations of asbestos material and debris will be removed at this stage.

5.5.2 HEPA Vacuum Clean-up.

After the initial clean-up, the contractor shall allow

all areas of the work zone to dry, and will clean all surfaces with a HEPA filtered vacuum. After this clean-up, the contractor shall wait 24 hours and then shall reclean all surfaces with a HEPA filtered vacuum.

After the second clean-up, the inspector shall evaluate the adequacy of the decontamination process. If the inspector finds visible accumulations of dust or bulk asbestos containing materials in the work zone, the contractor shall repeat the cleaning, at his/her expense, until the area is declared as clear of visible accumulations of dust and asbestos.

Following the inspector's initial clearance of the work zone, the contractor shall remove the outer layer of plastic from the walls and floors, but shall keep the windows, doors and HVAC vents sealed. The decontamination enclosure system and the negative pressure system shall remain in place. Other equipment, materials, and sealed drums (previously cleaned as above) shall be removed from the equipment decontamination enclosure system at an appropriate time in the cleaning sequence.

5.5.3 Initial Clearance Test.

Twenty four hours after the work zone is totally dismantled, after all of the contractor's equipment, supplies and waste (including the outer layer of plastic) have been removed from the room, the inspector shall make a final visual inspection of the work area. If this inspection reveals no visible dust, the contractor shall remove the second layer of plastic sheeting and all barriers, with the exception of the plastic over the windows and the barrier between the work zone and the outside.

The air sampling professional shall, at this stage, conduct the post abatement air monitoring. The maximum acceptable levels for these air samples shall be .01 fibers / cc. or less, or a level equal to or less than the average asbestos level determined in the initial background samples taken outside the building.

Areas which do not comply with the standards specified above shall continue to be cleaned by the contractor at his / her expense until the specified standard is achieved as evidenced by the results of air testing.

5.5.4 Reinstallation of Displaced Equipment.

After the inspector has cleared the work area as clean from visible dust, and after the air sampling professional has determined that the area has achieved background air quality relative to the standards specified above, all remaining seals and barriers shall be dismantled by the contractor.

The contractor shall relocate all objects, which were moved to temporary locations during the course of the work,

back to their proper positions. The contractor shall resecure mounted objects, which were removed during the course of the project, back to their former positions. The contractor shall reestablish HVAC, mechanical and electrical systems, which were temporarily shut down during the project, in conformance with all applicable building, mechanical and electrical codes. All existing filters shall be disposed, as asbestos contaminated, and replaced with new filters.

PART 6 : LOCATIONS OF ASBESTOS REMOVAL PROJECTS IN THE BUILDING.

Asbestos is to be removed in two areas in the building - the boiler room, and the basement rooms with steam pipes. The contractor is responsible for removing all asbestos from these locations.

6.1 Boiler Room.

Figure 1 illustrates the sites and approximate areas where asbestos was discovered in this room. The contractor is responsible for removing all of the asbestos in this room. All of the asbestos in this room shall be removed in accordance with the specifications described in this document.

Following the removal of asbestos, the boilers, boiler stack, pipes and all surfaces which were stripped during the project will be reinsulated with a material which is acceptable to the owner.

6.2 Basement Rooms

The contractor is responsible for removing all asbestos from all of the rooms located in the basement. Asbestos is present on the surface of steam pipes which are located in the storage rooms.

Following the removal of asbestos, all of the pipes shall be reinsulated with a material which is acceptable to the owner.

PART 7 : SCHEDULE.

Asbestos remediation shall be initiated when the building owner authorizes the initiation of the projects.

All asbestos shall be removed from the building by October 1, 1987. All cleaning and inspections, air sampling, and recleaning shall be completed no later than November 1, 1987. The contractor shall not be released from the job until the following clearances have been obtained :

7.1 Inspection Clearance.

The inspector shall declare the project areas and all areas in the building that were affected by the project as "clean", when all visible accumulation of asbestos and dust have been removed from these locations.

7.2 Air Quality Clearance.

The air sampling professional shall declare the air quality in the building as acceptable for occupancy when the post abatement air sample analyses indicate that airborne asbestos have achieved background levels (or better) according to the standards established in these specifications.

7.3 Final Reoccupancy Clearance.

The building owner will perform a reoccupancy inspection of all work areas to ascertain the general condition of the rooms and the fixtures and to evaluate the quality of any reinsulation, restoration or replacement of materials required where the asbestos has been removed.

The owner shall declare the areas as acceptable for reoccupancy when he is satisfied that all aspects of the contractor's work have been completed to his satisfaction.

The entire building shall be ready for reoccupancy by no later than December 1, 1987. Any deviations or extensions of this schedule shall require the written authorization from the building owner.

GUIDE FOR THE SELECTION OF A CONTRACTOR

The thoroughness and the degree of safety involved in an asbestos removal project depend largely upon the experience and competence of an asbestos remediation contractor. There are currently no state or federal regulations which review or license the contractors who perform this work. Therefore, it is extremely important that the School District thoroughly reviews the qualifications of prospective bidders for the removal project. This section outlines criteria for selecting the best contractor to perform the work. There are two phases involved in the process : the initial screening of companies interested in submitting a proposal for the work and the detailed review of contractors qualifications.

PHASE I : INITIAL REVIEW OF APPLICATIONS FOR A PROPOSAL.

This stage pertains to the initial screening of contractors who are interested in submitting a proposal to perform the asbestos remediation in the schools. The School District should initially advertise for a qualifications statement from prospective bidders. The qualifications statement should include the following information :

A. Record of experience in asbestos removal with names of the building owners of past projects;

B. Names and training of personnel who would perform the removal work;

C. Any record of violations of federal or state asbestos regulations over the past ten years ;

D. Affadavit regarding any projects which were prematurely terminated due to contract violations or building contamination incidents.

E. Statement of liability insurance coverage ;

F. Other information pertinent to asbestos removal.

The School District should carefully scrutinize these qualifications and select a list of qualified firms to submit a full proposal for the removal projects. The review should include a check of all references from previous projects which includes phone contacts to the building owners or the clerk of the works or inspectors of these projects to discuss the quality of work performed by the contractor. The affadavit regarding past violations should be checked by contacting the Environmental Protection Agency's Region I Asbestos Coordinator, OSHA, and the Connecticut Department of Health Services.

PHASE II : SELECTION OF THE CONTRACTOR.

When a list of qualified contractors is obtained, the School District should invite these firms to review all areas of the buildings which are scheduled for remediation. After a tour of all of the areas, followed by a question and answer period, the contractors will be instructed to develop a full proposal for all asbestos remediation described in the contract specifications with a bid quote for the project.

The final stage of screening before selection occurs is an interview process with one or more firms whose proposals are considered superior to the School District. The screening committee should be composed of 3 - 5 individuals including the Superintendent of Schools, the School District's Business Manager, and an asbestos inspector. The interview should include a discussion of the scope of the projects, the schedule, strategies for remediation, equipment available and other issues pertinent to completing the project in accordance with the specifications of the contract.

The selection should be based both on the competetiveness of the cost and the competence of the firm in safely completing each project in a timely manner. However, in no case should any question regarding the contractor's qualifications be superceded by a relatively lower cost.

ASBESTOS MANAGEMENT PLAN
ADMINISTRATION BUILDING

Prepared By :
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Consulting Services
November, 1986

TABLE OF CONTENTS FOR ASBESTOS MANAGEMENT PLAN

Laboratory Reports are in the Appendix at the End of the Plan.

ASBESTOS MANAGEMENT PLAN : EAST ST. ADMINISTRATION BUILDING

The East Street Administration Building was surveyed and evaluated for asbestos containing materials in September, 1986. The New Milford School District has developed a series of management strategies for each location where asbestos was identified in the building. The remedial action prescribed for each of these areas is the foundation for this asbestos management plan.

The purpose of the plan which follows is to provide the documentation of the asbestos surveys and to describe the management strategies for each area where asbestos is present in the school. The specific objectives of this plan are as follows :

(1) Provide a description of the building which highlights the locations where asbestos containing materials are present ;

(2) Describe the methodology which was used for surveying and evaluating materials in the school which were suspected to contain asbestos ;

(3) Summarize the locations and conditions of materials which were confirmed as asbestos ;

(4) Describe the remedial strategy selected for each site which has asbestos present in the school with a justification for selecting this course of action ;

(5) Develop a system for implementing the plan which includes the following elements :

   a. Timetable for implementing remediation strategy ;

   b. Interim strategies for minimizing fiber release from the areas with asbestos until a permanent method of remediation can be implemented ;

   c. Procedure for implementing the remedial strategy ;

   d. Specifications for removal of asbestos containing materials;

This asbestos management plan is submitted to the State Department of Education in accordance with Public Act 85-541 of the Connecticut General Statutes.

