

AHERA Asbestos Management Plan Update

Elmira High School 24936 Fir Grove Ln Elmira, Oregon 97437

Prepared for:

Fern Ridge School District #28J

March 2023 Project No.: 52743.000

Tab Number

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TAB 1

General Data

DISTRICT DATA

School District:	Fern Ridge School District 28J
District Type:	Public
District Address	88834 Territorial Road
	Elmira, Oregon 97437
District Phone	541.935.2253
SITE DATA	
Site Name:	Elmira High School
Site Address:	24936 Fir Grove Lane
	Elmira, Oregon 97437
No. of Students:	354
No. of Staff:	43
No. of Custodial:	3

KEY DISTRICT PERSONNEL

The following individuals have ongoing responsibilities in developing and maintaining the District's Asbestos Program. Their general responsibilities relative to asbestos activities are also listed.

Superintendent

Gary Carpenter 88834 Territorial Road Elmira, Oregon 97437 541.935.2253

The Superintendent has overall responsibility for ensuring compliance to the School District's policies and the successful operation of its programs. This responsibility extends to overall responsibility for the District's activities relative to asbestos-containing materials. The Superintendent should approve the appointment of the LEA Designate.

LEA Designate

James Storey 88834 Territorial Road Elmira, Oregon 97437 541.935.2253

The Local Education Agency (LEA) Designate is required by the Final Rules to ensure the District's continuing compliance with the AHERA requirements. The LEA Designate's specific requirements are described in Section 763.84 of the Final Rules. The LEA Designate must ensure that all records are maintained, satisfactory training provided, notifications sent, and Management Plans are available in compliance with the Final Rules.



ACCREDITED INSPECTOR/MANAGEMENT PLANNER

The following accredited Management Planner and Inspector performed inspection and assessments of suspected asbestos-containing building materials at this school district facility. The following Management Planner(s) has recommended appropriate response actions for friable, non-friable, known, or assumed building materials where indicated. All of the above-listed tasks have been performed in accordance with 40 CFR, Part 763, Subpart E.

Jeff Heeren Management Planner/Asbestos Inspector PBS Engineering and Environmental Inc. 3500 Chad Drive, Suite 100 Eugene, Oregon 97408 Accreditation: IMR-22-4941A

Signature

Date

LABORATORY ACCREDITATION

This asbestos management plan update is based on sample results from a Pre-Renovation Hazardous Building Materials Survey completed by PBS Engineering and Environmental Inc. in September 2014. The following laboratory was utilized for analysis of bulk samples for asbestos content using Polarized Light Microscopy (PLM) with dispersion staining technique. Refer to the survey report for copies of laboratory reports, and analyst signatures in accordance with Section 763.93. As indication that the laboratory meets the applicable requirements of Section 763.87, the laboratory's EPA accreditation number is listed below. All work was performed in accordance with procedures described in 40 CFR, Part 763, Subpart E.

LabCor Portland, Inc. 4321 S Corbett Avenue, Suite A Portland, Oregon 97239 503.224.5055 NVLAP Lab Code: 200741-0



THIS IS TO CERTIFY THAT

JEFF HEEREN

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE for ASBESTOS INSPECTOR / MANAGEMENT

PLANNER REFRESHER

In accordance with TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR

Cauraa	Data
Course	Date:

03/23/2022

Course Location:

Certificate:

Online,

IMR-22-4941A

For verification of the authenticity of this certificate contact: PBS Engineering and Environmental Inc.

4412 S Corbett Avenue

Portland, OR 97239

503.248.1939



CCB #SRA0615 4-Hr Training

AHERA is the Asbestos Hazard Emergency Response Act enacting Title II of Toxic Substance Control Act (TSCA)

Expiration Date: 03/23/2023

ander Fridly

Andy Fridley, Instructor

TAB 2

LEA Designate Documentation

The school must designate and train a person to ensure compliance with the requirements of Section 763.84 of the AHERA final rules. The responsibilities of the LEA designate are listed below and are taken directly from the federal register.

LEA Designate

James Storey 88834 Territorial Road Elmira, Oregon 97437 541.935.2253

LEA Designate Training

Course Name: Asbestos Class III Operations & Maintenance Refresher Course Training Date: TBD Total Course Hours: 16

Course Description:

For anyone who performs small-scale maintenance or repair activities that may impact asbestoscontaining materials (ACM). This course provides hands-on training, so workers can safely perform routine maintenance duties on or around ACM. Examples of Class III asbestos work include repairing or replacing broken pipes or valves that have asbestos wrapping, replacing damaged floor or ceiling tiles, drilling into asbestos wallboard, work on light fixtures, replacing roofing tiles, repairing window glaze or putty and other general building maintenance. This course fulfills the requirements of AHERA, Chapter 40, Part 763 and Federal OSHA 29, CFR, 1926.1101.

LEA Designate Responsibilities

- 1. Ensure that the activities of any persons who perform inspections, reinspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with Subpart E of the Final Rules.
- Ensure that all custodial and maintenance employees are properly trained as required in Subpart E of the Final Rules and all other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration Asbestos Standard for Construction, the EPA Worker Protection Rule, or applicable State regulations).
- 3. Ensure that workers and building occupants, or their legal guardians are informed at least once each school year about inspections, response actions, and post-response action activities, including periodic reinspection and surveillance activities that are planned or in progress.



- 4. Ensure that all short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations of ACBM and suspected ACBM.
- 5. Ensure that all warning labels are posted in accordance with Section 763.95.
- 6. Ensure that all management plans are available for inspection and notification of such availability has been provided as specified in the management plan under Section 763.93(g).
- 7. Consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under the Final Rules.



TAB 3

School Buildings

AHERA GENERAL DATA SHEET

Office of School District Services

Oregon Department of Education 255 Capitol Street NE Salem, OR 97310

Elmira High School	Fern Ridge School District 28J	Lane
Name of School Building	LEA (Center)	County
24936 Fir Grove Lane	Elmira	97437
Address	City	Zip Code
541-935-8200	James Storey	541.935.2253
Building Telephone Number	District's Asbestos Program Manager	Telephone Number

CONSTRUCTION DATA

Year of Construction	on:	1964					
Addition Dates:		1967, 1969, 1	974, 1976, 1	983, 1	985, 1999, 200)1	
Construction Type	:	Steel	X Wood	<u>X</u>	Concrete _	X Masonry	Х
Roof Framing:		Steel	Wood	<u>X</u>	Concrete _		
Heating System:		Steam	Hot Wa	iter	X Force	d Air <u>X</u>	
		Electric Baseb	oard		_ Heat Pump		
Renovation:		Yes X	No _		Year(s)	1983	
	PANCY						
	Education						
No. of School Occupants:	Staff:	43 Stude	nts: 354	Main	t. /Custodial St	taff: 3	



INSPECTOR AND MANAGEMENT PLANNER

Name:	Jeff Heeren (Management Planner)				
Business:	PBS Engineering an	d Environme	ntal Inc.		
Certification:	IMR-22-4941A Exp. Date: 3/23/202				
Name:	Mason Kazer (Inspe	ctor)			
Business:	PBS Engineering and Environmental Inc.				
Certification:	IRO-22-0099C	Exp. Date:	3/2/2023		
Course Provider:	PBS Engineering and Environmental Inc.				

SUMMARY DATA SHEET

Facility Name and Address: Elmira High School – 24936 Fir Grove Ln, Elmira, OR 97437

Preparer Name and Phone No.: _ Jeff Heeren 541.686.8684

Date: 1/2023

		SURFACING	THERMAL	SYSTEM INSU	LATION	MISC.
CATEGC	DAMAGE DRY		LINEAR FT	SQ. FT.	H. F.	
1. Dam	naged or ificantly Damaged		-	_	-	
	naged Friable acing	3 SF				
-	ificantly Damaged ble SURFACING	-				
Sign	naged or ificantly Damaged ble MISC					15 SF
	M with Potential Damage	4,000	-	-	-	-
	M with Potential Significant Damage	-	-	-	-	-



7. Any Remaining Friable or Suspect Friable ACBM	-	-	-	-	8 EA
Total Friable ACBM	4,003 SF	-	-	-	15 SF 8 EA

8. ACBM – Nonfriable or Suspect Nonfriable*			Refer to Inspection Data
Total ALL ACBM			Refer to Inspection Data

This site was investigated for asbestos-containing building materials (ACBM) by PBS Engineering and Environmental Inc. The list indicates the presence of friable and non-friable ACBM within the building. Known ACBM means that materials were sampled and tested positive (asbestos-containing). Suspect ACBM means that materials were located and not sampled, but based on the experience of the inspector the materials were assumed to contain asbestos.

Known	Known	Suspect	Suspect
Friable	Non-Friable	Friable	Non-Friable
ACBM?	ACBM?	ACBM?	ACBM
Yes	Yes	No	Yes

SCHOOL DISTRICT RESPONSIBILITIES

The chart below indicates the District's responsibilities to enact the major activities outlined in the management plan and AHERA regulations. The responsibilities are based on the known or suspected presence of friable and non-friable ACBM.

	Survey Findings		
Activity	Known or Suspect Friable ACBM	Known or Suspect Non-Friable ACBM	No Asbestos Containing Material
LEA Designate Training	X	X	-
Custodial / Maintenance Training	Х	*	-



Initial Cleaning	-	-	-
Inspection Report & Management Plan on File and Available	Х	Х	-
O & M Program	Х	*	-
Periodic Surveillance and Reinspections	Х	Х	-
Annual Notification	Х	х	-

Legend:

- X Must enact
- Not required
- * Recommended, but not required



TAB 4

Building Inspections

BUILDING INSPECTION BACKGROUND

A pre-renovation asbestos survey of the site was conducted by PBS Engineering & Environmental Inc. in September 2014 in accordance with Occupational Safety and Health Administration (OSHA) requirements under CFR 1910.1001 and Lane Regional Air Protection Agency (LRAPA) Title 43. Results of that inspection are provided as a portion of this Asbestos Management Plan (AMP) for the site. As part of the survey, PBS conducted an inspection and sampling of suspect ACBM. All inspection activities were conducted by EPA AHERA-accredited Inspectors, and all analysis of asbestos bulk samples was completed by NVLAP-accredited laboratories.

INFORMATION AND ASSESSMENTS

Based on PBS' review of all inspection data, the following information is provided in this report:

- 1. Types, general locations, and general condition of confirmed and suspect friable and nonfriable ACBM in the buildings.
- 2. Categorization of ACBM into appropriate AHERA assessment categories as required under 40 CFR § 763.88.
- 3. A list of abatement options, including prioritization, for managing ACBM (Management Plan Tab 5).
- 4. Cost estimates for the various abatement options of Immediate Health Concerns, High Concerns, and most Moderate Concerns (Management Plan Tab 5).

The assessments discussed in this report are based on the potential for future damage, disturbance, air erosion factors, friability, proximity to air currents, and present condition of ACBM as outlined and recommended in 40 CFR § 763.88. The following assessment categories have been established: Immediate Health Concern, High Concern, Moderate Concern, and Low Concern. The material assessments are based on a physical inspection of each material conducted in December 2022.

Note: This AMP Update report is intended to satisfy the Three Year Reinspection requirement in 40 CFR § 763.85.

SUMMARY OF ASBESTOS-CONTAINING MATERIALS

The following materials tested positive, or, based on the experience of PBS field personnel, were not tested and should be considered asbestos-containing. Materials with mixed results are considered positive. Materials not sampled may contain asbestos and should be tested to verify asbestos content prior to impact through demolition, renovation, etc.



Material	Location	Approximate Quantity
Floor Tile /Mastic	Rooms: 6, 7, 11-15, 22, 23, 33, and Media Center ¹	11,050 SF
Textured "Popcorn" Ceiling Material	Exposed in Media Center and Room 3 Concealed above lower ceiling in Rooms 2 & 13 ²	4,000 SF (exposed)
Gypsum Board/Joint Compound/Texture ³	Wall, ceiling, and soffit finishes throughout original 1964 construction and 1967, 1969, and 1974 building additions	Not Quantified
Lab Countertops/Backsplashes	Room 19 and adjoining Prep Room, Room 21	325 SF
Cement Asbestos Board	Room 19 and adjoining Prep Room (fume hood lining)	30 SF
Wire Insulation (Stage Light Cords)	Theatre Control Room	8 EA
Miscellaneous Science Lab Accessories	Science Storage Room	1 Glove Woven Cloth on Beaker Holder

SF – Square Feet, LF – Linear Feet, EA – Each

Notes:

- 1. Asbestos-containing floor tile is concealed under carpet in some locations.
- 2. Additional remnant "popcorn" ceiling texture and associated overspray is assumed to be present above ceilings throughout the original 1964 building footprint.
- 3. Joint compound and orange peel type texture materials associated with gypsum board wall, ceiling, and soffit finishes have tested positive for asbestos in the areas identified above. It is possible that newer gypsum board finishes within these areas that have been installed as part of building renovation and alteration projects do not contain asbestos. PBS recommends additional testing of any gypsum board finishes within the areas identified above prior to impacting the finishes through renovation or demolition activities to verify asbestos content.



MATERIALS CONTAINING LESS THAN 1% ASBESTOS

Asbestos was detected in the following materials in concentrations of less than one percent. Under current regulations, the EPA, DEQ, and OSHA classify a material as asbestos-containing if analytical results indicate the material contains greater than 1% asbestos. However, OSHA regulations (29 CFR, 1910.1001, 29 CFR, 1926.1101 and interpretations) require that the material be handled at all times by personnel with appropriate asbestos training and that an OSHA defined competent person select appropriate work procedures and engineering control strategies during material handling operations.

