



Mattacheese Middle School
400 Higgins Crowell Road
West Yarmouth, Massachusetts

AHERA 3-YEAR RE-INSPECTION REPORT

August 2022

PREPARED FOR:

Dennis-Yarmouth Regional School District
296 Station Avenue
South Yarmouth, Massachusetts
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Introduction

The Vertex Companies, LLC (VERTEX) conducted a 3-Year Reinspection on August 3, 2022 as required by the 40 CFR 763 Asbestos Hazard Emergency Response Act (AHERA) at the Mattacheese Middle School located at 400 Higgins Crowell Road, West Yarmouth, Massachusetts. The AHERA regulation requires that each Local Education Agency (LEA) retain a certified/accredited Asbestos Inspector to conduct a re-inspection of all friable and non-friable known or assumed asbestos-containing building materials (ACBM) in each school building that they lease, own, or otherwise utilize as a school building every three years since the initial inspection. The AHERA re-inspection is to be performed by an accredited inspector at least once every three years from the time of implementation of the original management plan. . In addition, the LEA is required to assign a Designated Person (DP) to oversee the management of the identified ACBMs within the school which includes but not limited to conducting Six-Month Periodic Surveillance Inspections, Annual Notifications, Training, Record Keeping, etc. as required to effectively manage the identified ACBMs in place at the school.

The initial AHERA inspection was conducted by Universal Engineering Corporation (Universal) of Boston, MA in August 1988. Based on the initial inspection Universal prepared an Asbestos Management Plan (AMP) for the Mattacheese Middle School in August 1988. The following is a list of dates and consultants that have conducted the required 3-Year Reinspections. Additionally, the following list of reinspections have been provided and maintained by the Dennis-Yarmouth (D-Y) Regional School District:

<u>Date</u>	<u>Consultant</u>
October 1991	Universal of Boston, MA
July 2000	FLI Environmental of Dedham, MA
July 2003	FLI Environmental of Dedham, MA
September 2011	FLI Environmental of Dedham, MA
June 2012(Revised 2011 Report)	FLI Environmental of Dedham, MA
May 2013	Vertex Air Quality Services, LLC, Weymouth, MA
August 2016	The VERTEX Companies, Inc., Weymouth, MA
July 2019	The VERTEX Companies, Inc., Weymouth, MA

The current AHERA 3-Year Re-inspection Report conducted by VERTEX is presented to the D-Y Regional School District as an addendum to the original Management Plan and should be incorporated into the school's Management Plan folder.

The D-Y Regional School District and/or Mattacheese Middle School may use the information obtained from the AHERA Re-inspection and the data compiled in the existing Management Plan to effectively manage the ACBMs present in the Mattacheese Middle School in West Yarmouth, Massachusetts.

SECTION 1
INSPECTION REPORT

Section 1
Inspection Report

Re-inspection Protocol

Massachusetts Department of Labor Standards (DLS) Certified Asbestos Inspector, Jessica Woltemate (AI#901049) performed the AHERA Re-inspection. The updated Management Plan was developed by Massachusetts DLS Certified Asbestos Management Planner, Jason Mohre (AP#000080). The purpose of the reinspection was to identify if the hazard potential of the ACBMs or assumed ACBMs has changed since the last inspection as well as sample and assess any suspect materials not listed in the original management plan. As required by the AHERA regulation, the reinspection survey procedures must include a visual re-inspection and reassessment of the condition of all known locations of friable and non-friable ACBMs. The visual inspection consists of touching ACBM, which was previously considered non-friable to determine whether the ACBM has become friable since last re-inspection. It should be noted that under the AHERA regulations only ACBMs is inspected, other asbestos containing materials (ACMs) may be associated with the school that do not fall under AHERA ACBM definition. Examples of materials which have been found to contain asbestos include but are not limited to exterior window caulking, window glazing, and roofing material. Prior to school renovations any suspect materials not sampled or listed within the school's AMP, must be tested prior to disturbance. Furthermore, VERTEX recommends an Asbestos Containing Materials (ACMs) Survey be conducted prior to any renovation activities to comply with the Environmental Protection Agency (EPA) Title 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs) and the Massachusetts Department of Environmental Protection Regulations. Documentation for subsequent surveys not related to AHERA should be included in the overall Management Plan.

In addition, hazard assessment of known friable materials and newly determined friable materials must be recorded and submitted to the school's Designated Person. Assessment of potential asbestos hazards is subject to each individual inspector's judgment, and as a result, hazard assessments may vary.

Furthermore, the LEA Designated Person should assume that potential asbestos-containing pipe and fitting insulation may be located behind walls and ceilings not accessible. Any renovation/demolition work that may penetrate these areas should be inspection.

All available documentation of asbestos abatement projects, which have occurred since the initial AHERA inspection should be included with the reinspection report. VERTEX was provided and reviewed the following Abatement Records maintained by the D-Y Regional School District:

Date

Consultant

January 2016

The Vertex Companies, Inc., Weymouth, MA

In addition, VERTEX was provided and reviewed the maintained six-month surveillance inspections conducted since the past 3-year re-inspection. No concerns were noted upon review of the six-month surveillance inspections records.



Appendix D contains Certification Page for the Inspector and Management Planner involved with the reinspection of the school as well as a copy of the LEA's Designated Person's training.

Locations of the identified ACBMs with quantities observed, conditions assessed, homogeneous hazard assessment and changes since the previous re-inspection report are presented in Appendix A of this report.

Section 1
Inspection Report (cont.)

Bulk Sampling Methodology

Bulk samples were not collected during the current re-inspection activities in August 2022. However, VERTEX had collected and analyzed the following bulk samples of suspect homogeneous materials within the facility during an AHERA inspection conducted in May 2013. Please refer to Table 1 below for a summary of the bulk samples collected and analyzed.

Table 1 -Sample Locations and Results (May 2013)

Sample Number	Sample Description	Sample Location	Asbestos Content
B-429-01A	12" x 12" Gray Floor Tile	1 st Fl., C-Wing Corridor	None Detected
B-429-01B	12" x 12" Gray Floor Tile	Fl. 2, A-Wing Corridor	None Detected
B-429-02A	12" x 12" Gray Floor Tile Mastic	1 st Fl., C-Wing Corridor	None Detected
B-429-02B	12" x 12" Gray Floor Tile Mastic	Fl. 2, A-Wing Corridor	None Detected
B-429-03A	12" x 12" Off-White w/ Multicolor Spec Floor Tile	1 st Fl., Main Office	None Detected
B-429-03B	12" x 12" Off-White w/ Multicolor Spec Floor Tile	1 st Fl., Main Office Strg.	None Detected
B-429-04A	12" x 12" Off-White w/ Multicolor Spec FT Mastic	1 st Fl., Main Office	None Detected
B-429-04B	12" x 12" Off-White w/ Multicolor Spec FT Mastic	1 st Fl., Main Office Strg.	None Detected
B-429-05A	12" x 12" Gray/Tan Spec Floor Tile	1 st Fl., Gym/Auditorium Connector #1	None Detected
B-429-05B	12" x 12" Gray/Tan Spec Floor Tile	1 st Fl., Gym/Auditorium Connector #1	None Detected
B-429-06A	12" x 12" Gray/Tan Spec Floor Tile Mastic	1 st Fl., Gym/Auditorium Connector #1	None Detected
B-429-06B	12" x 12" Gray/Tan Spec Floor Tile Mastic	1 st Fl., Gym/Auditorium Connector #1	None Detected
B-429-07A	12" x 12" Off-White Tan Streak Floor Tile	1 st Fl., C-6	None Detected
B-429-07B	12" x 12" Off-White Tan Streak Floor Tile	1 st Fl., B-5	None Detected
B-429-08A	12" x 12" Off-White Tan Streak Floor Tile Mastic	1 st Fl., C-6	None Detected
B-429-08B	12" x 12" Off-White Tan Streak Floor Tile Mastic	1 st Fl., B-5	None Detected
B-429-09A	12" x 12" Off-White Black Streak Floor Tile	1st Fl., Copy Room	2% Chrysotile
B-429-09B	12" x 12" Off-White Black Streak Floor Tile	1st Fl., Faculty Kitchen	Positive Stop
B-429-10A	12" x 12" Off-White Black Streak Floor Tile Mastic	1 st Fl., Copy Room	None Detected
B-429-10B	12" x 12" Off-White Black Streak Floor Tile Mastic	1 st Fl., Faculty Kitchen	None Detected
B-429-11A	12" x 12" Tan Streak Floor Tile	1 st Fl., C-4	None Detected
B-429-11B	12" x 12" Tan Streak Floor Tile	1 st Fl., C-7 Storage	None Detected
B-429-12A	12" x 12" Tan Streak Floor Tile Mastic	1st Fl., C-4	4% Chrysotile
B-429-12B	12" x 12" Tan Streak Floor Tile Mastic	1st Fl., C-7 Storage	Positive Stop
B-429-13A	12" x 12" Gray/Brown Spec Floor Tile	2 nd Fl., Library Office	None Detected
B-429-13B	12" x 12" Gray/Brown Spec Floor Tile	2 nd Fl., Library Storage	None Detected
B-429-14A	12" x 12" Gray/Brown Spec Floor Tile Mastic	2 nd Fl., Library Office	None Detected

Table I - Sample Locations and Results (May 2013)

Sample Number	Sample Description	Sample Location	Asbestos Content
B-429-14B	12" x 12" Gray/Brown Spec Floor Tile Mastic	2 nd Fl., Library Storage	None Detected
B-429-15A	Green Epoxy Floor	1 st Fl., C-Wing Corridor	None Detected
B-429-15B	Green Epoxy Floor	2 nd Fl., A-Wing Corridor	None Detected
B-429-16A	Wood Flooring Paper	1 st Fl., Band Room	None Detected
B-429-16B	Wood Flooring Paper	1 st Fl., Band Room	None Detected
B-429-17A	Wood Floor Subfloor Board	1 st Fl., Band Room	None Detected
B-429-17B	Wood Floor Subfloor Board	1 st Fl., Band Room	None Detected
B-429-18A	Carpet Adhesive	1 st Fl., Auditorium	None Detected
B-429-18B	Carpet Adhesive	1 st Fl., Auditorium	None Detected
B-429-19A	Beige Covebase	1 st Fl., C-Wing Corridor	None Detected
B-429-19B	Beige Covebase	2 nd Fl., B-Wing Corridor	None Detected
B-429-20A	Beige Covebase Adhesive	1 st Fl., C-Wing Corridor	None Detected
B-429-20B	Beige Covebase Adhesive	2 nd Fl., B-Wing Corridor	None Detected
B-429-21A	Brown Residual Covebase Adhesive	2 nd Fl., B-25	None Detected
B-429-21B	Brown Residual Covebase Adhesive	1 st Fl., A-2	None Detected
B-429-22A	Black Sink Mastic #1	1st Fl., A-2	2% Chrysotile
B-429-22B	Black Sink Mastic #1	2nd Fl., B-22	Positive Stop
B-429-23A	Black Sink Mastic #2	1st Fl., C-7 Art	3% Chrysotile
B-429-23B	Black Sink Mastic #2	1st Fl., C-7 Storage	Positive Stop
B-429-24A	Black Fountain Mastic	1 st Fl., Boy's Locker Rm.	Trace (<% Chrysotile)
B-429-24B	Black Fountain Mastic	1 st Fl., Girl's Locker Rm.	Trace (<% Chrysotile)
B-429-25A	Gray Sink Mastic	1st Fl., C-1	15% Chrysotile
B-429-25B	Gray Sink Mastic	2nd Fl., Library Office	Positive Stop
B-429-26A	Brown Glue Daubs Associated w/ 1'x1' Wall/Ceiling Tiles	2 nd Fl., C-21	None Detected
B-429-26B	Brown Glue Daubs Associated w/ 1'x1' Wall/Ceiling Tiles	2 nd Fl., C-22	None Detected
B-429-27A	Black Adhesive on Wall	2 nd Fl., Kitchen Storage	3 % Chrysotile
B-429-27B	Black Adhesive on Wall	2 nd Fl., Kitchen Laundry	Positive Stop
B-429-28A	Black Mastic on Foundation Wall	Crawl Space, C-Wing	None Detected
B-429-28B	Black Mastic on Foundation Wall	Crawl Space, C-Wing	None Detected
B-429-29A	Interior Door Caulking	1 st Fl., Boiler Room	None Detected
B-429-29B	Interior Door Caulking	2 nd Fl., B-Wing Corridor	None Detected
B-429-29C	Interior Door Caulking	1 st Fl., A-1	None Detected
B-429-30A	Interior Window Caulking	2 nd Fl., Cafeteria	None Detected
B-429-30B	Interior Window Caulking	2 nd Fl., B-Wing Corridor	None Detected
B-429-30C	Interior Window Caulking	1 st Fl., A-1	None Detected
B-429-31A	Interior Window Glazing	1 st Fl., C-3/5	Trace (<% Chrysotile)
B-429-31B	Interior Window Glazing	2 nd Fl., B-25	Trace (<% Chrysotile)
B-429-31C	Interior Window Glazing	1 st Fl., A-Wing Corridor	Trace (<% Chrysotile)

