



**REQUEST FOR PROPOSALS (RFP)
for**

Limited Asbestos Abatement and Demolition of 111 Highland, Highland Park, MI 48203

Event	Date Due	Method of Communication
Issue Date	February 5, 2026	Published on WCLB website and BidNet
Non-Mandatory Site Visit	February 12, 2026 1:00 pm	See below for more information.
Question Deadline	February 18, 2026 1:00 pm	Email questions to jennifer.lagerbohm@mcdowasc.com
Responses to Questions	February 23, 2026	Published on WCLB website and BidNet
RFP Response Due	February 27, 2026 4:00 pm	Email to awistow@waynecountymi.gov and jennifer.lagerbohm@mcdowasc.com
Interviews	Week of March 2, 2026	Email

The Wayne County Land Bank (WCLB) invites qualified Contractors to submit bids for demolition services described under Scope of Work/Specifications. Project completion is May 30, 2026 with no exceptions.

Respondents are responsible for assuring that the submission is emailed to awistow@waynecountymi.gov no later than close of business Thursday February 27, 2026 at 4:00 pm.

I. Instructions:

1. Bid Information - Timely received bids will be evaluated on the merit and completeness of all the information submitted with the bid.

Respondents are encouraged to visit the location during the mandatory site visit.
2. Questions - All questions must be submitted in writing to the contact responsible for this RFP before the question deadline indicated on the timetable of this RFP. All responses to questions will be in writing.
3. Bid Submission –
 - a. Bids must be submitted electronically to the email address shown in the timetable.
 - b. Submission of a bid establishes a conclusive presumption that the Respondent is thoroughly familiar with this RFP and that the Respondent understands and agrees to abide by each and all of the stipulations and requirements contained herein.

- c. All costs incurred in the preparation and presentation of the bid is the Respondent's sole responsibility; no pre-bid costs will be reimbursed to any Respondent.
 - d. Bids must be held firm for a minimum of 180 days.
4. Additional Information – The WCLB reserves the right to request additional information from the Respondent and may consider past performance of the Respondent.
5. Additional points consideration will be given to respondents who can commit to performing the majority of the demolition work the week of March 30, 2026.
6. Rejection – The WCLB reserves the right to reject any/all bids or to accept or reject any bid in part.
7. Contract Award – The WCLB reserves the right to award by item, group, or total to the lowest and most responsible bidder. The successful Respondent will be notified at the earliest possible date. Award decisions may be subject to approval from the Board of Directors.

Scope of Work/Specifications:

1. Minimum Qualifications – Respondents shall include proof of required licenses and certifications, in good standing for the area(s) in which they are responding. If proof in the form of a copy is not provided with the bid, the WCLB reserves the right to reject the bid for being unresponsive and incomplete.

Respondents must hold a valid Michigan Residential Builder's or Maintenance & Alteration License, be a Michigan Accredited Asbestos Abatement Contractor, and provide proof of liability and workers' compensation insurance. Work must be completed by accredited asbestos abatement workers or asbestos abatement contractor/supervisors. Firms must demonstrate completion of at least three (3) demolition projects of comparable scope within the past five (5) years and employ supervisory staff with OSHA 30-hour training.

Respondents are encouraged to attend a non-mandatory site visit.

2. Scope of Work – The WCLB is looking to award work at 111 Highland, Highland Park, MI 48203. The final deliverable is a graded free of debris, rubble, and other objectionable material site no later than May 30, 2026. McDowell & Associates and Wayne County Land Back representatives will conduct a final walk through to ensure the site is acceptable prior to release of funds.

II. Scope of Work by Category of Service:

The property consists of an approximate 80,000-square foot, six-story apartment building constructed in 1927. The building has a basement.

An Asbestos Survey was completed on February 26, 2025 for the building, which also included a 2017 Asbestos Survey. A copy of those reports are attached.

The building has suffered areas of water and fire damage and has been determined to be structurally unsound and unsafe to enter. A copy of the Structural Integrity Opinion letter completed by McDowell & Associates on January 16, 2026 is attached.

The scope of work includes demolition of the building. Since asbestos-containing materials are present within the building that cannot be abated prior to demolition, all of the waste will need to be treated as asbestos waste and disposed accordingly. Effort will be made to remove accessible exterior window caulk prior to demolition that could become friable during the demolition.

The scope of work addressed by this RFP addresses proper asbestos abatement and demolition of the building in accordance with State and Federal guidelines and backfill with clean backfill and includes the following:

- Submit 10-Day Notice of Intent to Renovate/Demolish.
- Obtain all permitting requirements and fees.
- Disconnecting all utilities at the property line.
- Installation and maintaining required soil erosion control devices.
- Secure fencing, signage, and access controls for the property to restrict access.
- Removal of accessible asbestos-containing window caulk and other exterior asbestos containing materials (if encountered) that could become friable during the demolition process by a licensed asbestos abatement contractor.
- Obtain landfill approval for disposal of demolition debris in accordance with EGLE and LEO requirements.
- Demolition of the building and disposal of all demolition debris. Building footings and basement floor slab to be removed and disposed. All debris to be disposed as asbestos waste under manifest. A waste log to be maintained by the contractor with signed load tickets from the landfill that document proper disposal.
- Daily third-party air monitoring. Summary reports to be provided to McDowell & Associates following completion of the demolition.
- Provide appropriate dust suppression for no visible emissions. Periodic EPA Method 9 observations to be made by McDowell & Associates at no fee to demolition contractor. Contractor to supply an appropriate water source with staff to apply as needed to comply with NESHAP wetting requirements.
- Backfill excavations and return site to grade using lifts of not more than 12” and compacted to 90% modified proctor. Backfill sources and chemical testing in accordance with the City of Detroit Backfill Protocols. Chemical testing of source to be completed by McDowell & Associates at no charge to contractor if no more than 2 sources of backfill are used. Each source of backfill soil after the second source would result in a charge to contractor of \$2,000 per source per each 2,000 tons of soil. Disturbed areas of the site to be properly seeded after completion of demolition, backfill, removal of all miscellaneous debris and rubble, and final site grading.

The successful Contractor to provide all construction services to execute the scope including but not limited to equipment, manpower, tooling, and materials to complete limited asbestos abatement and demolition and backfill.

Contractor’s Responsibilities including but not limited to:

- Completion of work must be obtained no later than May 30, 2026.
- All Insurance and documentation
- All Site-Specific Safety Plans (Safety Policies), OSHA/MIOSHA regulations.
- Install and maintain required soil erosion control devices.
- Dust suppression for no visible emissions.
- Secure fencing, signage, and access controls for all properties under construction.
- All daily/weekly cleanup to not affect the property and contractors safety and performance.
- All quality control and approval by WCLB or their designees.
- All means and methods

- All submittals and approvals
- Value engineering
- Constructability solutions
- All temporary facilities
- A detailed baseline schedule within 14 days of Notice to Proceed, updated bi-weekly.
- Quality assurance
- The Wayne County Land Bank does not warrant environmental conditions of any property.
- Subcontractors must be pre-approved by WCLB; roster updates required prior to mobilization, including license and insurance when required.
- Require minimum on-site supervision ratio (e.g., 1 qualified foreman per property).
- Contractors must demonstrate workforce capacity to handle parallel properties to prevent delays.
- Schedule and coordinate all inspections with City building officials and ensure timely resolution of red tags.
- WCLB to be copied on all inspection reports.

Wayne County Land Bank Responsibilities:

- The WCLB will provide a dedicated project manager to coordinate the work being performed with the demolition contractor.
- The WCLB agrees to give the contractor access to work areas. Local noise ordinances must be followed.
- The WCLB will establish a weekly Owner's meeting with the demolition contractor for progress, compliance, and reporting.