A. GENERAL DESCRIPTION OF BUILDING.

The Administration Building was built in 1929. The Building houses the administrative offices of the New Milford School District. Additionally, the School District allots classroom space for the "latch-key" program on the second floor and the Town Sewer Commission on the first floor. The building has a staff of 20.

The building is constructed with a basement foundation, with brick outer walls and a wood frame. The inner walls and ceiling are made of plaster. The building is heated by one oil burning boiler which conveys heat through insulated steam pipes which traverse the ceilings of the rooms in the basement and near the true ceiling, which branch up to hot water radiators which are located in each of the rooms. There is no active ventilation system serving the building.

B. DELINEATION OF AREAS

For the purpose of this evaluation, the building was divided into 6 sections of similar design, construction or function. Table 1, below, lists these areas and indicates whether asbestos was identified in each location.

TABLE 1 : AREAS OF ADMINISTRATION BUILDING SURVEYED FOR ASBESTOS

location	materials evaluated	prescence of asbestos
boiler room *	boilers, pipes	YES
basement storage rooms *	pipe insulation	YES
kitchen	exhaust duct, pipes,	NO
gymnasium	ceiling, walls, curtains	NO
first floor - rooms & offices	room by room search : ceiling, walls, floor, assessory mat'ls.	NO
Classrooms - second floor.	room by room survey : ceiling, floor, walls, assessory mat'ls.	NO

* The specific locations which contain asbestos are described in more detail on Table 2 and in the narrative text.

C. METHOD OF EVALUATION

The Administration Building was surveyed for asbestos containing materials and evaluated in the following manner :

(1) An inspection of each room of the building was conducted to provide a descriptive documentation of design, construction, and building materials to identify substances which are positively asbestos, non asbestos materials and materials which are suspected to contain asbestos, which require an analytical confirmation of its constituency. The maintenance staff of the School District was consulted with regard to specific locations of areas and regarding areas of recent construction activities affecting insulation or other asbestos containing materials.

(2) All asbestos suspect materials (identified above) were sampled in accordance with the State Department of Health Services guidelines for identification of asbestos. These samples were submitted to the State Department of Health Services Laboratory for analysis of asbestos content.

(3) Following receipt of the laboratory reports, all locations in the building where asbestos was confirmed to be present were inspected again and evaluated with respect to its condition in accordance with the State Health Department's "decision protocol" process.

D. LOCATIONS WHERE ASBESTOS IS PRESENT IN THE ADMINISTRATION BUILDING

Table 2 indicates the location where asbestos was positively identified in the building. The table also describes the condition, the degree of friability, and the potential for future deterioration of each asbestos product in the building. The asbestos materials were confirmed, in all cases, by a laboratory analysis of bulk samples which were taken from the building. The analytical reports are attached to the appendix at the end of this document.

Exhibits A - C are the "school facility" and "area reports" (EDO75A and EDO75B), which provide information on the specific locations where asbestos is present in the building.

The diagrams on the following pages illustrate the areas where asbestos is present in the building. Figures 1 and 2 are site specific illustrations of each asbestos area in the building, showing the total area of asbestos at each location.

TABLE 2 : SUMMARY OF ASBESTOS LOCATIONS - EAST ST. ADMINISTRATION

location of asbestos	friability	condition	damage potential	management strategy selected
Boiler Room: - boilers - stacks - breeching - h.w. tank	moderate	poor	potential for impact and vibration.	removal under contract specifications
Boiler Room: - pipe insulation.	moderate	fair- open at ends; some areas damaged	potential for water damage and impact.	removal under contract specifications.
Basement rooms - pipe insulation	moderate	fair - open at ends; some insulation damaged.	subject to water damage and impact.	

EXHIBIT A

CONNECTICUT DEPARTMENT OF EDUCATION

ED 075B
SCHOOL FACILITY ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

SCHOOL DISTRICT: NEW MILFORD
DISTRICT CODE: 096

FACILITY NAME: ADMINISTRATION BUILDING
FACILITY ADDRESS: 50 EAST ST. NEW MILFORD, CT

Year of Construction 1929 Year of Additions (if any) _____

CERTIFICATION:

Attached are 3 Area Asbestos Inspection Reports (ED 075A) for the above referenced school facility.

☒ Check this box if this school facility has been inspected according to Public Act 85-541, state regulations enacted pursuant thereto and decision protocols.

☒ Check this box if this school facility has been inspected prior to January 1, 1986 in order to comply with Environmental Protection Agency (EPA) School Asbestos Inspection Rule.

Name of Inspector JACK S. KOZUCHOWSKI Phone 203-792-361

Signature of Inspector Jack S. Kozuchowski Date 11/20/86

☐ Check this box if this building had been previously inspected and was found to have asbestos containing materials which have subsequently been removed. Please submit documentation supporting this fact.

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CONNECTICUT DEPARTMENT OF EDUCATION

ED XXX

Page 1 of 1

SCHEDULE A - AREA ASBESTOS INSPECTION REPORT

P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME	FACILITY ADDRESS	INSPECTED BY (Name and Telephone)	DATE
ADMINISTRATION BUILDING	50 EAST ST. NEW MILFORD, CT.	JACK S. KOZUCHOWSKI 792-3613	

	AREA DESCRIPTION	AREA SQUARE FEET	AREA POPULATION
1.	BOILER ROOM	~~40~~ 694	6

1. Samples: Description of material sampled FIBROUS LAGGING MAT'L WITH OUTER WR
Type of sample: Bulk ✓ Dust ____ Air A | PIPES; AIR CELL INS

2. Type of Material: Sprayed on ____ Trowled on ____ Boiler Lagging ✓
Pipe Insulation ✓ Duct ____ Other (please explain) ____

3. Friability: High ____ Moderate ✓ Low ____ Not Friable ____
Sq. Footage Area 500 Pipe Insulation ____ Linear Feet ____ Sq. Ft. ____

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ____ Moderate ____ Low ____ None ✓
Physical Damage: High ____ Moderate ✓ Low ____ None ____

5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ____
Contact Potential: High ____ Moderate ____ Low ✓ None ____
Distance to items needing maintenance:
Electrical ____ Plumbing 1-5 Feet Ventilation ____ Other ____

6. Internal Building Description:
Wall Texture: Rough ____ Pitted ____ Moderately Textured ✓ Smooth ____
Floor Type: Concrete ____ Carpet ____ Tile ____ Wood ____ Other ____
Ceiling Type: Concrete ____ Acoustical Tile ____ Plaster ✓ Metal Deck ____
Suspended lay in panels ____ Concrete joist and beam ____
Suspended metal lath ____ Other ____

7. Barriers: Suspended Ceiling ____ Encapsulation ____ Enclosure ____
Railing ____ Other ~~ACCESS~~ ____ None ✓

8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ____
Outflow vents near friable materials(y/n) N Distance ft. ____
Plenum (y/n) N Air Erosion Evident (y/n) N
Air Movement: High ____ Moderate ____ Low ✓

9. Activity/Movement:
Use of Area MECHANICAL - BOILER MAINTENANCE Activity: High ____ Moderate ____ Low ✓
What is adjacent to the area? BATHROOM, HALLWAY
What is above the area? ROOMS

10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	____ hrs/day	____ days/week
Staff 6	1 hrs/day	2 days/week

Comments: ____

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
SEVERAL AREAS ON BOILER ARE LOOSE AND IN BAD CONDITION, PIPE INSULATION HAS SOME DAMAGED AREAS WHERE OUTER WRAP IS TORN.

ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL OF ASBESTOS DURING 1987 AND IMPLEMENTATION OF INTERIM MANAGEMENT PROCEDURES

0 075A

CONNECTICUT DEPARTMENT OF EDUCATION

Page ___ of ___

ED XXX
SCHEDULE A - AREA ASBESTOS INSPECTION REPORT
P.A. 85-541

RETURN TWO (2) COPIES TO: State Department of Education, Bureau of Grants Processing
School Facilities Unit, P.O. Box 2219, Hartford, CT 06145

FACILITY NAME: ADMINISTRATION BUILDING
FACILITY ADDRESS: 56 EAST ST NEW MILFORD, CT
INSPECTED BY (Name and Telephone): JACK S. KOZUCHOWSKI 792-3613
DATE:

AREA DESCRIPTION: 2: BASEMENT STORAGE ROOM
AREA SQUARE FEET: 370
AREA POPULATION: 6

1. Samples: Description of material sampled: AIR CELL INSULATION ON PIPES
   Type of sample: Bulk ✓ Dust ___ Air ___
2. Type of Material: Sprayed on ___ Trowled on ___ Boiler Lagging ___
   Pipe Insulation ✓ Duct ___ Other (please explain) ___
3. Friability: High ___ Moderate ___ Low ✓ Not Friable ___
   Sq. Footage Area 20 Pipe Insulation ___ Linear Feet ___ Sq. Ft. ___

(If the potential for fiber release or contact has been affected, explain under Comments.)

