

July 28, 2016

Mr. Thomas Geary Director of Facilities Haverhill Public Schools 4 Summer Street Haverhill, MA 01832

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VIA EMAIL

Project 01288.003

RE: AHERA 3-Year Re-inspection, Greenleaf Elementary School, 58 Chadwick Street, Haverhill, MA

Dear Mr. Geary,

Axiom Partners, Inc. (AXIOM) conducted a 3-year AHERA<sup>1</sup> re-inspection of the Greenleaf Elementary School at the above-referenced address. The re-inspection was performed to continue the Local Education Agency's (LEA's) compliance with AHERA which requires periodic assessment of known asbestos-containing building materials (ACBMs) located in this school building.

#### A. AHERA 3-YEAR RE-INSPECTION

The re-inspection was performed in compliance with the Environmental Protection Agency's Asbestos Hazard Emergency Response Act (AHERA), 40 CFR Part 763, Section 763.85.

The re-inspection was performed on February 19, 2016 by experienced Massachusetts-licensed Asbestos Inspector, Mr. Christopher M. LaPorte (License Number Al031166). The re-inspection included all accessible interior areas of the building.

A summary table prepared for the school is attached to this letter. The table includes:

- ACBMs
- Presumed ACBMs
- Quantities
- Locations
- Friability
- Hazard/Condition Assessments
- Changes in Condition
- Previous Response Actions
- Recommended Response Actions
- Newly-identified Suspect ACBMs

To ensure compliance with AHERA, a copy of this re-inspection report must be included in the Asbestos Management Plan for the school.

AXIOM recommends labeling of certain ACBMs specified by AHERA and the continued management of these ACBMs in place until they are removed.



<sup>&</sup>lt;sup>1</sup> EPA's Asbestos Hazard Emergency Response Act, 1986

#### B. RECOMMENDATIONS/ACTION ITEMS

Based on AXIOM's observations during this 3-year AHERA re-inspection, we recommend the following:

- Label friable insulation in the basement with asbestos warning stickers/labels (adhere directly onto insulation and post a warning sign at the entrance).
- Perform a complete building asbestos survey with limited sampling. Destructive sampling methods are not recommended. It would be beneficial to discreetly sample items such as plaster, wall board, joint compound, ceiling tiles and other materials which are likely to be impacted by students, faculty or maintenance during routine activities (e.g., hanging artwork, installing telecomm lines). Materials which may be present in large quantities such as floor tile and associated adhesive, and which would therefore be costly abatement items, should also be sampled in an effort to remove them from the list of suspect materials.
- The only documentation available for this school during AXIOM's re-inspection were the 1987 initial inspection report and 1988 asbestos management plan, both authored by Hunter Environmental and the 2011 three-year re-inspection report authored by Hub Testing Laboratory, Inc. Consider contacting previous consultants or Designated Person(s) to locate and obtain additional asbestos-related documentation for this school. Documentation may include additional 3-year re-inspection reports, bulk sampling results and/or ACBM abatement documentation such as asbestos abatement notification forms, waste shipment records, contractor documents or abatement summary reports to complete your documentation of AHERA-related activities.

#### C. LIMITATIONS AND EXCLUSIONS

This inspection effort included our review of available AHERA documentation. The original 1987 inspection report, the 1988 Management Plan and the 2011 Re-inspection reports were used as guidance documents. Historical documentation did not include supporting asbestos bulk sample data (laboratory analytical reports). AXIOM did not collect any bulk samples for asbestos analysis.

The re-inspection was performed by AXIOM to ensure that the LEA is in compliance with AHERA, however this inspection is not NESHAP<sup>2</sup> compliant, which is required for building demolition or renovation including testing of exterior suspect ACBMs. The potential for concealed ACBMs to remain in this school exists. Inaccessible building areas, systems, structural components or surfaces which may not have been observed may include the following:

- Buried or otherwise concealed pipe trenches and utility vaults/corridors;
- Buried foundations (except as specifically identified);
- Electrical equipment/wire (except as specifically identified);
- Multi-layered flooring material applications;
- Most pipe and vessel gaskets;
- Inside boilers and other mechanical equipment, ductwork and air handling equipment;
- Enclosed wall and ceiling cavities;
- Fire door cores;
- Interior window and door frame caulking that have been replaced or in-filled;
- · Roofing materials; and
- Exterior window and door frame caulking.