Material	Location
Wall Panel Mastic, black	Throughout 1964 Original Buildings
Ceiling Tile Mastic, brown	1969 Addition – portions of Girls Locker Room ¹ , Training Room, and Storage Room

Notes:

1. Records reviewed by PBS indicate that ceiling tiles and associated mastic located in the Girls Locker Room and Equipment Storage Room were removed during a 2016 renovation project. PBS was not able to access the area to field verify the absence or presence of this material.



Known or suspected asbestos-containing building materials are listed below in order of hazard priority. The priorities are established by the Accredited Inspector(s) and Accredited Management Planner(s), and are based on the assessments. A material may be listed more than once if its location varies and if the assessment criteria also dramatically changes.

1.	MATERIAL LOCATION CATEGORY	Asbestos Insulated Wiring Theatre Control Room High to Moderate Concern Miscellaneous Material - Damaged or significantly damaged friable ACBM
2.	MATERIAL LOCATION CATEGORY	Miscellaneous Science Lab Accessories Science Storage Room Moderate Concern Miscellaneous Material - Damaged or significantly damaged friable ACBM
3.	MATERIAL LOCATION CATEGORY	Gypsum Wallboard/Joint Compound Throughout 1964, 1967, 1969, and 1974 building additions Moderate Concern Miscellaneous Material - Damaged or significantly damaged friable ACBM
4.	MATERIAL LOCATION CATEGORY	Spray-on Ceiling Media Center, Rooms 2, 3, and 13 Moderate Concern Surfacing Material - Damaged and friable ACBM
5.	MATERIAL LOCATION CATEGORY	Cement Asbestos Board Room 19 and adjoining Prep Room (fume hood) Low Concern Miscellaneous Non-friable ACBM or Assumed ACBM
6.	MATERIAL LOCATION CATEGORY	Lab Counter Top Room 19 and adjoining Prep Room, Room 21 Low Concern Miscellaneous Non-friable ACBM or Assumed ACBM
7.	MATERIAL LOCATION CATEGORY	Vinyl Floor Tile/Mastic Rooms 6, 7, 11-15, 22, 23, 33, and Media Center Low Concern Miscellaneous Non-friable ACBM or Assumed ACBM



1

PRIORITY NO.

HOMOGENEOUS AREA	Asbestos Insulated Wiring	
FUNCTIONAL SPACE	Theatre Control Room	
QUANTITY	8 EA	
DESCRIPTION		
Asbestos-containing wiri	ng is generally white and coarse in	texture.
ADDITIONAL SAMPLES TAKEN:	None	
ASSESSMENT	AHERA CLASSIFICATION	Miscellaneous Material - Damaged or significantly damaged friable ACBM
	CONCERN CATEGORY	High to Moderate Concern
CURRENT DAMAGE	Moderate to None	
UNDAMAGED AREA	Fair	
FRIABILITY	High to Moderate	
ACCESSIBILITY	Moderate	
DAMAGE POTENTIAL	High to Moderate	
DAMAGE TYPE	Flaking	
DAMAGE CAUSE	Age, Wear	

DISCUSSION

AHERA Classification - ACBM with potential for significant damage.

Woven asbestos wire insulation is exposed and subject to direct contact.

RESPONSE ACTIONS

Preventative Measures Prior to Abatement

Do not disturb material without proper training and protection.

Recommended Abatement Action

Remove using controlled non-isolated conditions: wet methods, HEPA vacuum, and proper worker protection.

Other Options



2

PRIORITY NO.

HOMOGENEOUS AREA	Miscellaneous Science Lab Accessories	
FUNCTIONAL SPACE	Science Storage Room	
QUANTITY	2 EA	
DESCRIPTION		
Woven asbestos glove Beaker holder with asbes	tos heat pad	
ADDITIONAL SAMPLES TAKEN:	None	
ASSESSMENT	AHERA CLASSIFICATION	Miscellaneous Material - Damaged or significantly damaged friable ACBM
	CONCERN CATEGORY	Moderate Concern
CURRENT DAMAGE	Moderate to None	
UNDAMAGED AREA	Fair	
FRIABILITY	High to Moderate	
ACCESSIBILITY	Moderate	May no longer be in use
DAMAGE POTENTIAL	Moderate	
DAMAGE TYPE	Flaking	
DAMAGE CAUSE	Age, Wear	

DISCUSSION

AHERA Classification - ACBM with potential for damage.

Items are in a worn condition and woven asbestos fibers are exposed to direct contact.

RESPONSE ACTIONS

Preventative Measures Prior to Abatement

Do not disturb material without proper training and protection.

Recommended Abatement Action

Remove using controlled non-isolated conditions: wet methods, HEPA vacuum, and proper worker protection.

Other Options



3

PRIORITY NO.

HOMOGENEOUS AREA	Gypsum Wallboard/Joint Compound
FUNCTIONAL SPACE	Throughout 1964, 1967, 1969, and 1974 building additions
QUANTITY	Not measured

DESCRIPTION

Manufactured panels typically 4 feet by 8 feet composed of compressed gypsum plaster with paper face and backing. Seams are covered with tape and joint compound and nail or screw locations are covered with joint compound only.

ADDITIONAL SAMPLES TAKEN:	None	
ASSESSMENT	AHERA CLASSIFICATION	Miscellaneous Material - Damaged or significantly damaged friable ACBM
	CONCERN CATEGORY	Moderate Concern
CURRENT DAMAGE	Moderate to None	Isolated areas of damaged wallboard, all less than approximately 3 SF
UNDAMAGED AREA	Good	
FRIABILITY	Moderate to Low	
ACCESSIBILITY	High	
DAMAGE POTENTIAL	High to Moderate	
DAMAGE TYPE	Impact, Water	
DAMAGE CAUSE	Maintenance, Water, Accidents	

DISCUSSION

AHERA Classification - ACBM with potential for damage.

Greater than 1 SF of damage noted in Theatre (backstage area), Women's RR, Conference Room, Mechanical Room HV-1,

RESPONSE ACTIONS

Preventative Measures Prior to Abatement

Do not disturb material without proper training and protection. Continue to implement Operations and Maintenance program.

Recommended Abatement Action

Repair material using trained workers.

Other Options



PRIORITY NO. 4

HOMOGENEOUS AREA	Spray-on Ceiling
FUNCTIONAL SPACE	Media Center, Rooms 2, 3, and 13
QUANTITY	4000 SF

DESCRIPTION

A material sprayed on to a ceiling substrate to create a textured appearance, provide acoustical dampening, condensation prevention or other purpose.

ADDITIONAL SAMPLES TAKEN:	None	
ASSESSMENT	AHERA CLASSIFICATION	Surfacing Material - Damaged and friable ACBM
	CONCERN CATEGORY	Moderate Concern
CURRENT DAMAGE	Moderate to None	Water damage in NW corner of Room 2 (upper ceiling)
UNDAMAGED AREA	Good	
FRIABILITY	High to Moderate	
ACCESSIBILITY	Moderate	
DAMAGE POTENTIAL	Moderate	
DAMAGE TYPE	Water	
DAMAGE CAUSE	Water	

DISCUSSION

AHERA Classification - Damaged friable surfacing ACM.

RESPONSE ACTIONS

Preventative Measures Prior to Abatement

Do not disturb material without proper training and protection. Continue to implement Operations and Maintenance program.

Recommended Abatement Action

Repair or remove damaged material using trained workers.

Other Options



MATERIAL	Cement Asbestos Board
FUNCTIONAL SPACE	Room 19 and adjoining Prep Room (fume hood)

DESCRIPTION

Manufactured cementitious sheets with asbestos fibers bound into the material's matrix. The sheets were generally held in place with nails or screws.

SAMPLE RESULTS	ASSUMED POSITIVE

ASSESSMENT Low Concern

Cement asbestos board was observed in the building. Before raising friability by sawing, drilling, etc., remove using wet methods and proper worker protection, modified isolation or full isolation depending upon application and quantity of material. A qualified project designer should determine appropriate method prior to abatement. Testing is not typically considered necessary since the inspector is usually able to visually identify the white asbestos fiber bundles bound into the cementitious matrix.

MATERIAL	Lab Counter Top
FUNCTIONAL SPACE	Room 19 and adjoining Prep Room, Room 21
DESCRIPTION	

Manufactured cementitious sheet material with asbestos fibers bound into the material's matrix. The lab top is thick, heavy, and generally designed to withstand laboratory conditions.

SAMPLE RESULTS POSITIVE

ASSESSMENT Low Concern

Lab counter surface was observed in the building. Before raising friability by drilling, sawing, sanding, etc., remove using wet methods and proper worker protection. A qualified project designer should determine the appropriate method and type of isolation prior to abatement.

MATERIAL	Vinyl Floor Tile/Mastic	
FUNCTIONAL SPACE	Rooms 6, 7, 11-15, 22, 23, 33, and Media Center	
DESCRIPTION		

Manufactured floor tiles typically 9 inches by 9 inches or 12 inches by 12 inches, composed of a dense vinyl matrix that often contains asbestos and is adhered to the substrate with a mastic that often contains asbestos.

SAMPLE RESULTS F	POSITIVE
------------------	----------

ASSESSMENT Low Concern

Vinyl floor tile and mastic are suspected to contain asbestos. Drilling, grinding, sanding, etc. will create friability. At a minimum, establish an operations and maintenance program. Prior to disturbing the tile, a qualified inspector should take samples that include both the tile and mastic, which adheres the tile to the floor substrate. Remove using full isolation if the tile and/or mastic is asbestos-containing (positive). Other methods may be acceptable; contact the local air pollution authority and worker protection division. Carpeting and reflooring is permitted if existing material remains undisturbed. Polarized light microscopy (PLM) analysis is not considered conclusive for this material due to the potential presence of many small fibers that are invisible under PLM magnification. All negative sample results of vinyl floor tile should be verified through scanning or transmission electron microscopy (SEM or TEM).



Photo 1. Damaged Gypsum Board/Joint Compound Ceiling Material in Theatre Backstage Area



Photo 2. Asbestos Heat Pads on Beaker Holders in Science Storage Room





Photo 3. Spray-on "Popcorn" Ceiling Texture concealed above Suspended-grid Lower Ceiling in Room 13



Photo 4. Damaged Gypsum Board/Joint Compound Wall in Women's Restroom





Photo 5. Damaged Gypsum Board/Joint Compound Soffit in Conference Room

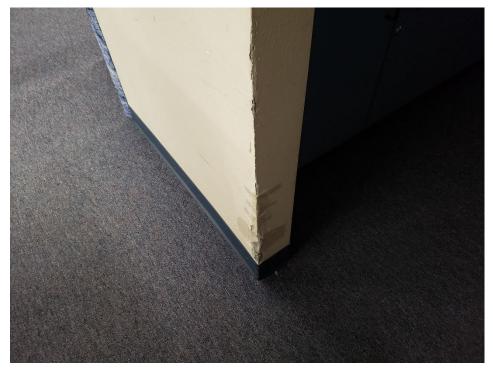


Photo 6. Damaged Joint Compound at Wall Edge in Media Center





Photo 7. Damaged Gypsum Board/Joint Compound Soffit in Room 3



Photo 8. Damaged Spray-on "Popcorn" Ceiling Texture concealed above lower Suspended-grid Ceiling in Room 2





Photo 9. Damaged Gypsum Board/Joint Compound Wall in Upper Gym over Boy's Locker Room



Photo 10. Damaged Gypsum Board/Joint Compound Wall in Upper Gym Mechanical Room

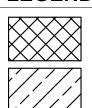


GENERAL NOTES

- 1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION ONLY.
- 2. BUILDING DRAWING FOOTPRINT MAY BE INACCURATE AND THE DRAWING IS NOT TO SCALE. ALL MATERIALS IDENTIFIED IN THE ASBESTOS MANAGEMENT PLAN SHOULD BE FIELD VERIFIED.
- 3. ACCESSIBLE AREAS OF THE SITE WERE REINSPECTED TO VERIFY THE PRESENCE OF PREVIOUSLY IDENTIFIED ASBESTOS-CONTAINING MATERIALS. WHEN OBSERVED, THE MATERIALS WERE NOTED ON THIS DRAWING.
- 4. ADDITIONAL ASBESTOS-CONTAINING FLOORING MATERIALS MAY BE PRESENT THAT ARE NOT REPRESENTED ON THIS DRAWING. IF ADDITIONAL SUSPECT FLOORING MATERIALS ARE ENCOUNTERED DURING BUILDING RENOVATION ACTIVITIES, THE MATERIALS SHOULD BE TESTED PRIOR TO IMPACT.
- 5. THIS DRAWING IS NOT INTENDED TO SERVE AS AN ABATEMENT, RENOVATION, OR DEMOLITION SPECIFICATION.