III. Submission Requirements

To be considered, each Respondent must submit a complete submission in response to this RFP using the format specified. Respondent's submission must be submitted in the format outlined below. There should be no attachments, enclosures, or exhibits other than those required in the RFP or considered by the Respondent to be essential to a complete understanding of the submission. Each section of the submission should be clearly identified with appropriate headings:

1. Business Organization and History – State the full name, address, phone number and email address of your organization and, if applicable, the branch office or other subordinate element that will perform, or assist in performing, the work hereunder. Indicate whether it operates as an individual, partnership, or corporation; if as a corporation, include the state in which it is incorporated. The submission must state whether the organization is licensed to operate in the State of Michigan and include proof of licenses.
2. Statement of Intent – State in succinct terms your understanding of WCLB's intent presented by this RFP.
3. Narrative – Include a narrative summary description of the proposed effort and of the services(s)/products(s) that will be delivered.
4. Work Plans – Provide detailed information on the qualifications that your organization must accomplish in relation to the Scope of Work explained in Section II.
5. Competency – Describe the prior experience of your organization which you consider relevant to the successful accomplishment of the project defined in this RFP. Submissions in this section

should include descriptions of qualifying experience, descriptions of projects, and starting and completion dates of successful projects. Please include the name, address, email, and phone number of the individual(s) responsible for the client and/or organization who may be contacted. The WCLB may evaluate the Respondent's prior performance with the WCLB, The Charter County of Wayne, or the State of Michigan; and prior performance information may be a factor in the award decision.

6. Staffing Experience – The Respondent must be able to staff a project team which possesses talent and expertise in the field of the requirements of this RFP. Please provide a brief outline of qualifications and similar projects completed for each current staff member and their areas of expertise. Submit copies of any specialized training, certifications and current licenses for each staff member. Indicate which of these individuals you consider key to the successful completion of the work.
7. Subcontractors – Include a list of **all** subcontractors, if any, that may be engaged to supplement your work under a future contract; include firm name and address, contact person and complete description of work to be subcontracted. Include descriptive information concerning subcontractor's organization and abilities.
8. Respondent's Authorized Expediter – Include the name and telephone number of person(s) in your organization authorized to expedite any proposed contract with the WCLB.
10. Additional Information and Comments – Include any other information that is believed to be pertinent, but not specifically asked for elsewhere.
11. References – Provide a minimum of three references for relevant work. Include contact name, company name, contact information and very brief description of the work completed.

Fee Schedule:

Please provide detailed pricing information to complete the requested scope of work on a lump sum basis.

Respondents please note: Rates quoted in response to this RFP must remain firm for the duration of this RFP. Price increase will not be permitted during that time.

Complete a Bid Form for the project.

Failure to complete a Bid Form may result in your Bid being deemed non-responsive and rejected.

IV. Selection Criteria

1. Selection Criteria

Submissions to this RFP will be evaluated based upon a two-step selection process. The submission must address the requirements described in Section III of this RFP (questions 1-11 and fee schedule). Respondents would move on to the next step if the minimum described below is met.

Step I – Initial evaluation for compliance

The WCLB staff will screen the submissions for:

- Timely submission of the documentation.
- Submissions satisfy the form and content requirements of this RFP.
- Minimum Requirements are met.

Step II – Criteria for Satisfactory Submissions & Selection

- a. During the second step of the selection process, submissions will be considered by an evaluation committee comprised of individuals selected by the WCLB. Only those submissions that satisfy Step I will be considered for evaluation in Step II. The evaluation committee reserves the right to request additional information from any Respondent.
- b. The submission should indicate the ability of the Respondent to meet the requirements of talent and expertise in the fields detailed in this RFP.
- c. Based on what is in the best interest of the WCLB, the WCLB will request an interview from Respondents. The WCLB will consider value, quality, experience, timeliness, and the ability to meet the objectives of a specific project in awarding contracts.
- d. The award recommendation will be made to the responsive and responsible qualified Respondent who offers the best value to the WCLB. Best value will be determined by the Respondent meeting the requirements and offering the best proposal that meets the objectives of the specific project.
- e. The WCLB is not liable for any costs incurred by any Respondent prior to the signing of a Contract by all parties.
- f. The WCLB may refuse to qualify a Respondent who has failed to pay any applicable taxes or if the Respondent has an outstanding debt to the State of Michigan or The Charter County of Wayne.
- g. Conflict of Interest - The Respondent must disclose, in an exhibit to the submission, any possible conflicts of interest that may result from the award of a Contract or the services provided under a Contract. Except as otherwise disclosed in the submission, the Respondent affirms that to the best of its knowledge there exists no actual or potential conflict between the Respondent, the Respondent's project manager(s) or its family's business or financial interests (Interests) and the services provided under a Contract. In the event of any change in either interests or the services provided under a Contract, the Respondent will inform the WCLB regarding possible conflicts of interest which may arise as a result of such change and agrees that all conflicts shall be resolved to the WCLB's satisfaction, or the Respondent may be disqualified from consideration under this RFP.
- h. If the WCLB determines that a Respondent purposefully or willfully submitted false information in response to this RFP, the Respondent will not be considered for an award and any resulting Contract that may have been executed may be terminated.
- i. Notwithstanding any other statement in this RFP, the WCLB reserves the right to:
 - a. reject any and all submissions;
 - b. waive any errors or irregularities in the bidding process or in any submission;
 - c. rebid the project;
 - d. negotiate with any Respondent for a reduced price, or for an increased price to include any alternates that the Respondent may propose;
 - e. revise or reduce the scope of the project, and rebid or negotiate with any Respondent regarding the revised project;
 - f. defer or abandon the project

- g. amend or revise the RFP; and/or
- h. request clarification of information submitted and to request additional information of one or more Respondents.

V. Terms & Conditions

1. Insurance Requirements

- a. Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the services by the Contractor, its agents, representatives, or employees.
- b. Contractor shall maintain at least the following minimum coverage:
 - i. Commercial General Liability (GGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal and advertising injury with limits no less than \$1,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this Contract or the general aggregate limit shall be twice the required occurrence limit.
 - ii. Umbrella or Excess Liability Policy: in an amount not less than \$5,000,000. Umbrella or Excess policy wording shall be at least as broad as the primary or underlying policy(ies) and shall apply both to the Contractor's general liability and to its automobile liability insurance and shall be written on an occurrence basis. The WCLB employees and/or representatives as may be specified in any "Special Conditions" shall be named as an additional insured under this policy.
 - iii. Automobile Liability: Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), or if Contractor has no owned autos, Code 8 (hired) and 9 (non-owned), with limits no less than \$1,000,000 per accident for bodily injury and property damage.
 - iv. Workers' Compensation: insurance as required by the State of Michigan, with Statutory Limits, and Employer's Liability Insurance with limits of no less than \$1,000,000 per accident for bodily injury or disease.
 - v. Contractors Pollution Liability and/or Asbestos Pollution Liability and/or Errors & Omissions: applicable to the work being performed, with a limit no less than \$3,000,000 per claim or occurrence and \$3,000,000 aggregate per policy period of one year.
- c. Additional Insured Status - The certificate must include the Wayne County Land Bank is named as additional insured and said coverage shall be considered to be the primary coverage rather than any policies and insurance or self-insurance retention owned or maintained by Wayne County Land Bank.
- d. Primary Coverage - For any claims related to this Contract, the Contractor's insurance coverage shall be primary insurance as respects the WCLB. Any insurance or self-insurance maintained by the WCLB, or representatives shall be excess of the Contractor's insurance and shall not contribute with it.
- e. Notice of Cancellation - Each insurance policy shall state that coverage shall not be canceled, except with notice to the WCLB.
- f. Waiver of Subrogation - Contractor grants to the WCLB a waiver of any right to subrogation which any insurer of the Contractor may acquire against the WCLB by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision

applies regardless of whether or not the WCLB has received a waiver of subrogation endorsement from the insurer.