4. Condition: Water Damage: High ___ Moderate ___ Low ___ None ✓
   Physical Damage: High ___ Moderate ___ Low ✓ None ___
5. Accessibility: Less than 10 ft. ✓ More than 10 ft. ___
   Contact Potential: High ___ Moderate ✓ Low ___ None ___
   Distance to items needing maintenance:
   Electrical ___ Plumbing ___ Ventilation ___ Other ___
6. Internal Building Description:
   Wall Texture: Rough ___ Pitted ___ Moderately Textured ✓ Smooth ___
   Floor Type: Concrete ___ Carpet ___ Tile ___ Wood ___ Other ___
   Ceiling Type: Concrete ___ Acoustical Tile ___ Plaster ✓ Metal Deck ___
   Suspended lay in panels ___ Concrete joist and beam ___
   Suspended metal lath ___ Other ___
7. Barriers: Suspended Ceiling ___ Encapsulation ___ Enclosure ___
   Railing ___ Other ___ None ✓
8. Ventilation: Intake vents near friable materials(y/n) N Distance ft. ___
   Outflow vents near friable materials(y/n) N Distance ft. ___
   Plenum (y/n) N Air Erosion Evident (y/n) N
   Air Movement: High ___ Moderate ___ Low ✓
9. Activity/Movement:
   Use of Area STORAGE ROOM Activity: High ___ Moderate ___ Low ✓
   What is adjacent to the area? STAIRWELL
   What is above the area? ROOMS
10. Population Exposed:

Number of Individuals:	Length of Exposure:	Frequency of Exposure:
Students 0	___ hrs/day	___ days/week
Staff 6	1 hrs/day	1 days/week

Comments: ___

Conclusions (Recommendation Derived from the Detailed Asbestos Decision Protocol):
PIPE INSULATION IS NOT IN BAD CONDITION BUT BUILDING CONDITIONS SUGGEST POTENTIAL FOR DAMAGE FROM IMPACT. ASBESTOS MANAGEMENT PLAN SPECIFIES REMOVAL DURING 1987.

FIGURE 1 : BOILER ROOM .
Total Area of Asbestos : 500 square feet

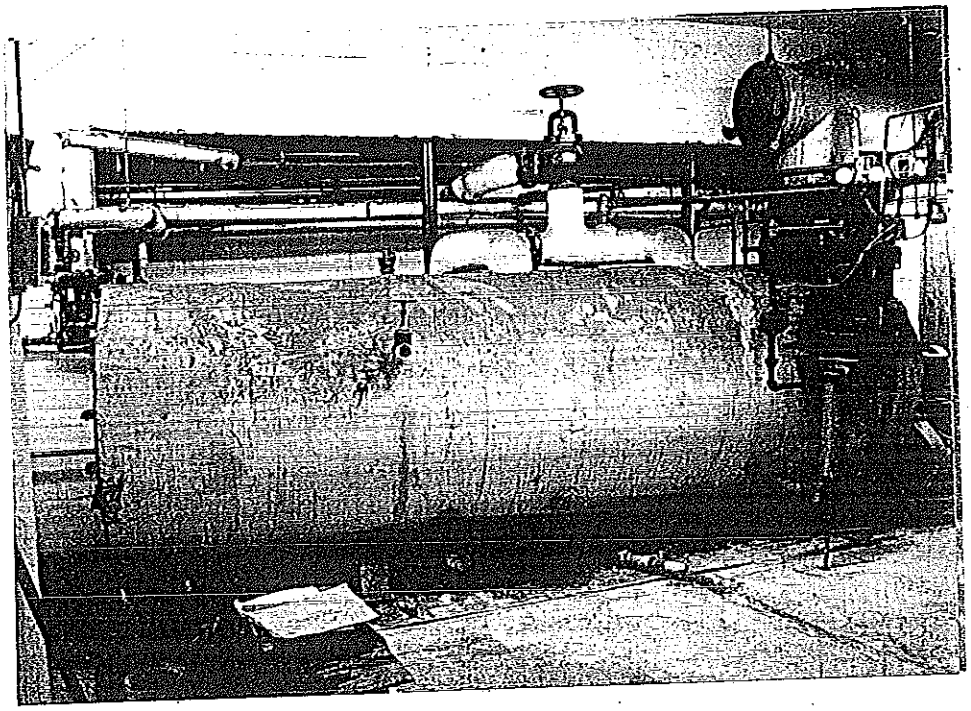
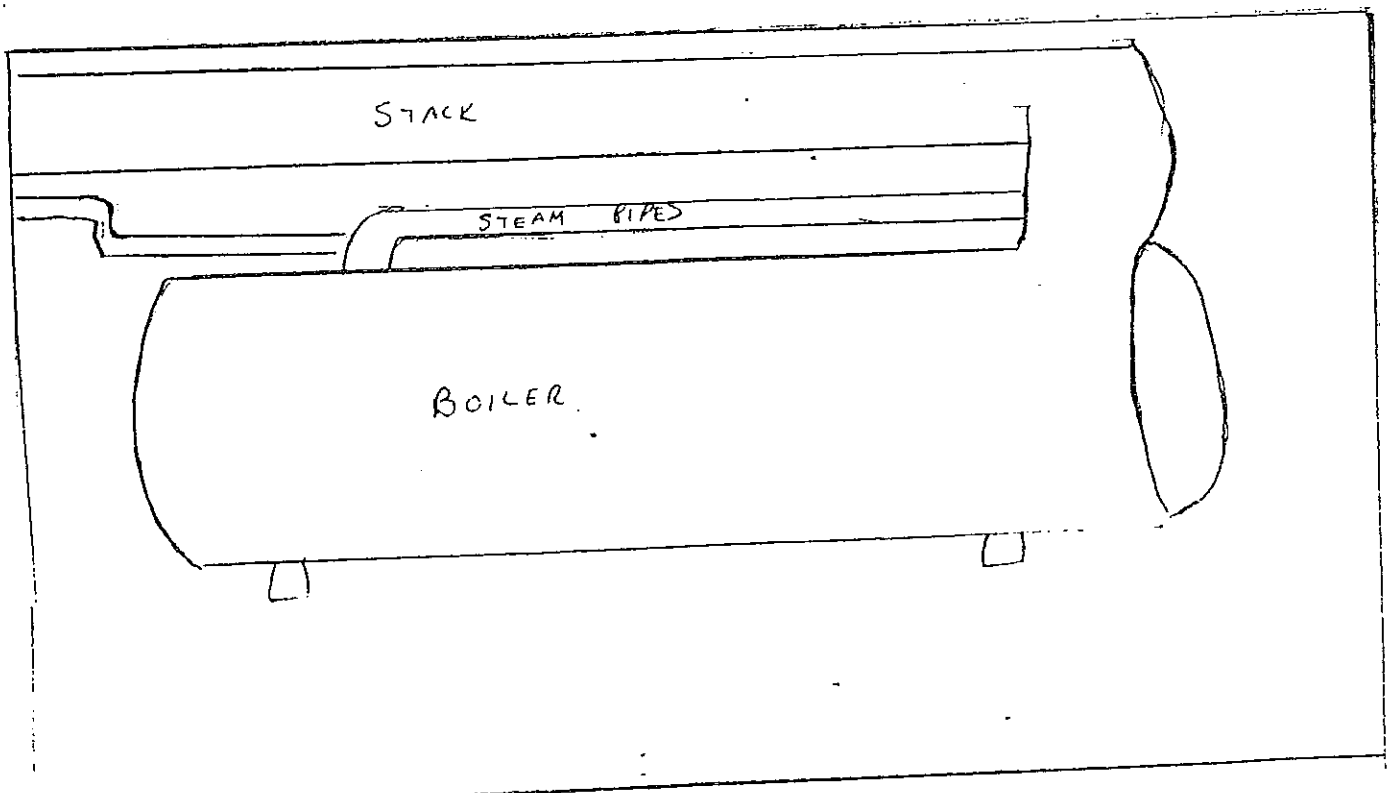


Fig. 1A : Photograph showing boilers, stack, and pipes covered with asbestos insulation.



Not to scale

FIGURE 2 : BASEMENT STORAGE ROOM.