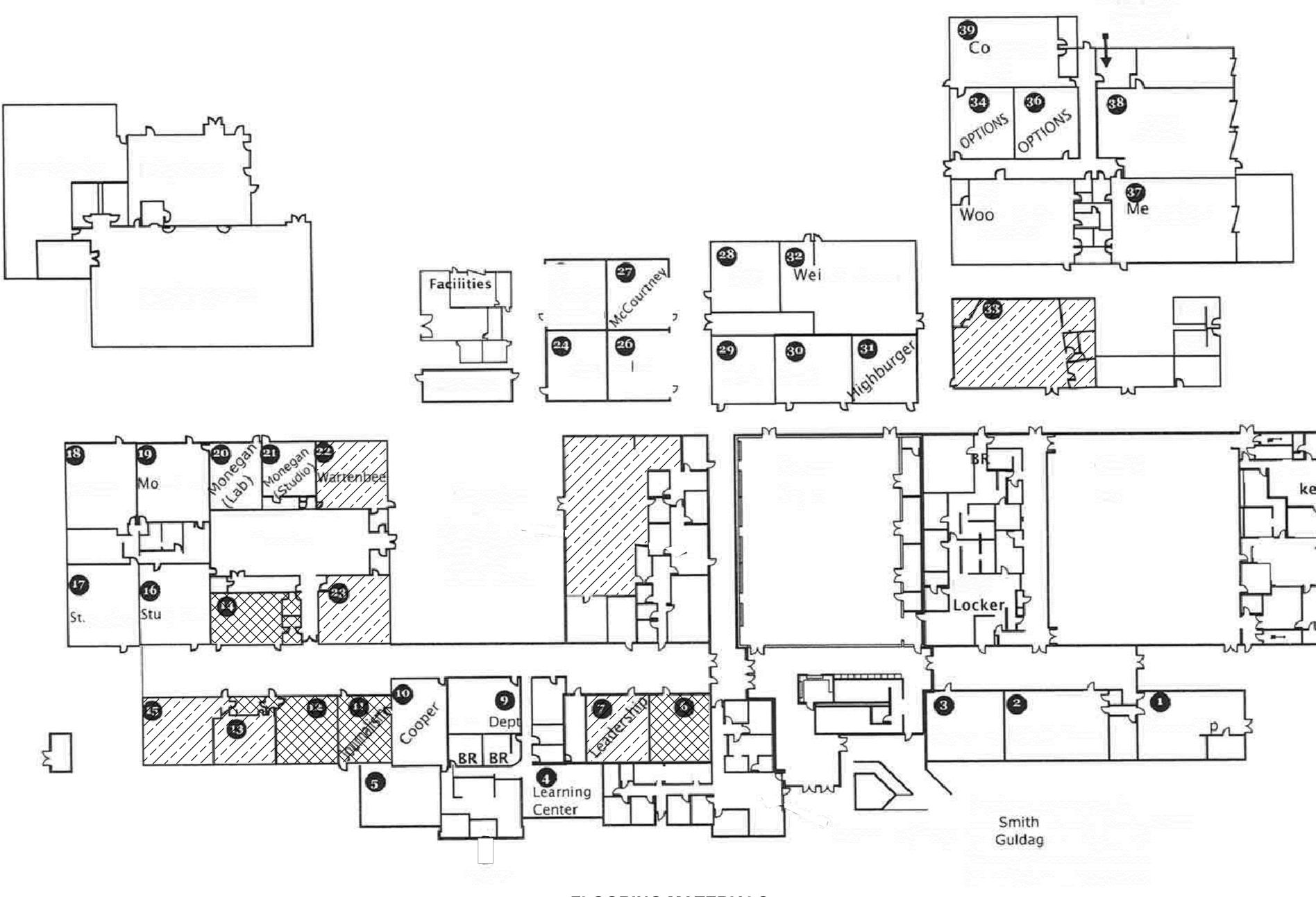
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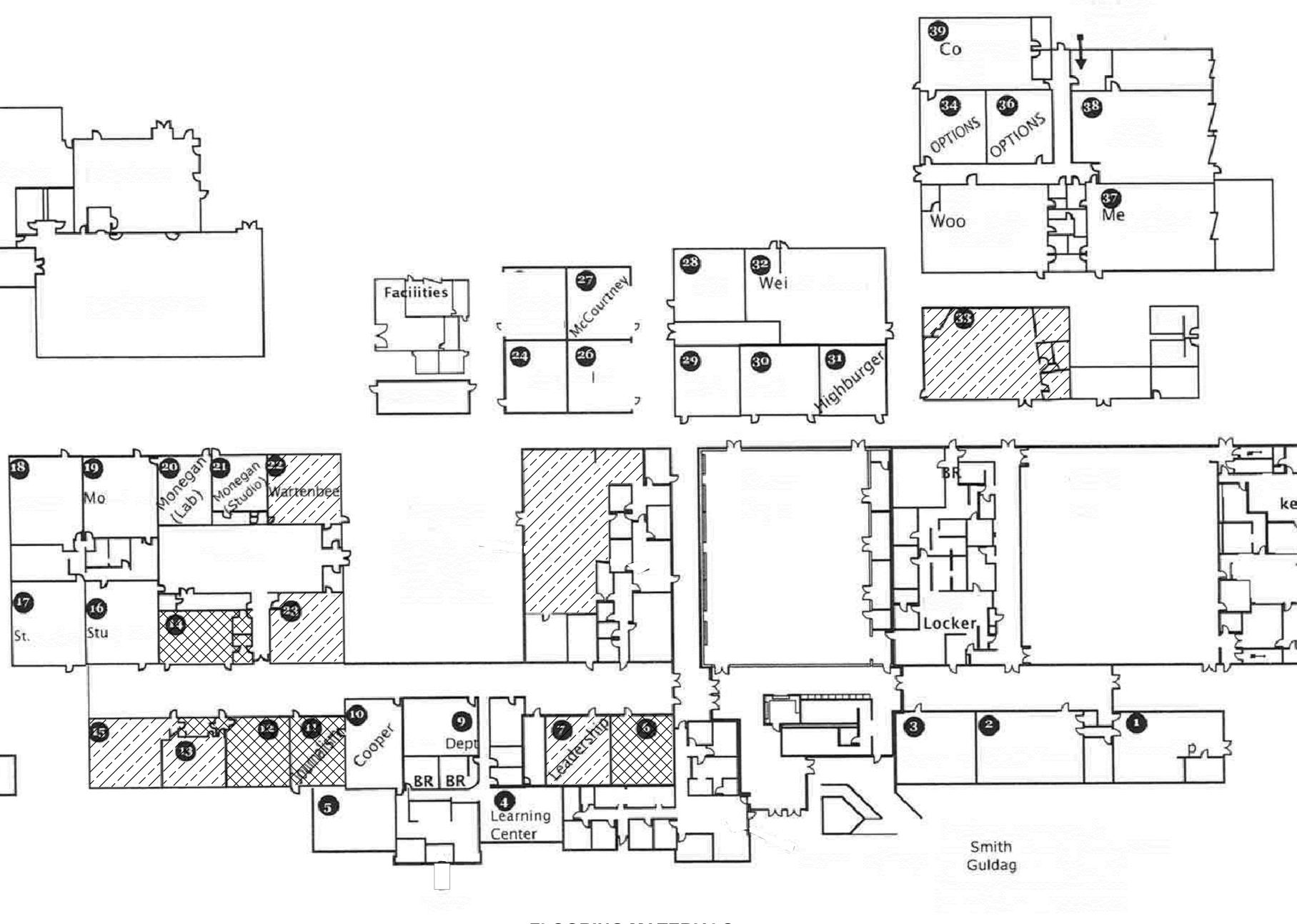
LEGEND



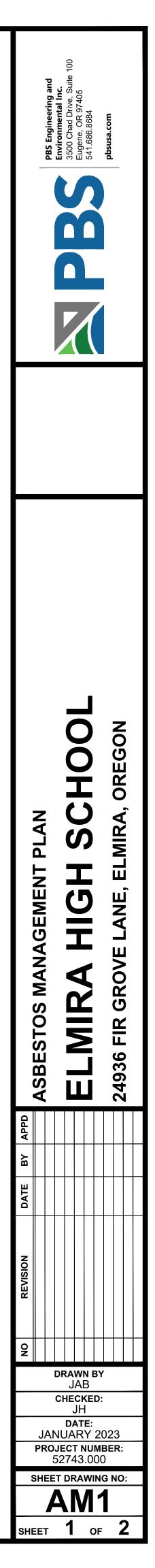
EXPOSED ASBESTOS-CONTAINING FLOOR TILE AND MASTIC

ASBESTOS-CONTAINING FLOOR TILE AND MASTIC CONCEALED UNDER CARPET





FLOORING MATERIALS





PREPARED FOR: FERN RIDGE SCHOOL DISTRICT

GENERAL NOTES

- 1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION ONLY.
- 2. BUILDING DRAWING FOOTPRINT MAY BE INACCURATE AND THE DRAWING IS NOT TO SCALE. ALL MATERIALS IDENTIFIED IN THE ASBESTOS MANAGEMENT PLAN SHOULD BE FIELD VERIFIED.
- 3. ACCESSIBLE AREAS OF THE SITE WERE REINSPECTED TO VERIFY THE PRESENCE OF PREVIOUSLY IDENTIFIED ASBESTOS-CONTAINING MATERIALS. WHEN OBSERVED, THE MATERIALS WERE NOTED ON THIS DRAWING.
- 4. THE EXTENTS OF ASBESTOS-CONTAINING GYPSUM BOARD/JOINT COMPOUND FINISHES INDICATED ON THE DRAWING ARE BASED ON HISTORIC TESTING AND PBS' BEST UNDERSTANDING OF BUILDING CONSTRUCTION AND BUILDING ADDITION BOUNDARIES. ADDITIONAL DELINEATION MAY BE REQUIRED PRIOR TO CONDUCTING BUILDING RENOVATION ACTIVITIES THAT IMPACT GYPSUM BOARD FINISHES.
- REMNANT ASBESTOS-CONTAINING "POPCORN" CEILING TEXTURE 5. HAS BEEN IDENTIFIED IN ISOLATED LOCATIONS THROUGHOUT THE ORIGINAL BUILDING FOOTPRINT. THE REMNANT MATERIAL IS CONCEALED ABOVE LOWER SUSPENDED GRID CEILING SYSTEMS. WHERE OBSERVED BY PBS DURING THIS REINSPECTION, THE CONCEALED MATERIAL IS NOTED ON THE DRAWING. ADDITIONAL CONCEALED MATERIAL AND ASSOCIATED OVERSPRAY IS LIKELY TO BE PRESENT. EXPOSED ASBESTOS-CONTAINING "POPCORN" CEILING TEXTURE IS STILL PRESENT IN THE AREAS IDENTIFIED ON THE DRAWING.
- 6. A TRACE AMOUNT OF ASBESTOS (<1%) WAS DETECTED IN BLACK MASTIC ASSOCIATED WITH WOOD WALL PANELING LOCATED IN VARIOUS LOCATIONS THROUGHOUT THE ORIGINAL BUILDING FOOTPRINT. THIS MATERIAL IS NOT SHOWN ON THE DRAWING.
- 7. THIS DRAWING IS NOT INTENDED TO SERVE AS AN ABATEMENT, RENOVATION, OR DEMOLITION SPECIFICATION.