<sup>&</sup>lt;sup>2</sup> EPA's National Emission Standard for Hazardous Air Pollutants

Mr. Thomas Geary July 28, 2016 Page 3 AHERA 3-Year Re-inspection Report Greenleaf Elementary School Haverhill, Massachusetts

Please note that, while roofing materials, window and door frame caulking and other exterior materials are not regulated by AHERA, these materials would require sampling prior to demolition, renovations or repairs that may impact them.

AXIOM made every reasonable effort to address potential ACBMs at the school; however, the potential remains that concealed ACBMs could be encountered during future building renovations. If suspect ACBMs are encountered that are not discussed herein, testing should be performed and results should be incorporated into the School's Asbestos Management Plan.

Please call us if you have any questions.

Sincerely,

Heather R. Forgione Project Manager

attachments: AHERA Summary Table

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Stephen E. Minassian Principal

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LEA/School System: Haverhill Public Schools Building: Greenleaf Elementary School Inspection Date: February 19, 2016

	Re-inspection Findings for ACBMs								
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Recommendations Preventive Measures; Response Actions		
Wall Plaster	Throughout School	42,600 SF	Friable	5	Non-ACBM; intact	No Change	Identified in 1987 Hunter inspection, 2011 HUB inspection and confirmed in this inspection; inspections reported material is negative, with 7 sample results to confirm (Hunter GRN 21, 22, 24, 42, 50-52); remove from O&M Plan but maintain documentation of sample results		
Ceiling Plaster	Throughout School (Basement is non-ACBM)	11,000 F	Friable	5	PACM; intact	No Change	Identified in 1987 Hunter inspection, 2011 HUB inspection and confirmed in this inspection; inspections reported material is negative, but there are ONLY sample results to confirm negative in the BASEMENT (7 samples) (Hunter GRN 40, 41, 43-45, 48 & 49); additional areas require distributed sampling per AHERA; maintain O&M Plan		
Gypsum Wall Board / Sheetrock	Throughout School (Room 105A-C is non- ACBM)	3,000 SF	Non-Friable	5	PACM; intact	No Change	Identified in 1987 Hunter inspection, 2011 HUB inspection and confirmed in this inspection; inspections reported material is negative, but there are ONLY sample results to confirm negative in ROOM 105A-C (Hunter GRN 05-07); maintain O&M Plan		

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<sup>&</sup>lt;sup>1</sup> SF = Square Feet; LF = Linear Feet; EA = Each

<sup>&</sup>lt;sup>2</sup> AHERA Categories: (1) Damaged or significantly damaged thermal system insulation ACM; (2) Damaged friable surfacing ACM; (3) Significantly damaged friable surfacing ACM; (4) Damaged or significantly damaged friable miscellaneous ACM; (5) ACBM with potential for damage; (6) ACBM with potential for significant damage; (7) Any remaining friable ACBM or friable suspected ACBM

	Re-ins	spection Fir	ndings for A	CBMs			Management Planner Recommendations
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions
Joint Compound	Throughout School	3,000 SF	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
Caulking/Glazing	Window Walls Throughout School	TBD	Non-Friable	5	PACM; intact	No Change	Identified in the 2011 HUB inspection and confirmed in this inspection; maintain O&M Plan
Black Mastic Associated with Floorings	Under All Floor Tiles	6,000 SF	Non-Friable	5	PACM		Identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan
Interior Window Frame Caulking	Throughout School	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
Exterior Window Frame Caulking	Throughout School	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
Brick Mortar	Throughout Basement	TBD	Non-Friable	5	PACM; intact	No Change	Identified in the 2011 HUB inspection and confirmed in this inspection; maintain O&M Plan
Pipe Insulation & Fittings	Basement Boys' Restroom	75 LF	Friable	1	PACM; damaged	1	Not identified in the 1987 Hunter or 2011 HUB inspection in this location; remove, repair or seal off pipe insulation; maintain O&M Plan
Pipe Insulation & Fittings	Tunnels and Chases	TBD	Friable	1	PACM; damaged		Identified in 2011 HUB inspection but not confirmed in this inspection; remove, repair or seal off pipe insulation; maintain O&M Plan
Breeching Exhaust Insulation	Boiler Room	75 SF	Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; remove, repair or seal off pipe insulation; maintain O&M Plan