Area of Asbestos : 20 square feet

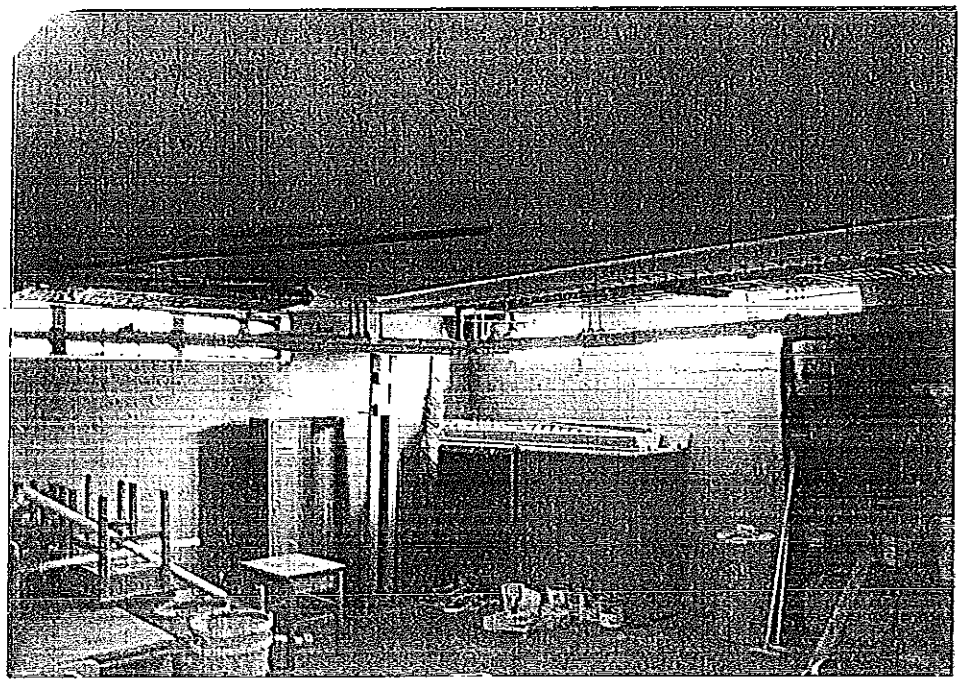


Fig. 2A : Photograph of basement storage room showing pipes.

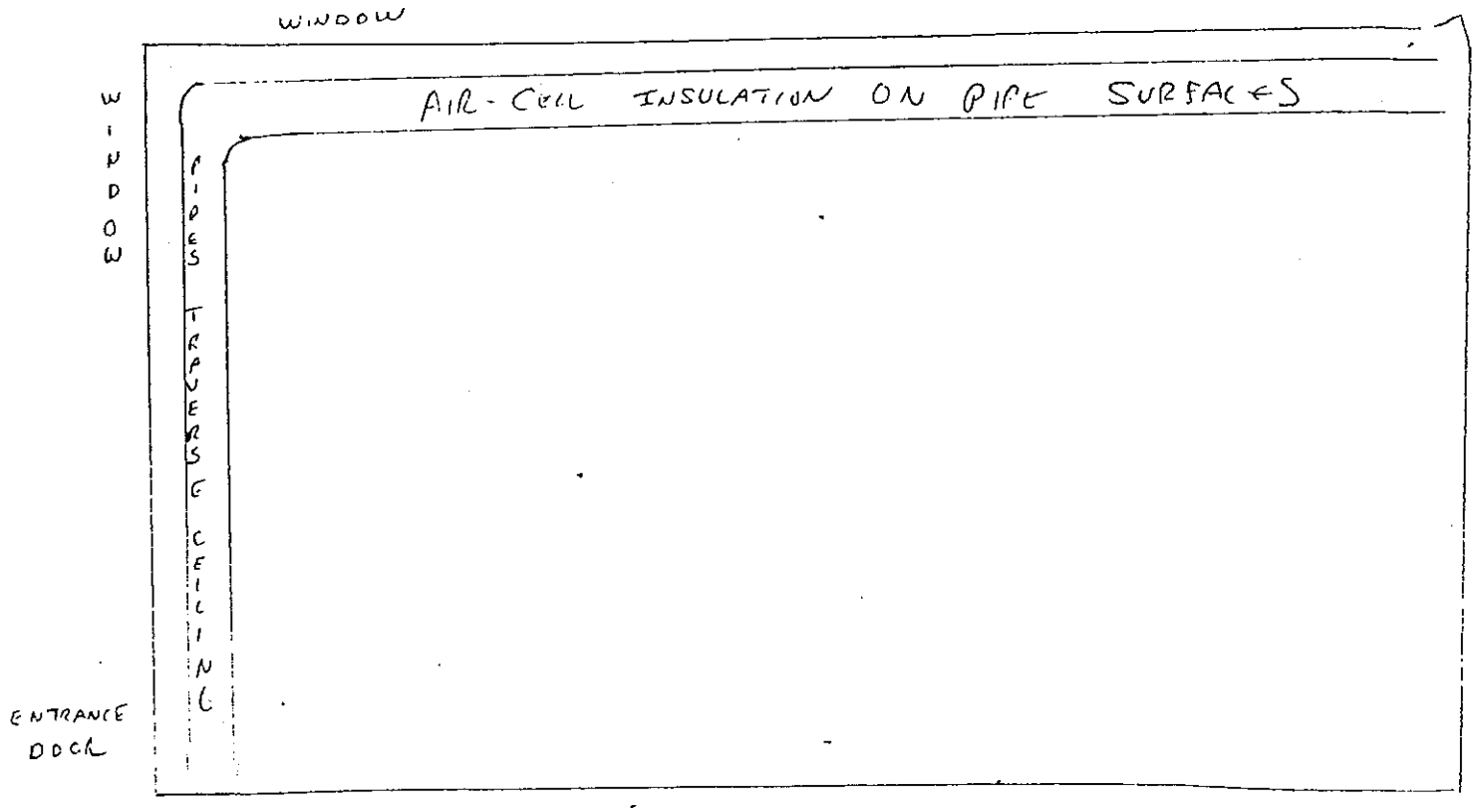


Fig 2B : Sketch of basement storage room. Not to scale.

E. AREA REMEDIATION STRATEGIES.

This section outlines the management strategies which will be used for each location in the building where asbestos is present. This narrative also includes a justification for the remediation option which was selected.

(1) Boiler room.

The insulation on the oil furnace boiler (including the breeching and stack) and the steam pipes contains asbestos. The insulation on the boilers, breeching, and stack are characterized in a different manner than the pipe insulation.

The steam pipes in this room are covered with air cell insulation. The asbestos is sandwiched on the surface of "cells" of corrugated fiber material which encloses pockets of air. The outer surface of this insulation is wrapped with a non asbestos fiber wrap. Pipe elbows are insulated with asbestos which are cloth wrapped. As long as the outer wrap of the pipe runs and elbows remain intact, the asbestos is not friable. The insulation is susceptible to damage from impact or water. If the insulation becomes torn or delaminated from the surface of the pipes, the asbestos will become friable. In several areas of the room, the insulation has deteriorated and is, therefore, friable.

The asbestos insulation on the boiler surfaces, the breeching, and the stack is friable, and will only get worse in time. The surface areas of friable asbestos results in a potential for chronic exposure to the maintenance and janitorial staff who work in this room.

All of the asbestos in the boiler room will be removed during the summer of 1987. The large amount of friable asbestos which is present in this area poses an ongoing potential for asbestos exposure to employees and contractors who work in this room. Therefore, the removal of asbestos under contract specifications is the permanent solution of choice. Contract specifications for the removal project are described in Section G.

Due to the large scope of this job, and the importance of performing the work when classes are out of session, the work is scheduled for the summer 1987 school recess. In the interim period, the management program described in Section F will be instituted.

(2) Pipe Runs - Basement Storage Room and Bathroom.

The steam pipes leading out of the boiler room run through the basement bathroom and the storage room before they branch up to the radiators on the first and second floor. These steam pipes are insulated with air cell insulation with asbestos insulated elbows that are wrapped with a non asbestos cloth wrap. As long

as the fiber wrap over the insulation on the straight runs of pipes and the cloth wrap on the elbows remains intact, there is no potential for exposure to airborne asbestos in these areas. However, there is a potential for future damage to this insulation due to impact damage resulting from maintenace operations or from the movement of articles in and out of the room by the staff. Removal of the asbestos from all pipes is the most permanent remedial strategy for removing the potential of asbestos exposure in the storage room and bathroom.

The asbestos insulation will be removed from all pipes in the basement of the building during the summer of 1987. The asbestos will be removed under the contract specifications described in Section G. Until the asbestos is removed, the interim management program, described in Section F, will be implemented in the basement area.

F. INTERIM MANAGEMENT MEASURES FOR ASBESTOS SCHEDULED FOR REMOVAL

Interim management procedures have been developed for the areas in the basement where asbestos is scheduled for removal within the next several months. The management/monitoring program developed for all of these areas centers on implementing procedures for minimizing exposure and access to asbestos containing materials, training of maintennace and janitorial staff in these procedures, and conducting periodic inspections of the asbestos containing materials.

The specific details of the staff training which is referenced throughout this section are described in the document, titled :

" Inservice Training Program for Maintenance Staff :
Mininizing Asbestos Exposure to Staff and Building Occupants

New Milford Public Schools "
(November, 1986).

(1) Boiler Room.

The following interim strategy has been developed for the boiler room. These management procedures will be instituted immediately and will remain in effect until the asbestos is removed in the summer of 1987.

The management process for these areas centers on work procedures and staff training. This includes the following measures :

STAFF TRAINING. An overview on the recognition of asbestos hazards and safety precautions regarding work around large surface areas of asbestos containing materials will be presented to the maintenance and janitorial staff.