Table I - Sample Locations and Results (May 2013)

Sample Number	Sample Description	Sample Location	Asbestos Content
B-429-32A	Drywall	2 nd Fl., C-21	None Detected
B-429-32B	Drywall	2 nd Fl., C-22	None Detected
B-429-33A	Joint Compound	2 nd Fl., C-21	None Detected
B-429-33B	Joint Compound	2 nd Fl., C-21	None Detected
B-429-33C	Joint Compound	2 nd Fl., C-22	None Detected
B-429-33D	Joint Compound	2 nd Fl., Kitchen Food Storage	None Detected
B-429-33E	Joint Compound	2 nd Fl., Kitchen Storage	None Detected
B-429-34A	Drywall	1 st Fl., Auditorium Sound Rm.	None Detected
B-429-34B	Drywall	1 st Fl., Auditorium Sound Rm.	None Detected
B-429-35A	Joint Compound Textured Ceiling	1 st Fl., Auditorium Sound Rm.	None Detected
B-429-35B	Joint Compound Textured Ceiling	1 st Fl., Auditorium Sound Rm.	None Detected
B-429-35C	Joint Compound Textured Ceiling	1 st Fl., Auditorium Sound Rm.	None Detected
B-429-36A	1' x 1' Ceiling Tile (Line)	1 st Fl., C-Wing Corridor	None Detected
B-429-36B	1' x 1' Ceiling Tile (Line)	1 st Fl., A-Wing Corridor	None Detected
B-429-37A	2' x 4' Ceiling Tile (Textured)	2 nd Fl., Cafeteria	None Detected
B-429-37B	2' x 4' Ceiling Tile (Textured)	2 nd Fl., Cafeteria	None Detected
B-429-38A	2' x 4' Ceiling Tile (Fissure/Dot)	2 nd Fl., Cafeteria	None Detected
B-429-38B	2' x 4' Ceiling Tile (Fissure/Dot)	2 nd Fl., Cafeteria	None Detected
B-429-39A	2' x 4' Ceiling Tile (Speckled/Dot)	2 nd Fl., Cafeteria	None Detected
B-429-39B	2' x 4' Ceiling Tile (Speckled/Dot)	2 nd Fl., Cafeteria	None Detected
B-429-40A	2' x 2' Ceiling Tile (Pin)	1 st Fl., C-2	None Detected
B-429-40B	2' x 2' Ceiling Tile (Pin)	1 st Fl., C-2	None Detected
B-429-41A	2' x 2' Ceiling Tile (Rough)	1 st Fl., C-2	None Detected
B-429-41B	2' x 2' Ceiling Tile (Rough)	1 st Fl., C-2	None Detected
B-429-42A	2' x 2' Ceiling Tile (Speckled/Dot)	1 st Fl., C-2	None Detected
B-429-42B	2' x 2' Ceiling Tile (Speckled/Dot)	1 st Fl., C-2	None Detected
B-429-43A	Foil Back Paper Jacket on Fiberglass Pipe Insulation	Crawl Space, C-Wing	None Detected
B-429-43B	Foil Back Paper Jacket on Fiberglass Pipe Insulation	Crawl Space, B-Wing	None Detected
B-429-43C	Foil Back Paper Jacket on Fiberglass Pipe Insulation	Crawl Space, A-Wing	None Detected
B-429-44A	Boiler Insulation	1 st Fl., Boiler Room	None Detected
B-429-44B	Boiler Insulation	1 st Fl., Boiler Room	None Detected
B-429-44C	Boiler Insulation	1st Fl., Boiler Room	3 % Chrysotile
B-429-45A	Boiler Breeching Exhaust Insulation	1 st Fl., Boiler Room	None Detected
B-429-45B	Boiler Breeching Exhaust Insulation	1 st Fl., Boiler Room	None Detected
B-429-45C	Boiler Breeching Exhaust Insulation	1 st Fl., Boiler Room	None Detected

Based on sampling of homogenous suspect ACBMs identified by VERTEX within the facility, VERTEX has determined the following:

The following is a list of homogenous materials that were determined or assumed to be ASBESTOS-CONTAINING:

12" x 12" Off-White Black Streak Floor Tile	12" x 12" Off-White Black Streak FT Mastic
12" x 12" Tan Streak Floor Tile	12" x 12" Tan Streak Floor Tile Mastic
Black Sink Mastic	Gray Sink Mastic
Boiler Insulation	Pipe Fitting Insulation
Interior Window Glazing	Black Fountain Mastic
Black Counter Tops	Fume Hood
Roof Drain Insulation	

The following is a list of materials that were found and determined to be NON-ASBESTOS-CONTAINING:

12" x 12" Gray Floor Tile	12" x 12" Gray Floor Tile Mastic (Yellow)
12" Off-White w/ Multicolor Spec Floor Tile	12" Off-White w/ Multi Spec FT Mastic (Yellow)
12" x 12" Gray/Tan Spec Floor Tile	12" x 12" Gray/Tan Spec FT Mastic (Yellow)
12" x 12" Off-White Tan Streak Floor Tile	12" Off-White Tan Streak FT Mastic (Yellow)
12" x 12" Gray/Brown Spec Floor Tile	12" x 12" Gray/Brown Spec FT Mastic (Yellow)
Green Epoxy Floor	Wood Flooring Paper
Wood Floor Subfloor Board	Carpet Adhesive
Beige Covebase	Beige Covebase Adhesive
Brown Residual Covebase Adhesive	Brown Glue Daubs
Black Adhesive on Wall	Black Mastic on Foundation Wall
Interior Door Caulking	Interior Window Caulking
Drywall	Joint Compound
Joint Compound Textured Ceiling	1' x 1' Ceiling Tile (Line)
2' x 4' Ceiling Tile (Textured)	2' x 4' Ceiling Tile (Fissure/Dot)
2' x 4' Ceiling Tile (Speckled/Dot)	2' x 2' Ceiling Tile (Pin)
2' x 2' Ceiling Tile (Rough)	2' x 2' Ceiling Tile (Speckled/Dot)
Foil Back Paper Jacket on Fiberglass Pipe Insulation	

Section 1
Inspection Report (continued)
Updated Hazard Assessment

All known locations of friable and non-friable ACM were re-inspected to determine whether a change in the ACM's condition has occurred since the initial AHERA inspection. From the reinspection, an asbestos hazard assessment was performed. Factors considered when assessing asbestos hazard include;

1. The friability of the material;
2. The condition of material including type, severity and extent of damage;
3. The material's potential for disturbance including accessibility and air flow;
4. The material's potential for damage.

The location, estimated quantities, condition and Homogenous Area Hazard Assessment Category for the identified ACMs are presented in Appendix A. The following is an updated homogenous area assessment for each homogeneous area as well as new homogeneous areas identified during the current reinspection.

Homogeneous Area Assessment

Homogeneous Area #1- Black Counter Tops

Classification: Non-Friable Miscellaneous ACM

Asbestos-containing Black Counter Tops are located within rooms B-1 and B-2 at the school. The Black Counter Tops are non-friable, in generally good condition, and have a potential for damage.

Homogeneous Area #2- Fume Hood

Classification: Assumed Non-Friable Miscellaneous ACM

An assumed asbestos-containing Fume Hood is located within the B-2 at the school. The Fume Hood is assumed to be asbestos-containing, non-friable, in generally good condition, and has a potential for damage.

Section 1
Inspection Report (continued)

Homogeneous Area #3-Pipe Fitting Insulation

Classification: Thermal System Insulation

Asbestos-containing pipe fitting insulation is located at the school. The pipe fitting insulation is friable and was observed damaged within the crawlspaces, C-2 (SPED), C-2 (Resource), Boy Locker Room and the Janitor Closet within the Boys Locker Room. The pipe fitting insulation observed exposed and accessible has a potential for significant damage (specifically the Boy's and Girl's Locker Room. Additionally, pipe fitting insulation is assumed and/or identified behind walls and hard ceiling areas. The pipe fitting insulation is friable and presents a potential for damage in these areas.

Homogeneous Area #4-Roof Drain Fitting Insulation

Classification: Thermal System Insulation

Asbestos-containing roof drain fitting insulation is located at the school. The roof drain fitting insulation is friable and was observed within the Cafeteria, C-21, B-28, and B-27 at the school. The pipe fitting insulation is friable, in generally good condition and presents a potential for damage in these areas.

Homogeneous Area #5- 12" x 12" Tan Streak Floor Tile and Mastic

Classification: Non-Friable Miscellaneous ACBM

Asbestos-containing 12"x 12" Tan Streak Floor Tile and Mastic is located within Rooms C-7 and C-7 Storage at the school. The 12"x 12" Tan Streak Floor Tile and Mastic is non-friable, in generally good condition and has a potential for damage.

Homogeneous Area #6- 12" x 12" Off-White Black Streak Floor Tile

Classification: Non-Friable Miscellaneous ACBM

Asbestos-containing 12"x 12 Off-White Black Streak Floor Tile is located within Copy Room and Faculty Kitchen at the school. The 12"x 12 Off-White Black Streak Floor Tile is non-friable, in generally good condition and has a potential for damage.

Homogeneous Area #7- Flexible Duct Connector Cloth (Previous HA # 5)

Classification: Assumed Non-Friable Miscellaneous ACBM

Assumed asbestos-containing Flexible Duct Connector Cloth is located within the Choral Office Band Room and Main Office at the school. The Flexible Duct Connector Cloth is assumed to asbestos-containing, non-friable, in generally good condition, and has a potential for damage.