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Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions
Old Breeching Exhaust Insulation	Boiler Room	120 SF	Friable	1	PACM; damaged	No Change	Identified in 1987 Hunter inspection as 90 SF abated in 1987 and "rejacketed with rewettable cloth, good condition" but no supporting documentation; identified in 2011 HUB inspection as 400 LF significantly damaged; confirmed in this inspection; remove, repair or seal off pipe insulation; maintain O&M Plan
Boiler Insulation	Boiler Room	TBD	Friable	1	АСВМ		Identified in 2011 HUB inspection as intact ACBM on an old rib-style boiler; not confirmed in this inspection; maintain O&M Plan until abatement documentation can be obtained
Stair Tread Mastic	Front/Back Stairs	500 SF	Non-Friable	5	PACM; intact	Treads previously identified as damaged	Treads (but not the mastic) were identified in the 2011 HUB inspection; treads and mastic were confirmed in this inspection; maintain O&M Plan
9" x 9" Tan Floor Tile	Side Stairwell	TBD	Non-Friable	5	ACBM; intact	No Change	Identified in 1987 Hunter inspection as POSITIVE (Hunter GRN 27) in Rooms 105B & C, 107, 208, 230 & Stairwell; confirmed in this inspection in Side Stairwell; maintain O&M Plan
9" x 9" Tan Floor Tile Adhesive	Side Stairwell	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
12" x 12" Marble Floor Tile	Main Office	364 SF	Non-Friable	5	PACM; intact	No Change	Identified in 2011 HUB inspection and confirmed in this inspection; maintain O&M Plan

	Re-in:	spection Fir	ndings for A	CBMs			Management Planner Recommendations
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions
12" x 12" Marble Floor Tile Adhesive	Main Office	364 SF	Non-Friable	5	PACM; intact	No Change	Identified in 2011 HUB inspection and confirmed in this inspection; maintain O&M Plan
Library Partition	Library	120 SF	Non-Friable	5	PACM		Identified in 1987 Hunter inspection as negative, but there is only ONE negative sample (Hunter GRN 01), additional sampling required; identified in 2011 HUB inspection as intact PACM; not confirmed in this inspection; maintain O&M Plan
9" x 9" Aqua Floor Tile	Teacher's Room	TBD	Non-Friable	5	PACM		Identified in 2011 HUB inspection; HUB indicated one sample had been collected by Hunter in 1987, but Hunter inspection does not identify this material; not confirmed in this inspection; maintain O&M Plan
9" x 9" Aqua Floor Tile Adhesive	Teacher's Room	TBD	Non-Friable	5	PACM		Associated with 9" x 9" aqua floor tile identified in 2011 HUB inspection; not confirmed in this inspection; maintain O&M Plan
4" Brown Cove Base	1 <sup>st</sup> Floor Restrooms	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
4" Brown Cove Base Adhesive	1 <sup>st</sup> Floor Restrooms	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
12" x 12" White Floor Tile	1 <sup>st</sup> Floor Restrooms	TBD	Non-Friable	5	PACM; intact	No Change	Identified in 2011 HUB inspection in 2 <sup>nd</sup> floor women's restroom; identified in this inspection in 1 <sup>st</sup> floor restrooms; maintain O&M Plan

	Re-ins	spection Fir	ndings for A	CBMs			Management Planner Recommendations
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions
12" x 12" White Floor Tile Adhesive	1 <sup>st</sup> Floor Restrooms	TBD	Non-Friable	5	PACM; intact	No Change	Identified in 2011 HUB inspection in 2 <sup>nd</sup> floor women's restroom; identified in this inspection in 1 <sup>st</sup> floor restrooms; maintain O&M Plan
Vibration Dampening Cloth	1 <sup>st</sup> Floor Girls' and Boys' Restroom, Library Storage Area	TBD	Friable	5	PACM; intact	No Change	Identified in the 2011 HUB inspection in Storage Area; confirmed in this inspection in 1st Floor Girls' & Boys' Rooms, Library & Storage Area; maintain O&M Plan
Interior Door Caulking	1st Floor Boys' Restroom	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
9" x 9" Tan Streaked Floor Tile	1 <sup>st</sup> Floor Nurse's Office	140 SF	Non-Friable	5	PACM; intact	No Change	Identified in 2011 HUB inspection as "tan w//pink & blue;" confirmed in this inspection; maintain O&M Plan
9" x 9" Tan Streaked Floor Tile Adhesive	1 <sup>st</sup> Floor Nurse's Office	140 SF	Non-Friable	5	PACM; intact	No Change	Identified in 2011 HUB inspection as associated with "tan w//pink & blue;" confirmed in this inspection; maintain O&M Plan
9" x 9" Green Floor Tile	1 <sup>st</sup> Floor Side Stairwell Hallway, Work Room	500 SF	Non-Friable	5	PACM; intact	No Change	Identified in 1987 Hunter inspection as POSITIVE in Room 103 and NEGATIVE in 105, 105A & 106, but there is only ONE negative sample (Hunter GRN 25), additional sampling required; confirmed in this inspection in 1st Floor Side Stairwell Hallway & Work Room; maintain O&M Plan
9" x 9" Green Floor Tile Adhesive	1 <sup>st</sup> Floor Side Stairwell Hallway, Work Room	500 SF	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan

	Re-ins	spection Fir	ndings for A	CBMs			Management Planner Recommendations
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions
12" x 12" Brown Floor Tile	1 <sup>st</sup> Floor Hallway, Stairwell #1	1,100 SF	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
12" x 12" Brown Floor Tile Adhesive	1 <sup>st</sup> Floor Hallway, Stairwell #1	1,100 SF	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
12" x 12" Gray Floor Tile with Gray/White Flecks	1 <sup>st</sup> Floor Hallway & Entry	1,100 SF	Non-Friable	5	PACM		Identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan
12" x 12" Gray Floor Tile with Gray/White Flecks Adhesive	1 <sup>st</sup> Floor Hallway & Entry	1,100 SF	Non-Friable	5	PACM		Associated with 12" x 12" gray floor tile with gray/white flecks identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan
12" x 12" Blue Mottled Floor Tile	Threshold Room 101	TBD	Non-Friable	5	PACM		Identified in 2011 HUB inspection but not confirmed in this inspection; maintain O&M Plan
12" x 12" Blue Mottled Floor Tile Adhesive	Threshold Room 101	TBD	Non-Friable	5	PACM		Identified in 2011 HUB inspection but not confirmed in this inspection; maintain O&M Plan
12" x 12" Tan Flecked Floor Tile	Rooms 102 & 106	TBD	Non-Friable	5	ACBM; intact	No Change	Identified in 1987 Hunter inspection in Rooms 002 & 003A as POSITIVE; identified in 2011 HUB inspection; confirmed in this inspection in Rooms 102 & 106; maintain O&M Plan
12" x 12" Tan Flecked Floor Tile Adhesive	Rooms 102 & 106	TBD	Non-Friable	5	PACM; intact	No Change	Identified in 2011 HUB inspection in Rooms 002 & 003; confirmed in this inspection in Rooms 102 & 106; maintain O&M Plan

	Re-ins	spection Fir	ndings for A	CBMs			Management Planner Recommendations
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions
12" x 12" Yellow Floor Tile with Brown/White/Gray Flecks	Rooms 102 & 106	2,100 SF	Non-Friable	5	PACM		Identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan
12" x 12" Yellow Floor Tile with Brown/White/Gray Flecks Adhesive	Rooms 102 & 106	2,100 SF	Non-Friable	5	PACM		Associated with 12" x 12" yellow floor tile with brown/white/gray flecks identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan
White Sheet Flooring	1 <sup>st</sup> Floor Restrooms	TBD	Non-Friable	5	PACM; intact		A non-descript "Linoleum" was identified in the 1987 Hunter inspection and the 2011 HUB inspection as POSITIVE (Hunter GRN 29) and located in the bathrooms of Rooms 104A & B and the 1st floor slop sink;
Multicolored Sheet Flooring	Room 102 Closet	TBD	Friable	5	PACM; intact		two different styles of sheet flooring were identified in this inspection; both materials remain PACM until sampling can confirm/refute this presumption; maintain O&M Plan
12" x 12" Off-white Floor Tile with Gray Flecks	Rooms 103, 104 & Stair Landings	800 SF	Non-Friable	5	PACM		Identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan
12" x 12" Off-white Floor Tile with Gray Flecks Adhesive	Rooms 103, 104 & Stair Landings	800 SF	Non-Friable	5	PACM		Associated with 12" x 12" off- white floor tile with gray flecks identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan

	Re-ins	pection Fir	ndings for A	CBMs			Management Planner Recommendations
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions
9" x 9" Brown Floor Tile	Rooms 104, 105D & 203	190 SF	Non-Friable	5	АСВМ		Identified in 1987 Hunter inspection as POSITIVE and damaged (GRN 30) but not confirmed in 2011 HUB or in this inspection; maintain O&M Plan until/unless abatement documentation can be obtained
9" x 9" Brown Floor Tile Adhesive	Rooms 104, 105D & 203	190 SF	Non-Friable	5	PACM		Associated with 9" x 9" brown floor tile identified in 1987 Hunter inspection as POSITIVE and damaged (GRN 30) but not confirmed in 2011 HUB or in this inspection; maintain O&M Plan until/unless abatement documentation can be obtained
Bulletin Boards	Rooms 105, 201, 204 & 207	200 SF Each	Non-Friable	5	Non-ACBM		Identified in 1987 Hunter inspection as NEGATIVE with 4 sample results to confirm (Hunter GRN 8-11); confirmed in 2011 HUB inspection but not confirmed in this inspection; remove from O&M Plan but maintain documentation of results
12" x 12" Tan Mottled Floor Tile	Room 105	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
12" x 12" Tan Mottled Floor Tile Adhesive	Room 105	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
Tan Mosaic Sheet Flooring	Room N 106	15 SF	Non-Friable	5	PACM		Not identified in 1987 Hunter inspection; identified in 2011 HUB inspection as "could not be located;" not confirmed in this inspection; maintain O&M Plan

	Re-ins	pection Fir	ndings for A	CBMs			Management Planner Recommendations
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions
2' x 4' Ceiling Tile	Room 106 Storage, Rooms 203, 204 & 205, Side Stairwell, Library Storage	6,000 SF	Friable	5	PACM; intact	No Change	Identified in 1987 Hunter inspection and 2011 HUB inspection; reported as negative, but there is only ONE negative sample (Hunter GRN 25, which is a duplicate sample number), additional sampling required; confirmed in this inspection; maintain O&M Plan
9" x 9" Brown Floor Tile	Room 106 Storage	TBD	Non-Friable	5	ACBM; intact	No Change	Identified in 1987 Hunter inspection as POSITIVE in Rooms 104, 105D & 203; confirmed in this inspection in Room 106 Storage; maintain O&M Plan
9" x 9" Brown Floor Tile Adhesive	Room 106 Storage	TBD	Non-Friable	5	PACM; intact	No Change	Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
Glue-on Panels	2 <sup>nd</sup> Floor Hall by Water Fountain	TBD	Non-Friable	5	PACM		Identified in 2011 HUB inspection as intact PACM but not confirmed in this inspection; maintain O&M Plan
12" x 12" Tan Floor Tile	2 <sup>nd</sup> Floor Women's Restroom, Art Room, Music Storage, Room 201	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
12" x 12" Tan Floor Tile Adhesive	2 <sup>nd</sup> Floor Women's Restroom, Art Room, Music Storage, Room 201	TBD	Non-Friable	5	PACM; intact		Not identified in the 1987 Hunter or 2011 HUB inspection; maintain O&M Plan
12" x 12" Beige Floor Tile with Beige Flecks	Art Room, Storage off Art Room, Room 201, Hall by 201	3,300 SF	Non-Friable	5	PACM		Identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan

	Re-inspection Findings for ACBMs									
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions			
12" x 12" Beige Floor Tile with Beige Flecks Adhesive	Art Room, Storage off Art Room, Room 201, Hall by 201	3,300 SF	Non-Friable	5	PACM		Associated with 12" x 12" beige floor tile with beige flecks identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan			
1' x 1' Ceiling Tile	Stairwell at Room 203	TBD	Friable	4	PACM; damaged		Not identified in the 1987 Hunter or 2011 HUB inspection; remove or replace ceiling tile system; maintain O&M Plan			
9" x 9" White Floor Tile	Room 202, 203, Stairwell and Storage at Room 203	TBD	Non-Friable	5	PACM; intact	No Change	Identified in 1987 Hunter inspection in Rooms 205, 206, 103 & 107A; identified in 2011 HUB inspection in Rooms 202, 203 & small vestibule; 1987 Hunter inspection reported material is negative, but only one sample (Hunter GRN 28), additional sampling required; confirmed in this inspection in Rooms 202, 203, Stairwell and Storage at Room 203; maintain O&M Plan			
9" x 9" White Floor Tile Adhesive	Room 202, 203, Stairwell and Storage at Room 203	TBD	Non-Friable	5	PACM; intact	No Change	Identified in 2011 HUB inspection in Rooms 202, 203 & small vestibule; confirmed in this inspection in Rooms 202 & 203, Stairwell and Storage at Room 203; maintain O&M Plan			
Carpet Mastic	Room 203, Principal's Office, Music Room	TBD	Non-Friable	5	PACM; intact	No Change	Identified in the 2011 HUB inspection and confirmed in this inspection; maintain O&M Plan			
12" x 12" Beige Floor Tile with White Flecks & Streaks	Room 207, Small Bathroom Near 207	TBD	Non-Friable	5	PACM		Identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan			