- g. Deductibles and Self-Insured Retentions - Any deductibles or self-insured retentions must be declared to and approved by the WCLB. The WCLB may require the Contractor to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.
- h. All insurance must be effected under valid and enforceable policies, issued by recognized, responsible insurers qualified to conduct business in Michigan which are well-rated by national rating organizations. All companies providing the coverage required shall be licensed or approved by the Insurance Bureau of the State of Michigan and shall have a policyholder's service rating no lower than A: VII as listed in A.M. Best's Key Rating guide, current edition or interim report.
- i. Waiver of Subrogation - Contractor grants to the WCLB a waiver of any right to subrogation which any insurer of the Contractor may acquire against the WCLB by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the WCLB has received a waiver of subrogation endorsement from the insurer.
- j. Deductibles and Self-Insured Retentions - Any deductibles or self-insured retentions must be declared to and approved by the WCLB. The WCLB may require the Contractor to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.
- k. All insurance must be effected under valid and enforceable policies, issued by recognized, responsible insurers qualified to conduct business in Michigan which are well-rated by national rating organizations. All companies providing the coverage required shall be licensed or approved by the Insurance Bureau of the State of Michigan and shall have a policyholder's service rating no lower than A: VII as listed in A.M. Best's Key Rating guide, current edition or interim report.
- l. Claims-made Policies - If any of the required policies provide coverage on a claims-made basis:
 - i. The Retroactive Date must be shown and must be before the date of the Contract or the date the Contractor starts to perform the services.
 - ii. Insurance must be maintained, and evidence of insurance must be provided for at least five (5) years after completion of the Contract.
 - iii. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the Contract effective date, the Contractor must purchase "extended reporting" coverage for a minimum of five (5) years after completion of Contract work.
- m. Verification of Coverage - Contractor shall furnish the WCLB with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this Article. The WCLB shall receive and approve all certificates and endorsements before the Contractor begins providing services. Failure to obtain the required documents prior to commencement of services shall not waive the Contractor's obligation to provide them. The WCLB reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by the Article, at any time.
- n. Subcontractors – Contractor shall require and verify that all subcontractors maintain insurance satisfying all the stated requirements, and Contractor shall ensure that the WCLB is an additional insured on insurance required from subcontractors.

- o. Special Risks or Circumstances – The WCLB reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.
- p. The Contractor must submit certificates evidencing the insurance to the Risk Management Division at the time the Contractor executes the Contract, and at least fifteen (15) days prior to the expiration dates of expiring policies.

Exhibit A - Required Forms

Exhibit B - Environmental Summary and Reports

Pre-Demolition Asbestos and Hazardous
Materials Survey
of

111 Highland St.
Highland Park MI 48203



Prepared for
Mrs. Anne Wistow
Wayne County Land Bank
500 Griswold Street, 28th Floor,
Detroit, MI 48226

Prepared by



Testing Engineers and Consultants, Inc. (TEC)
1343 Rochester Road, PO Box 249
Troy, Michigan 48099-0249

TEC Project Number: 64659-04

February 26, 2025

Zachary Line
Asbestos Building Inspector
A63411

Madison Konrad
Group Manager
Industrial Hygiene Services

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LIST OF APPENDICES

APPENDIX A	SCOPE, METHODS, AND REGULATORY GUIDELINES
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APPENDIX C	OSHA ABATEMENT PROCEDURES
APPENDIX D	ASBESTOS SAMPLE LOG/CHAIN OF CUSTODY
APPENDIX E	REPORT OF BULK SAMPLE ANALYSIS FOR ASBESTOS
APPENDIX F	REPRESENTATIVE PHOTOGRAPHS OF ACM MATERIALS
APPENDIX G	SAMPLE LOCATION MAP
APPENDIX H	PM ENVIRONMENTAL PRE-RENOVATION HAZARDOUS MATERIALS SURVEY

1 EXECUTIVE SUMMARY

Testing Engineers and Consultants, Inc. (TEC) was retained by Wayne County Land Bank (WCLB), to conduct an assessment for asbestos-containing materials (ACM)/Hazardous Materials (Haz-Mat) within the building located at 111 Highland St, Highland Park MI 48203 48104.

Asbestos Containing Materials (ACMs)

A total of **260** sample layers were collected/analyzed from **76** suspected asbestos-containing homogeneous materials (ACMs) identified during the assessment. The samples were analyzed by polarized light microscopy (PLM). A material is considered by the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Safety and Health Administration (OSHA) and the State of Michigan to be ACM if PLM results detect greater than one percent (>1%) asbestos. Refer to Appendix G for the Sample Location Map.

28 ACMs (>1% asbestos) were identified through laboratory analysis during this investigation. Bold Depicts Positive Layer:

- **Multilayered Flooring 12"x12" w/ Mastic (Brown, Green, and Beige) - 200 SF – FS 8**
- **<2" Straight Pipe Insulation (Grey/White) - 6,360 LF - FS 6 8, 10, 71, 74, 76, 78, 81, 82, 86, 87, 88, 89, 195 (All Unit Bathrooms and Kitchens)**
- **4" Stright Pipe Insulation (Grey/White) – 412 LF – FS 71, 75, 78, 87, 88, 89, 90**
- **>6" Stright Pipe Insulation (Grey/White) – 245 LF – FS 90**
- **<2" Pipe Joint Insulation (Grey/White) – 716 EA – FS 70, 71, 74, 78, 81, 87, 88, 89, 90, 104, 195 (All Unit Bathrooms and Kitchens)**
- **4" Pipe Joint Insulation (Grey/White) – 20 EA – FS 78, 87, 89**
- **>6" Pipe Joint Insulation (Grey/White) – 1 EA – FS 90**
- **Tank Insulation (Grey/White) – 400 SF – FS 90**
- **Cement Patch (Grey) – 10 SF – FS 90**
- **9"x9" Floor Tile (Brown & Black) w/ Mastic – 610 SF – FS 71, 101**
- **9"x9" Floor Tile (Beige) w/ Mastic – 1200 SF – FS 82, 84, 85, 87**
- **9"x9 Floor Tile (Cream) w/ Mastic – 2,000 SF – FS 81**
- **Exterior Window Glaze (Tan) – Est. 8,500 – FS 1 (Exterior Windows)**
- **Drywall w/ Joint Compound (Tan/White) 1,150 SF – FS 72, 73, 74**
- **9"x9" Floor Tile (Black) w/ Mastic – 900 SF – FS 123, 139, 144, 146, 147, 251, 277, 442**
- **9"x9" Floor Tile (Brown & White – Mottled) w/ Mastic – 30 SF – FS 149, 151**
- **Countertop Sheeting (White) – 8 SF – FS 95, 205**
- **9"x9" Floor Tile (Light Brown) w/ Mastic – 30 SF – FS 295, 298**
- **Multilayer Flooring (Top – 9"x9" Black Floor Tile) w/ Mastic & Floor Tile (Green) w/ Mastic – 20 SF – FS 304**
- **9"x9" Floor Tile (Red) w/ Sheet Floor/Felt – 15 SF – FS 306**
- **9"x9" Floor Tile (Tan w/ Gold Specks) w/ Mastic – 400 SF – FS 341, 366**
- **9"x9" Floor Tile (Tan w/ Green) w/ Mastic – 200 SF – FS 342**