CONTROLLED ACCESS. Access to the boiler room will be restrict-

ed by the asbestos coordinator. Entrance into the boiler room will be restricted to maintenance personnel with assigned tasks. The doors of the boiler room will remain locked and will be placarded with a warning notice. Smoking in the boiler room will be absolutely prohibited.

WORK PROCEDURES . Any employee who works directly on the boiler, breeching, stack, or steam pipes, or any assigned task in the boiler room which requires more than a short (longer than 15 - 30 minutes) period of time will be equipped with respiratory protection. Dry sweeping of the floors in this room will be prohibited.

(2) Basement Rooms with asbestos insulated pipes.

The following procedures apply to the bathroom and the storage room in the basement, where asbestos is present on the pipes.

WORK OPERATIONS. Any work that is required on these pipes must be specifically authorized by the asbestos coordinator. The maintenance staff, designated to work around asbestos, will conduct any operations which may disturb the pipe insulation. Employees performing these tasks must wear asbestos respirators. If any of the insulation on these pipes is punctured or dislodged from the surface, it will be immediately repaired and cleaned up by the maintenance staff in accordance with the procedures outlined in the employee training manual.

PROHIBITIONS. Access to these areas will be controlled by the asbestos coordinator. The asbestos coordinator will prohibit loitering or smoking in these areas.

G. CONTRACT SAFETY SPECIFICATIONS FOR ASBESTOS REMOVAL PROJECTS.

There are two areas in the Administration Building where the asbestos will be removed and replaced by a contractor : the boiler room and the basement steam pipes. Both projects will be conducted during the summer of 1987. This section outlines the safety specifications which will be required for the removal project in these two areas and describes selection criteria for hiring a contractor to do the asbestos abatement work.

PART I. GENERAL

1.1 Introduction.

Asbestos has been classified by the federal government as a carcinogenic material. These specifications are designed to maintain compliance with all governmental regulations regarding asbestos work, minimize employee exposures to airborne asbestos, and protect the building and its occupants from asbestos contamination.

1.2 Scope.

These specifications cover all safety and environmental controls and procedures which will be used during the removal of asbestos from the Administration Building. The extent of asbestos removal is confined to the rooms and areas described in Section 6. All aspects of the removal work shall be conducted in strict accordance with these specifications.

1.3 Applicable Codes.

The contractor shall be solely responsible for conducting each project supervising all work in a manner which will be in conformance with all federal, state and local regulations and guidelines pertaining to asbestos abatement. Specifically, the contractor shall comply with the requirements of the following agencies :

1.3.1 EPA Regulations (40 CFR Part 763) ;

1.3.2 NESHAPS Regulations (40 CFR 61, Subpart M) ;

1.3.3 OSHA Regulations (29 CFR 1910.1001 and 1926.58) ;

1.3.4 Connecticut DEP Regulations (Section 22a-209-8(i) and Section 22a-220 of the Connecticut General Statutes).

1.3.5 Connecticut Regulations regarding asbestos inspection and abatement ;

1.3.6 Connecticut Basic Building Code ;

1.3.7 Connecticut Fire Safety Code ;

1.3.8 Local health and safety codes, ordinances or regulations pertaining to asbestos remediation.

1.4 Exemptions.

Any deviations from these specifications requires the written approval and authorization from the building owner.

1.5 Contractor Qualificatiioms.

All bidders shall submit a record of prior experience in asbestos removal projects, listing no less than 10 completed jobs in the past 5 years.

PART 2 : TERMINOLOGY

2.1 ABATEMENT - Procedures to control fiber release from asbestos-containing materials; includes removal, encapsulation, and enclosure.

2.2 AIRLOCK - A system for permitting ingress and egress while assuring air movement to contaminated area from an uncontaminated area. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.3 AIR MONITORING - The process of measuring the fiber content of a specific volume of air in a stated period of time.

2.4 AIR SAMPLING PROFESSIONAL - A professional capable of conducting air monitoring and analysis schemes. This indivdual should be a certified industrial hygienist or an environmental scientist or engineer with equivalent experience in asbestos air monitoring and worker protection equipment and procedures. This individual should have demonstrated proficiency in conducting air sample collection in accordance with 29 CFR 1910.1001 and 1926.58.

2.5 AMMENDED WATER - Water to which a surfactant has been added.

2.6 ASBESTOS - the name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles.

2.7 ASBESTOS CONTROL AREA - An area where asbestos abatement operations are performed which is isolated by physical boundaries to prevent the spread of asbestos dust, fibers, or debris.

2.8 ASBESTOS FIBERS - Those particles with a length greater than five (5) microns and a length to diameter ratio of 3 : 1 or greater.

2.9 ASBESTOS FIBERS PERMISSABLE EXPOSURE LIMIT (PEL) - The maximum concentration of asbestos fibers which is allowed in a work area where employees are present. The current level established by OSHA is 0.2 fibers per cubic centimeter of air as an eight (8) hour time weighted average. An employer is responsible for maintaining work areas in a manner that this standard is not exceeded.

2.10 AUTHORIZED VISITOR - Any person authorized by the building owner to enter the premises of the school building.

2.11 BUILDING OWNER - The New Milford School District. The Superintendent of the New Milford Schools (or his designee) shall represent the owner in all transactions with the contractor.

2.12 CLEAN ROOM - An uncontaminated area or room which is a part of the worker decontamination enclosure with provisions for storage of workers' street clothes and protective equipment.

2.13 CURTAINED DOORWAY - A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms. Two curtained doorways spaced a minimum of six feet apart form an airlock.

2.14 DECONTAMINATED ENCLOSURE SYSTEM - A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers and equipment. A decontamination enclosure system always contains at least one airlock.

2.15 ENCAPSULANT - A liquid material which can be applied to asbestos-containing material and which controls the possible release of asbestos fibers from the materials either by creating a membrane over the surface (bridging encapsulant) or penetrating the material and binding its components together (penetrating encapsulant).

2.16 ENCAPSULATION - A specified asbestos remediation strategy involving the application of an encapsulant to asbestos-containing materials to control the release of asbestos fibers into the ambient air.

2.17 EQUIPMENT DECONTAMINATION ENCLOSURE - That portion of a decontamination enclosure system designed for controlling the transfer of materials and equipment, typically consisting of a washroom and a holding area.

2.18 EQUIPMENT ROOM - A contaminated area or a room which is part of the worker decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.19 FIXED OBJECT - A unit of equipment or furniture in the work areas which cannot be removed from the work area.

2.20 FRIABLE ASBESTOS MATERIAL - Any material that contains more

than 1% asbestos by weight, that can be crumbled, pulverized or reduced to powder by hand pressure, and, which releases asbestos particles to the environment. Covering by an impermeable, intact surface precludes friability.

2.21 GLOVEBAG TECHNIQUE - A method for removing small amounts of asbestos-containing materials from HVAC ducts, short piping runs, elbows, valves, joints and other non-planar surfaces in a self-contained work area.

2.22 HEPA FILTER - A high efficiency particulate air (HEPA) filter in compliance with ANSI Z9.2-1979.

2.23 HEPA VACUUM EQUIPMENT - Vacuum equipment with a HEPA filter system for filtering the effluent air from the unit.

2.24 HOLDING AREA - A chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area. The holding area comprises an airlock.

2.25 INSPECTOR - An individual, retained by the Owner, who is a "qualified asbestos inspector" as defined by the State of Connecticut Department of Health Services, and who will be responsible for overseeing and enforcing all of the specifications during the asbestos remediation projects.

2.26 MOVABLE OBJECT - A unit of equipment or furniture in the work area which can be removed from the work area.

2.27 NEGATIVE AIR PRESSURE EQUIPMENT - A portable local exhaust system equipped with HEPA filtration used to create negative pressure in a contaminated area (negative with respect to adjacent uncontaminated areas) and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.

2.28 NOTICE OF DISCHARGE - A formal discharge of the contractor by the building owner and nullification of the contract.

2.29 NOTICE OF NON-COMPLIANCE - A process to be followed in the course of a violation hearing, whereby the building owner, upon determining that the specifications have been breached, informs the contractor that he (she) has 24 hours to correct the violations noted by the inspector, subsequent to a discharge procedure.

2.30 NOTICE OF VIOLATION - An enforcement procedure by which the inspector informs the contractor to immediately cease all removal or remediation work in the building and to immediately implement clean-up procedures. The notice of violation will be followed by a hearing with the building owner within 24 hours.

2.31 PLASTICIZE - To cover floors and walls with plastic sheeting as specified herein.

2.32 REMOVAL - All procedures, specified herein, which are necessary to remove asbestos-containing materials from the designated areas and to dispose of these materials at an acceptable site.

2.33 SHOWER ROOM - A room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between the contaminated area and the clean area.