LEA/School System: Haverhill Public Schools Building: Greenleaf Elementary School Inspection Date: February 19, 2016

	Re-inspection Findings for ACBMs									
Material Description	Location(s)	Quantity <sup>1</sup>	Friability	Assessment Category <sup>2</sup>	Assessment Justification	Change in Assessment	Preventive Measures; Response Actions			
12" x 12" Beige Floor Tile with White Flecks & Streaks Adhesive	Room 207, Small Bathroom Near 207	TBD	Non-Friable	5	PACM		Associated with 12" x 12" beige floor tile with white flecks & streaks identified in 2011 HUB inspection as PACM; not confirmed in this inspection; maintain O&M Plan			
2' x 4' Ceiling Tile (Replacement)	Room 210	TBD	Friable	5	PACM		Identified in 1987 Hunter inspection; reported as negative, but there is only ONE negative sample (Hunter GRN 26), additional sampling required; not confirmed in this inspection; maintain O&M Plan			
Blown-in Insulation	Attic	9,000 SF	Friable	5	PACM; intact	No Change	Identified in the 2011 HUB inspection and confirmed in this inspection; maintain O&M Plan			
Roofing Materials	Roof	900 SF	Non-Friable	5	PACM; intact	No Change	Identified in the 2011 HUB inspection and confirmed in this inspection; maintain O&M Plan			

#### **General Comments**

- AXIOM reviewed the initial 1987 inspection report and 1988 asbestos management plan from Hunter Environmental and a 2011 three-year reinspection report authored by Hub Testing Laboratory, Inc. No additional documentation (e.g., 3-year re-inspection reports, abatement paperwork) was reviewed during this re-inspection.
- Per comments in the table above, a number of materials have had minimal samples collected indicating they are negative for asbestos; however, these materials should be presumed ACBM until additional sampling and analysis can be performed in accordance with AHERA sampling protocols.
- Pipes in several areas of the building were observed to either be uninsulated or insulated with fiberglass. No documentation regarding abatement of ACBM or PACM pipe insulation and fittings was available for review.
- Concealed pipe/fitting insulation may be located in wall cavities.

LEA/School System: Haverhill Public Schools Building: Greenleaf Elementary School Inspection Date: February 19, 2016

#### **Suggested Action Items**

- Label friable insulation in the basement with asbestos warning stickers/labels (adhere directly onto insulation and post a warning sign at the entrance).
- Perform a complete building asbestos survey with limited sampling. Destructive sampling methods are not recommended. It would be beneficial to
  discreetly sample items such as plaster, wall board, joint compound and other materials which are likely to be impacted by students, faculty or
  maintenance during routine activities (e.g., hanging artwork, installing telecomm lines). Materials which may be present in large quantities such as
  floor tile and associated adhesive, and which would therefore be costly abatement items, should also be sampled in an effort to remove them from the
  list of suspect materials.
- The only documentation available for this school during AXIOM's re-inspection were the 1987 initial inspection report and 1988 asbestos management
  plan, both authored by Hunter Environmental and a three-year re-inspection report completed by HUB Testing Laboratory, Inc. in 2011. Consider
  contacting previous consultants or Designated Person(s) to locate and obtain additional asbestos-related documentation for this school.
  Documentation may include additional 3-year re-inspection reports, bulk sampling results and/or ACBM abatement documentation such as asbestos
  abatement notification forms, waste shipment records, contractor documents or abatement summary reports to complete your documentation of
  AHERA-related activities.

Were additional samples of this ACBM collected: NO	Date Management Planner Review: July 28, 2016					
Inspector Name: Christopher M. LaPorte	Management Planner Name: Heather R. Forgione					
Inspector Signature:	Management Planner Signature: Nather R. Pagione					
Accreditation No. / State: Al031166 / Massachusetts	Accreditation No. / State: AP900433 / Massachusetts					
Expiration Date: September 9, 2016	Expiration Date: September 9, 2016					

I, the LEA's Designated Person have read and understood the recommendations made above: <b>Thomas Geary</b>	Signature (LEA Designate):
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