JLL SIZE SHEET FORMAT IS 24X36; IF PRINTED SIZE IS NOT 24X36, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

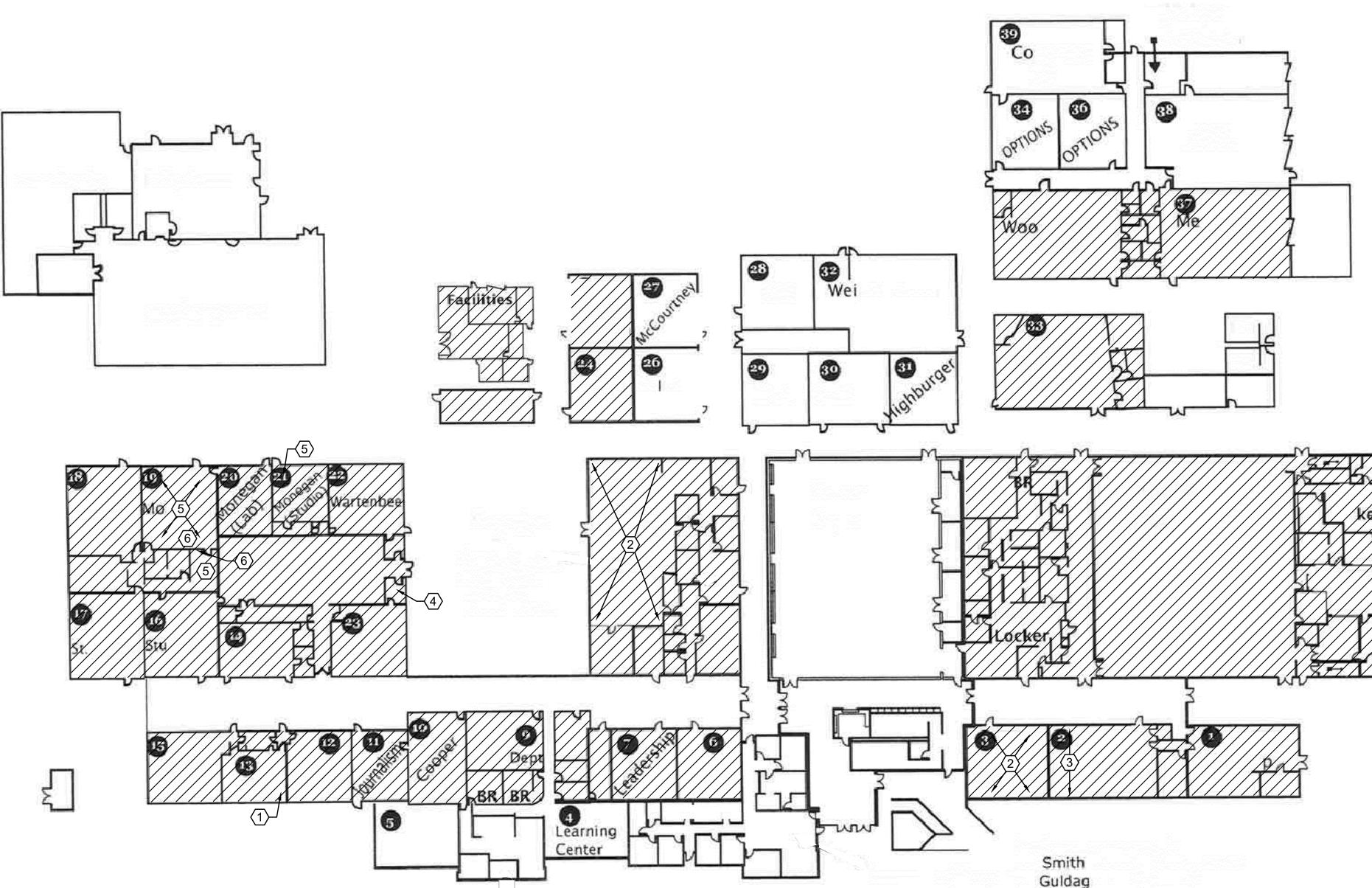
KEY NOTES

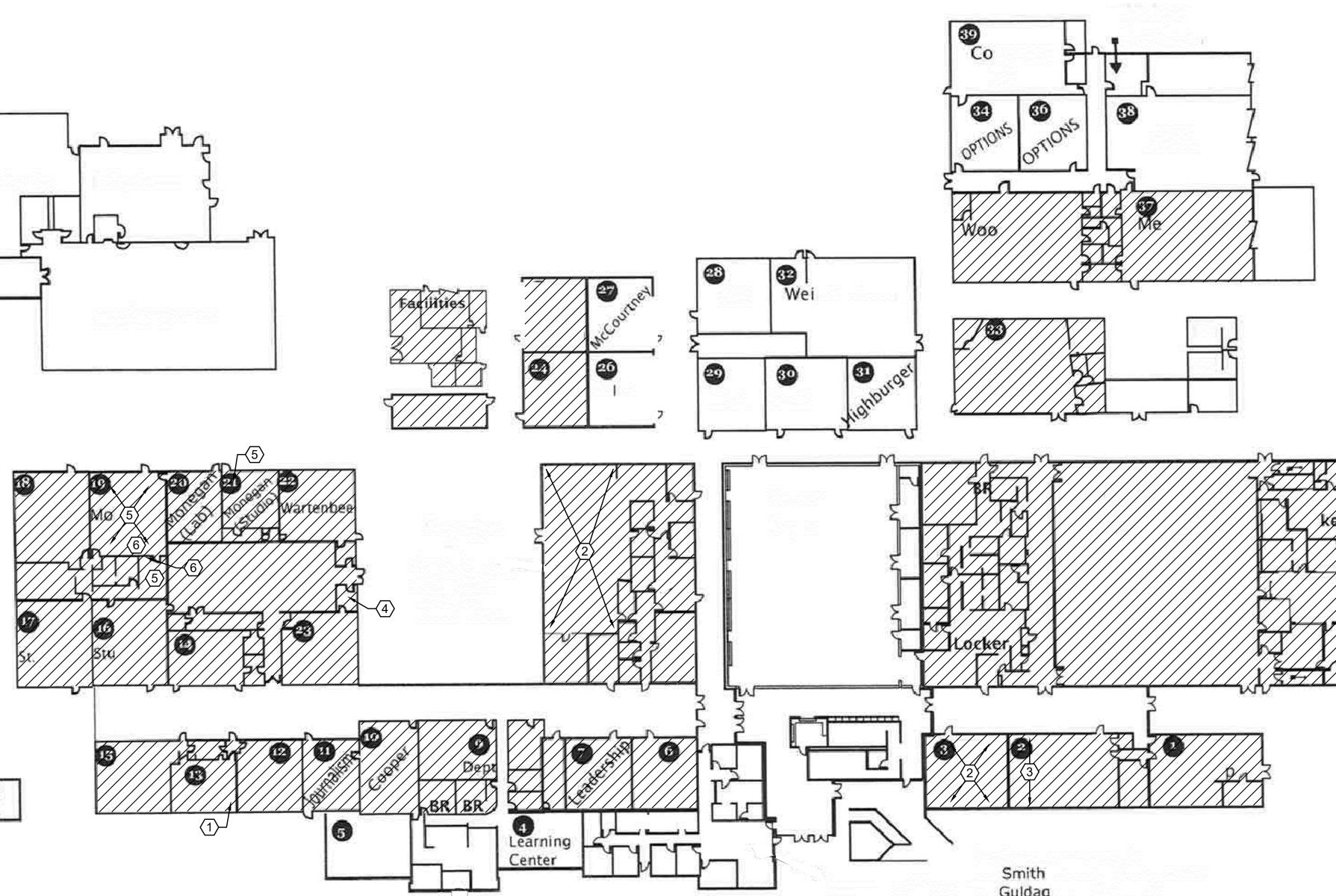
- (1) REMNANT ASBESTOS-CONTAINING "POPCORN" CEILING TEXTURE OBSERVED ON CONCEALED UPPER CEILING
- $\langle 2 \rangle$ EXPOSED ASBESTOS-CONTAINING "POPCORN" CEILING TEXTURE
- $\langle 3 \rangle$ ASBESTOS-CONTAINING "POPCORN" CEILING TEXTURE ON CONCEALED UPPER CEILING
- $\langle \overline{4} \rangle$ STAGE LIGHTS WITH ASBESTOS-CONTAINING WIRE INSULATION STORED IN THEATRE CONTROL ROOM
- $\langle 5 \rangle$ ASBESTOS-CONTAINING LAB COUNTERTOPS AND BACKSPLASHES
- $\langle 6 \rangle$ ASSUMED ASBESTOS-CONTAINING FUME HOOD LINING PANELS

LEGEND



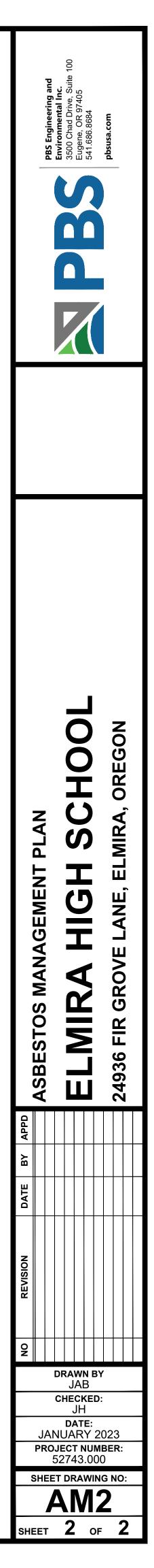
ASBESTOS-CONTAINING JOINT COMPOUND/ORANGE PEEL TYPE TEXTURE ON ORIGINAL GYPSUM BOARD WALL, CEILING, AND SOFFIT FINISHES

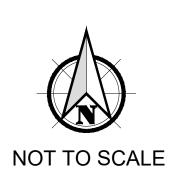






SURFACING AND MISCELLANEOUS MATERIALS





PREPARED FOR: FERN RIDGE SCHOOL DISTRICT

TAB 5

Response Actions

MATERIAL SUMMARY

Known or suspected friable ACBM are listed below in order of hazard priority. The priorities are established by the Accredited Inspector and Accredited Management Planner and are based on the material assessments. The assessments can be found under Tab 4 of this Management Plan. The material may be listed more than once if its location varies and if the assessment criterium also significantly changes.

Material	Location	Category	Preventive Measure	Interim Cost
Asbestos Insulated Wiring (Stage Lights)	Theatre Control Room	ACBM with potential for significant damage	Restrict access to light fixtures	\$ 0
Misc. Science Lab Accessories	Science Storage Room	ACBM with potential for damage	Remove materials	\$250
Gypsum Wallboard/Joint Compound	1964, 1967, 1969, and 1974 building additions	ACBM with potential for damage	Patch and repair areas of minor damage	\$2,000
Spray-on "Popcorn" Ceiling Texture	Media Ctr, Rooms 2,3, and 13	Damaged friable surfacing ACM	Repair or remove areas of minor damage	\$1,500

Total Cost for Preventive Measures\$3,750

Costs of Preventive Measures are estimates that assume that the School will either utilize their own trained personnel or retain a qualified abatement contractor. Consequently, associated costs such as air monitoring, contractor mobilization, and engineering fees cannot be estimated and are not included.



ABATEMENT SUMMARY

Based on the previous material assessments, logical abatement projects of specific areas have been defined and prioritized by the Accredited Management Planner. Abatement costs have been determined for materials determined to be an Immediate Health Concern, High Concern, or Moderate Concern. The District may have other criteria that influence the order, scope, and priority of abatement projects. This summary is intended as a guide and is not a mandate.

Material	Location	Abatement Cost
Asbestos Insulated Wiring (Stage Lights)	Theatre Control Room	\$1,600
Gypsum Wallboard/Joint Compound	1964, 1967, 1969, and 1974 building additions	NA – abate as necessary to facilitate other renovation/remodel projects
Spray-on "Popcorn" Ceiling Texture	Media Ctr, Rooms 2,3, and 13	\$40,000

Total Cost for Abatement of above-listed Materials: \$41,600



TAB 6

Statement of Review

Pursuant to section 763.84 and section 763.93 of the EPA AHERA regulations, each management plan must contain a true and correct statement, signed by the LEA designated person that certifies that the general LEA responsibilities have been met. This form is provided to assist you in complying with this portion of the AHERA regulations.

LEA Name:	Fern Ridge School District 28J
LEA Address:	88834 Territorial Road, Elmira, Oregon 97437
Designated Person Name:	James Storey
Designated Person Address:	88834 Territorial Road, Elmira, Oregon 97437
Designated Person Phone:	541.935.2253

ASSURANCES

- 1. The activities of any persons who perform inspections, reinspections, and periodic surveillance, develop and update management plans, and develop and implement response actions, including operations and maintenance, are carried out in accordance with Part 763.
- 2. All custodial and maintenance employees are properly trained as required in Part 763 and all other applicable Federal and/or State regulations (e.g., the Occupational Safety and Health Administration Asbestos Standard for Construction, the EPA Worker Protection Rule, or applicable State regulations).
- 3. All workers and building occupants, or their legal guardians, are informed at least once each school year about inspections, response actions, post-response action activities, and periodic surveillance and reinspection activities that are planned or in progress.
- 4. All short-term workers (e.g., telephone repair workers, utility workers, or exterminators) who may come in contact with asbestos in a school are provided information regarding the locations of ACBM and suspected ACBM assumed to be ACM.
- 5. All warning labels are posted in accordance with Section 763.95.
- 6. All management plans are available for inspection and notification of such availability has been provided as specified in the management plan under Section 763.93(g).
- 7. The undersigned person designated by the LEA pursuant to Section 763.84(g)(1) has received adequate training as stipulated in Section 763.84(g)(2).
- 8. The LEA has and will consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under Part 763.

Date



LEA designated person signature

TAB 7

Operations and Maintenance

OPERATIONS AND MAINTENANCE OVERVIEW

- **SCOPE:** Implement an Operations and Maintenance Program to maintain the condition of asbestos-containing materials.
- **TRAINING:** Class 1 Minimum: 32-hour training for individuals who work with asbestoscontaining building materials (ACBM) in amounts greater than 3 square feet (SF) or 3 linear feet (LF).

Class 2 Minimum: 8-hour generic material training for individuals who work with flooring, roofing, siding, cement asbestos board panels, and ceiling tiles.

Class 3 Minimum: 16-hour training for individuals engaged in maintenance and repairs. 4-hour single generic material training for individuals who work with gaskets, fire doors, laboratory hoods, etc.

Class 4 Minimum: 2-hour training for individuals engaged in custodial cleaning.

RECORDKEEPING FORMS: Keep records of all activities.

An Operations and Maintenance (O & M) Program is required by the AHERA regulations for all school buildings with friable ACBM. It is also considered by PBS to be a necessity for any school building with only non-friable ACBM because of the eventual need for repairs and routine or emergency maintenance.

The O & M Program is a set of specific procedures and practices applied to building cleaning, maintenance, renovation, and general operation to maintain the building as free of asbestos contamination as possible. The O & M Program draws heavily on information generated during the inspection process, and should remain in effect until all friable and non-friable ACBMs are removed from the facility. A description of an O & M Program is found in the AHERA Federal Register. 40 CFR Part 763, Appendix B should be read completely.

Properly enacted, this program will document the building owner's prudence in dealing with asbestos in the building. There are three primary objectives of the O & M Program:

- 1. Clean up and repair existing ACBM
- 2. Minimize future fiber release by controlling access to ACBM
- 3. Maintain ACBM until it is eventually removed

Since by law all ACM must be removed from buildings before demolition, the O & M Program is not a permanent solution, nor is it a means by which full-scale asbestos abatement is accomplished. Rather, material is removed only as necessary for maintaining building systems. As an example,



asbestos-containing insulation may be removed around a leaking steam valve to gain access for repairing the valve as part of an O & M Program. Removing material is allowed and anticipated as an integral part of the O & M Program, but the motivation to remove material must develop from a specific maintenance need. Large abatement projects that require extensive planning and technical expertise are beyond the scope of the O & M Program.

COMPONENTS

Maintaining asbestos in place may be the only affordable option for many school districts. It is a multi-faceted program and involves many parts of this management plan. The major components are as follows:

- Periodic surveillance
- Specific maintenance and cleaning practices
- Medical surveillance
- Training employees and workers
- Notification and labeling
- Recordkeeping

Creating and enacting the O & M program is central to the management plan. Information to accomplish this task is found in this section and also through training courses for the LEA Designate and maintenance workers.

The heart of any asbestos program is the inspection and the inspection documentation. Understand the inspection report and the location of ACBMs.

An O & M Program for asbestos materials will highly impact the school's maintenance activities and will involve the cooperation of all maintenance staff members. Once mastered, the procedures will become routine and the additional burden of asbestos-containing materials will become an accepted practice.