- **9"x9" Floor Tile (Black) w/ Glue & 9"x9" Floor Tile (Tan) w/ Glue – 30 SF – FS 394**
- **12"x12" Floor Tile (Cream/Pattern) w/ Mastic – 100 SF – FS 431**
- **Multilayer Flooring (Top – 9"x9" Green/Pattern) w/ Glue & Floor Tile (Beige) w/ Glue & Sheet Floor/Felt – 20 SF – FS 450**
- **Exterior Doorframe Caulk (Tan – Painted Green) – 90 LF – FS 1 (Around Exterior Doors)**
- **Roof Flashing (Black) – 2,040 SF – FS 1 (Roof)**
- **Exterior Caulk (Brown – Painted Cream) – Est. 8,500 LF – FS 1 Around Window Frames**
- **Contaminated Debris – Est. 1,300 Cubic Yards/ 35,000 Cubic Feet**
 - **Contaminated with Lead-based paint (confirmed with XRF Analyzer), asbestos-containing textured wall & ceiling application, and asbestos-containing Thermal System Insulation**

An additional two ACMs were identified through laboratory analysis during the 2017 investigation performed by PM Environmental:

- **Wall and Ceiling Texture – 200,000 SF**
- **Residual Mastic – 40 SF**
 - **This mastic may be present in more areas than identified. TEC was unable to identify the mastic due to excessive debris on the floors of the entire building.**

The following materials were not sampled and are assumed to be ACM:

- None

A summary of the laboratory results for the suspect ACM samples collected within the subject building are provided in Table 1, while the analytical laboratory results/chain of custody are included as Appendix D and Appendix E. Site diagrams identifying sample locations (Appendix G) are attached for review.

Please refer to Appendix H for the 2017 PM Environmental Pre-Renovation Hazardous Materials Survey.

2 GENERAL BUILDING AND SURVEY INFORMATION

2.1 BUILDING INFORMATION

The subject building contains one address 111 Highland St, Highland Park MI 48203 48104. The subject building contains 92 rooms, a basement, and is approximately 70,000 SF in size. At the time of the survey, the building was in a severely damaged state, which hindered TEC to fully inspect all areas of the building.

2.2 INSPECTION INFORMATION

2.2.1 GENERAL BUILDING INFORMATION

Subject Property: **111 Highland St.
Highland Park MI 48203**

Construction Date: **Unknown**

Number of Floors: **6 and a Basement**

Square Footage **Est. 70,000 SF**

Construction Type: **Brick/Pyro Brick & Mortar Construction,
Concrete Foundation with Flat Rubber Membrane Roof**

Building Occupant(s) **Unoccupied**

2.2.2 Inspection Information

Name of Inspector(s): **Zachary Line**

Signature: 

State of Michigan Inspector No. A63411

Date(s) of Inspection: **December 11, 30, 31, 2024 & January 27 & 28, 2025**

Report Reviewed By: **Madison Konrad**

Signature: 

3 FINDINGS

3.1 ASBESTOS RESULTS

A total of **260** samples were collected/analyzed from **76** suspect asbestos-containing homogenous materials identified during the assessment.

The “Report of Bulk Sample Analysis for Asbestos,” the “Asbestos Bulk Sample Log,” Photographs, and Asbestos Glossary are included in the Appendices. Table 1 attached to this report lists the suspect ACMs observed throughout the building that were sampled, along with the results of the inspection and laboratory analysis.

Table 1 provides descriptions of the materials, their general locations, condition, and friability, EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) category, OSHA abatement classification and estimated quantity.

3.1.1 INACCESSIBLE AREAS / AREAS NOT INCLUDED

- **The following areas were inaccessible due to excessive debris, building condition, and/or structural integrity:** Functional Space 135, 137, 153, 154, 156, 166, 179, 180, 195, 198, 199(closet), 208(closet), 244(closet), 245, 246, 253(both closets), 262, 264, 271, 274, 275(closet), 279(closet), 284(kitchen), 286, 287, 288, 289, 290, 292(closet), 301(closet), 304(kitchen), 308(Both Closets), 309, 310, 311, 312, 313, 314, 315, 316, 317, 324, 325, 330(kitchen), 335(kitchen), 336, 344(closet), 351, 352, 353, 354, 355, 357(kitchen), 358(kitchen), 363, 367, 372(closet), 374, 375, 376, 377, 378, 379, 380, 381, 383, 385, (hallway), 388(closet), 389, 390, 391, 392, 396(kitchen), 398(closet), 400(kitchen), 401, 406(kitchen), 407(kitchen), 409, 414(kitchen), 416, 417, 418, 419, 420, 421, 422, 423(kitchen), 432, 434(kitchen), 439, 440, 441, 443, 444, 445, 446, 448, 449, 456 (See Appendix G for specific locations)
- General building conditions were very poor. Plaster, pyro brick, lead-based paint, asbestos-containing textured wall/ceiling application, and asbestos-containing thermal system insulation littered the floors all throughout the building. In a lot of cases, entire functional spaces were inaccessible due to excessive debris and/or poor structural integrity. Building integrity was a concern during the survey. Several parts throughout the building had standing water/ice and there were parts of the floor missing in some of the functional spaces. There was also a lot of human trash piled up, blocking stairways and other functional spaces. TEC made their best efforts to thoroughly inspect all areas of the building. If new materials are discovered during demolition, they should be treated as asbestos-containing or tested to prove asbestos content.

3.1.2 NON-SUSPECT MATERIALS

The following materials were observed but are considered ‘non-suspect’ ACM due to their composition (fiberglass, rubber, etc.) and were not sampled.

- Metal, plastic, and glass building components
- Rubber/foam pipe insulation
- Fiberglass roll/bat insulation
- Ceramic bathroom fixtures (sink, toilet, tub, etc.)

4 CONCLUSIONS & RECOMMENDATIONS

4.1 CONCLUSIONS

28 - ACMs were found within and on the subject property in the 2024/2025 TEC investigation

2 Additional ACMs were found within and on the subject property in the 2017 PM investigation

No Assumed ACMs were found within the subject property.

7 - Assumed HAZMAT Categories as presented on Table 2-Suspected HAZMATs Inventory Checklist

4.1.1 ASSUMPTIONS/OBSERVATIONS

The following assumptions were used to develop TEC's sampling strategy:

- Pipes throughout the building were either uninsulated (metal or PVC) or insulated with asbestos-containing insulation.

4.2 RECOMMENDATIONS

ASBESTOS CONTAINING MATERIALS (ACM)

The ACMs identified in the subject building were found to be in poor condition.

Prior to demolition, TEC recommends that the identified ACMs (assumed and verified by sampling), as well as the assumed hazardous materials, be removed prior to demolition. Category I Non-Friable (such as the assumed roofing material) ACM may often be left in place during demolition if not made friable by cutting, grinding or sanding. If left in place, these materials cannot be recycled or used as clean fill.

Any areas that were noted as being inaccessible during this assessment or any concealed areas, such as behind walls, where suspect ACMs could be discovered, will require a survey for ACM.

TEC has provided the regulatory abatement methods as defined by OSHA in Appendix C for each class of work applied to the materials noted in this report. These procedures can be performed by the demolition contractor if they are licensed to perform abatement in Michigan.