Section 1
Inspection Report (continued)
Updated Hazard Assessment

Homogeneous Area #8- Black Sink Mastic

Classification: Non-Friable Miscellaneous ACBM

Asbestos-containing Black Sink Mastic is located within Rooms C-7, C-7 Storage, C-6, C-6 Storage, C-4, C-2 (SPED), B-6, B-5, B-7, B-21, B-22, B-23, B-24, B-25, B-26, B-27, B-28, A-1, A-2, A-3, A-4, A-5, A-6, A-7, A-8, A-21, A-22, A-23, A-24, A-25, A-26, A-27, and A-28 at the school. The Black Sink Mastic is non-friable, in generally good condition, and presents the potential for damage due to storage of materials within the under sink cabinet areas.

Homogeneous Area #9- Gray Sink Mastic

Classification: Non-Friable Miscellaneous ACBM

Asbestos-containing Gray Sink Mastic is located within C-1, Library Office, and the Boy's and Girl's Dressing Rooms at the school. The Gray Sink Mastic is non-friable, in generally good condition, and presents the potential for damage due to storage of materials within the under sink cabinet areas.

Homogeneous Area #10- Black Glue Adhesive on Wall

Classification: Non-Friable Miscellaneous ACBM

Concealed (Painted) Asbestos-containing Black Glue Adhesive on Wall is located within Kitchen Storage and Laundry Area at the school. The Black Glue Adhesive on Wall is non-friable, painted, and presents the potential for damage.

Homogeneous Area #11-Residual Boiler Insulation

Classification: Thermal System Insulation

Asbestos-containing pipe residual boiler insulation is located within the boiler room at the school. The residual boiler insulation is located under the newly insulated boiler materials on both boilers. The residual boiler insulation is friable, covered and has a potential for damage.

Homogeneous Area #12- Interior Window Glazing

Classification: Non-Friable Miscellaneous ACBM

Trace asbestos-containing Interior Window Glazing is located throughout the school and associated with the storefront window units. The interior window glazing is non-friable however in poor condition and presents a potential for damage. The trace asbestos-containing interior window glazing should be point counted to determine if the material is greater than 1 % asbestos in content.

Section 1
Inspection Report (continued)
Updated Hazard Assessment

Homogeneous Area #13- Black Mastic on Fountains

Classification: Non-Friable Miscellaneous ACBM

Trace asbestos-containing Black Mastic on Fountains is located within the Boy's and Girl's Locker Rooms. The Black Mastic on the Fountains is non-friable, in generally good condition and presents a potential for damage. The trace asbestos-containing Black Mastic on Fountains should be point counted to determine if the material is greater than 1 % asbestos in content.

Homogeneous Area #14- Wood Flooring Paper

Classification: Assumed Non-Friable Miscellaneous ACBM

Assumed asbestos-containing Wood Flooring Paper is assumed to be located under the Wood Floor within the Gym and Room C-3/ C-5 at the school. VERTEX conducted bulk sampling and analysis of the associated Wood Flooring Materials with the Band Room/Stage which were determined to be non-asbestos containing.

Homogeneous Area #15- Interior Boiler Insulated Materials

Classification: Assumed Non-Friable Miscellaneous ACBM

Assumed asbestos-containing Interior Boiler Insulating Materials not previously identified is assumed to be located within the Boilers at the school.

SECTION 2

RESPONSE ACTION DETERMINATION

Section 2

Response Action Determination

The following is based on the Decision Tree for Thermal System Insulation Type ACM. The recommended response actions are determined utilizing the “decision tree” approach for Response Action Determination as outlined in EPA’s “Asbestos Hazard Emergency Response Act,” (AHERA) 40 CFR 763. Because of defined friability factors associated with surfacing and miscellaneous materials versus thermal system insulation, separate decision trees are utilized for each group of materials.

Decision Trees are used to estimate the risk associated with exposure to asbestos in a given homogeneous area, and to recommend certain response actions, which are consistent with regulatory requirements. Eight response actions are recommended for both thermal system insulation and for surfacing/miscellaneous insulation. The response section number given to each homogeneous area indicates a priority for action, the lower the number, the more serious the hazard. Most response actions call for an operations and maintenance program, assuming that this is the least burdensome method which still protects human health and environment. This does not prohibit the building owner from removal of ACM at any time, if that is the preferred response action.

Recommended response actions are based upon the material condition, disturbance, air-flow and the potential for damage. Potential response actions include the following:

1. Significantly Damaged Thermal System Insulation: **Response Action 1.** Isolate the area and restrict access to the area. ACM should be removed as soon as possible.
2. Damaged Thermal System Insulation with High Disturbance: **Response Action 2.** Continue O&M program and remove the ACM as soon as possible or reduce the potential for disturbance.
3. Damaged Thermal System Insulation with Moderate Disturbance and in the Presence of an Air Stream: **Response Action 2.** Continue with O&M Program and remove the ACM as soon as possible or reduce the potential for disturbance.
4. Damaged Thermal System Insulation with Moderate Disturbance: **Response Action 3.** Repair ACM, continue with O&M Program.
5. Damaged Thermal System Insulation with Low Disturbance and in the Presence of an Air Stream: **Response Action 4.** Repair ACM, continue with O&M Program.
6. Damaged Thermal System Insulation with Low Disturbance: **Response Action 5.** Repair ACM, continue with O&M Program.
7. Undamaged Thermal System Insulation with High Disturbance: **Response Action 6.** Continue with O&M Program and take preventative measures to reduce disturbance.
8. Undamaged Thermal System Insulation with Moderate Disturbance: **Response Action 7.** Continue with O&M Program and take preventative measure to reduce disturbance.
9. Undamaged Thermal System Insulation with Low Disturbance: **Response Action 7.** Continue with O&M Program and take preventative measure to reduce disturbance.

Section 2
Response Action Determination (continued)

The following is based on the Decision Tree for Surfacing and Miscellaneous ACM. Recommended response actions are based upon friability, material condition, disturbance, air flow and the potential for damage. Potential response actions include the following:

1. Friable Surfacing or Miscellaneous ACM with Significant Damage: **Response Action 1:** Isolate the area and restrict access to the area. Remove the ACM as soon as possible.
2. Friable Surfacing or Miscellaneous ACM with Damage and a High Disturbance: **Response Action 2:** Continue with O&M Program and remove ACM as soon as possible or reduce the potential for disturbance.
3. Friable Surfacing or Miscellaneous ACM with Damage, Moderate Disturbance and in the Presence of an Air Stream: **Response Action 2:** Continue with O&M Program and remove ACM as soon as possible or reduce the potential for disturbance.
4. Friable Surfacing or Miscellaneous ACM with Damage and Moderate Disturbance: **Response Action 3:** Continue with O&M Program and schedule removal when practical and cost-effective
5. Friable Surfacing or Miscellaneous ACM with Damage, Low Disturbance and in the Presence of an Air Stream: **Response Action 4:** Continue with O&M Program and schedule removal when practical and cost-effective
6. Friable Surfacing or Miscellaneous ACM with Damage and Low Disturbance: **Response Action 5.** Continue with O&M Program and schedule removal when practical and cost-effective
7. Friable Surfacing or Miscellaneous ACM with No Damage and High Disturbance: **Response Action 6.** Take preventative measures to reduce the disturbance.
8. Friable Surfacing or Miscellaneous ACM with No Damage and Moderate Disturbance: **Response Action 7.** Take preventative measure to reduce the disturbance.
9. Friable Surfacing or Miscellaneous ACM with No Damage and Low Disturbance: **Response Action 8.** Take preventative measure to reduce the disturbance.
10. Non-Friable Surfacing or Miscellaneous ACM: **Response Action 8:** Continue with O&M until major renovation or demolition requires removal under the EPA NESHAPS, or until hazard assessment factors change.

Section 2

Response Action Determination (continued)

Advantages and Disadvantage to Abatement Alternatives

The decision trees outlined in AHERA 40 CFR 763 are used to provide the “best” alternative for the specific conditions in each homogeneous area.

Below is a discussion of the alternative approaches to asbestos management in a building.

Long Term Operation & Maintenance Program

Advantages:

- *Low initial cost for implementation
- *Good interim plan
- *An O&M program may be implemented and carried out by in house trained personnel.

Disadvantages:

- *Asbestos remains in the building
- *Condition of the asbestos must be monitored
- *Cost of training and special work procedures may be significant
- *Effectiveness may be limited where control of the building occupants is difficult

Encapsulation

Advantages:

- *Reduces the risk of release of asbestos fibers
- *Initial cost is lower than the cost of asbestos removal
- *Asbestos-containing material may still serve its initial purpose
- *Quick temporary means of repair

Disadvantages:

- *Asbestos remains in the building and encapsulant makes removal more difficult
- *Improper encapsulation may cause the material to delaminate or pull away from substrate
- *Asbestos-containing material must have an O&M program
- *Similar preparation for asbestos removal is required for encapsulation
- *Long term cost may be greater than asbestos removal is periodic reapplication of the encapsulant is required

Section 2

Response Action Determination (continued)

Enclosure

Advantages:

- *Enclosure reduces immediate exposure
- *Initial cost of enclosure is lower than the cost of asbestos removal
- *Asbestos-containing material may still serve its initial purpose
- *Quick temporary means of repair

Disadvantages:

- *Asbestos remains in place and later removal is more difficult
- *If maintenance is required of the systems insulated with asbestos, the asbestos will be exposed
- *An O&M program will have to be implemented for the asbestos-containing material
- *Similar preparation for asbestos removal is required for enclosure

Removal

Advantages

- *Asbestos-containing material is eliminated from the building
- *There is no need for an O&M plan
- *Initial cost is great, but the future costs are eliminated

Disadvantages:

- *Reinsulation, refireproofing, or replacement of materials may be required
- *Improper removal may raise levels of airborne fibers higher than background levels
- *The initial cost of removal is very high
- *Areas of the building involved in asbestos removal may not be occupied during removal

SECTION 3

UPDATED RECOMMENDED RESPONSE ACTIONS

Section 3

Updated Recommended Response Actions

The updated recommended response actions are for all the homogenous areas found within the school. The response actions are determined utilizing the decision tree approach for Response Action Determination as described in Section 2.

Homogeneous Area #1- Black Counter Tops

Response Action 8: The Black Counter Tops located within Rooms B-1 and B-2 are in generally good condition, non-friable and have a potential for damage. Continue the Operations and Maintenance (O&M) Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #2- Fume Hood

Response Action 8: The assumed asbestos-containing Fume Hood located within B-2 is in generally good condition, non-friable and has a potential for damage. Continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #3-Pipe Fitting Insulation

Response Action 2: The pipe fitting insulation located within the Boy's Locker Room, Boy's Locker Room Janitor Closet, and Crawl Spaces display damage. Retain a Massachusetts certified Abatement Contractor to remove and complete the response action. Affix appropriate asbestos warning labels to Boiler Room and Crawlspace Entrances Recommended completion date of the work activities: September 2022.

Response Action 6: The remaining pipe fitting insulation located within the Boy's and Girl's Locker Room is in generally good condition, however, the locations of the fittings are noted as low and present of potential for significant damage. Limit the potential for disturbance and continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Response Action 7: The pipe fitting insulation located within the remainder of the school and assumed behind wall and hard ceiling areas at the school have a potential for damage. Limit the potential for disturbance and continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed. It should be noted that asbestos-containing pipe fitting insulation may be located above hard ceilings and/or behind walls. As such, a thorough exploratory inspection should be conducted prior to any renovations that may impact wall or ceiling areas.