POLICIES

One of the most complicated areas of the AHERA rules is understanding what activities you can or should perform with your own trained staff, short of having everyone trained as a full-scale worker. Consideration should be given to further training beyond the minimum requirement as one way to assure competency when conducting activities that impact asbestos. The district should set policies that clarify the confusion between State and Federal laws and to reflect the uniqueness of their operation and facilities. Policies should be set with input from many sources such as the School Board, legal representative, parents, teachers, and outside consultants.

Following are general policies established by the District:

- 1. All maintenance activities shall be by inner school permit system. The LEA Designate shall sign off that asbestos-containing materials are being properly treated for each remodeling or maintenance project.
- 2. It is the general policy of the District that all asbestos related work shall be performed by outside contractors.
- 3. The District has appointed an Asbestos Program Manager to oversee all asbestos-containing building materials operations and activities.
- 4. Maintenance and custodial staff that come in contact with asbestos-containing building materials will be provided with a minimum of 2 hours of asbestos awareness training in accordance with AHERA and OSHA regulations. Training records should be placed in the Recordkeeping section of the management plan.
- 5. All removal of ACM greater than 3 SF or 3 LF shall be performed by an outside contractor with their accredited personnel regardless of the quantity of material removed.
- 6. Any fiber release episode shall be immediately reported to the Asbestos Program Manager. The area shall be isolated and demarcated. Outside contractors will be contacted to clean-up and repair asbestos-containing materials.
- 7. Air monitoring and inspection tasks will be performed by a third-party air monitoring technician.
- 8. Perform an annual workplace review of asbestos programs to evaluate safe working conditions, training, labeling and updates to asbestos-containing building material actions.
- 9. Perform a visual surveillance every six months of friable and non-friable asbestos-containing building material with a potential for damage.

Fern Ridge School District Asbestos Management Plan Policy Chart

ΑCTIVITY	IN-HOUSE	OUTSIDE CONTRACTOR OR CONSULTANT	SHARED BY IN-HOUSE & OUTSIDE
Special Cleaning in Proximity of Friable ACM	Х		
O & M Activities			х
Material Disturbance Less Than 3 SF or 3 LF		х	
Material Disturbance Greater Than 3 SF or 3 LF		Х	



ΑCTIVITY	IN-HOUSE	OUTSIDE CONTRACTOR OR CONSULTANT	SHARED BY IN-HOUSE & OUTSIDE
Training Provider		Х	
Project Design and Specifications		х	
Air Monitoring		Х	
Abatement Project Management		x	

PERMIT SYSTEM

Minimizing inadvertent disruption of ACBM during maintenance and renovation operations is often one of the most difficult tasks faced by the LEA Designate appointed Asbestos Program Manager. Initiating a permit system, where all work orders or requests are funneled through the Asbestos Program Manager is a simple yet effective way of controlling disruption of ACM during these activities. The EPA "Green Book" is an excellent source of information on permit systems. The NIBS "Guidance Manual, Asbestos Operations & Maintenance Work" presents a detailed comprehensive model permit system.

In the permit system, all requests for maintenance/renovation activities (other than emergency responses) are given to the Asbestos Program Manager prior to the issuance of a work order to proceed. He or she then checks the building's management plan for information about the presence of ACBM where work is to be performed. The manager should also physically inspect the area in question to ensure asbestos records reflect actual conditions.

If no asbestos is present, the work order is issued and the planned actions can proceed. If asbestos is present, the Asbestos Program Manager will contract with an outside contractor to perform abatement activities needed to complete the work. An example permit is included in this section.

For all jobs where potential contact and disturbance of ACM exists, the Asbestos Program Manager or a designated supervisor qualified by training and experience should visit the work site when the work begins to ensure that the job is being performed properly. In worst-case situations (e.g., large amounts of ACM or contamination), noncritical maintenance/renovation work should be deferred until the ACM in the area can be abated by an abatement contractor.

RESPIRATOR PROGRAM

The District has established a Respirator Program if personnel, who are trained, are to remove, encapsulate, or repair asbestos-containing materials, are required to enter contaminated areas, or are otherwise required to wear a respirator as part of their work. The minimum recommended level



of training for maintenance personnel involves a two-day course of hands-on education. The details of Respirator Programs are discussed in depth during that training, but should at least include:

- 1. **Policy Statement.** A written statement of management policy, including assignment of individual responsibility, accountability, and authority for required activities of the respiratory protection program.
- 2. **Standard Procedures.** Written standard operating procedures governing the selection and use of respirators. Respirator selection (from NIOSH/MSHA-approved and certified models) is based on the hazards to which the worker is exposed.
- 3. **Medical Exam.** Medical examination of workers to determine whether or not they may be assigned an activity where respiratory protection is required.
- 4. **Proper Use and Training.** User training in the proper use and limitations of respirators and evaluation of the skill and knowledge obtained by the worker through training.
- 5. **Fit Test.** Respirator fit testing. The fit testing should be performed by an industrial hygienist. Testing is done prior to wearing a respirator and at least every six months thereafter.
- 6. **Cleaning.** Regular cleaning and disinfecting of respirators.
- 7. **Inspection.** Routine inspection of respirators during cleaning, and at least once a month and after each use for those respirators designated for emergency use.
- 8. **Storage.** Storage of respirators in convenient, clean and sanitary locations.
- 9. **Air Monitoring.** Surveillance of work area conditions and degree of employee exposure through air monitoring. OSHA regulations require that documentation is available that assures that the respirator in use is adequate protection.
- 10. **Program Evaluation.** Regular inspection and evaluation of the continued effectiveness of the respirator program.

The Respirator Program involves medical testing of personnel who must wear respirators, respirator selection, respirator fit-testing and proper care and maintenance of the respirator. The Respirator Program must be written and records kept. If the Owner's program requires that a Respirator Program be established, the Asbestos Program Manager must be responsible for implementation and adherence to the established procedures.



FIBER RELEASE EPISODES

SCOPE:	Response to accidental disturbance of friable ACBM Minor Fiber Release: Less than 3 SF or 3 LF Major Fiber Release: 3 SF or 3 LF or more	
TRAINING:		16-hour O & M Training Accredited Project Designer and Accredited Abatement Worker
FORMS:	Form A	

An accidental disturbance of asbestos material resulting in asbestos fibers being released into the air is considered a Fiber Release Episode. If less than 3 square feet or 3 linear feet are dislodged, it is considered a minor fiber release. If greater than 3 square feet or 3 linear feet is dislodged, it is a major fiber release. Follow the guidelines below as appropriate:

MINOR FIBER RELEASE EPISODE

- 1. **16-Hour Training.** Personnel with a minimum of a 16-hour O & M training course can perform clean-up.
- 2. **Restrict Area.** Immediately restrict access to the area to only those persons necessary to enact clean-up. Shut off air handling equipment if necessary to prevent fiber dispersal to other areas of the building. Other sources of air movement such as open windows, openings under closed doors, etc. must be considered and dealt with accordingly.
- 3. **Wet Material.** The material or debris should be thoroughly wetted and disposed of in labeled and sealed 6 mil plastic bags.
- 4. **Clean Area.** Prior to cleaning the horizontal surfaces such as floors, etc., lightly mist the air with amended water. Begin at the high point of the room and end low to the floor. This is to trap airborne asbestos fibers. Allow time for mist to settle. Using a HEPA vacuum and/or wet methods clean the affected area. The area cleaned should extend at least three feet in all directions from locations of obvious debris. Dispose of rags, water, etc. properly.
- 5. **Repair.** Repair damaged areas with asbestos-free materials. Use the method described in the technical sections.

Note: Determine if episode can recur and institute preventative measures. Consultations with other people within or outside the school may be appropriate. Air monitoring while cleaning up and afterwards may be desired.



MAJOR FIBER RELEASE EPISODE

- 1. **Restrict Area.** The school maintenance staff should immediately restrict access and post warning signs to the area. So as not to exacerbate the situation, trained personnel should enter area only as absolutely necessary. Shut off air handling system or modify to prevent asbestos fibers from spreading. Other sources of air movement such as open windows, openings under closed doors, etc. must be considered and dealt with accordingly.
- 2. Design the response action using accredited Project Designer.
- 3. Accredited full scale abatement personnel must be used to perform clean-up.
- 4. Review nearby materials for inclusion and compare various response actions.
- 5. Execute the response action with proper management and air monitoring.

Notify the local air pollution control and other authorities as necessary. If building occupants are involved and they come in contact with ACMs, stay calm, do not brush material from clothing and avoid trampling material. HEPA vacuum and wet wipe clothing and skin. Treat physical injuries requiring immediate first aid before decontamination of individuals and clothing.

FIBER RELEASE OR O & M ACTIVITY?

Much confusion may exist as to the difference between a Fiber Release Episode and an O & M activity. It is a key issue in that only 3 square feet or linear feet of material may be removed by 16-hour trained maintenance personnel during a fiber release episode, but no such clearly defined limit exists for an O & M activity. The difference is the motivation for the action taken and the material's condition prior to the activity.

A Fiber Release Episode is accidental damage to friable asbestos material. The damage results in asbestos fibers being released into the air. Some examples would be students causing damage to a textured ceiling material or school personnel damaging a boiler jacket while moving equipment in the boiler room. The response to these situations would be as described for Fiber Release Episodes.

Removal of ACBM as an O & M activity is motivated by the need to safely maintain a mechanical system or other building component. Examples would be a leaking steam valve insulated with asbestos material, or moving asbestos-containing ceiling tiles to gain access to the ceiling space to alter the air handling system. The removal is a precursor to another activity and the material being removed is likely in good condition and thereby not releasing vast quantities of asbestos fibers.

Materials that are excessively damaged and releasing fibers must be encountered using the procedures described as a Fiber Release Episode. Materials that are in generally good condition, but must be removed for the purposes of maintaining the building, are addressed as O & M activities.



GENERAL GUIDELINES

When trained personnel are required to remove, encapsulate or repair asbestos-containing material in the course of their regular maintenance activities, the following general guidelines should be followed. The procedures represent a general, prudent standard and may be modified by management policy. These guidelines are for planned or emergency disturbance of ACM resulting from maintenance needs. Prior to the O & M activity, it is assumed that the material is in relatively good condition and does not meet the criteria of a Fiber Release Episode. A Fiber Release Episode is the accidental damage which causes an immediate release of asbestos fibers into the air. Fiber Release response is discussed in the previous section. Additional O & M guidelines for the specific materials found in the building are presented in the technical sections that follow.

- 1. **Restrict Access.** Restrict entry into the area to only those necessary to perform the maintenance project. All personnel in the area must be protected as described in the technical sections. Access may be restricted through physical means or by scheduling.
- 2. **Post Signs.** Signs must be posted at all reasonable points of entry into the affected work area to prevent entry by unauthorized persons.
- 3. **Shut Off Air Handlers.** The building's air handling system must be shut off or modified to prevent air movement which could carry fibers outside of the affected work area. Other sources of air movement such as open windows, openings under closed doors, portable fans, etc., must be considered and dealt with accordingly.
- 4. **Air Monitoring.** Determine if historical air monitoring exists for the planned activity and if clearance air sample results are necessary. OSHA requires sufficient personal air monitoring results to verify that the correct respirator has been selected.
- 5. **Use Proper Work Practices.** See the technical sections for the appropriate procedures. Trained personnel must use good work practices such as wet methods, HEPA vacuums, HEPA exhaust fans, mini-enclosures, glove bags, prompt clean-up and disposal, etc. to inhibit the spread of released fibers.
- 6. **Clean Area.** After the necessary disturbance of the ACM, the fixtures, components and surfaces in the immediate and affected area should be HEPA-vacuumed or wet-cleaned.
- 7. **Dispose of Debris.** Asbestos debris, used glove bags, contaminated rags, etc. must be placed in sealed, leak tight containers or 6-mil plastic bags. The bags and containers must be properly labeled. Dispose of at an approved landfill with appropriate disposal manifest.



PROTECTION LEVELS

The following methods of personnel protection are referenced in the technical sections. Only trained personnel with proper medical approval and fit-test can wear respirators. All respirators must be approved by NIOSH/MSHA (National Institute for Occupational Safety and Health; Mine Safety and Health Administration) and be equipped with HEPA filter disposable cartridges (magenta/purple color code). It is assumed that adequate oxygen supply is present in the work area as none of the respirators listed supply additional air to the wearer. The HEPA cartridges filter minute dust particles and are not effective for filtering organic vapors, paint mists, etc.

LEVEL	RESPIRATOR	PROTECTIVE CLOTHING
ONE	Half-face negative pressure	Disposable gloves
TWO	Half-face negative pressure	Disposable gloves Single layer disposable coveralls
THREE	Half-face negative pressure	Disposable gloves Double layer disposable coveralls
FOUR	Full-face powered air-purifying	Disposable gloves Double layer disposable coveralls

PERSONAL DECONTAMINATION PROCESS

After completion of the maintenance activity, the worker must properly decontaminate. The process is generally the same for all Protection Levels. The worker should follow the steps below as appropriate to the level of protection.

- 1. **HEPA Vacuum Outer Coverall.** HEPA vacuum outer layer of disposable coveralls. Carefully remove, turning coveralls inside-out.
- 2. **HEPA Vacuum Inner Coverall.** HEPA vacuum inner layer of disposable coveralls. Carefully remove, turning coveralls inside-out.
- 3. **Remove Gloves.** Carefully remove gloves, turning gloves inside out.
- 4. **Dispose of Coveralls and Gloves.** Dispose of coveralls, gloves and other contaminated items in 6-mil plastic bags that are leak tight. Place in a second properly labeled 6-mil plastic bag.
- 5. **Wash.** Wash hands, face and other exposed skin. This is good hygiene practice, and wastewater should not be asbestos-contaminated if the worker was involved in routine procedure with a low fiber level. If high fiber levels are expected, contain and filter the water prior to disposal in sanitary sewer system.