TABLES

TABLE 1 – SUSPECT ACMS – SAMPLED (BOLD DEPICTS A POSITIVE RESULT)

Site: 111 Highland St, Highland Park MI 48203

Survey Date(s): 12/11/24, 12/30/24, 12/31/24, 1/27/25, 1/28/25

Material Number & Sample Number	Material Description	Material Location	F/NF ¹	Cond. ²	% Asbestos & type ³	EPA NESHAP Category ^{1,4}	OSHA Class Designation ⁵	Estimated Quantity
1A-G	Plaster (Grey & White) w/ Skim Coat	Throughout	F	Poor	NAD/ NAD	NA	NA	NA
2A-G Same as PM HA# 13	Textured Application (White)	Throughout	F	Poor	3% Ch	RACM	Class I	200,000 SF
3A-B	Brick (Orange) & Mortar	Throughout	NF	Poor	NAD/ NAD	NA	NA	NA
4A-B	Brick (Grey) & Mortar	Throughout	NF	Poor	NAD/ NAD	NA	NA	NA
5A-B	Pyro Block (Orange) & Mortar (Grey)	Throughout	NF	Poor	NAD/ NAD	NA	NA	NA
6A-B	Carpet Adhesive (Tan)	Throughout	NF	Poor	NAD	NA	NA	NA
7A-B	Pyro Block (Grey) & Mortar	Throughout	NF	Poor	NAD/ NAD	NA	NA	NA
8A-B	9"x9" Floor Tile (Maroon) w/ Mastic	FS 4, 7, 44, 121, 122, 211, 235, 236, 255, 256, 267, 273, 283, 285, 300, 331, 348, 349, 382, 400, 413, 415, 426, 429, 434, 436, 447	NF	Poor	NAD/ NAD	NA	NA	NA
9A-B	Multilayered Flooring 12"x12" w/ Mastic (Brown, Green, and Beige)	FS 8	NF	Poor	NAD/ 5% Ch NAD/ NAD/	Cat II NF	Class II	200 SF
10A-B	Construction Adhesive (Beige)	FS 8	NF	Poor	NAD	NA	NA	NA
11A-C	<2" Straight Pip Insulation (Grey/White)	All Bathrooms and Kitchens in Units FS 6 8, 10, 71, 74, 76, 78, 81, 82, 86, 87, 88, 89, 195	F	Poor	40% Ch	RACM	Class I	Visually Observed 385 LF, & ~ 6,024 LF (in chases/walls/cavities/etc.)

1 F = Friable ; NF = Non-friable

2 Cond. = Condition of Materials; Either good, fair or poor

3 NAD = No Asbestos Detected, Ch = Chrysotile, Am = Amosite, Tr = Tremolite; Ver = Vermiculite; PT = Point Count Analysis; TEM = Transmission Electron Microscopy

4 NESHAP Category - Regulated ACM (RACM), Cat I NF=Category I Non-Friable ACM, Cat II NF= Category II Non-Friable ACM

5 NA = Not Applicable

OSHA/EPA Class Definitions:

Class I asbestos work means activities involving the removal of TSI and surfacing ACM and PACM.

Class II asbestos work means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III asbestos work means repair and maintenance operations, where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed.

Class IV asbestos work means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Material Number & Sample Number	Material Description	Material Location	F/NF ¹	Cond. ²	% Asbestos & type ³	EPA NESHAP Category ^{1,4}	OSHA Class Designation ⁵	Estimated Quantity
12A-B	Ceramic Wall Tile (White/Blue) w/ Mortar & Grout	All Bathrooms	NF	Poor	NAD/ NAD/ NAD	NA	NA	NA
13A-B	Ceramic Floor Tile (White- Hexagon) w/ Mortar & Grout	All Bathrooms	NF	Poor	NAD/ NAD/ NAD	NA	NA	NA
14A-B	Cloth Wire Insulation (Black)	Throughout	NF	Poor	NAD	NA	NA	NA
15A-B	Cloth Wire Insulation (White)	Throughout	NF	Poor	NAD	NA	NA	NA
16A-B	12"x12" Floor Tile (White- Faux Pebble) w/ Mastic	FS 9, 11, 70, 160	NF	Poor	NAD/ NAD/ NAD	NA	NA	NA
17A-B	Interior Window Frame Caulk (White)	Throughout	NF	Poor	NAD	NA	NA	NA
18A-B	9"x9" Floor Tile (Tan) w/ Mastic	FS 28, 29, 68, 170, 202, 241, 293, 343	NF	Poor	NAD/ NAD	NA	NA	NA
19A-B	9"x9" Floor Tile (Red) w/ Mastic	FS 33, 167, 364, 365	NF	Poor	NAD/ NAD	NA	NA	NA
20A-B	Multi-layered Flooring (Top-Sheeting Tan) & Flooring (Beige) & Flooring (Brown) & Flooring (Brown)	FS 36	NF	Poor	NAD/ NAD/ NAD/ NAD	NA	NA	NA
21A-B	Floor Sheeting (Maroon) w/ Adhesive	FS 38, 68	NF	Poor	NAD/ NAD	NA	NA	NA
22A-B	12"x12" Floor Tile (Tan) w/ Mastic	FS 37, 41, 301	NF	Poor	NAD/ NAD	NA	NA	NA
23A-B	Floor Sheeting (Green) w/ Mastic	FS 40, 240	NF	Poor	NAD/ NAD	NA	NA	NA
24A-B	Floor Sheeting (Cream) w/ Mastic	FS 44	NF	Poor	NAD/ NAD	NA	NA	NA
25A-B	Granite Floor Tile Mortar (Grey)	FS 49, 51, 52, 53, 54	NF	Poor	NAD	NA	NA	NA
26A-G	Decorative Plaster (White)	Throughout	F	Poor	NAD	NA	NA	NA
27A-B	9"x9" Floor Tile (Tan w/ Yellow) w/ Mastic	FS 59	NF	Poor	NAD/ NAD	NA	NA	NA

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2 Cond. = Condition of Materials; Either good, fair or poor
3 NAD = No Asbestos Detected, Ch = Chrysotile, Am = Amosite, Tr = Tremolite; Ver = Vermiculite; PT = Point Count Analysis; TEM = Transmission Electron Microscopy
4 NESHAP Category - Regulated ACM (RACM), Cat I NF=Category I Non-Friable ACM, Cat II NF= Category II Non-Friable ACM
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OSHA/EPA Class Definitions:
Class I asbestos work means activities involving the removal of TSI and surfacing ACM and PACM.
Class II asbestos work means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.
Class III asbestos work means repair and maintenance operations, where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed.
Class IV asbestos work means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Material Number & Sample Number	Material Description	Material Location	F/NF ¹	Cond. ²	% Asbestos & type ³	EPA NESHAP Category ^{1,4}	OSHA Class Designation ⁵	Estimated Quantity
28A-B	Ceramic Cove Base (White) w/ Mortar bed & Grout	FS 60	NF	Poor	NAD/ NAD	NA	NA	NA
29A-B	9"x9" Floor Tile (Brown w/ White) w/ Mastic	FS 67, 114, 213, 395, 425	NF	Poor	NAD/ NAD	NA	NA	NA
30A-C	4" Straight Pipe Insulation (White)	Boiler Room- FS71, 75, 78, 87, 88, 89, 90 & pipe runs/chases	F	Poor	40% Ch	RACM	Class I	192 LF (visually observed) Est – 220 LF
31A-C	>6" Straight Pipe Insulation	Boiler Room- FS71, 75, 78, 87, 88, 89, 90 & pipe runs/chases	F	Poor	40% Ch	RACM	Class I	135 LF (visually observed) Est – 110 LF
32A-C	<2" Pipe Joint Insulation	All Bathrooms and Kitchens in Units Boiler Room- FS71, 75, 78, 87, 88, 89, 90	F	Poor	70% Ch	RACM	Class I	53 EA (visually observed), Est. 663 EA (In chases/walls/cavities/etc.)
33A-C	4" Pipe Joint Insulation	Boiler Room- FS71, 75, 78, 87, 88, 89, 90	F	Poor	70% Ch	RACM	Class I	20 EA (visually observed)
34A-C	>6" Pipe Joint Insulation	Boiler Room- FS71, 75, 78, 87, 88, 89, 90	F	Poor	70% Ch	RACM	Class I	1 EA (visually observed)
35A-C	Tank Insulation (White)	Boiler Room- FS71, 75, 78, 87, 88, 89, 90	F	Poor	40% Ch	RACM	Class I	400 SF
36A-C	Cement Patch (Grey)	Boiler Room – FS 90	NF	Poor	10% Ch	Cat II NF	Class II	10 SF
37A-B	9"x9" Floor Tile (Brown & Black) w/ Mastic	FS 71, 101	NF	Poor	10% Ch / NAD	Cat II NF	Class II	610 SF
38A-B	9"x9" Floor Tile (Beige) w/ Mastic	FS 82, 84, 85, 87	NF	Poor	10% Ch / NAD	Cat II NF	Class II	1,200 SF
39A-B	9"x9" Floor Tile (Cream) w/ Mastic	FS 81	NF	Poor	5% Ch / NAD	Cat II NF	Class II	2,000 SF
40A-B	Exterior Window Glaze (Tan)	FS 81	NF	Poor	5% Ch	Cat II NF	Class II	8,500 LF
41A-B	Drywall (Tan) w/ Joint Compound (White)	FS 72, 73, 74	NF	Poor	NAD/ 1.75% Ch (PT)	RACM	Class I	1,150 SF