Section 3
Updated Recommended Response Actions (Continued)

Homogeneous Area #4-Roof Drain Fitting Insulation

Response Action 7: The roof drain insulation fitting insulation located within the Cafeteria, C-21, B-28, and B-27 is in generally good condition and have a potential for damage. Limit the potential for disturbance and continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change.. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #5- 12" x 12" Tan Streak Floor Tile and Mastic

Response Action 8: The 12"x 12" Tan Streak Floor Tile and Mastic located within Rooms C-7 and C-7 Storage are in generally good condition, non-friable, and has a potential for damage. Continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #6- 12" x 12" Off-White Black Streak Floor Tile

Response Action 8: The 12"x 12 Off-White Black Streak Floor Tile located within Copy Room and Faculty Kitchen are in generally good condition, non-friable, and has a potential for damage. Continue the O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #7- Flexible Duct Connector Cloth (Previous HA # 5)

Response Action 8: Assumed asbestos-containing Flexible Duct Connector Cloth located within the Choral Office and Band Room. The Flexible Duct Connector Cloth is assumed to be non-friable and have a potential for damage. Continue O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. The Flexible Duct Connector Cloth is assumed to be asbestos-containing and should be tested prior to any activities that may disturb this material.

Homogeneous Area #8- Black Sink Mastic

Response Action 8: The Black Sink Mastic located under the sink areas within classrooms throughout the school is in generally good condition, and presents the potential for damage due to storage of materials within the under sink cabinet areas. Discontinue under sink cabinet storage and seal doors for access for authorized personnel (i.e. plumber). Implement an O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Section 3
Updated Recommended Response Actions (Continued)

Homogeneous Area #9- Gray Sink Mastic

Response Action 8: The Gray Sink Mastic located under the sink areas within C-1, Library Office, and the Boy's and Girl's Dressing Rooms is in generally good condition, and presents the potential for damage due to storage of materials within the under sink cabinet areas. Discontinue under sink cabinet storage and seal doors for access for authorized personnel (i.e. plumber). Implement an O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #10- Black Glue Adhesive on Wall

Response Action 8: The Black Glue Adhesive on Wall located within the Kitchen Storage and Kitchen Laundry areas is now painted/concealed, non-friable, and has a potential for damage. Implement an O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #11-Residual Boiler Insulation

Response Action 7: The residual boiler insulation located under the newly insulated boiler insulation on the two boilers at the school is covered and has a potential for damage. Limit the potential for disturbance and implement an O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #12- Interior Window Glazing

Response Action 8: Trace Asbestos-Containing Interior Window Glazing located throughout the school is in poor condition. The interior window glazing is non-friable however in poor condition and presents a potential for damage. The trace asbestos-containing interior window glazing should be point counted to determine if the material is greater than 1 % asbestos in content. Repair or remove and replace the damaged Interior Window Glazing. Continue O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Section 3
Updated Recommended Response Actions (Continued)

Homogeneous Area #13- Black Mastic on Fountains

Response Action 8: Trace Asbestos-Containing Black Mastic on Fountains located within the Boy's and Girl's Locker Room is non-friable, in generally good condition and has the potential for damage. The trace asbestos-containing interior Black Mastic on Fountains should be point counted to determine if the material is greater than 1 % asbestos in content. Continue O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. Prior to renovation/demolition the material must be removed if it will be disturbed.

Homogeneous Area #14- Wood Flooring Paper

Response Action 8: Assumed asbestos-containing Wood Flooring Paper is located under the wood floor within the Gym and Room C-3/5. The Wood Flooring Paper is assumed to be non-friable and covered. Continue O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. This Wood Flooring Paper is assumed to be asbestos-containing and should be tested prior to any activities that may disturb this material.

Homogeneous Area #15- Interior Boiler Insulating Materials

Response Action 7: Assumed asbestos-containing Interior Boiler Insulating Materials are assumed to be located within the two boilers at the school. Continue O&M Program until major renovations or demolition requires the removal of this material, or until the hazard assessment factors change. The Interior Boiler Insulating Materials are assumed to be asbestos-containing and should be tested prior to any activities that may disturb this material.

SECTION 4

RECORDKEEPING REQUIREMENTS AND RECOMMENDATIONS

Section 4

Recordkeeping Requirements and Recommendations

The AHERA regulations have very specific requirement for the maintenance of records associated with the management of asbestos in the school. The following is a list of some of the key items that the LEA Designated Person must maintain as part of the package:

- Initial AHERA inspection report and Asbestos Management Plan
- Subsequent 3-year reinspection reports.
- 6-month surveillance reports.
- Documentation for minor and major fiber release episodes. This includes abatement work performed by outside contractors as well as work performed by 16 hour trained maintenance personnel no matter how small.
- Documentation for completion of response actions (i.e. clearance testing). This should always include applicable training & licensure documentation for whomever performs the work.
- Labeling of ACBM (friable)
- Yearly notice to parents, teachers and staff.
- Training and medical exams for 16-hour trained personnel. Although training does not require renewal. Medicals are to be performed every year. In addition, 16-hour personnel should be fit tested every six months.
- Two hour awareness training for staff. Any new workers are required to receive this training at start of employment. Training should include specific review of ACBM in building their working in.

The above items are some of the key items, which need to be incorporated into the plan. The following are some recommendations are how best to maintain for easy access and review by outside parties:

- Maintain an update the three- ring binder for the school. Have a duplicated copy, one for administration office and one for the facilities office.
- Create tab sections in the binder. Each section should contain the information above. This will allow for easy review and update.
- Ensure that for every major and minor fiber release episode, that all documentation is received.

- As you updated your file, ensure the school's is updated.

Section 4

Recordkeeping Requirements and Recommendations (cont.)

In addition, it is also required that if outside contractors enter building perform work that they review areas where asbestos may be present that will be near their work. Have a log at the school for them to sign that they have read and understand. This will protect the school from liability and ensure outside contractors will not disturb asbestos. Finally, periodically review program internally and with your 16-hour persons to ensure compliance.

The pipe fitting insulation located within the Boy's Locker Room, Boy's Locker Room Janitor Closet, and Crawl Spaces display damage. Retain a Massachusetts certified Abatement Contractor to remove and complete the response action. Affix appropriate asbestos warning labels to Boiler Room and Crawlspace Entrances Recommended completion date of the work activities: September 2022.

Trace asbestos-containing Interior Window Glazing is located throughout the school and associated with the storefront window units. The interior window glazing is non-friable however in poor condition and presents a potential for damage. The trace asbestos-containing interior window glazing should be point counted to determine if the material is greater than 1 % asbestos in content.

Continue the periodic cleaning schedule. Properly trained staff (i.e. 2-Hour Asbestos Awareness) should conduct the cleaning activities utilizing HEPA-vacuums and/or wet wiping and floor tile maintenance as outlined in the recommended Operations and Maintenance procedures.

A required six-month periodic surveillance inspection should be scheduled for February 2023.

VERTEX recommends an ACMs Survey be conducted prior to any renovation activities to comply with the EPA Title 40 CFR Part 61, NESHAPs and the Massachusetts Department of Environmental Protection Regulations.

SECTION 5

ESTIMATED RESOURCES REQUIRED TO COMPLETE THE RESPONSE ACTIONS

Section 5

Estimated Resources Required to Complete the Response Actions

This section contains the estimated resources required to complete the abatement activities of the identified damaged ACBMs. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. The cost estimate below does not include abatement contactor mobilization, abatement design and/or project monitoring services.

Estimated Cost to complete the Response Actions at the Mattacheese Middle School located in West Yarmouth, Massachusetts:

\$1,200.00*

Cost Estimate Worksheet can be found in Appendix B.

***The estimated cost above to complete the response actions does not include the removal or repair of the trace asbestos-containing interior window glazing throughout the school. The estimated cost for removal or repair of trace asbestos-containing interior window glazing should be determined upon additional point cont analysis.**

*The estimated cost provided above does not include costs that may be associated with abatement consulting, contractor mobilization, two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs associated costs mentioned above:

Abatement Work Plan/Design Specification = \$500-\$2,500.00
Mobilization = \$1,500.00-\$2,500.00
Project Monitoring/Clearance Testing = \$520.00-\$600.00/per shift
Transmission Electron Microcopy (TEM) Analysis = \$75.00-\$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -\$15.00/sample
Clearance Report Preparation = \$350.00-\$800.00
2-Hour Asbestos Awareness Training= \$75/person
OSHA 16-hr Operations and Maintenance Training = \$300/person
Six-Month Periodic Surveillance Inspection = \$400/inspection

SECTION 6

ESTIMATED RESOURCES REQUIRED FOR THE ABATEMENT OF THE IDENTIFIED ACBMs

Section 6
Estimated Resources Required For Abatement of the Identified ACBMs

This section contains the estimated resources required to perform the removal of identified ACBMS, however EPA recommends the ACBMs to be managed in place if they are not damaged. Alternative abatement costs are estimated using current Abatement Contractor Estimates. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMS, phasing of work, etc. The cost estimate below is a worst case scenario if all identified ACBMs were to be removed. The cost estimate below does not include abatement contractor mobilization, abatement design and/or project monitoring services.

Estimated Cost for the Removal of ACBMs from the Mattacheese Middle School located in West Yarmouth, Massachusetts:

\$57,041.00**

Cost Estimate Worksheet can be found in Appendix C.

****The cost estimate above does not include the cost for removal of the assumed pipe fitting insulation potentially located behind walls and/or hard ceiling areas. As such, an additional budget should be noted for the assumed pipe fitting insulation potentially located behind walls is estimated at approximately \$30,000.00 in addition to the cost estimate above.**

****The cost estimate above does not include the cost for removal of the assumed wood flooring materials within Room C-3/5 and the Gym. The estimated cost for removal of assumed Wood Flooring Materials should be determined upon a thorough inspection and bulk sample analysis.**

****The cost estimate above does not include the cost for removal of the trace asbestos-containing Black Mastic on Fountains within Boy's and Girl's Locker Rooms. The estimated cost for removal of the trace asbestos-containing Black Mastic on Fountains should be determined upon additional point cont analysis.**

****The estimated cost above does not include the cost for removal the trace asbestos-containing interior window glazing throughout the school. The estimated cost for removal of the trace asbestos-containing interior window glazing should be determined upon additional point cont analysis.**

****The cost estimate above does not include the cost for removal of the assumed interior boiler insulating materials located within the two boilers at the school. The estimated cost for removal of assumed interior boiler insulating materials should be determined upon a thorough inspection and bulk sample analysis.**

** The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = \$500-\$2,500.00
Mobilization = \$1,500.00-\$2,500.00
Project Monitoring/Clearance Testing = \$520.00-\$600.00/per shift
Transmission Electron Microcopy (TEM) Analysis = \$75.00-\$100.00/sample
Phase Contrast Microscopy (PCM) Analysis = No Charge -\$15.00/sample
Clearance Report Preparation = \$350.00-\$800.00

SECTION 7

OPERATIONS AND MAINTENANCE

Section 7 **Operations and Maintenance Program**

INTRODUCTION

The DYRSD has established an overall asbestos control program that is designed to minimize exposure of all occupants of the facility to asbestos fibers located at 400 Higgins Crowell Road in West Yarmouth, Massachusetts. This Operations and Maintenance (O&M) Plan is an integral part of the overall program. It sets guidelines for the proper in-place management of all assumed and identified asbestos-containing building materials (ACBM) located in the building. This O&M plan contains the following sections:

- A. A description of the **duties of the LEA Designated Person (DP)**.
- B. A procedure for **notifying** workers, tenants, and other visitors where ACBM are located, and stressing the importance of avoiding disturbing the ACBM in any way.
- C. The detailed description of **O&M Activities**, including:
 - 1. **Emergency procedures** for both major and minor episodes of fiber release;
 - 2. **Periodic surveillance** of ACBM, so that any changes in the condition of ACBM can be noted, assessed, and documented; and
 - 3. Detailed descriptions of **work procedures** for both general maintenance and Asbestos Associated Project Workers, which must be used so that workers can avoid or minimize fiber release when performing activities that may disturb ACBM.
- D. A list of **records** that must be kept to document O&M and abatement activities.
- E. **Training requirements** for the DP, and custodial and maintenance staff.