2.34 STRIPPING - Taking off asbestos materials from any structural member, pipe surface or HVAC equipment.

2.35 SURFACTANT - A chemical wetting agent added to water to improve penetration into asbestos-containing materials.

2.36 VIOLATION HEARING - A formal process whereby the building owner holds a conference with the contractor and the inspector to review violations of the specifications noted during the project, in order to ascertain whether the project contract has been breached

2.37 WASHROOM - A room between the work area and the holding area in the equipment decontamination enclosure with provisions for storage of contaminated clothing and equipment.

2.38 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 by water, and by afterwards disposing these cleaning items as asbestos contaminated waste.

2.39 WORK AREA - Designated rooms, spaces, or areas of the project in which asbestos abatement actions are occurring and which may become contaminated as a result of such abatement actions. The work area must be totally self contained by sealing, plasticizing and equipping the area with a decontamination enclosure system.

2.40 WORKER DECONTAMINATION ENCLOSURE SYSTEM - That portion of a decontamination enclosure system designated for controlled passage of workers, and other personnel and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room.

2.41 WORK STOPPAGE CLEANUP PROCEDURE - A process following the completion of the project or following the issuance of a notice of violation, whereby the contractor thoroughly cleans and decontaminates the work area, the decontamination enclosure system, and any other areas of the building affected by the removal project, to the satisfaction of the inspector.

2.42 WORK ZONE - The area of the decontamination enclosure system where asbestos is being removed.

PART 3 : DESCRIPTION OF WORK

3.1 Locations and Work Statement

The specific sites for asbestos removal are described in Part 6 of these specifications. The contractor shall retain full ownership of all asbestos containing materials in these specific locations and is responsible for removal, transport, and disposal of the asbestos in accordance with these specifications.

3.2 Chain of Command

3.2.1 Responsible Authority.

The Owner, represented by the Superintendent of Schools, (or his designee) is the ultimate authority in the discharge of this contract. All deliberations regarding the contract or the degree of compliance with the specifications, shall be ultimately decided by the owner.

3.2.2 Inspector.

The owner shall retain an asbestos inspector to oversee all work performed under this contract and to enforce the provisions of these specifications. The inspector shall have the authority to issue a notice of violation to the contractor and temporarily stop all further work if the air quality of the building is affected by the removal operation. The inspector may also function as the air sampling professional, if he/she is qualified under the terms defined herein.

3.2.3 Air Sampling Professional.

The owner shall also retain an air sampling professional to conduct the air monitoring tasks outlined in section 5.4.3.1 of these specifications. If the owner retains a separate individual as the air sampling professional (in addition to the inspector), he/she shall report directly to the inspector. All determinations of air quality contamination shall be made by the air sampling professional.

3.2.4 Project Supervision.

With the exception of the process outlined in part 3.5.3 - 3.5.5 of these specifications, the contractor shall report to the inspector as the owner's designated project manager.

3.3 Contractor Responsibilities.

The work specified in this contract entails the removal of asbestos-containing materials and the replacement of such materials with a suitable non asbestos product. All of the work specified shall be done by persons who are knowledgeable, qualified, and experienced in the removal, treatment, handling, and disposal of asbestos-containing materials and the subsequent clean-up. The contractor selected must comply with all applicable federal, state, and local regulations which mandate work practices and shall be capable of performing the work of this contract within the specified timeframe.

The contractor shall supply all labor, materials, equipment, services, insurance, and incidentals which are necessary or required to perform the work in accordance with all applicable governmental regulations and the specifications of this contract.

3.4 Performance Bond.

Before commencing work, the contractor shall post a performance bond in the amount and form specified in the general contract. In the event of an issuance of a notice of discharge, the owner reserves the right to use the bond to complete any unfinished work specified by this contract and adequately clean and/or decontaminate the work area and the building of asbestos to make it fit for occupancy.

3.5 Procedure for Resolving Documented Violations.

In the event that the inspector determines a violation of these specifications, the following procedures shall be employed to resolve and correct the areas of non compliance :

3.5.1 The inspector shall adequately document deviations from these specifications and immediately inform the contractor of the conditions which require correction. The contractor shall be given a reasonable period of time to correct these conditions.

3.5.2 If the violations continue unabated, the inspector shall issue a notice of violation to the contractor. After receiving the notice of violation, the contractor shall immediately cease all removal operations and effectuate a work stoppage cleanup procedure.

3.5.3 Within 24 hours of the issuance of a notice of violation, a hearing shall be conducted by the owner, with the contractor and the inspector in attendance. The owner shall review the documented violations with the objective of resolving the problems which resulted in the violations noted by the inspector. When the issues are fully resolved, removal work can resume under the conditions established by the building owner.

3.5.4 If the building owner sets conditions to correct the violations which the contractor is unwilling or unable to accomplish, the owner shall issue a notice of non-compliance.

3.5.5 If the correction conditions established by the owner are not initiated within 24 hours, the building owner shall issue a notice of discharge to the contractor, which immediately abrogates the contract.

PART 4 : WORK PREPARATION.

Prior to the initiation of the removal work, the following tasks must be completed by the contractor :

4.1 Work Site Safety Plan.

The contractor shall establish a set of emergency procedures and shall post them in a conspicuous place at the work site. The safety plan should include provisions for the following :

4.1.1 Evacuation of injured workers.

4.1.2 Emergency and fire exit routes from all work areas.

The contractor is responsible for training all workers in these procedures.

4.2 Notifications, Postings, and Submittals.

The contractor will make the following notifications, and provide the following submittals 10 days prior to the commencement of removal work :

4.2.1 Environmental Protection Agency (EPA)

Submit notification to the Regional EPA NESHAPS Coordinator at this address :

Director, Enforcement Division
Air and Hazardous Materials Division
Pesticides and Toxic Substances Branch
USEPA Region 1
Boston, Massachusetts 02203

The minimum information required in the notification includes the following :

- Name and address of the owner ;
- Building Location ;
- Building size, age, and use ;
- Amount of friable asbestos ;

. Work schedule, including proposed start and completion dates ;
. Asbestos removal procedures ;
. Name and location of disposal site for generated friable asbestos waste.

4.2.2 State Department of Education.

Send written notice of any project which involves the removal of more than 160 linear feet or 260 square feet of asbestos containing material to the Connecticut State Department of Education at the following address :

Chief, Bureau of Grants Processing
Room 325, State Office Building
State Department of Education
165 Capitol Avenue
Hartford, Connecticut 06106

The following information must be submitted :

. Name and address of building owner ;
. Building location ;
. Building size, age and use ;
. Amount of friable asbestos ;
. Work schedule, including proposed start and completion dates ;
. Asbestos removal procedures ;
. Name and location of disposal site for generated friable asbestos.

4.2.3 Transport and Disposal.

Submit proof, satisfactory to the owner, that all required permits, site locations, arrangements for transport and disposal of asbestos containing or asbestos contaminated materials and supplies have been obtained.

4.2.4 Work Zone Construction Plan.

Submit to the owner plans and/or shop drawings for the construction of decontamination enclosure systems and for the isolation of work areas as may be necessary in compliance with these specifications and applicable regulations.

4.2.5 Certification of Compliance Record for Past Projects.

Contractor must submit a written statement regarding whether he/she has ever been found out-of compliance with pertinent Federal and State asbestos regulations pertaining to removal. transport, disposal or other environmental or safety considerations.

4.2.6 Employee Training.

Submit documentation to the owner indicating that each

employee has had instruction on the hazards of asbestos exposure, on the proper use and fitting of respirators, on protective dress, on use of showers, on entry and exit from work areas, and on all aspects of work procedures and protective measures. This documentation must include a signed statement by each employee who will perform the removal work in the High School that he/she understands these instructions and is willing to comply with these procedures and perform all work in accordance with these specifications.

The contractor must also submit verification that all employees have received medical examinations as required by OSHA regulations.

4.2.7 Postings.

The contractor shall post signs in and around the work area to comply with 29 CFR 1910.1001 and 1926.58. Post one copy of each of the following documents at the work site :

- Title 29, Code of Federal Regulations, Part 1910.1001 and 1926.58 OSHA Asbestos Standards.
- Title 40, Code of Federal Regulations, Part 61, Subparts A and B, NESHAPS.

4.2.8 Condition of Fixtures.

The owner and contractor must agree, in writing, on the condition of the building and fixtures. A photograhic record of major fixtures is required.

4.2.9 Certification of Exhaust Equipment.

The contractor must submit the manufacturer's certification that vacuums, negative air pressure equipment, and other local exhaust / ventilation equipment conform to ANSI Z9.2-1979.

4.2.10 Rental Equipment.

When rental equipment is to be used in removal areas or to transport waste materials, the contractor shall provide documentation to the owner that written notification has been provided to the rental company informing them of the nature of use of the rented materials.

4.2.11 Equipment and Supplies.

The contractor shall provide a list of equipment, materials and supplies which will be used for the remediation projects. This list shall include the replacement materials which will be used for the areas where asbestos will be stripped. All materials, supplies and equipment shall be suitable to conduct the remediation projects in accordance with these specifications.