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Material Number & Sample Number	Material Description	Material Location	F/NF ¹	Cond. ²	% Asbestos & type ³	EPA NESHAP Category ^{1,4}	OSHA Class Designation ⁵	Estimated Quantity
42A-B	9"x9" Floor Tile (Black) w/ Mastic	FS 123, 139, 144, 146, 147, 259, 277, 442	NF	Poor	1.5% Ch (PT)/ NAD	Cat II NF	Class II	900 SF
43A-B	12"x 12" Floor Tile (White) w/ Mastic	FS 130	NF	Poor	NAD/ NAD	NA	NA	NA
44A-B	Roof Flashing (Black – Courtyard)	FS 1 (Courtyard)	NF	Poor	NAD	NA	NA	NA
45A-B	Flat Roofing Materials (Black – Courtyard)	FS 1 (Courtyard)	NF	Poor	NAD	NA	NA	NA
46A-B	Floor Sheeting (Black) w/ Glue (Black) Glue (Brown)	FS 131, 133, 162, 240, 264, 282	NF	Poor	NAD/ NAD/ NAD	NA	NA	NA
47A-B	12"x12" Multilayer flooring (Top Black Faux Stone) Glue (Brown) Glue (Yellow) Felt (Brown)	FS 143	NF	Poor	NAD/ NAD/ NAD/ NAD	NA	NA	NA
48A-B	6"x6" Floor Tile (Black) w/ Mastic	FS 152	NF	Poor	NAD/ NAD	NA	NA	NA
49A-B	9"x9" Floor Tile (Brown & White Mottled) w/ Mastic	FS 149, 151	NF	Poor	1.50% Ch (PT)/ NAD	Cat II NF	Class II	30 SF
50A-B	Floor Sheeting (Tan) w/ Mastic	FS 164, 211, 265, 266	NF	Poor	NAD/ NAD	NA	NA	NA
51A-B	9"x9" Floor Tile (Green) w/ Mastic	FS 191, 192, 209, 212, 237, 253, 276, 332, 345, 366	NF	Poor	NAD/ NAD	NA	NA	NA
52A-B	Floor Sheeting (Blue/ Green) w/ Mastic	FS 203	NF	Poor	NAD/ NAD	NA	NA	NA
53A-B	Countertop Sheeting (White)	FS 95, 205	NF	Poor	10% Ch	Cat II NF	Class II	8 SF
54A-B	9"x9" Floor Tile (Light Brown) w/ Mastic	FS 295, 298	NF	Poor	1.75% Ch (PT)/ NAD	Cat II NF	Class II	30 SF
55A-B	Multilayer Flooring (Top 9"x9" Black) w/ Mastic Floor Tile (Green) w/ Mastic	FS 304	NF	Poor	NAD/ NAD/ 10% Ch/ NAD	Cat II NF	Class II	20 SF
56A-B	9"x9" Floor Tile (Red) w/ Sheet Floor/ Felt	FS 306	NF	Poor	10% Ch/ NAD	Cat II NF	Class II	15 SF

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Material Number & Sample Number	Material Description	Material Location	F/NF ¹	Cond. ²	% Asbestos & type ³	EPA NESHAP Category ^{1,4}	OSHA Class Designation ⁵	Estimated Quantity
57A-B	6"x6" Floor Tile (Marron) w/ Mastic	FS 323	NF	Poor	NAD/ NAD	NA	NA	NA
58A-B	12"x12" Floor Tile (Faux Stick-on wood, Brown) w/ Glue	FS 328	NF	Poor	NAD/ NAD	NA	NA	NA
59A-B	9"x9" Floor Tile (Tan w/ Gold Specks) w/ Mastic	FS 341, 366	NF	Poor	1.50% Ch (PT)/ NAD	Cat II NF	Class II	400 SF
60A-B	9"x9" Floor Tile (Tan w/ Green) w/ Mastic	FS 342	NF	Poor	5% Ch/ NAD	Cat II NF	Class II	200 SF
61A-B	9"x9" Floor Tile (Black) w/ Glue 9"x9" Floor Tile (Tan) w/ Glue	FS 394	NF	Poor	1.75% Ch (PT) NAD/ 1.50% Ch (PT)/ NAD	Cat II NF	Class II	30 SF
62A-B	Countertop Sheeting (Green) w/ Mastic	FS 396	NF	Poor	NAD/ NAD	NA	NA	NA
63A-B	Floor Sheeting (Brown) w/ Mastic	FS 403	NF	Poor	NAD/ NAD	NA	NA	NA
64A-B	Blown in Insulation (White)	Throughout 6 th Floor	NF	Poor	NAD	NA	NA	NA
65A-B	9"x9" Floor Tile (White Faux Marble) & Felt	FS 431	NF	Poor	NAD	NA	NA	NA
66A-B	12"x12" Floor Tile (Cream/Pattern) w/ Mastic	FS 431	NF	Poor	1.50% Ch (PT)/ NAD	Cat II NF	Class II	100 SF
67A-B	Multilayer Flooring (Top 9"x9" Green/Pattern) w/ Glue Floor Tile (Beige) w/ Glue & Sheet Floor/ Felt	FS 450	NF	Poor	5% Ch/ NAD/ NAD/ NAD/ NAD	Cat II NF	Class II	20 SF
68A-B	Vibration Dampener (Brown)	FS 451, Throughout	NF	Poor	NAD	NA	NA	NA
69A-B	Flat Roofing Material (Black)	FS 1	NF	Poor	NAD	NA	NA	NA
70A-B	Exterior Door Frame Caulk (Tan Painted Green)	FS 1 (around door frames)	NF	Poor	10% Ch	Cat II NF	Class II	90 SF
71A-B	Roof Flashing (Black)	FS 1	NF	Poor	10% Ch	Cat I NF	Class II	2,040 SF

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Class II asbestos work means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding singles, and construction mastics.

Class III asbestos work means repair and maintenance operations, where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed.