In general, asbestos represents a health hazard **only** if fibers are breathed into the lungs or, in rare cases, are swallowed. Asbestos-containing materials that are non-friable (i.e. cannot be easily broken or crumbled by hand pressure) are not hazardous as long as they are intact and in good condition. Because friable materials can be easily crumbled or crushed, they are more susceptible to airborne fiber release than are non-friable materials.

It is a policy of the DYRSD that untrained employees and outside contractors **DO NOT** handle, touch or otherwise disturb any material that is asbestos or suspected of containing asbestos. A properly qualified and trained individual must handle any material that is, or may contain asbestos. Non-asbestos materials have been and may be identified by the asbestos coordinator using one or more of the following criteria: (1) lab analysis, (2) results of previous lab analysis, (3) product composition labels, (4) receipts, and so forth. At no time will any employee, student, or outside contractor assume a material to be asbestos-free. An inventory of Asbestos Containing Building Materials identified from the inspections are presented in Appendix A.

Section 7
Operations and Maintenance Program (Continued)

1. DUTIES OF THE ASBESTOS MANAGEMENT PLAN DESIGNATED PERSON

The DP oversees the implementation and management of the O&M plan. Duties of the DP include (1) notifying building staff, workers, and outside contractors where ACBM is located in the building, (2) assigning workers to tasks involving work that may disturb ACBM, (3) ensuring that abatement and O&M activities are conducted by trained qualified personnel, and (4) keeping records of all asbestos-related activities at the property.

The DP must receive training related to asbestos issues (see “Training Requirements” of this plan).

2. NOTIFICATION

The DP shall ensure that building workers, outside contractors, and tenants are notified of the location, quantity, and physical condition of identified and assumed ACBM that they might disturb. Such notification shall be accomplished by written notice, by personal communication, by posting signs at entrances to mechanical areas, and/or by labeling ACBM. By informing occupants of potential hazards in their vicinity, the notification reduces the possibility that occupants will accidentally disturb ACBM. The notification must stress that persons who disturb ACBM may accidentally release asbestos fibers into the air, and that therefore everyone must avoid disturbing ACBM. This notification will assure compliance with Occupational Health and Safety Administration (OSHA) Regulation 29 CFR Part 1926.1101, which regulates asbestos exposure as it relates to construction work (including building maintenance) and with 29 CFR 1910.1001, which regulates asbestos exposure in general industry (including normal housekeeping). If asbestos-related construction, abatement, or O&M activities is conducted, the DP shall also notify the following persons about the presence, location, and quantity of ACBM:

- A. Employees of the building, such as maintenance and custodial personnel who will work in or adjacent to areas containing ACBM:
- B. Staff who will occupy areas containing ACBM.
- C. Prospective employers applying for or bidding for work if their employees will be expected to work in or adjacent to areas containing ACBM.
- D. Multiple employers occupying a work-site in the building, any of whose employees will be performing work within or adjacent to areas containing ACBM.

Before conducting any work in the building that has the potential to impact ACBM, contractors will be required to sign the Contractor’s Asbestos Notification and Acknowledgment Form. In addition, all contractors and contractor’s employees who work on the site will be required to notify the DP of the presence, location, and quantity of newly discovered ACBM within 24 hours.

Section 7
Operations and Maintenance Program (Continued)

(or sooner if ACBM is disturbed) of the discovery. If any building materials are discovered, the asbestos content of which is unknown, the material shall be presumed to contain

asbestos, until the results of sampling and analysis prove otherwise. Appropriate sampling of the material shall be conducted by a Massachusetts Department of Labor and Work Force Development Division of Labor Standards accredited asbestos inspector and analyzed at an appropriately licensed asbestos analytical laboratory.

The DP shall ensure that all required warning signs are posted during abatement and O&M activities during which the release of asbestos fibers into the air is possible. Warning signs shall demarcate all regulated areas and shall bear the following information:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

Contractors and in-house personnel who remove ACBM within the site shall label all waste containers that contain ACBM waste in accordance with OSHA and EPA guidelines.

The Massachusetts Department of Environmental Protection (DEP) and the Massachusetts Division of Labor Standards (DLS) will be notified anytime work will impact any quantity of ACBM at the school.

The DP shall ensure that all previously installed ACBM that have been identified in the facility are labeled or identified by signs, as feasible. All ACBM that are friable and accessible, such as TSI located in mechanical areas or below suspended ceilings, will be labeled. Labels shall be attached to or posted in areas where employees, residents, and outside contractors who are likely to be exposed will clearly notice (such as at the entrance to mechanical rooms).

The labels shall bear the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

Posted signs may be used in lieu of labels to indicate the type and location of each ACBM.

Section 7
Operations and Maintenance Program (Continued)

3. OPERATIONS AND MAINTENANCE ACTIVITIES

Operations and maintenance activities include:

- A. Emergency procedures to be followed in the event of a major or minor episode of fiber release;
- B. Periodic surveillance of ACBM within at the school building;
- C. Work procedures associated with planned maintenance activities that may disturb ACBM. Only properly trained personnel under the control and direction of the DP shall conduct operations and maintenance activities.
- D. Periodic Cleaning Activities

A. Emergency Procedures for Fiber Release Episodes

Fiber release episodes are categorized as *major* (the falling or dislodging of more than 3 square feet or 3 linear feet of friable ACBM), or *minor* (the falling or dislodging of fewer than 3 square feet or 3 linear feet of friable ACBM)

PROCEDURE FOR MAJOR EPISODE

- 1. Restrict entry into the area.
- 2. Immediately contact the DP
- 3. Post sign to prevent anyone from entering the area except persons necessary to perform the response action.
- 4. Shut off or temporarily modify the air-handling system to prevent the fibers from being distributed to other areas in the building.
- 5. The DP shall contact an accredited designer of abatement to prepare an abatement plan that specifies the appropriate response actions.
- 6. The DP shall ensure that only a Massachusetts Certified Asbestos Abatement Contractor conducts the response actions.

Section 7
Operations and Maintenance Program (Continued)

PROCEDURE FOR MINOR EPISODE

1. Thoroughly saturate the debris using all wetting methods necessary.
2. Clean the area using wet wiping techniques followed by vacuuming with a specially equipped High Efficiency Particulate Air (HEPA) vacuum.
3. Place all debris and all contaminated cleaning supplies (mop heads, rags, etc.) into a leak tight container, such as a 6-mil thick polyethylene waste bag, and seal the container. Place the sealed container into a second 6-mil thick polyethylene bag. If labeled waste bags are not used, apply warning label to outside of each bag used.
4. Repair the area of damaged ACBM, as follows:
 - a. Use materials such as asbestos-free spackling, plaster, cement, or insulation; or
 - b. Seal the area with latex paint or an encapsulate; or
 - c. Immediately implement other appropriate response action.

B. Periodic Surveillance

Periodic surveillance of all known and assumed ACBM shall be conducted once every six months. The purpose of the regularly scheduled surveillance is to ensure that any ACBM that are damaged or that have deteriorated are detected in a timely manner. The DP shall use the information from the periodic surveillance in conjunction with ongoing reports from the periodic surveillance in conjunction with ongoing reports from service workers of changes in the condition of the ACBM to take corrective action.

The periodic surveillance consists of a visual inspection of all known and assumed ACBM. Periodic surveillance shall also include a visual and physical evaluation of ACBM in order to determine the degree of damage and to assess the likelihood of future fiber release. The area in the immediate vicinity shall also be examined for potential loose ACBM debris. The DP shall record the cause of the damage.

Only persons who have received at least the minimum asbestos-awareness training (see "Training Requirements", of this plan) shall conduct the periodic surveillance. The results of the surveillance shall be recorded on the periodic surveillance inspection form.

Section 7

Operations and Maintenance Program (Continued)

C. Work Procedures for General Maintenance Personnel

The following work practices shall be prohibited in all circumstances:

- Drilling holes in ACBM;
- Damaging ACBM while moving furniture or other objects;
- Sweeping or dusting floors, ceilings, moldings, or other surfaces in asbestos-contaminated environments;
- Using an ordinary vacuum to clean up asbestos-containing or asbestos contaminated debris (only vacuums equipped with a HEPA filter should be used);
- Removing potentially contaminated ventilation system filters without thoroughly wetting them; and
- Shaking potentially contaminated ventilation system filters.

D. Periodic Cleaning

The following is a general outline to be utilized for the properly trained personnel to conduct the periodic cleaning activities:

- Utilization of disposable rags to wet wipe of all non-porous horizontal surfaces followed by the use of a HEPA-equipped vacuum. Dry sweeping and/or dusting is not permitted to be used to clean the surfaces.
- The collected debris within the lined HEPA-equipped vacuum and disposal rags should be properly disposed of in a labeled asbestos-waste bag accompanied by a Waste Shipment Record for future disposal at a permitted facility that accepts asbestos waste.
- Document the Name of the individual conducting the work activities, location date and time of cleaning for proper recordkeeping. These records should be included within the AMP for the school.

Floor Tile Maintenance

Pursuant to the Occupational Safety and Health Administration (OSHA) Asbestos Standard 29 CFR 1910.1001, properly trained staff (i.e. 2-Hour Asbestos Awareness) should adhere to the OSHA's guidance for care of asbestos-containing flooring materials outlined below:

- Do not sand asbestos-containing flooring material;
- Use only low-abrasion buffing pads;
- Operate buffers only at speeds lower than 300 rpm;

- Use wet methods;
- Document the Name of the individual conducting the work activities, location date and time of cleaning for proper recordkeeping. These records should be included within the AMP for the facility.

Section 7

Operations and Maintenance Program (Continued)

4. RECORDKEEPING REQUIREMENTS

The building owner shall maintain the following documentation pertaining to ACBM in the facility:

- A. All data that are relied upon to demonstrate that suspect ACBM do not in fact contain asbestos.
- B. All data communicated and received that identify the locations and quantities of ACBM.
- C. All records associated with abatement projects and O&M activities.
- D. These documents shall be maintained during the term of ownership. They shall then be transferred to successive owners, in accordance with OSHA Regulation 1926.1101 (n).
- E. If the owner's employees conduct activities that may potentially cause them to be exposed to asbestos fibers, the owner shall keep the following additional records:
- F. All employee exposure-monitoring records pursuant to OSHA Regulation 1926.1101(f).
- G. All information relative to medical surveillance of employees pursuant to OSHA Regulation 1926.1101(m). Medical surveillance shall be required only if:
 - 1. Employees are required to conduct tasks that would result in their exposure to airborne concentrations of asbestos above the OSHA permissible exposure limit (PEL); or
 - 2. If employees conduct asbestos abatement tasks for more than 30 days per year.
- H. The owner shall maintain all employee-training records for one year beyond the employee's last date of employment.

Section 7
Operations and Maintenance Program (Continued)

1. TRAINING REQUIREMENTS

The extent of asbestos training for facility employees depends on the type of asbestos-related activities they will conduct. For most employees who will require training, a two-hour **awareness course** will be sufficient but necessary. For employees who are involved in activities where exposure to airborne asbestos fibers is likely, a more **comprehensive** 16 hour **training course** is necessary.