6. **Respirator.** Remove respirator and clean. Detach cartridges and dispose.

COMMON MATERIALS AND DEFINITIONS

- 1. **AHERA:** Asbestos Hazard Emergency Response Act. 40 CFR Part 763. Federal regulation requiring public elementary and secondary schools to develop and implement an asbestos management plan (O & M program).
- 2. **Amended Water:** Clean potable water containing a surfactant additive. The surfactant additive shall be 50 percent polyoxyethylene ether and 50 percent polyethylene ester, or equivalent, and shall be mixed with water at a concentration of one ounce surfactant to 5 gallons of water, or as recommended by the manufacturer in the case of an equivalent.
- 3. **ACM:** Asbestos containing material. Any material containing more than 1 percent asbestos.
- 4. **Asbestos:** Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that has been chemically treated and/or altered.
- 5. **Disposal Containers:** Disposal containers shall be suitable to receive and retain any asbestos containing or contaminated materials until disposal at an approved site. The containers shall be labeled in accordance with OSHA and EPA regulations. Containers must be both air and watertight, and have hard top, bottom and sides such as steel or fiberboard.
- 6. Encapsulants: Encapsulants shall be of the bridging or penetrating variety and shall be listed as "satisfactory" by the EPA. Penetrating Encapsulant: No. 207 Special Sealer #33775 27A as manufactured by Makus-Cincinnatus, Inc.; "Asbestop 30B-2" as manufactured by Asbesco Corp.; "Cable Coating 22-P" as manufactured by American Coatings Corp., or approved. Bridging Encapsulant: Decadex Firecheck, manufacturer's standard color "Magnolia", as manufactured by Pentagon Plastics, Inc.; "Cable Coating 2-B", manufacturer's standard color gray, as manufactured by American Coatings Corp.; or approved.
- 7. **Glove Bag:** A manufactured device consisting of a transparent impervious plastic bag-like enclosure with a seamless bottom and inward projecting glove-like appendages through which material and tools may be handled, an internal tool pouch, provisions for fastening and sealing at the top and sides, and a receptacle in the bottom to hold asbestos waste. The glove bag is affixed around asbestos-containing material to be removed and contains all fibers released during the process. Glove bags are used to remove insulation from small sections of pipe and fittings. Glove bags shall not exceed 60 inches x 60 inches and are not installed on pipe insulation when temperatures exceed 150 degrees.
- 8. **HEPA Filter:** A High Efficiency Particulate Air (absolute) filter capable of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 microns in length.



- 9. **HEPA Vacuum Equipment:** High Efficiency Particulate Air (absolute) filtered vacuuming equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97 percent efficiency for retaining fibers of 0.3 microns in length or larger.
- 10. **HEPA Fan Unit:** An air-purifying fan which draws air through a HEPA filter.
- 11. **Mini-Enclosure:** A small temporary enclosure of 6 mil plastic sheeting constructed around a work area to contain airborne asbestos fibers. The enclosure shall accommodate no more than two persons and shall conform to the configuration of the space. The enclosure shall be placed under negative pressure using a HEPA vacuum. Prior to use the enclosure shall be inspected for leaks and smoke tested. Prior to reuse the enclosure shall be cleaned with amended water and HEPA vacuumed. Attached to the mini enclosure is a three-foot by three-foot equipment room with impermeable plastic bottom, top and sides to be used for decontamination purposes.
- 12. **Plastic Bags:** Plastic bags shall be 6-mil polyethylene printed with warning labels per OSHA and EPA regulations.
- 13. **Rewettable Lagging Cloth:** Twelve ounce glass fabric lagging cloth saturated with dried lagging adhesive. "Dip Lap" as manufactured by Claremont Co. or equivalent.
- 14. **Tack Coat:** A coat of penetrating encapsulant applied to all surfaces from which asbestoscontaining materials have been removed.
- 15. **Warning Labels and Signs:** Warning labels and signs shall be posted as required by OSHA and EPA regulations.
- 16. **Wet Cleaning:** The process of eliminating asbestos from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with amended water.

DISPOSAL

The Operations and Maintenance Program will intermittently generate small quantities of asbestos debris and contaminated waste. It may not be feasible to transport waste directly to an approved landfill at the time the waste is generated. Consequently, each school should establish an area to safely store disposal bags prior to transport to the landfill.

The area should be securely locked, inaccessible to students, teachers and non-maintenance personnel, and directly open to the outside if possible. Used disposal bags must be double-bagged, kept sealed and should be stored in a labeled steel or fiberboard drum. Once a bag is sealed, it should not be reopened. This allows reuse of the drum container, if the outer bag of the double-bagged waste remains undamaged. If the bags are damaged, the drum container must also be



disposed of as contaminated waste unless it can be effectively cleaned. The landfill dump receipt and other records should be kept as part of the recordkeeping process and a summary of those activities kept in all of the management plans.

Contaminated water must either be double-bagged as asbestos waste or passed through a HEPA water filtration device. If cleansed through a filtration device, the water may be disposed of through the building's plumbing system.



MATERIAL HANDLING TECHNICAL SECTIONS

The following documents are technical sections for handling of some of the asbestos-containing materials found at this site:

- Special Cleaning Procedures
- Asbestos Debris
- Non-friable Finish Materials
- Other Non-friable Products
- Floor Tile
- Textured Ceiling Material



SPECIAL CLEANING PROCEDURES

General Discussion

- A. In areas containing friable asbestos material such as sprayed-on ceiling texture or fireproofing, microscopic asbestos fibers can be released from the material and become airborne. Most of the fibers will eventually settle onto floors, furniture, tops of light fixtures, etc. The activities of the building occupants can cause the fibers to become airborne once again. The cycle of fibers being released, settling, and becoming re-entrained can perpetuate indefinitely unless steps are taken. Special cleaning procedures are designed to remove the settled asbestos fibers.
- B. The Initial Cleaning, if recommended in the Survey Report, should be scheduled within a few months during a period of non-occupancy. Additional periodic cleanings should be considered if the material is highly friable or is specifically noted in the Survey Report or discussions with the environmental consultant. Areas with High Concern exposed surfacing materials should be cleaned, at a minimum, every six months. The asbestos program manager should establish a written policy which can be used to determine when cleaning activities require a restricted area.

Repair

A. Not applicable

Special Cleaning Process

- A. Protection level: One
- B. Maximum Quantity Per Project: No Limit
- C. Procedure:
 - 1. HEPA Vacuum Protrusions and Fixtures. Window sills, door heads, tops of bulletin or chalk boards, suspended light fixtures, exit signs, and other surfaces that collect settled dust should be HEPA-vacuumed.
 - 2. Wet Clean Protrusions and Fixtures. Wet-wipe areas that were previously HEPA vacuumed. In lieu of first cleaning with a HEPA vacuum, the surfaces may be wet-wiped twice.
 - 3. Clean Floors. HEPA-vacuum or steam-clean carpets. Other floors such as vinyl floor tiles and sheet vinyl should be wet-mopped.



- 4. Disposal. Place all rags, contaminated water, vacuum bags and mop-heads in 6-mil plastic bag or leak tight container. Thoroughly clean non-disposable tools. Wet-wipe or HEPA vacuum the outside of bag and place in a second properly labeled 6-mil plastic bag or leak tight container. Transport all waste material to a landfill with an appropriate waste disposal manifest or to a secure, temporary holding area.
- 5. Filters and Water. Check with HEPA vacuum manufacturer as to the replacement schedule of filter stages. In lieu of double bagging, water may be filtered through water-purifying equipment and disposed of through the building's plumbing system. The water-purifying system shall be capable of removing all fibers longer than 1 micron such as "AQUA HOG" by Control Resource Systems, Inc. or similar.

Routine Cleaning Process

- A. Protection level: None
- B. Procedure:
 - Routine. After the special cleaning, daily, weekly and other routine cleaning may use normal procedures. Custodial staff should be alerted to the location of the friable asbestos-containing material and be advised not to impact the material in any manner.
 - 2. Alert. If custodial staff notices any signs of the asbestos-containing materials flaking or dislodging, they should not work in the area and should immediately notify the Asbestos Program Manager.

END OF SECTION SPECIAL CLEANING PROCEDURES



ASBESTOS DEBRIS

General Discussion

- A. Review the Asbestos Survey Report to determine the preventative measure recommendation for the debris. If the preventative measure is "restrict access," refer to the sections Accessing Restricted Areas and Removal of Large Amounts of Debris below. If the preventative measure is "clean up the debris," refer to the section Small Scale Short Duration Projects.
- B. Areas of a building identified in the Survey Report as containing extensive quantities of asbestos debris should be restricted so that access is limited to trained personnel. These restricted areas are generally crawlspaces, attics, ceiling plenums, and pipe tunnels. The cost to remove the material may be prohibitive, which necessitates establishing a procedure to enter the area when required. Access to these areas should only be when absolutely necessary. Evaluate to determine if debris may be disturbed during required maintenance in the area. If so, remove debris as a full-scale asbestos removal project.
- C. Restricted areas may also be defined as confined spaces. Additional requirements may be necessary while accessing such areas. Refer to management policy statements for specific information.

Repair

A. Not applicable

Accessing Restricted Area

- A. Protection level: Four
- B. Consider installing an equipment room at the entrance of the restricted area to reduce contamination potential, as outlined in the section Accessing Restricted Area: Equipment Room.
- C. Procedure:
 - 1. Mobilization. Place all decontamination equipment such as HEPA vacuum, water, rags, disposal bags, etc. at the entrance/exit point of the restricted area.
 - 2. Restrict Access. The entrance to the restricted area should have been posted with warning signs. Additionally, barriers and/or signs should be placed in appropriate hallways, etc., to limit access by other personnel to the adjacent area. Only trained and protected personnel should be in the area.



- 3. Entry. Place plastic ground cloth at entrance. Carefully enter area and avoid disturbing debris if at all possible. Do not exit restricted area without decontaminating.
- 4. Decontamination Prior to Exit. When exiting remove the outer layer of protective coverall while in the restricted area but at the point of immediate exit. Turn the coverall inside out while removing. Carry the coverall out of the area and immediately place it in a 6-mil disposal bag or leak tight container. As an option, the worker can leave the protective coverall in the contaminated area and then exit.
- 5. Clean Exit Area. Pickup plastic ground cloth and place in 6-mil disposal bag or leak tight container. HEPA vacuum work clothes. Wet-clean and HEPA-vacuum the area at the exit point.

Accessing Restricted Area Equipment Room

- A. Protection level: Four
- B. Consider installing permanent equipment room at access points to restricted areas such as pipe tunnels and crawlspaces.
- C. Procedure: Equipment Room
 - Construct Equipment Room. Construct an equipment room and attached air lock using 6-mil plastic (floor, walls, ceiling) on a wood-framed or plastic pipe structure. Construct an equipment room of a size that is large enough to accommodate equipment, waste bags with adequate room for decontamination. Construct an airlock chamber between equipment room and restricted area. Seal the airlock to a non-asbestos surface. The "airlock" serves as entry/exit to the work area. The equipment room provides additional security in the event of increased fiber release.
 - 2. Entry. Carefully enter area and avoid disturbing debris if at all possible. Conduct work. Do not exit without decontaminating.
 - Decontamination in Area. Remove outer disposable coverall in the restricted area. Place all waste, outer layers of contaminated clothing, rags, disposable tools, etc. into a 6-mil plastic bag or leak tight container. Thoroughly clean non-disposable tools. Wet-wipe or HEPA vacuum outside of all waste bags and place inside the equipment room.
 - 4. Decontamination in Equipment Room. Proceed to equipment room and place bagged waste in second 6-mil, properly labeled bag or leak tight container. Wetclean surfaces inside of mini-enclosure. Remove inner layer of disposable coverall



and double-bag for disposal. HEPA vacuum work clothing.

5. Disposal. Remove all waste materials to a landfill with appropriate disposal manifest, or to a secure, temporary holding area.

Small Scale Short Duration Project

- A. Protection Level: Two
- B. Maximum Quantity per Project: 3 linear feet or 3 square feet.
- C. Procedure:
 - 1. Wet Material. Mist the debris with an amended water sprayer until it is thoroughly saturated.
 - 2. Clean Debris. Carefully place debris into a 6-mil plastic bag. If feasible, wet-wipe and/or HEPA-vacuum horizontal surfaces at least 3 feet in all directions from the debris. Apply a mist of spray encapsulant to the area if it is not a finished surface.
 - 3. Decontamination/Disposal. Place all disposable tools, rags, and outer layer of protective clothing, etc., in a 6-mil plastic bag or leak tight container. Seal bag and wet-wipe/HEPA vacuum outside of bag. Place bag into equipment room, if used, or pass it through the entrance to the restricted area. Remove inner layer of disposable coverall and double-bag for disposal. HEPA vacuum work clothing. Transport to a landfill with an appropriate waste disposal manifest, or to a secure, temporary holding area.

Removal of Large Amounts of Debris

A. Not allowed. Extensive debris must be removed as a full-scale abatement project and is outside the scope of the O & M program.

END OF SECTION ASBESTOS DEBRIS



NON-FRIABLE FINISH MATERIALS

General Discussion

- A. Building finishes used a variety of products that contained asbestos. Asbestos was very common in the joint compound used to fill the cracks between drywall sheets. The drywall itself may occasionally contain asbestos as well. Plaster products can also contain asbestos. The asbestos can be found in the plaster scratch coat, finish coat, or the veneer layer over the lath.
- B. These products are non-friable until damaged. Do not drill, sand, or cut material without utilizing proper procedures.
- C. Since these are relatively low concern materials when in good condition, and since it is very difficult to consistently verify all wall types and locations in a given building because the materials are typically obscured by paint and other coverings, extensive bulk sampling to confirm asbestos content may not have been conducted. Even if some materials test negative for asbestos, other locations with similar materials may contain asbestos. If it is necessary to impact suspect materials for which no sample data is available, the materials should be sampled prior to impact. If samples test positive for asbestos, use the procedures provided below.