Class IV asbestos work means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Material Number & Sample Number	Material Description	Material Location	F/NF ¹	Cond. ²	% Asbestos & type ³	EPA NESHAP Category ^{1,4}	OSHA Class Designation ⁵	Estimated Quantity
72A-B	Exterior Caulk (Brown Painted Cream)	FS 1 (around window frames)	NF	Poor	5% Ch	Cat II NF	Class II	8,500 LF
73A-B	Limestone (Tan) & Mortar	FS 1	NF	Poor	NAD/ NAD	NA	Na	NA
74A-B	Exterior Pipe Sealant (Black)	FS 1	NF	Poor	NAD	NA	NA	NA
75A-G Same as PM HA# 13	Textured Wall Application (White/Grey)	FS 117, 140, 190, 254, 319, 384, 405	F	Poor	3% Ch	RACM	Class I	200,000 SF
76A-G Same as PM HA# 13	Textured Ceiling Application (White/Grey)	FS 117, 140, 190, 254, 319, 384, 405	F	Poor	3% Ch	RACM	Class I	200,000 SF
PM HA# 21	Residual Mastic	PM Report	NF	Poor	2% Ch	Cat II NF	Class II	40 SF
DEBRIS	Contaminated Debris	Throughout	F	Poor	Varies	RACM	Class I	1,300 Cubic Yards

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Table 2: Suspected HAZMATS Inventory Checklist

Address: 111 Highland St, Highland Park MI 48203 48104- Total Quantities			
Inspection Item	Constituent of Concern	Size/Quantity	Notes:
8 ft Florescent bulbs	Mercury	11	FS 81, 87, 109, 112
TV	Mercury	10	FS 90, 126, 201, 228, 293, 334
Misc. Items	Lead or other misc. constituents	20	Basement
Paint Cans	Lead/Asbestos	10	Basement
Light Ballasts	PCBs	19	FS 73, 81, 85, 87, 90, 109, 112, 114
4 ft Florescent bulbs	Mercury	7	FS 73, 85, 90
Exit Signs	Mercury/ H-3	1	FS 228

APPENDIX A

SCOPE, METHODS, AND REGULATORY GUIDELINES

A1 INTRODUCTION

A1.1 SCOPE OF SERVICES

The scope of services for this project consisted of conducting a comprehensive ACM and hazardous material assessment, sampling, and analysis of accessible and exposed interior areas within the subject facility.

The pre-demolition assessment included areas within the structure where building materials could potentially be impacted during the upcoming demolition. The pre-demolition assessment included a visual inspection of the subject area(s), sample collection, PLM sample analysis, quantification of ACMs and suspected hazardous materials, and report preparation and review.

A1.2 PURPOSE

The purpose of this survey was to provide general information for the subject structure regarding the presence, condition, and quantity of accessible and/or exposed friable and non-friable, building materials that contain asbestos as well as substances that would require special handling and disposal prior to demolition.

A1.3 AUTHORIZATION

Authorization to perform this work was given by Wayne County Land Bank, as owner, through the issuance of a Signed Proposal.

A1.4 LIMITATIONS

The asbestos survey was intended to meet the requirements of the EPA NESHAP regulation for demolition or renovation. The survey included a thorough inspection of all areas of the building.

TEC was unable to access certain areas of the building due to excessive debris covering the floor, making the areas inaccessible. Those areas are identified in section 3.1.1. With TEC unable to perform sampling in these areas properly, there may be additional Homogenous Materials undiscovered which could contain possible ACM.

Roof Systems were assumed to be asbestos containing for the purposes of this study. These materials can be treated as non-regulated demolition debris provided; they are not rendered friable during the demolition process.

TEC performed sampling requiring demolition or destructive activities such as knocking holes in walls, dismantling of equipment or removal of protective coverings. Reasonable efforts to access suspect materials within known areas of restricted access (e.g., catwalks) were made; however, confined spaces or areas which may pose a health or safety risk to TEC personnel were not sampled. Sampling did not include suspect materials which could not be safely reached with available ladders/man-lifts. TEC did not sample any system which presented a hazard to the inspection team such as energized electrical systems, confined spaces, or structurally unsafe areas. This survey was

conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the building.

Void spaces which were evaluated included locations of suspected pipe or HVAC chases, wall cavities where fireproofing or other ACM was suspected, above finished ceiling systems where ACM was likely to exist, within pipe trenches or within concealed locations. Although TEC made an attempt to identify all areas of ACM, an exhaustive investigation of void spaces was not included in the scope of services for this project. Inaccessible is defined as areas of the building that were locked, or where admittance was not possible. It also includes areas/materials that could not be tested (sampled) without destruction of the structure or a portion of the structure, and areas/materials that could not be safely reached by the inspector or inspection team. In the event that access to a portion of the building was not obtained (which otherwise would have been tested), such limitations specifically are identified in the Findings Section of this report.

The information contained in this report is relevant to the dates on which this survey was conducted and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by Wayne County Land Bank Companies for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. TEC does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied, is made.

The HAZMATs survey was visual only and did not include sampling of identified materials.

A1.5 WARRANTY

The field and laboratory results reported herein are considered sufficient in detail and scope to determine the presence of accessible and/or exposed suspect ACM/HAZMATs for the building structure. TEC warrants that the findings contained herein have been prepared in general accordance with accepted professional practices at the time of its preparation as applied by professionals in the community. Changes in the state of the art or in applicable regulations cannot be anticipated and have not been addressed in this report.

The survey and analytical methods have been used to provide the client with information regarding the presence of accessible and/or exposed suspect ACMs existing at the time of the inspection. Test results are valid only for the material(s) tested. There is a distinct possibility that conditions may exist which could not be identified within the scope of the study, or which were not apparent during the site visit. This assessment covered only those areas that were exposed and/or physically accessible to the Inspector. The study is also limited to the information available from the client at the time it was conducted.

A2 METHODOLOGY

Inspection and sampling procedures were performed in general accordance with the guidelines published by the EPA. The inspection and survey described below was performed by an EPA and Michigan accredited inspector.

A2.1 RECORD DOCUMENT REVIEW

Prior to conducting the visual inspection, TEC typically reviews documents provided by the client, including: drawings, floor plans, historical data, maintenance records, previous survey reports, laboratory reports, etc. for information regarding construction history and building materials.

A report performed in 2017 by PM Environmental was provided for TEC review. See attachment H.

A2.2 VISUAL INSPECTION PROCEDURES

A2.2.1 Asbestos

An initial facility walkthrough was conducted to determine the presence of suspect asbestos-containing materials that were accessible and/or exposed within all areas scheduled for upcoming demolition activities.

Materials which were similar in color, texture, general appearance and which appear to have been installed at the same time were grouped in Homogeneous Sampling Areas. Such materials are termed "homogeneous materials" by the EPA. During this walkthrough, the approximate locations of these homogeneous materials were also noted.

The inspector evaluated the overall condition of the material and determined whether the materials were friable or non-friable by touching the material, where practical. A friable material is defined as any material able to be crushed, crumbled, pulverized or reduced to a powder by hand pressure when dry.

Each material was further assessed for overall condition. Conditions were rated as good, damaged or significantly damaged. TEC's inspector also identified the EPA NESHAP classification of the material based on the materials current condition. TEC's inspector provided estimated quantities of the materials identified as ACM, based only on materials that were accessible and exposed.

A2.3 ASBESTOS SAMPLING PROCEDURES

Following the walkthrough, the Inspector collected samples of suspect materials.

EPA guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous sampling area. While an effort was made to collect samples randomly, samples were taken preferentially from areas already damaged or areas which were the least visible to minimize disturbance of the material.

Each sample location was sprayed with amended water and was kept wet during the entire sampling process. Samples were collected by coring through the material from the surface down to the base substrate. All layers of the material were extracted and placed into a sample container for transport to the laboratory. Sample containers were sealed and labeled with a unique sample identification number. Where appropriate, sampled materials were sealed with an encapsulant or covered with tape after sampling. TEC is not responsible for restoring the sampled areas to their pre-sampled condition.