AWARENESS TRAINING

The curriculum shall include instruction in the following:

- A. The location, quantity, and physical condition of all ACBM located in the facility.
- B. Recognition of damage, deterioration, and delaminating of ACBM.
- C. The health effects associated with asbestos exposure, including the relationship between smoking and asbestos in producing lung cancer.
- D. Procedures to be implemented in the event of a minor or major episode of fiber release.
- E. The requirements for posting signs and affixing labels, and the meaning of the required legends for such signs and labels.

COMPREHENSIVE WORKER TRAINING

The curriculum shall include instruction in the following:

- A. All awareness training information described above.
- B. The nature of operations that could result in exposure to asbestos, and the importance of necessary protective controls and of procedures for minimizing exposure, including:
 - engineering controls
 - work practices,
 - respirators,
 - housekeeping procedures,
 - hygiene facilities,
 - protective clothing,
 - decontamination procedures,
 - emergency procedures,

- waste disposal procedures and any necessary instruction in the use of these controls and procedures.

Section 7
Operations and Maintenance Program (Continued)

- C. The purpose, proper use, fitting instructions, and limitations of respirators.
- D. Medical surveillance program requirements
- E. The contents of the OSHA standard (1926.1101) regarding asbestos in construction.
- F. Hands-on-training in the use of respiratory protection, other personal protection measures, and work practices.

Detailed procedures for conducting small-scale, short duration abatement activities, as defined in Appendix A to Subpart E to EPA Regulation 40 CFR Part 763.

APPENDIX A

LOCATIONS OF THE ASBESTOS CONTAINING BUILDING MATERIALS AND UPDATED CONDITONS

Appendix A
3-Year AHERA Re-Inspection August 2022
Locations of the Identified Asbestos-Containing Building Materials
Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
<i>Crawl Spaces</i>						
C-Wing Crawl Space	Pipe Fitting Insulation	30 Units	NA	NA	Y	1/5
A-Wing Crawl Space	Pipe Fitting Insulation	34 Units	NA	NA	Y	1/5
B-Wing Crawl Space	Pipe Fitting Insulation	76 Units	NA	NA	Y	1/5
Courtyard-Crawl Space	Pipe Fitting Insulation	14 Units	NA	NA	Y	5
Gym/Auditorium Crawl Space	Pipe Fitting Insulation	10 Units	NA	NA	Y	5
Electrical Room by Boiler Room	Pipe Fitting Insulation	5 Units	NA	NA	Y	1/5
<i>1st Floor C-Wing</i>						
Boiler Room	Interior Boiler Materials	2 Boilers	U	U	U	5
	Boiler Insulation	100 ft ²	C	C	Y	5
	Interior Window Glazing*	SU	P	P	N	5
Corridor	Interior Window Glazing*	SU	P	P	N	5
	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
C-1	Interior Window Glazing*	SU	P	P	N	5
	Gray Sink Mastic	1 Unit	G	G	N	5
C-3/5 (Former Wood Shop)	Interior Window Glazing*	SU	P	P	N	5
	Pipe Fitting Insulation	26 Units	G	G	Y	6
	Wood Flooring Paper (Assumed)	3808 ft ²	C	C	U	5
C-3/5 Storage A/B	Interior Window Glazing*	SU	P	P	N	5

Appendix A 3-Year AHERA Re-Inspection August 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
1st Floor C-Wing (Continued)						
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U	C	U	5
C-7 (Art Room)	12" x 12" Tan Streak Floor Tile and Mastic	1564 ft ²	G	P	N	5
	Black Sink Mastic	2 Units	G	P	N	5
	Interior Window Glazing*	SU	P	U	N	5
C-7-Storage	12" x 12" Tan Streak Floor Tile and Mastic	160 ft ²	G	P	N	5
	Black Sink Mastic	1 Unit	G	G	N	5
	Pipe Fitting Insulation	2 Units	G	P	Y	5
	Interior Window Glazing*	SU	P	G	N	5
C-6 (Art Room)	Black Sink Mastic	2 Units	G	C	N	5
	Interior Window Glazing*	SU	P	P	N	5
C-6-Storage	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	U	N	5
C-4	12" x 12" Tan Streak Floor Tile and Mastic	1000 ft ²	G	C	N	5
	Black Sink Mastic	5 Units	G	P	N	5
	Interior Window Glazing*	SU	P	P	N	5

Appendix A 3-Year AHERA Re-Inspection August 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
1st Floor C-Wing (Continued)						
C-2 (SPED)	Black Sink Mastic	1	G	G	N	5
	Pipe Fitting Insulation	10 Units	G	G	Y	6
	Pipe Fitting Insulation (Above Ceiling)	33 Units	G	G	Y	5
	Interior Window Glazing*	SU	P	P	N	5
C-2 Resource Room	Interior Window Glazing*	SU Unit	P	P	N	5
2nd Floor C-Wing						
C-22	Interior Window Glazing*	SU	G	G	N	5
C-21	Interior Window Glazing*	SU	P	P	N	5
	Roof Drain Fitting Insulation	2 Units	G	G	Y	5
Kitchen	Pressure Controller Floor Drain Insulation	4 Units	G	G	U	NA
Kitchen Storage	Black Glue Adhesive on Wall	100 ft ²	C	C	N	5
	Interior Window Glazing*	SU	G	G	N	5
Kitchen Laundry	Black Glue Adhesive on Wall	60 ft ²	C	C	N	5
Food Storage/Office	Interior Window Glazing*	SU	P	P	N	5
Cafeteria	Roof Drain Fitting Insulation	2 Units	D	D	Y	5
	Interior Window Glazing*	SU	P	P	N	5
C-Stair	Interior Window Glazing*	SU	P	P	N	5
Serving Room	Interior Window Glazing*	SU	G	G	N	5
Cafeteria Hall	Interior Window Glazing*	SU	P	P	N	5

Appendix A 3-Year AHERA Re-Inspection August 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
2nd Floor C-Wing (Continued)						
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Teachers Lounge	Interior Window Glazing*	SU	P	P	N	5
1st Floor B-Wing						
Corridor	Interior Window Glazing*	SU	P	P	N	5
	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
B-2	Table Tops	200 ft ²	G	G	N	5
	Fume Hood	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-4	Interior Window Glazing*	SU	P	P	N	5
B-6	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-7	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-5	12" x 12" Off-White Tan Streak Floor Tile and Mastic	1360 ft ²	G	G	N	5
	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-3	Interior Window Glazing*	SU	P	P	N	5

Appendix A 3-Year AHERA Re-Inspection August 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
1st Floor B-Wing (Continued)						
B-1	Interior Window Glazing*	SU	P	P	N	5
Janitor Closet	Interior Window Glazing*	SU	P	P	U	5
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
2nd Floor B-Wing						
Janitor Closet	Interior Window Glazing*	SU	P	P	N	5
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Resource Office	Interior Window Glazing*	SU	P	P	N	5
B-22	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-24	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-26	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-28	Black Sink Mastic	1 Unit	G	G	N	5
	Roof Drain Fitting Insulation	2 Units	G	G	Y	5
	Interior Window Glazing*	SU	P	P	N	5

Appendix A 3-Year AHERA Re-Inspection July 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
2nd Floor B-Wing (Continued)						
B-27	Black Sink Mastic	1 Unit	G	G	N	5
	Roof Drain Fitting Insulation	2 Units	G	G	Y	5
	Interior Window Glazing*	SU	P	P	N	5
B-25	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-23	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
B-21	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
2nd Floor B-Wing Corridor	Interior Window Glazing*	SU	P	P	N	5
	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
B-Wing Stair	Interior Window Glazing*	SU	P	P	N	5
Library	Interior Window Glazing*	SU	P	P	N	5
Tech Office	Interior Window Glazing*	SU	P	P	N	5
Technology Work Room	Interior Window Glazing*	SU	P	P	N	5
Library Office	Gray Sink Mastic	1 Unit	G	G	N	5
2nd Floor A-Wing						
2nd Floor A-Wing Corridor	Interior Window Glazing*	SU	G	G	N	5
	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5

Appendix A 3-Year AHERA Re-Inspection August 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
2nd Floor A-Wing(Continued)						
Resource Room	Interior Window Glazing*	SU	P	P	N	5
A-21	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	G	G	N	5
A-23	Black Sink Mastic	1 Unit	P	P	N	5
	Interior Window Glazing*	SU	G	G	N	5
A-25	Black Sink Mastic	1 Unit	P	P	N	5
	Interior Window Glazing*	SU	G	G	N	5
A-27	Black Sink Mastic	1 Unit	P	P	N	5
	Interior Window Glazing*	SU	G	G	N	5
A-28	Black Sink Mastic	1 Unit	P	P	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-26	Black Sink Mastic	1 Unit	G	G	N	5
	Roof Drain Fitting Insulation	2 Units	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-24	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-22	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
Janitor Closet	Interior Window Glazing*	SU	P	P	N	5
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Boys Room	Pipe Fitting Insulation (ABW)		U	U	U	5

Appendix A 3-Year AHERA Re-Inspection August 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
1st Floor A-Wing						
1st Floor A-Wing Corridor	Interior Window Glazing*	SU	P	P	N	5
	Pipe Fitting Insulation (Assumed Walls)		U	U	U	5
Office	Interior Window Glazing*	SU	P	P	N	5
A-1	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-3	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-5	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-7	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-8	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-6	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-4	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
A-2	Black Sink Mastic	1 Unit	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
Janitor Closet	Interior Window Glazing*	SU	P	P	N	5

Appendix A 3-Year AHERA Re-Inspection August 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
1st Floor A-Wing (Continued)						
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	U
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	U
A-Wing Stair	Interior Window Glazing*	SU	P	P	P	5
1st Floor Gym/Auditorium Area						
Gym/Auditorium Halls	Interior Window Glazing*	SU	P	P	N	5
Choral Office	Flexible Duct Connector Cloth	10 ft ²	G	G	N	5
Band Room	Flexible Duct Connector Cloth	20 ft ²	G	G	N	5
Boys Dressing Room	Gray Sink Mastic	1 Unit	G	G	N	5
	Pipe Fitting Insulation (Assumed behind Walls)				U	5
Girls Dressing Room	Gray Sink Mastic	1 Unit	G	G	N	5
Mens Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Gym	Wood Floor Paper (Assumed)	10100 ft ²	G	G	U	5
Boys Locker Room Janitor Closet	Pipe Fitting Insulation	17 Units	MD (3)	MD (3)	Y	1/6
Boys Locker Room	Pipe Fitting Insulation	17 Units	MD (2)	MD (2)	Y	1/6
	Black Mastic on Fountain**	2 Units	G	G	N	5