Repair

- A. Protection Level: Two
- B. Procedure to Repair Friable Damaged Areas:
 - 1. HEPA vacuum area of all loose debris.
 - 2. Fill with compatible non-asbestos filler such as spackling compound.
 - 3. Use wet sponge technique to blend into adjacent surfaces.
 - 4. Maintain with a good paint coating.
- C. Procedure to Tack Nails into Plaster or Gypsum Board
 - 1. Protection Level: None required, Level One suggested.
 - 2. Lightly mist material prior to tacking.
 - 3. Install nail.



4. HEPA vacuum or wet clean area with sponge.

Small Scale Short Duration Project

- A. Protection level: Three
- B. Maximum Quantity per Project: 3 square feet unless modified by School policy. Verify policy statement.
- C. Procedure: Mini-enclosure.
 - 1. Construct a mini-enclosure and attached change room approximately 3 feet square by applying 2 layers of 6-mil poly sheeting to a wood-framed or plastic pipe structure. Construct mini-enclosure of a size that is slightly larger than the work area and that allows the trained person to access the material by ladder if necessary. The change room or "airlock" serves as entry/exit to the work area, an equipment room, and as additional security in the event of increased fiber release. If applicable, extend mini-enclosure from the floor to dropped ceiling and affix to sheet rock or suspended grid.
 - 2. Operate HEPA vacuum or fan unit in the mini-enclosure at all times. The vacuum may sit outside of the enclosure with the hose extending extended into the work area.
 - 3. Thoroughly wet the area to be removed with amended water. Carefully remove and place material in 6-mil plastic bags.
 - 4. HEPA vacuum ladder, inside surfaces of mini-enclosure, and outer layer of worker's protective coveralls.
 - 5. Use airlock for personal decontamination procedures. Place all waste, contaminated clothing, rags or tools, etc. in 6-mil plastic bags. Thoroughly clean non-disposable tools. Wet wipe or HEPA vacuum outside of bags and place in second 6-mil plastic bags that bears proper label.
 - 6. Dismantle the airlock and mini-enclosure. Dismantled plastic from airlock and minienclosure should be double-wrapped in 6-mil plastic and labeled. As last step, remove inner layer of disposable coveralls and double-bag. Remove all waste materials to temporary holding area or landfill.

END OF SECTION NON-FRIABLE FINISH MATERIALS



OTHER NON-FRIABLE PRODUCTS

General Discussion

- A. Cementitious non-friable asbestos-containing materials are commonly cement asbestos board (CAB), cement asbestos shingles and cement asbestos piping ("Transite" is a brand name of cement asbestos products). Other examples of non-friable materials include caulks and sealants, and various adhesive mastics. In their non-friable state, these products are usually a low concern.
- B. These products are non-friable until damaged. Do not drill, sand, or cut material without utilizing proper procedures.

Repair

- A. Protection Level: Four
- B. Procedure to Repair Friable Damaged Areas:
 - 1. HEPA vacuum area of all loose debris.
 - 2. Seal Material. Stabilize damaged area with a sealant such as polyurethane. Painting over material should maintain it in relatively good condition.
- C. Procedure to Tack Nails into Plaster or Gypsum Board
 - 1. Protection Level: None required, Level One suggested.
 - 2. Lightly mist material prior to tacking.
 - 3. Install nail.
 - 4. HEPA vacuum or wet clean area with sponge.

Drilling

- A. Protection Level: Four
- B. Procedure: Maintenance may require drilling through a non-friable product to anchor equipment, etc. Utilize the following steps:
 - 1. Plastic Ground Cloth. Place plastic ground cloth underneath the work surface.



- 2. Foam. Create a dam to contain shaving cream or similar type of foam. A dam may be created from a spray can cap or by cutting a length of PVC pipe. Apply shaving cream or similar type foam to area where hole is to be drilled.
- 3. Drill. Drill hole in center of foam. High-speed or hole saw bits may create excessive foam splatter and additional containment of foam may be needed.
- 4. HEPA Vacuum. Remove the foam with a HEPA vacuum, and then wet-clean and vacuum the area. Thoroughly clean non-disposable tools such as drill bit.
- 5. Seal Material. Stabilize exposed ends of non-friable material with polyurethane sealer.
- 6. Disposal. Place contaminated rags, disposable tools, ground cloth, etc. in 6-mil plastic bag. Clean the dam if it will be reused. Clean outside of bag, place in second 6-mil plastic bag that bears proper label and transport to temporary holding area or landfill accompanied by the appropriate waste disposal manifest.

Class 3 Maintenance Project

- A. Protection level: Three
- B. Maximum Quantity per Project: 3 square feet unless modified by School policy. Verify policy statement.
- C. Procedure:
 - 1. Plastic Ground Cloth. Place plastic ground cloth underneath the work surface.
 - 2. Wet Material. Keep the material wet and utilize a HEPA vacuum to clean up any possible debris.
 - 3. Detach from Substrate. If the product is attached to a substrate, carefully remove nails or screws. Hold a HEPA vacuum nozzle next to the area to minimize fiber release.
 - 4. Remove Material. Maintain and remove material intact as much as possible.
 - 5. Wet-Clean Area. Wet-wipe all horizontal surfaces near the material being removed.
 - 6. Disposal. Thoroughly clean non-disposable tools. Place contaminated rags, disposable tools, ground-cloth, etc. in 6-mil plastic bag or leak tight container. Clean outside of bag and place in second 6-mil plastic bag that bears proper labeling or



leak tight container. Remove protective coveralls and double bag. Remove all waste materials to a landfill with an appropriate disposal manifest or to a secure temporary holding area.

END OF SECTION OTHER NON-FRIABLE PRODUCTS



VINYL FLOOR TILE

General Discussion

- A. Vinyl Floor Tile or Vinyl Asbestos Tile (VAT) flooring material is often left in place because of budgetary concerns and due to the material's non-friable condition. The objective is to safely maintain the tiles while also maintaining their appearance.
- B. Fibers can be released when maintaining VAT floors and using abrasive floor pads; therefore, low-speed machines and low-abrasive floor pads should be used only as indicated in this section. The fiber levels should not exceed the OSHA Permissible Exposure Limit (0.1 f/cc 8 hour TWA)
- C. Use low speed (lower than 300 rpm) machines and wet methods when stripping finishes
- D. Burnishing or dry buffing of floors should be done only where there is sufficient finish to prevent the pad from coming into contact with the flooring material.
- E. An alternative to maintaining VAT floors is installing new non-asbestos resilient flooring or carpet on top of the existing VAT. When installing a new material, do not utilize techniques that sand, cut or drill into the existing VAT. Do not use abrasive floor pads.
- F. Removal of VAT requires an assessment of the condition of the tiles. The tiles must be intact and remain intact during the removal process. Incidental breakage of floor tile during removal or disturbance does not mean that the VAT is no longer intact. Whether broken or not VAT tile is intact if it is not crumbled, pulverized, or deteriorated to the point that the ACM is no longer bound by its matrix. The work practices described in this section are intended to keep the tile intact during removal or repair.

Repair

- A. Protection Level: Four
- B. Procedure: Manual spot removal of a damaged tile during maintenance may be required. Limit this procedure to damaged tile.
 - 1. HEPA Vacuum. HEPA vacuum the entire floor with metal floor attachment.



- 2. Pry Method. Detach each floor tile with stiff beaded scraper. If tile will not release use a hammer to strike scrapper to cause the tile to release. A heat gun may be used to soften the adhesive and facilitate removal.
- 3. Heat Method. Without prying up floor tiles apply heat to the tiles (heat gun, infrared machine) and remove tiles with scraper. Wetting may be omitted when using a heat source.
- 4. Tile Disposal. Place tile(s) in a 6-mil plastic disposal bag or other closed leak tight container.
- 5. Adhesive Removal. Wet and scrap away the residual adhesive with stiff beaded scraper. Solvent-based or citrus based mastic removal solutions may be used to help dissolve the remaining adhesive when water is not effective removing the adhesive. Follow manufacturer's recommendations and Material Safety Data Sheet (MSDS).
- 6. Place the wet adhesive residues in a 6-mil plastic disposal bag or closed leak tight container.
- 7. HEPA Vacuum. HEPA vacuum the area from which the adhesive has been removed with metal floor attachment. After the removal area has dried repeat HEPA vacuuming with metal floor attachment, including adjacent areas.
- 8. Cleanup and Disposal. Clean outside of bags and place in second 6-mil plastic bag that bears proper label or leak tight container, and transport to temporary holding area or landfill. HEPA vacuum work clothing.
- C. Procedure: Maintenance may require drilling through a floor tile to anchor equipment, etc. Utilize the following steps:
 - 1. Foam. Create dam to contain shaving cream or similar type foam. A dam may be created from a spray can cap or by cutting a length of PVC pipe. Apply shaving cream or similar type foam to area where hole is to be drilled.
 - 2. Drill. Drill hole in center of foam. High-speed or hole saw bits may create excessive foam splatter and additional containment of foam may be needed.
 - 3. HEPA Vacuum. Remove the foam with a HEPA vacuum, and then wet-clean the area. Thoroughly clean non-disposable tools such as drill bits.
 - 4. Clean-up and Disposal. Place contaminated rags, disposable tools, etc. in 6mil plastic bag. Clean dam if it will be re-used. Clean outside of bag, place in



second 6-mil plastic bag that bears proper label, and transport to temporary holding area or landfill. HEPA vacuum work clothing.

Class 3 Alternative Maintenance Procedures

A. Vinyl floor tiles do not generally require removal as a necessary process for maintaining a building. Although the material is non-friable, removal can cause elevated fiber levels. The owner should develop a policy for various removal methods which may be used for the removal VAT for O & M Program. Building owners should develop a written program in consultation with a qualified industrial hygiene firm employing appropriate removal techniques, e.g., infrared removal machines, heat guns, and dry ice.

Cleaning Process

- A. Protection Level: None required
- B. Maximum Quantity per Project: No limit unless modified by management policy. Verify with policy statement.
- C. Procedure:
 - 1. Chemical Strip. Chemical-strip floors, rinse and apply an acrylic polymer or similar finish. Follow manufacturer's recommendations and material safety data sheet (MSDS).
 - 2. Apply Sealer. Apply a permanent sealer over the tile and maintain the floor without power stripping. Apply numerous coats following manufacturer's recommendations and MSDS. The floor must be in good condition prior to using this method and not have any high spots. The use of any abrasive, high- or low-speed buffing may release asbestos fibers and is not recommended.
 - 3. Periodic Cleaning. After application of permanent sealer, periodic maintenance should be directed towards the sealer layer only. If buffing or stripping is necessary, use low speed buffers only, do not impact tile, and use Protection Level: One.

END OF SECTION VINYL FLOOR TILE

TEXTURED CEILING MATERIAL

General Discussion

- A. Asbestos-containing texturing materials may be either troweled on or sprayed onto a ceiling substrate for decorative or acoustical effect. O & M activities might involve repairing water-damaged, gouged or scratched areas, or removal of small patches to facilitate other building maintenance work.
- B. The friability of these materials can vary dramatically and can significantly alter the O & M activities. Review the Asbestos Survey Report for material friability information. If the material is highly friable, even the application of a gentle mist of amended water or encapsulant may dislodge the material, making repair difficult or unfeasible.

Repair (Moderate to Low Friability)

- A. Protection Level: TWO
- B. Maximum Quantity Per Project: 3 SF
- C. Procedure:
 - 1. RESTRICT AREA. Warning signs that demarcate the work area should be displayed at each location where repairs are to take place. The signs shall be posted at an appropriate distance from where the work area to allow personnel to read the sign and take the necessary protective steps prior to entering the area.
 - 2. REMOVE DEBRIS. Saturate delaminated material with a spray mist of amended water. Carefully place debris into a 6-mil plastic bag or leak tight container. Wet-clean and/or HEPA-vacuum the area affected.
 - 3. PROTECT FLOOR. Spread plastic out on the floor beneath the damaged ceiling, extending 3 feet in all directions from the edge of the repair area and covering any non-movable objects.
 - 4. ENCAPSULATE. Very gently mist the damaged area with multiple coats of penetrating encapsulant.
 - 5. APPLY NEW TEXTURE. Apply new non-asbestos texture to match appearance, if applicable. Allow sufficient drying time and paint.
 - 6. CLEAN AREA. Wet-clean and/or HEPA-vacuum the work area room and horizontal surfaces in adjacent areas.
 - 7. DISPOSAL. Wet-clean and/or HEPA-vacuum surfaces of equipment such as ladders, scaffolding, etc., and plastic drop cloth and worker's protective clothing. Place all contaminated disposable tools, rags, protective coveralls, etc., in a 6-mil plastic bag or leak tight container. Wet-clean and HEPA-vacuum the outside of the bag and place into a second properly labeled 6-mil plastic bag or leak tight container.
 - 8. CLOTHING. Transport all waste materials to a landfill with an appropriate waste disposal manifest or to a secure, temporary holding area.