4.3 Preliminary Conference

Prior to the commencement of asbestos removal work, a conference will be held between the owner, the contractor, and the inspector. The objectives of this conference are as follows :

. Contractor submits to the owner copies of all submittals and notifications outlined above ;

. Contractor and inspector review the work plan and inspection procedures established in the specifications ;

. All parties agree to work standards, roles and time schedules established in contract specifications.

Asbestos remediation work may proceed when the owner specifically authorizes the initiation of the project, in writing.

PART 5 : EXECUTION OF WORK.

5.1 Work Standards.

The contractor is responsible for maintaining work conditions at all times in conformance with OSHA standards and asbestos removal guidelines established by the Connecticut Department of Health Services. This includes the following :

5.1.1 Personnel Protection Equipment.

All employees shall be provided with and trained in the proper use of all equipment, respirators and supplies to minimize exposure to asbestos during work operations as specified in Section 1.6.1 - 1.6.7 of the document entitled "CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the Connecticut Department of Health Services.

5.1.2 Worker Protection Procedures.

All employees, inspectors, authorized visitors, or any individual who enters the work zone shall conform to the procedures established in Section 1.6.8.1 - 1.6.8.3 of the document entitled " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ".

A copy of these procedures shall be posted at all points of entry to the work zone. The contractor is responsible for limiting access to the work zone to individuals who abide by these procedures. The inspector shall oversee the control over entry into the work zone and shall enforce these procedures when necessary.

5.2 Decontamination Enclosure System.

Before initiating work on any given day, a properly constructed decontamination enclosure system shall be in place at all points of entry into the work zone. The inspector shall evaluate and approve the integrity of the enclosure system(s) prior to the commencement of asbestos removal work on any given day.

5.2.1 Features.

The enclosure system shall be constructed with suitable Building Code conforming framing and built according to the drawings specified in the contractor's "Work Zone Construction Plan" as submitted according to part 4.2.4 of these specifications. The contractor shall, at all times, maintain the decontamination enclosure system with a proper functioning worker decontamination enclosure (with an integral equipment room, shower room, and a clean room), an equipment decontamination enclosure (with an integral washroom and holding area) and highly visible, controlled, and properly posted entry points.

In all cases, access between contaminated and uncontaminated areas shall be through an airlock. In all cases, access between any two rooms within the decontamination enclosure system shall be through a curtained doorway.

5.2.2 Maintenance and Monitoring of Enclosure Systems.

The contractor shall create and maintain a pressure differential between work areas and occupied areas by the use of negative air pressure equipment. Such equipment shall be maintained at the work site at all times in a properly functioning condition. This equipment shall be equipped with a high efficiency particulate filtration system, shall be sized to provide four air changes per area in the work area and shall conform to ANSI Z9.2 - 1979. The equipment shall feature an automatic shutdown of the system and/or warning lights to indicate improper pressure drop across the filters.

The air sampling professional shall periodically monitor the integrity of the negative air pressure equipment and shall conduct periodic chemical smoke tests to verify the effectiveness of the enclosure system. If any of these tests indicate a breakdown in the integrity of the decontamination enclosure system's negative pressure system, the inspector shall immediately inform the contractor to cease all removal operations. The contractor shall take immediate steps to reestablish negative pressure in the enclosure system. When the air sampling professional verifies the proper functioning of pressure in the enclosure system, asbestos removal work can resume.

5.3 Sequence of Work.

The removal project shall proceed in accordance with the sequence of work established during the preliminary conference as mutually agreed upon between the contractor and the owner. Work is divided into two areas - the boiler room and the basement rooms with exposed pipes - each of which will be completed as a separate unit by the schedule delineated in part 7 of these specifications.

5.4 Control Over Asbestos Remediation Work.

All work procedures shall be continuously controlled and monitored to assure that the building will not be contaminated. The following controls shall be instituted on each working day :

5.4.1 Start-Up.

Prior to work on any given day, the contractor's designated project foreman shall discuss the day's work schedule with the inspector to evaluate job tasks with respect to safety procedures and requirements specified to prevent contamination of the building or the employees. This includes a visual survey of the work area and the decontamination enclosure systems.

5.4.2 Access.

The contractor shall maintain control of access to all work areas to ensure the following requirements :

. Unauthorized personnel are prohibited from entering the area ;

. All authorized personnel entering the work area shall read the "worker protection procedures" which are posted at the entry points to the enclosure system, and shall be equipped with properly fitted respirators and protective clothing ;

. All personnel who are exiting from the decontamination enclosure system shall be properly decontaminated ;

. Asbestos waste which is taken out of the work area must be properly bagged and labelled in accordance with these specifications. The surface of the bags shall be decontaminated. Asbestos leaving the enclosure system must be immediately transported off site or immediately placed in temporary storage on site, in accordance with the requirements described in part 5.4.5 of these specifications.

. Any material, equipment, or supplies which are brought out of the decontamination enclosure system shall be cleaned and decontaminated by wet cleaning and/or HEPA vacuuming of all surfaces.

The inspector shall be responsible for monitoring the integrity of this system of access control and shall immediately inform the contractor of any deviations from the above requirements. The inspector shall also have the authority to mandate

immediate corrections to the control of access which are necessary to prevent the building from becoming contaminated with asbestos.

5.4.3 Air Quality Monitoring.

Air sampling shall be conducted by the owner to ascertain the integrity of controls which protect the building from asbestos contamination. Independently, the contractor shall monitor air quality within the work zone to ascertain the protection of employees and to comply with OSHA regulations.

5.4.3.1 Owner's Responsibility.

The owner's air sampling professional shall collect and analyze air samples during three time periods :

. Pre-abatement Sampling Period. The air sampling professional shall collect a sufficient number of air samples, inside and outside of the work area, to establish background air quality conditions. At least one sample will be taken outside of the building.

. Abatement Period. Samples shall be taken on a daily basis during the work period. A sufficient number of area samples shall be taken inside the work area and decontamination enclosure system, outside of the work area, at the exhaust of the negative pressure system, and outside of the building to judge the degree of cleanliness or contamination of the building during removal.

The air sampling professional shall provide a continual evaluation of the air quality of the building during removal, using his/her best professional judgements in perspective of the State Department of Health Services guideline of .01 fibers/cc. and the background air quality established during the pre-abatement period. If the air sampling professional determines that the building air quality has become contaminated from the project, the inspector shall immediately inform the contractor to cease all removal operations and implement a work stoppage clean-up procedure. The contractor shall conduct a thorough cleanup of areas of the building designated by the inspector. No further removal work can take place until the air sampling professional has determined that the building air has been decontaminated.

. Post Abatement Period. The air sampling professional shall conduct air sampling following the final cleanup phase of the project, once the "no visible residue" criterion has been met. A sufficient number of samples, collected aggressively, will be taken to determine the final air concentration, in perspective of the "clearance guideline" of .01 fibers / cc.

5.4.3.2 Contractor Responsibility.

The contractor shall independently retain an air sampling professional to monitor airborne asbestos concentrations in the work zone and to establish conditions and work procedures for maintaining compliance with OSHA regulations 29 CFR 1910.1001 and 1926.58.

The contractor's air sampling professional shall document all air sampling results and provide a report to the inspector within 24 hours after each work day.

5.4.3.3 Air Sampling Methods.

All air sampling shall be conducted in accordance with methods described in OSHA standards 29 CFR 1910.1001 and 1926.58. All air samples shall be conducted in a manner that will provide a minimum detection limit of .01 fibers / cc.

5.4.4 Asbestos Removal Procedures.

The contractor shall be responsible for the safe and methodical removal of asbestos from the work zone. All removal procedures shall be in conformance with section 3.2.2 - 3.2.5 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS REMOVAL AT PUBLIC BUILDINGS ", published by the Connecticut Department of Health Services. At all times, negative pressure shall be maintained in the work zone, relative to the building outside of the decontamination enclosure system.

The inspector shall make periodic evaluations of removal work procedures and shall enforce all safety procedures which are outlined (or referenced) in these specifications.

5.4.5 Asbestos Waste.

All asbestos waste shall be bagged in 6 mil plastic, labeled with danger placards as specified in 29 CFR 1910.1001 (g) (2), and transported to a landfill facility which is approved by the Department of Environmental Protection for disposal of asbestos.

Asbestos may be temporarily stored on the owner's premises outside of the work zone under the following circumstances :

- The bagged asbestos is thoroughly cleaned off by wet sponging the surface of the bag in the washroom of the decontamination enclosure system ;

- The bagged asbestos taken out of the decontamination enclosure system shall be immediately placed in a dumpster with a locking metal cover. At the end of each work day the top of the dumpster shall be closed and locked ;

. The dumpsters are placed in an area of the property designated by the owner. The owner reserves the right to require the contractor to move the dumpster to a different location or to order them to be removed from the premises. In no case shall the asbestos remain on the owner's premises longer than 72 hours after the completion of the project.