Appendix A 3-Year AHERA Re-Inspection August 2022 Locations of the Identified Asbestos-Containing Building Materials Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	VERTEX 2019 Cond.	VERTEX 2022 Updated Cond.	Fri.	HAHAC #
1st Floor Gym/Auditorium Area (Continued)						
Boys Equipment Storage	Pipe Fitting Insulation	4 Units	G	G	Y	5
Girls Room (Exterior)	Pipe Fitting Insulation (Assumed behind Walls)		U	U	U	5
Boys Room (Exterior)	Pipe Fitting Insulation	4 Units	G	G	Y	5
Girls Locker Room	Pipe Fitting Insulation	49 Units	G	G	Y	6
	Black Mastic on Fountain**	2 Units	G	G	N	5
Girls Locker Room Janitor Closet	Pipe Fitting Insulation	8 Units	G	G	Y	6
1st Floor Main Office Area						
Main Area	Flexible Duct Connector Cloth	10 ft ²	G	G	N	5
Nurse	Interior Window Glazing*	SU	P	P	N	5
Conference Room # 1	Interior Window Glazing*	SU	P	P	N	5
Counselor Office	Interior Window Glazing*	SU	P	P	N	5
Psyc Office	Interior Window Glazing*	SU	P	P	N	5
Assistant Principal Office	Interior Window Glazing*	SU	P	P	N	5
Principal Office	Interior Window Glazing*	SU	P	P	N	5
	Pipe Fitting Insulation (Assumed behind Walls in Bathroom)		U	U	U	5
Ms. Kobel Office	Interior Window Glazing*	SU	P	P	N	5
Conference Room # 2	Interior Window Glazing*	SU	P	P	N	5
Faculty Kitchen	12" x 12" Off-White Black Streak Floor Tile	240 ft ²	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5
Copy Room	12" x 12" Off-White Black Streak Floor Tile	160 ft ²	G	G	N	5
	Interior Window Glazing*	SU	P	P	N	5

Notes:

ft ² = Square Foot	Cond. = Condition	U = Unknown
lf = Linear Foot	G = Good	C = Covered
Unit = Each	MD = Minor Damage	
Y= Yes	D = Damaged	
N = No	Fri. = Friable	
E = Exposed	SU = Store Front Window Units	

HAHAC # = Homogenous Area Hazard Assessment Category

1 = Damaged/Significantly Damaged Thermal System Insulation
2 = Damaged Friable Surfacing ACBM
3 = Significantly Damaged Friable Surfacing ACBM
4 = Damaged or Significantly Damaged Friable Miscellaneous ACBM
5 = ACBM with Potential for Damage
6 = ACBM with Potential for Significant Damage
7 = Any Remaining Friable ACBM or Friable Suspected ACBM
NA = Not Applicable

APPENDIX B

ESTIMATED RESOURCES REQUIRED TO COMPLETE THE RESPONSE ACTIONS

Appendix B 3-Year AHERA Re-Inspection August 2022 Estimated Resources to Complete the Response Actions Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	Recommended Response Action	Estimated Costs	Recommend Date of Completed Response Action	Date of Completed Response Action
<i>Crawl Spaces</i>						
Electrical Room by Boiler Room	Pipe Fitting Insulation	1 Unit	Repair	\$25.00	September 2022	
<i>1st Floor C-Wing</i>						
Boiler Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-1	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-3/5 (Former Wood Shop)	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-3/5 Storage A/B	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-7 (Art Room)	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-7-Storage	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-6 (Art Room)	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-6-Storage	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-4	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-2 (SPED)	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-2 Resource Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
<i>2nd Floor C-Wing</i>						
C-22	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-21	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Kitchen Storage	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Food Storage/Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Cafeteria	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	

Appendix B 3-Year AHERA Re-Inspection August 2022 Estimated Resources to Complete the Response Actions Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	Recommended Response Action	Estimated Costs	Recommended Date of Completed Response Action	Date of Completed Response Action
2nd Floor C-Wing (Continued)						
C-Stair	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Serving Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Cafeteria Hall	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Teachers' Lounge	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
1st Floor B-Wing						
Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-2	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-4	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-6	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-7	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-5	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-3	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-1	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Janitor Closet	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
1st Floor B-Wing						
Janitor Closet	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Resource Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-22	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-24	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-26	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-28	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-27	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-25	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-23	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	

Appendix B 3-Year AHERA Re-Inspection August 2022 Estimated Resources to Complete the Response Actions Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	Recommended Response Action	Estimated Costs	Recommended Date of Completed Response Action	Date of Completed Response Action
2nd Floor B-Wing (Continued)						
2nd Floor B-Wing Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-21	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-Wing Stair	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Library	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Tech Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Technology Work Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
2nd Floor A-Wing						
2nd Floor A-Wing Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Resource Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-21	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-23	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-25	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-27	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-28	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-26	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-24	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-22	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Janitor Closet	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
1st Floor A-Wing						
1st Floor A-Wing Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-1	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-3	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-5	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	

Appendix B 3-Year AHERA Re-Inspection August 2022 Estimated Resources to Complete the Response Actions Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	Recommended Response Action	Estimated Costs	Recommend Date of Completed Response Action	Date of Completed Response Action
1st Floor A-Wing (Continued)						
A-7	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-6	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-8	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-4	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-2	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Janitor Closet	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-Wing Stair	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
1st Floor Gym/Auditorium Area						
Gym/Auditorium Halls	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Boys Locker Room Janitor Closet	Pipe Fitting Insulation	3 Units	Repair	\$75.00	September 2022	
Boys Locker Room	Pipe Fitting Insulation	2 Units	Repair	\$50.00	September 2022	
1st Floor Main Office Area						
Nurse	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Conference Room # 1	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Counselor Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Psyc Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Assistant Principal Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Principal Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Ms. Kobel Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Conference Room # 2	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Faculty Kitchen	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Copy Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	

Notes:

Unit = Each

SU = Store Front Window Units

TBD¹= Trace asbestos-containing interior window glazing associated with the storefront window units is generally located throughout school. The estimated cost for removal or repair of trace asbestos-containing interior window glazing should be determined upon additional point cont analysis.

* The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = \$500-\$2,500.00

Abatement Contactor Mobilization = \$1,500.00-\$2,500.00

Project Monitoring/Clearance Testing = \$520.00-\$600.00/per shift

Transmission Electron Microcopy (TEM) Analysis = \$75.00-\$100.00/sample

Phase Contrast Microscopy (PCM) Analysis = No Charge -\$15.00/sample

Clearance Report Preparation = \$350.00-\$800.00

**The estimated cost provided above does not include costs that may be associated with two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training, and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs that may be associated with the mentioned above:

2-Hour Asbestos Awareness Training = \$75/person

OSHA 16-hr Operations and Maintenance Training = \$300/person

Six-Month Periodic Surveillance Inspection = \$400/inspection

APPENDIX C

ESTIMATED RESOURCES REQUIRED FOR THE ABATEMENT OF THE IDENTIFIED ACBMs

Appendix B 3-Year AHERA Re-Inspection August 2022 Estimated Resources to Complete the Response Actions Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	Recommended Response Action	Estimated Costs	Recommend Date of Completed Response Action	Date of Completed Response Action
<i>Crawl Spaces</i>						
Electrical Room by Boiler Room	Pipe Fitting Insulation	1 Unit	Repair	\$25.00	September 2022	
<i>1st Floor C-Wing</i>						
Boiler Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-1	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-3/5 (Former Wood Shop)	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-3/5 Storage A/B	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-7 (Art Room)	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-7-Storage	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-6 (Art Room)	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-6-Storage	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-4	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-2 (SPED)	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-2 Resource Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
<i>2nd Floor C-Wing</i>						
C-22	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
C-21	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Kitchen Storage	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Food Storage/Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Cafeteria	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	

Appendix B 3-Year AHERA Re-Inspection August 2022 Estimated Resources to Complete the Response Actions Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	Recommended Response Action	Estimated Costs	Recommended Date of Completed Response Action	Date of Completed Response Action
2nd Floor C-Wing (Continued)						
C-Stair	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Serving Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Cafeteria Hall	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Teachers' Lounge	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
1st Floor B-Wing						
Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-2	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-4	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-6	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-7	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-5	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-3	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-1	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Janitor Closet	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
1st Floor B-Wing						
Janitor Closet	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Resource Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-22	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-24	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-26	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-28	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-27	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-25	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-23	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	

Appendix B 3-Year AHERA Re-Inspection August 2022 Estimated Resources to Complete the Response Actions Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	Recommended Response Action	Estimated Costs	Recommended Date of Completed Response Action	Date of Completed Response Action
2nd Floor B-Wing (Continued)						
2nd Floor B-Wing Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-21	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
B-Wing Stair	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Library	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Tech Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Technology Work Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
2nd Floor A-Wing						
2nd Floor A-Wing Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Resource Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-21	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-23	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-25	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-27	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-28	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-26	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-24	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-22	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Janitor Closet	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
1st Floor A-Wing						
1st Floor A-Wing Corridor	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-1	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-3	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-5	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	

Appendix B 3-Year AHERA Re-Inspection August 2022 Estimated Resources to Complete the Response Actions Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts						
Location	ACBM Description	Estimated Quantity	Recommended Response Action	Estimated Costs	Recommend Date of Completed Response Action	Date of Completed Response Action
1st Floor A-Wing (Continued)						
A-7	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-6	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-8	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-4	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-2	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Janitor Closet	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
A-Wing Stair	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
1st Floor Gym/Auditorium Area						
Gym/Auditorium Halls	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Boys Locker Room Janitor Closet	Pipe Fitting Insulation	3 Units	Repair	\$75.00	September 2022	
Boys Locker Room	Pipe Fitting Insulation	2 Units	Repair	\$50.00	September 2022	
1st Floor Main Office Area						
Nurse	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Conference Room # 1	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Counselor Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Psyc Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Assistant Principal Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Principal Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Ms. Kobel Office	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Conference Room # 2	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Faculty Kitchen	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	
Copy Room	Interior Window Glazing*	SU	Repair	TBD ¹	February 2023	

Notes:

Unit = Each

SU = Store Front Window Units

TBD¹= Trace asbestos-containing interior window glazing associated with the storefront window units is generally located throughout school. The estimated cost for removal or repair of trace asbestos-containing interior window glazing should be determined upon additional point cont analysis.

* The estimated cost provided above is developed from current Abatement Contractor Unit pricing. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs, phasing of work, etc. In addition, the costs above do not include mobilization of the Abatement Contractor, Abatement Work Plan/Design, Project Monitoring and/or Clearance Testing Services for the completion of the response actions. Please refer for below unit pricing regarding costs for the Contractor Mobilization and Clearance Testing Services:

Abatement Work Plan/Design Specification = \$500-\$2,500.00

Abatement Contactor Mobilization = \$1,500.00-\$2,500.00

Project Monitoring/Clearance Testing = \$520.00-\$600.00/per shift

Transmission Electron Microcopy (TEM) Analysis = \$75.00-\$100.00/sample

Phase Contrast Microscopy (PCM) Analysis = No Charge -\$15.00/sample

Clearance Report Preparation = \$350.00-\$800.00

**The estimated cost provided above does not include costs that may be associated with two-hour asbestos awareness training, OSHA 16-hr Operations and Maintenance Training, and/or the labor to conduct the required six-month surveillance re-inspections. Please refer below for estimated costs that may be associated with the mentioned above:

2-Hour Asbestos Awareness Training = \$75/person

OSHA 16-hr Operations and Maintenance Training = \$300/person

Six-Month Periodic Surveillance Inspection = \$400/inspection

APPENDIX D

PERSONNEL CERTIFICATIONS

The Vertex Companies, LLC

ACCREDITATION PAGE

Accredited Inspector

Name: Jessica Woltemate

Accreditation Number: AI901049



Signature: _____

Date: 8/23/22

Accredited Management Planner

Name: Jason Mohre

Accreditation Number: AP000080



Signature: _____

Date: 8/23/22

APPENDIX E

DESIGNATED PERSON ASSURANCES SIGN-OFF

DESIGNATED PERSON ASSURANCES

In accordance with 40 CFR ' 763.93(i) of the Environmental Protection Agency Asbestos-Containing Material in Schools regulation, the undersigned Local Education Agency (LEA) Designated Person (DP) hereby certifies that the following general responsibilities of the LEA under 40 CFR ' 763.84 have been or will be met:

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 Part 763, Subpart E.
2. Ensure that all custodial and maintenance employees are properly trained as required by Part 763, Subpart E and 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 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 for Asbestos-Containing Building Materials (ACBM) and suspected ACBM assumed to be Asbestos-Containing Materials (ACM).
5. Ensure that warning labels are posted in accordance with ' 40 CFR 763.95.
6. Ensure that management plans are available for inspection and notification of such availability has been provided as specified in the management plan under ' 40 CFR 763.93(g).
7. Designate a person to ensure that requirements under ' 763.84 are properly implemented and ensure that the designated person receives adequate training to perform duties assigned under ' 763.84. Such training shall provide, as necessary, basic knowledge of: health effects of asbestos; detection, identification, and assessment of ACM; options for controlling ACBM; asbestos management programs; relevant Federal and State regulations concerning asbestos, including those in Part 763, Subpart E and those of the Occupational Safety and Health Administration, U.S. Department of Transportation and the U.S. Environmental Protection Agency.
8. Consider whether any conflict of interest may arise from the inter-relationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under Part 763, Subpart E.