Constructing a Mini-Enclosure

- A. Protection Level: THREE
- B. Maximum Quantity Per Project: 3 SF



- C. Procedure: Mini-enclosure/equipment room.
 - 1. CONSTRUCT MINI-ENCLOSURE. Construct a mini-enclosure and attached equipment room by applying two layers of 6-mil plastic to a wood-framed or plastic pipe structure. Construct mini-enclosure of a size that will accommodate two workers and that allows the trained person to access the material by ladder or scaffolding, if necessary. The shape of the mini-enclosure should conform to the configuration of the work space. If applicable, extend mini-enclosure from floor to dropped ceiling and affix to sheetrock or suspended grid. Allow a 2 to 3 inch top clearance. Construct multiple-layer curtained doorways with a "Z-flap" passageway between the mini-enclosure and the equipment room and between the equipment room and the outside area. Attach an equipment room as entry/exit to work area. The equipment room acts as an additional security in the event of increased fiber release.
 - 2. INSPECT FOR LEAKS. Prior to use inspect the mini enclosure for leaks and smoke-test to detect breaches. Seal all leaks or breaches.
 - 3. CONSTRUCT EQUIPMENT ROOM. Construct an equipment room and attached air lock using 6-mil plastic (floor, walls, ceiling) on a wood-framed or plastic pipe structure. Construct an equipment room of a size that is large enough to accommodate equipment, waste bags with adequate room for decontamination. Construct and attach an airlock chamber between equipment room and mini-containment. The "airlock" serves as entry/exit to the work area. The equipment room provides additional security in the event of increased fiber release.
 - 4. HEPA EXHAUST. Do not affix mini-enclosure or airlock to the fireproofing; instead, leave a 2 inch top clearance. Operate a HEPA vacuum in the mini-enclosure at all times. Situate the vacuum hose so that correct airflow is achieved, i.e., air should flow over the top of the enclosure towards the HEPA vacuum. Test direction of airflow with smoke tube or similar device; do not proceed until proper airflow is certain. The vacuum should sit outside the enclosure and the hose be extended into the work area.
 - 5. REPAIR OR REMOVAL. Perform repair or removal of surfacing material.
 - 6. EVACUATE WASTE BAG. When waste bag is a maximum of one-third full, add water to bag to ensure saturation of all material. Evacuate air with HEPA vacuum and seal bag. Use additional 6-mil bags if necessary.
 - CLEAN WORK AREA. HEPA-vacuum and wet-clean work area HEPA-vacuum and wet-clean inside surface of mini-enclosure, and outer layer of protective coverall. Thoroughly clean non-disposable tools. Spray encapsulant on interior plastic sheeting of mini-enclosure and repaired area. Manufactured mini-enclosure may be reused if it is thoroughly HEPA vacuumed and washed with amended water.
 - 8. DECON/DISPOSAL. HEPA-vacuum and wet-wipe the outside of waste bags prior to passing them through the curtained entryway. Thoroughly clean non-disposable tools. HEPA-vacuum and remove protective coverall inside the work area. Place all contaminated disposable clothing, rags, tools, etc. into a 6-mil plastic bag or leak tight container. Place all contaminated waste into a second, properly labeled 6-mil plastic bag or leak tight container.
 - 9. DISMANTLE. Allow time for the encapsulant to dry. Shut down the HEPA vacuum. Dismantle the airlock and mini-enclosure. Dismantled plastic from the airlock and the mini-enclosure should be double-bagged or wrapped in 6-mil plastic and labeled. Remove protective coverall and double



bag. HEPA vacuum work clothing. Transport all waste materials to a landfill with the appropriate waste disposal manifest or to a secure, temporary holding area.

Repair (High Friability)

- A. Protection Level: THREE
- B. Maximum Quantity Per Project: 3 SF
- C. Procedure: Mini-enclosure.
 - RESTRICT AREA. Warning signs that demarcate the work area should be displayed at each location where repairs are to take place. The signs shall be posted at an appropriate distance from where the work area to allow personnel to read the sign and take the necessary protective steps prior to entering the area.
 - 2. CONSTRUCT MINI-ENCLOSURE. Construct a mini-enclosure as described in the Constructing a Mini-Enclosure Section.
 - 3. WET AND REMOVE DAMAGED MATERIAL. Mist damaged area gently with amended water. Carefully remove any dislodged material by gently scraping or HEPA vacuuming. Do not allow material to fall to the floor of the enclosure. Catch material in a disposal bag or on a small plastic catch sheet and place immediately into a 6-mil plastic bag or closed leak tight container. Carefully HEPA-vacuum work area and wet-clean and vacuum the inside surfaces of the enclosure.
 - 4. ENCAPSULATE. Very gently mist the damaged area with multiple coats of a penetrating encapsulant.
 - 5. APPLY NEW TEXTURE. If appropriate, apply new non-asbestos texture to match existing appearance. Allow sufficient drying time.
 - 6. ENCAPSULATE AREA. Lightly encapsulate remaining ceiling material within mini-enclosure. This may result in altering the material's appearance relative to non-encapsulated, adjacent material, but good practice and a lessening of a health hazard should take precedence over aesthetics. Encapsulate the inside surfaces of the mini-enclosure.
 - 7. DECON/DISPOSAL/DISMANTLE MINI-ENCLOSURE. Decontaminate, dispose of materials, and dismantle the mini-enclosure as outlined in the Constructing a Mini-Enclosure Section.

Class 3 Maintenance Project

- A. Protection Level: FOUR
- B. Maximum Quantity per Project: 3 SF
- C. Procedure: Mini-enclosure.
 - RESTRICT AREA. Warning signs that demarcate the work area should be displayed at each location where repairs are to take place. The signs shall be posted at an appropriate distance from where the work area to allow personnel to read the sign and take the necessary protective steps prior to entering the area.
 - 2. CONSTRUCT MINI-ENCLOSURE. Construct a mini-enclosure as described in the Constructing a Mini-Enclosure Section.



- 3. WET MATERIAL. Very gently mist the area to be removed with amended water or manufactured wetting agent until thoroughly saturated.
- 4. REMOVE MATERIAL. Scrape or wipe the ceiling texture off in small quantities, applying additional mist as necessary to ensure constant saturation. Do not allow the material to fall to the floor of the enclosure. Catch the material in a disposal bag or on a small plastic catch sheet and immediately place into a 6-mil plastic bag. When waste bag is maximum of one-third full, add water to bag to ensure saturation of all material. Evacuate air with HEPA vacuum and seal bag.
- 5. CLEAN/ENCAPSULATE AREA. Wet-clean or HEPA-vacuum all surfaces beneath the work area including the inside surfaces of the enclosure. Gently mist the edges of the remaining ceiling texture with a penetrating encapsulant. Spray all surfaces including the inside of the mini-enclosure with encapsulant.
- 6. DECON/DISPOSAL/DISMANTLE MINI-ENCLOSURE. Follow procedure outlined in the Constructing a Mini-Enclosure Section above for decontaminating, disposal of materials, and dismantling the mini-enclosure.

END OF SECTION TEXTURED CEILING MATERIAL

TAB 8

Recordkeeping

Use this section to maintain all completed forms

These forms include:

Forms A and A1 Forms B and B1 Form C Maintenance Work Authorization Form Notification Letters

TAB 9

Form Masters

ASBESTOS ACTIVITY RECORD FORM A.

ACBM RESPONSE ACTION ACBM PREVENTATIVE N CLEANING 0&M ACTIVITY	ON IEASURE	BUILDING:	to (stop)
FIBER RELEASE EPISODE			
DESCRIPTION OF MEASUR			
REASON WHY SELECTED:			
CONTRACTOR (if used):			
ADDRESS:		STATE:	ZIP:
WORKERS USED:			
NAME	TRAINING		IDENTIFICATION NO.
DISPOSAL OR STORAGE S			
		_CITY:\$	TATE: ZIP:
AIR SAMPLING DATA:			
DATES <u>:</u>			
COLLECTION DATE(S):			LYZING SAMPLES:
DESCRIPTION OF LOCATIO	ONS OF SAMPLES	S: ADDRESS: CITY: ST	ATE:ZIP:
			/SIS:
COMPANY/PERSON COLLECTING SAMPLES:		S: PERSON(S) ANALY	ZING SAMPLES:
SIGNATURE:			
PROJECT DESIGNER:			
		This signature certifie	s that this testing lab is enrolled n for PCM or is accredited by

ASBESTOS ACTIVITY COMPLETION RECORD FORM A1

ACM ABATEMENT PROJECT	OWNER:			
ACM PREVENTATIVE MEASURE	BUILDING	:		
	LOCATION	N:		
EMERGENCY RESPONSE: SMALL or LARGE	DATE:	(start)		(stop)
DESCRIPTION OF ACTION:				
WORK AREA:				
LOCATION OF REMAINING ACM/PACM:				
TYPE OF ACM/PACM REMAINING:				
QUANTITY OF ACM/PACM REMAINING:				
 NAME:				
ADDRESS:				
CITY:		ATE:	ZIP:	
SIGNATURE:				

PERIODIC SURVEILLANCE FORM B

Periodically asbestos-containing materials (ACM) should be observed to document any changes in conditions. Walk through the building to observe current conditions. Be sure to note both friability and damage for every material by checking the appropriate category. This form is to be kept in the periodic surveillance section and should be used anytime you notice a change in ACM conditions or accessibility.

DO NOT TOUCH ASBESTOS-CONTAINING MATERIAL WITHOUT PROPER TRAINING

Facility Name: _____

Building:

Date of Observation:

MATERIAL	LOCATION	DAMAGED?	FRIABLE?	COMMENTS	
		Yes No	Yes No		
		Yes No	Yes No		
		Yes No	Yes No		
		Yes No	Yes No		
		Yes No	Yes No		
		Yes No	Yes No		
		Yes No	Yes No		
		Yes No	Yes No		
		Yes No	Yes No		
		Yes No	Yes No		
Non-friable Mat	erials:				
Remarks:					
Ву:		Title:			

NEWLY DISCOVERED ACM FORM B1

Occasionally previously unknown ACM or PACM is discovered during routine maintenance or removal projects. These materials are to be reported to the Asbestos Program Manager within 24 hours of discovery. Complete all sections of this form and be sure to identify the type of material, the location and the quantity (your best estimate). This form is to be kept in the periodic surveillance section and should be used anytime you or contractor discovers new ACM/PACM.

DO NOT TOUCH ASBESTOS-CONTAINING MATERIAL WITHOUT PROPER TRAINING

Facility N	ame:		
Building:			
	MATERIAL	LOCATION	QUANTITY
1			
2			
3			
4			
5			

DESCRIPTION OF CONDITION:

Remarks:

TRAINING RECORD FORM C

CLASS 4	FACILITY NAME:
2-HOUR AWARENESS	
CLASS 3 16-HOUR WORKER (O & M)	FIRM NAME:
CLASS 1 & 2 FULL-SCALE WO	RKER
Trainee's Name:	
Address:	
City, State, Zip:	
Job Title:	
Training Course:	
Training Course Location:	
Training Course Provider:	
Training Course Description:	
Course Length:	
Instructor:	
Date taken:	
Accreditation Number (if applicable):	
Expiration Date of Accreditation (if appl	icable):
Comments:	

MAINTENANCE PERMIT REQUEST JOB REQUEST FORM FOR MAINTENANCE WORK

Name:	Date:
Telephone No.:	Job Request No.:
Requested Starting Date:	Anticipated Finish Date:
Address, building, and room number(s) (or desc	cription of area) where work is to be performed:
Description of work:	
Description of any asbestos-containing material	that might be affected, if known (include location and type):
Name and telephone number of requestor:	
Name and telephone number of supervisor:	
Submit this application to:	
(The Asbestos Program Manager)	
	Il maintenance work whether or not asbestos-containing ust then be received before any work can proceed.
Granted (Job Request No) With conditions* Denied	
*Conditions:	

MAINTENANCE PERMIT AUTHORIZATION MAINTENANCE WORK AUTHORIZATION FORM

AUTHORIZATION

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Authorization is given to proceed with the following maintenance work:

PRESENCE OF ASBESTOS-CONTAINING MATERIALS

ACM is present, but its disturbance is not anticipated; however, if conditions change, the Asbestos Program Manager will re-evaluate the work request prior to proceeding.

ACM is present, and may be disturbed.

WORK PRACTICES IF ASBESTOS-CONTAINING MATERIALS ARE PRESENT

The following work practices shall be employed to avoid or minimize disturbing asbestos:

PERSONAL PROTECTION IF ASBESTOS-CONTAINING MATERIALS ARE PRESENT

The following equipment/clothes shall be used/worn during the work to protect workers:

(manuals on personal protection can be referenced)

SPECIAL PRACTICES AND/OR EQUIPMENT REQUIRED:

Signed:

_____ Date: _____

(Asbestos Program Manager)

NOTIFICATION LETTER 1 CONTRACTORS / PROSPECTIVE CONTRACTORS or VENDORS

Dear Mr./Ms. _____:

Federal regulations require building owners to notify prospective contractors who may perform work, and contractors who perform work in Medford School District facilities, that asbestos-containing materials are present in the building. We are required to convey the type, location and quantity found in your building. A compiled list of the asbestos-containing materials are found in the following document.

<u>TYPE</u>

LOCATION

<u>QUANTITY</u>

Before engaging in construction, repair or maintenance activities you are required to determine if asbestos is present in the materials which will be disturbed. You are to consult the building Asbestos Management Plan (AMP) for guidance regarding the required asbestos construction, repair and maintenance work practices. Any asbestos contamination, which results from failure to follow procedures in the AMP, will be the responsibility of the contractor to resolve. It is your responsibility to ensure that your employees and any subcontractors you employ are notified about the conditions, procedures and requirements for working with asbestos-containing materials in this building including proper training.

Your cooperation is essential for the success of this program. Questions or concerns you may have regarding asbestos-containing materials should be directed to

_____, Program Manager at______.

Sincerely,

Optional Acknowledgment

Please return a signed copy of this letter to acknowledge your understanding of the asbestos control program in this building and your intent to comply with this program.

Name:	Date:
Signature:	Title:
Company:	