The asbestos shall be transported and disposed in accordance with Section 22a-209-8(i) of the administrative regulations of the Department of Environmental Protection and Section 3.7.1 of the document entitled, " CONNECTICUT STATE DEPARTMENT OF HEALTH SERVICES MODEL CONTRACT SPECIFICATIONS FOR ASBESTOS ABATEMENT AT PUBLIC SCHOOL BUILDINGS ", published by the State of Connecticut Department of Health Services.

5.4.6 End of Day Clean-up.

At the completion of each work day, a work stoppage clean-up procedure will be conducted by the contractor. The purpose of this clean-up is to remove all loose asbestos from the work zone and to inhibit the release of fibers to the air in the work room. This procedure should include the following steps :

. Bagging of all loose asbestos and decontamination of the bag surfaces in the washroom of the decontamination enclosure ;

. Wet cleaning of the floor of the work zone ;

. Visual inspection of the entire work zone for areas of loose asbestos ;

. Securing the work zone. This entails the sealing and posting of the decontamination enclosure system and locking the doors of the room where the removal is taking place.

5.5 Final Clean-up of Work Zone.

Following the completion of all asbestos removal work in a given area, the following clean-up, inspection and clearance procedure will be followed by the contractor and the inspector :

5.5.1 Initial Clean-up.

Following the last day of asbestos removal, the work stoppage clean-up procedure will be instituted, followed by a wet cleaning of all surfaces in the work zone. All visible accumulations of asbestos material and debris will be removed at this stage.

5.5.2 HEPA Vacuum Clean-up.

After the initial clean-up, the contractor shall allow

all areas of the work zone to dry, and will clean all surfaces with a HEPA filtered vacuum. After this clean-up, the contractor shall wait 24 hours and then shall reclean all surfaces with a HEPA filtered vacuum.

After the second clean-up, the inspector shall evaluate the adequacy of the decontamination process. If the inspector finds visible accumulations of dust or bulk asbestos containing materials in the work zone, the contractor shall repeat the cleaning, at his/her expense, until the area is declared as clear of visible accumulations of dust and asbestos.

Following the inspector's initial clearance of the work zone, the contractor shall remove the outer layer of plastic from the walls and floors, but shall keep the windows, doors and HVAC vents sealed. The decontamination enclosure system and the negative pressure system shall remain in place. Other equipment, materials, and sealed drums (previously cleaned as above) shall be removed from the equipment decontamination enclosure system at an appropriate time in the cleaning sequence.

5.5.3 Initial Clearance Test.

Twenty four hours after the work zone is totally dismantled, after all of the contractor's equipment, supplies and waste (including the outer layer of plastic) have been removed from the room, the inspector shall make a final visual inspection of the work area. If this inspection reveals no visible dust, the contractor shall remove the second layer of plastic sheeting and all barriers, with the exception of the plastic over the windows and the barrier between the work zone and the outside.

The air sampling professional shall, at this stage, conduct the post abatement air monitoring. The maximum acceptable levels for these air samples shall be .01 fibers / cc. or less, or a level equal to or less than the average asbestos level determined in the initial background samples taken outside the building.

Areas which do not comply with the standards specified above shall continue to be cleaned by the contractor at his / her expense until the specified standard is achieved as evidenced by the results of air testing.

5.5.4 Reinstallation of Displaced Equipment.

After the inspector has cleared the work area as clean from visible dust, and after the air sampling professional has determined that the area has achieved background air quality relative to the standards specified above, all remaining seals and barriers shall be dismantled by the contractor.

The contractor shall relocate all objects, which were moved to temporary locations during the course of the work,

back to their proper positions. The contractor shall resecure mounted objects, which were removed during the course of the project, back to their former positions. The contractor shall reestablish HVAC, mechanical and electrical systems, which were temporarily shut down during the project, in conformance with all applicable building, mechanical and electrical codes. All existing filters shall be disposed, as asbestos contaminated, and replaced with new filters.

PART 6 : LOCATIONS OF ASBESTOS REMOVAL PROJECTS IN THE BUILDING.

Asbestos is to be removed in two areas in the building - the boiler room, and the basement rooms with steam pipes. The contractor is responsible for removing all asbestos from these locations.

6.1 Boiler Room.

Figure 1 illustrates the sites and approximate areas where asbestos was discovered in this room. The contractor is responsible for removing all of the asbestos in this room. All of the asbestos in this room shall be removed in accordance with the specifications described in this document.

Following the removal of asbestos, the boilers, the steam pipes and all surfaces which were stripped during the project will be reinsulated with a material which is acceptable to the owner.

6.2 Basement Rooms

The contractor is responsible for removing all asbestos from all of the rooms located in the basement. Asbestos is present on the surface of all steam pipes which are located in the storage room, the bathroom, and any other areas of the basement where asbestos is evident.

Following the removal of asbestos, all of the pipes shall be reinsulated with a material which is acceptable to the owner.

PART 7 : SCHEDULE.

Asbestos remediation shall commence after July 1, 1987, after the building owner authorizes the initiation of the projects. The remediation projects shall take place when school classes are out of session. Under no circumstances shall asbestos be removed while non essential staff are present in the building.

All asbestos shall be removed from the building by August,

8, 1987. All cleaning and inspections, air sampling, and recleaning shall be completed no later than August 20, 1987. The contractor shall not be released from the job until the following clearances have been obtained :

7.1 Inspection Clearance.

The inspector shall declare the project areas and all areas in the building that were affected by the project as "clean", when all visible accumulation of asbestos and dust have been removed from these locations.

7.2 Air Quality Clearance.

The air sampling professional shall declare the air quality in the building as acceptable for occupancy when the post abatement air sample analyses indicate that airborne asbestos have achieved background levels (or better) according to the standards established in these specifications.

7.3 Final Reoccupancy Clearance.

The building owner will perform a reoccupancy inspection of all work areas to ascertain the general condition of the rooms and the fixtures and to evaluate the quality of any reinsulation, restoration or replacement of materials required where the asbestos has been removed.

The owner shall declare the areas as acceptable for reoccupancy when he is satisfied that all aspects of the contractor's work have been completed to his satisfaction.

The entire building shall be ready for reoccupancy by no later than August 24, 1987. Any deviations or extensions of this schedule shall require the written authorization from the building owner.

GUIDE FOR THE SELECTION OF A CONTRACTOR

The thoroughness and the degree of safety involved in an asbestos removal project depend largely upon the experience and competence of an asbestos remediation contractor. There are currently no state or federal regulations which review or license the contractors who perform this work. Therefore, it is extremely important that the School District thoroughly reviews the qualifications of prospective bidders for the removal project. This section outlines criteria for selecting the best contractor to perform the work. There are two phases involved in the process : the initial screening of companies interested in submitting a proposal for the work and the detailed review of contractors qualifications.

PHASE I : INITIAL REVIEW OF APPLICATIONS FOR A PROPOSAL.

This stage pertains to the initial screening of contractors who are interested in submitting a proposal to perform the asbestos remediation in the schools. The School District should initially advertise for a qualifications statement from prospective bidders. The qualifications statement should include the following information :

A. Record of experience in asbestos removal with names of the building owners of past projects;

B. Names and training of personnel who would perform the removal work;

C. Any record of violations of federal or state asbestos regulations over the past ten years ;

D. Affadavit regarding any projects which were prematurely terminated due to contract violations or building contamination incidents.

E. Statement of liability insurance coverage ;

F. Other information pertinent to asbestos removal.

The School District should carefully scrutinize these qualifications and select a list of qualified firms to submit a full proposal for the removal projects. The review should include a check of all references from previous projects which includes phone contacts to the building owners or the clerk of the works or inspectors of these projects to discuss the quality of work performed by the contractor. The affadavit regarding past violations should be checked by contacting the Environmental Protection Agency's Region I Asbestos Coordinator, OSHA, and the Connecticut Department of Health Services.

PHASE II : SELECTION OF THE CONTRACTOR.

When a list of qualified contractors is obtained, the School District should invite these firms to review all areas of the buildings which are scheduled for remediation. After a tour of all of the areas, followed by a question and answer period, the contractors will be instructed to develop a full proposal for all asbestos remediation described in the contract specifications with a bid quote for the project.

The final stage of screening before selection occurs is an interview process with one or more firms whose proposals are considered superior to the School District. The screening committee should be composed of 3 - 5 individuals including the Superintendent of Schools, the School District's Business Manager, and an asbestos inspector. The interview should include a discussion of the scope of the projects, the schedule, strategies for remediation, equipment available and other issues pertinent to completing the project in accordance with the specifications of the contract.

The selection should be based both on the competetiveness of the cost and the competence of the firm in safely completing each project in a timely manner. However, in no case should any question regarding the contractor's qualifications be superceded by a relatively lower cost.