Name of Designated Person:

Designated Person's Signature:

Date:

APPENDIX F
SIX-MONTH SURVEILLANCE

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
<i>Crawl Spaces</i>								
C-Wing Crawl Space	Pipe Fitting Insulation	30 Units	NA					
A-Wing Crawl Space	Pipe Fitting Insulation	34 Units	NA					
B-Wing Crawl Space	Pipe Fitting Insulation	76 Units	NA					
Courtyard-Crawl Space	Pipe Fitting Insulation	14 Units	NA					
Gym/Auditorium Crawl Space	Pipe Fitting Insulation	10 Units	NA					
Electrical Room by Boiler Room	Pipe Fitting Insulation	5 Units	NA					
<i>1st Floor C-Wing</i>								
Boiler Room	Interior Boiler Materials	2 Boilers	U					
	Boiler Insulation	100 ft ²	C					
	Interior Window Glazing*	SU	P					
Corridor	Interior Window Glazing*	SU	P					
	Pipe Fitting Insulation (Assumed behind Walls)		U					
C-1	Interior Window Glazing*	SU	P					
	Gray Sink Mastic	1 Unit	G					
C-3/5 (Former Wood Shop)	Interior Window Glazing*	SU	P					
	Pipe Fitting Insulation	26 Units	G					
	Wood Flooring Paper (Assumed)	3808 ft ²	C					
C-3/5 Storage A/B	Interior Window Glazing*	SU	P					
	Pipe Fitting Insulation	1 Unit	G					

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
1st Floor C-Wing (Continued)								
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U				
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U	U				
C-7 (Art Room)	12" x 12" Tan Streak Floor Tile and Mastic	1564 ft ²	G	G				
	Black Sink Mastic	3 Units	G	G				
	Interior Window Glazing*	SU	P	P				
C-7-Storage	12" x 12" Tan Streak Floor Tile and Mastic	160 ft ²	G	G				
	Black Sink Mastic	1 Unit	G	G				
	Pipe Fitting Insulation	2 Units	G	G				
	Interior Window Glazing*	SU	P	P				
C-6 (Art Room)	Black Sink Mastic	2 Units	G	G				
	Interior Window Glazing*	SU	P	P				
C-6-Storage	Black Sink Mastic	1 Unit	G	G				
	Interior Window Glazing*	SU	P	P				
C-4	12" x 12" Tan Streak Floor Tile and Mastic	1000 ft ²	G	G				
	Black Sink Mastic	5 Units	G	G				
	Interior Window Glazing*	SU	P	P				

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
1st Floor C-Wing (Continued)								
C-2 (SPED)	Black Sink Mastic	1	G					
	Pipe Fitting Insulation	10 Units	G					
	Pipe Fitting Insulation (Above Ceiling)	33 Units	G					
	Interior Window Glazing*	SU	P					
C-2 Resource Room	Interior Window Glazing*	SU	P					
2nd Floor C-Wing								
C-22	Interior Window Glazing*	SU	G					
C-21	Interior Window Glazing*	SU	P					
	Roof Drain Fitting Insulation	2 Units	G					
Kitchen	Pressure Controller Floor Drain Insulation	4 Units	G					
Kitchen Storage	Black Glue Adhesive on Wall	100 ft ²	P					
	Interior Window Glazing*	SU	G					
Kitchen Laundry	Black Glue Adhesive on Wall	60 ft ²	G					
Food Storage/Office	Interior Window Glazing*	SU	P					
Cafeteria	Roof Drain Fitting Insulation	2 Units	D					
	Interior Window Glazing*	SU	P					
C-Stair	Interior Window Glazing*	SU	P					
Serving Room	Interior Window Glazing*	SU	G					
Cafeteria Hall	Interior Window Glazing*	SU	P					

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
2nd Floor C-Wing (Continued)								
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
Teachers Lounge	Interior Window Glazing*	SU	P					
1st Floor B-Wing								
Corridor	Interior Window Glazing*	SU	P					
	Pipe Fitting Insulation (Assumed behind Walls)		U					
B-2	Table Tops	200 ft ²	G					
	Fume Hood	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-4	Interior Window Glazing*	SU	P					
B-6	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-7	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-5	12" x 12" Off-White Tan Streak Floor Tile and Mastic	1360 ft ²	G					
	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-3	Interior Window Glazing*	SU	P					

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
1st Floor B-Wing (Continued)								
B-1	Interior Window Glazing*	SU	P					
Janitor Closet	Interior Window Glazing*	SU	P					
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
2nd Floor B-Wing								
Janitor Closet	Interior Window Glazing*	SU	P					
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
Resource Office	Interior Window Glazing*	SU	P					
B-22	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-24	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-26	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-28	Black Sink Mastic	1 Unit	G					
	Roof Drain Fitting Insulation	2 Units	G					
	Interior Window Glazing*	SU	P					

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
2nd Floor B-Wing (Continued)								
B-27	Black Sink Mastic	1 Unit	G					
	Roof Drain Fitting Insulation	2 Units	G					
	Interior Window Glazing*	SU	P					
B-25	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-23	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
B-21	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
2nd Floor B-Wing Corridor	Interior Window Glazing*	SU	P					
	Pipe Fitting Insulation (Assumed behind Walls)		U					
B-Wing Stair	Interior Window Glazing*	SU	P					
Library	Interior Window Glazing*	SU	P					
Tech Office	Interior Window Glazing*	SU	P					
Technology Work Room	Interior Window Glazing*	SU	P					
Library Office	Gray Sink Mastic	1 Unit	G					
2nd Floor A-Wing								
2nd Floor A-Wing Corridor	Interior Window Glazing*	SU	G					
	Pipe Fitting Insulation(Assumed behind Walls)		U					

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
2nd Floor A-Wing(Continued)								
Resource Room	Interior Window Glazing*	SU	P					
A-21	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	G					
A-23	Black Sink Mastic	1 Unit	P					
	Interior Window Glazing*	SU	G					
A-25	Black Sink Mastic	1 Unit	P					
	Interior Window Glazing*	SU	G					
A-27	Black Sink Mastic	1 Unit	P					
	Interior Window Glazing*	SU	G					
A-28	Black Sink Mastic	1 Unit	P					
	Interior Window Glazing*	SU	P					
A-26	Black Sink Mastic	1 Unit	G					
	Roof Drain Fitting Insulation	2 Units	G					
	Interior Window Glazing*	SU	P					
A-24	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
A-22	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
Janitor Closet	Interior Window Glazing*	SU	P					
Girls Room	Pipe Fitting Insulation (ABW)		U					
Boys Room	Pipe Fitting Insulation (ABW)		U					

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
1st Floor A-Wing								
1st Floor A-Wing Corridor	Interior Window Glazing*	SU	P					
	Pipe Fitting Insulation (ABW)		U					
Office	Interior Window Glazing*	SU	P					
A-1	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
A-3	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
A-5	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
A-7	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
A-8	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
A-6	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
A-4	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
A-2	Black Sink Mastic	1 Unit	G					
	Interior Window Glazing*	SU	P					
Janitor Closet	Interior Window Glazing*	SU	P					

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location	ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
1st Floor A-Wing (Continued)								
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
Boys Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
A-Wing Stair	Interior Window Glazing*	SU	P					
1st Floor Gym/Auditorium Area								
Gym/Auditorium Halls	Interior Window Glazing*	SU	P					
Choral Office	Flexible Duct Connector Cloth	10 ft ²	G					
Band Room	Flexible Duct Connector Cloth	20 ft ²	G					
Boys Dressing Room	Gray Sink Mastic	1 Unit	G					
	Pipe Fitting Insulation (Assumed behind Walls)							
Girls Dressing Room	Gray Sink Mastic	1 Unit	G					
Mens Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
Girls Room	Pipe Fitting Insulation (Assumed behind Walls)		U					
Gym	Wood Floor Paper (Assumed)	10100 ft ²	G					
Boys Locker Room Janitor Closet	Pipe Fitting Insulation	17 Units	3 D					
Boys Locker Room	Pipe Fitting Insulation	17 Units	2 D					
	Black Mastic on Fountain**	2 Units	G					

AHERA Six-Month Surveillance Inspection Date: _____

Inspector (Print Name): _____

Inspector Signature: _____

Mattacheese Middle School - 400 Higgins Crowell Road West Yarmouth, Massachusetts

Location			ACBM Description	Estimated Quantity	VERTEX 2022 Cond.	Feb 2023 Cond.	Aug 2023 Cond.	Feb 2024 Cond.	Aug 2024 Cond.	Feb 2025 Cond.
		1st Floor Gym/Auditorium Area (Continued)								
Boys Equipment Storage			Pipe Fitting Insulation	4 Units	G					
Girls Room (Exterior)			Pipe Fitting Insulation (Assumed behind Walls)		U					
Boys Room (Exterior)			Pipe Fitting Insulation	4 Units	G					
Girls Locker Room			Pipe Fitting Insulation	49 Units	G					
			Black Mastic on Fountain**	2 Units	G					
Girls Locker Room Janitor Closet			Pipe Fitting Insulation	8 Units	G					
		1st Floor Main Office Area								
Main Area			Flexible Duct Connector Cloth	10 ft ²	G					
Nurse			Interior Window Glazing*	SU	P					
Conference Room # 1			Interior Window Glazing*	SU	P					
Counselor Office			Interior Window Glazing*	SU	P					
Psync Office			Interior Window Glazing*	SU	P					
Assistant Principal Office			Interior Window Glazing*	SU	P					
Principal Office			Interior Window Glazing*	SU	P					
			Pipe Fitting Insulation (ABW) in Bathroom)		U					
Ms. Kobel Office			Interior Window Glazing*	SU	P					
Conference Room # 2			Interior Window Glazing*	SU	P					
Faculty Kitchen			12" x 12" Off-White Black Streak Floor Tile	240 ft ²	G					
			Interior Window Glazing*	SU	P					
Copy Room			12" x 12" Off-White Black Streak Floor Tile	160 ft ²	G					

	Interior Window Glazing*	SU	P					
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Notes:

ft² = Square Foot
lf = Linear Foot
Unit = Each
D= Damaged
P= Poor

Cond. = Condition
G = Good
MD = Minor Damage
SU = Store Front Window Units

U = Unknown
C = Covered
ABW = Assumed behind Walls

APPENDIX G

SCHEMATICS