A2.4 ASBESTOS ANALYSIS PROCEDURES

All samples were analyzed by

- APEX Research, Inc.
11054 Hi Tech Drive
Whitmore Lake, Michigan 48189

This Laboratory is National Voluntary Laboratory Accreditation Program (NVLAP) Accredited.

The samples were analyzed for asbestos on a “positive-stop” basis by PLM and in accordance with the “EPA Method for the Determination of Asbestos in Bulk Building Materials” (EPA/600/R-93/116 July 1993). Analysis was performed by observing the bulk samples and slide preparation(s) for microscopic examination and identification. The samples were mounted on slides and then analyzed for asbestos (chrysotile, amosite, crocidolite, anthophyllite, actinolite/tremolite), and fibrous non-asbestos constituents (mineral wool, fiberglass, cellulose, etc.). Asbestos was identified by refractive indices, morphology, color, pleochroism, birefringence, extinction characteristics, and signs of elongation. The same characteristics were used to identify the non-asbestos constituents.

Using a stereoscope, the microscopist visually estimated relative amounts of each constituent by determining the volume of each constituent in proportion to the total volume of the sample.

The EPA method allows samples which are visually determined to have less than 10% asbestos to be quantified using a Point Count procedure. An ocular reticule (cross hair or point array) is used to visually superimpose a point or points on the microscope field of view. A total of 400 points superimposed on either asbestos fibers or non-asbestos

matrix material must be counted over at least eight different preparations of representative subsamples. If an asbestos fiber and matrix particle overlap so that a point is superimposed on their visual intersection, a point is scored for both categories. Point counting provides a quantification of the area percent asbestos. Point counted results supersede the results of the visual estimation. 9 samples were point counted for this survey.

It should be noted that some ACM might not be accurately identified or quantified by PLM. As an example, the original fabrication of vinyl floor tiles routinely involved milling of asbestos fibers to extremely small sizes. As a result, these fibers may go undetected under the standard PLM method. Transmission Electron Microscopy (TEM) is recommended for a more definitive analysis of these materials.

A2.4.1 Laboratory Quality Control Program

Each laboratory maintains an in-house quality control program. This program involves blind reanalysis of ten (10) percent of all samples, precision and accuracy controls, and use of standard bulk reference materials. In addition, the Laboratories are accredited by NVLAP, which also has quality control procedures inherent in its program.

A2.5 REGULATORY GUIDELINES:

ACM Definition –

The EPA and OSHA consider a material to be ACM if at least one sample from the homogeneous area shows asbestos in an amount greater than 1%.

Point Count Quantification –

If a material is found to contain less than 1% asbestos via PLM visual estimation, it can be treated as non-ACM per EPA Regulations, if verified to contain 1% or less asbestos by the Point Count Quantification Procedure. If not point counted, a sample in which asbestos was visually detected and estimated (including trace to $\leq 1\%$) must be assumed to be greater than 1% and treated as ACM. Please refer to the laboratory analyses for a more detailed description of the microscopic analysis of individual samples. No samples were quantified by the Point Count Procedure in this Asbestos Survey.

EPA NESHAP Category –

EPA classifies ACM into the following categories:

- **RACM** as defined by the Asbestos NESHAP is any (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.
- **Category I Non-friable ACM** includes packings, gaskets, resilient floor covering, and asphalt roofing products which contain more than one percent asbestos.

- **Category II Non-friable ACM** includes any material, except for a Category I non-friable ACM, which contains more than one-percent asbestos and cannot be reduced to a powder by hand pressure when dry.

OSHA –

OSHA requires all suspect materials to be analyzed by layer, even materials such as drywall/joint compound, which may sometimes be composited per the EPA. If any layer contains asbestos in a concentration >1%, the material is considered an ACM.

OSHA has a classification system (I thru IV) for ACM depending on the type of material and the disturbance as follows:

- **Class I** work is defined as activities involving the removal of ACM or presumed ACM (PACM) that is thermal system insulation (TSI) and surfacing materials.
- **Class II** activities involve removal of ACM/PACM other than TSI or surfacing material.
- **Class III** work includes repair and maintenance operations which are likely to disturb ACM/PACM.
- **Class IV** work includes maintenance and custodial activities during which employees contact but do not disturb ACM/PACM.

Materials where asbestos is detected, but where point counting is conducted and determined that the concentration is $\leq 1\%$ asbestos, are not considered to be ACM by OSHA. However, these materials are considered unclassified asbestos work per OSHA. Some OSHA work control practices and prohibitions will still apply, with the extent depending on whether the worker's exposure to airborne asbestos exceeds the OSHA permissible exposure limit (PEL).

Additional details of the OSHA asbestos regulations related to the construction industry can be found in 29 CFR Part 1926.1101.

A2.6 QUANTIFICATION

Quantification of suspect ACMs were conducted using visual estimation by an accredited asbestos inspector. This visual estimation was performed in accordance with generally accepted practices in the asbestos industry based on materials that were accessible and exposed. These values are sufficiently accurate for the purpose of documenting the presence of asbestos within its space for the purpose of identifying abatement control conditions or for general policy considerations. Actual quantities may differ between visually estimated values and physical measurements. If a licensed asbestos abatement contractor is engaged to remove the identified ACM, they should be made responsible for verifying reported quantities of ACM.

APPENDIX B

ASBESTOS GLOSSARY OF TERMS

Asbestos Glossary of Terms

-A-

Abatement – The encapsulation, enclosure, removal or repair of a material.

ACM - Asbestos Containing Material. Any material containing greater than 1% asbestos by weight.

Accessible - When referring to ACM, the material is subject to disturbance by occupants or maintenance personnel in the course of their normal activities.

AHERA – The Asbestos Hazard Emergency Response Act (AHERA); Environmental Protection Agency (EPA), 40 CFR 763, Asbestos-Containing Materials in Schools

Asbestos - Any of a group of commercially mined minerals that tend to break into fibers. The regulated asbestos minerals are the serpentine mineral chrysotile and the asbestiform varieties of the amphibole minerals grunerite (amosite), riebeckite (crocidilite), tremolite, actinolite and anthophyllite. Amphibole minerals occur in both the regulated, asbestiform varieties and the non-regulated, non-asbestiform varieties. The fibers are resistant to high temperatures, have high tensile strength, and in some cases can be woven into cloth.

Asbestosis - A chronic fibrosis of the lungs typically caused by prolonged, heavy exposures to asbestos, usually affecting miners, ship-builders and mill-workers. There are different scales of asbestosis but in the worst cases, it will restrict breathing and often be degenerative. It takes between 15 and 30 years for the disease to manifest following exposure to asbestos.

Asbestos Abatement - The encapsulation, enclosure, removal or repair of an asbestos containing material.

Asbestos-containing Construction Material (ACM) - Any manufactured construction material which contains more than one 1-percent asbestos by weight.

-B-

Bulk Sample - A sample of material such as boarding, insulation or debris taken by an accredited surveyor to be tested for asbestos fiber content by an accredited laboratory.

-C-

Category I Nonfriable Asbestos-Containing Material (ACM) - Asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

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

Cementitious - A material that is typically a densely packed granular matrix of sand and limestone and is typically considered, non-friable.

Class I asbestos work - Activities involving the removal of thermal system insulation (TSI) and surfacing ACM and PACM. These types of activities will not be conducted by university employees.

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

Class III asbestos work - Repair and maintenance operations, where "ACM" including TSI and surfacing ACM and PACM, is likely to be disturbed.

Class IV asbestos work - Maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

-D-

Damaged Friable Miscellaneous ACM - Friable miscellaneous ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or, if applicable, which has delaminated such that its bond to the substrate (adhesion) is inadequate or which for any other reason lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM in question may also indicated damage.

Damaged Friable Surfacing ACM - Friable surfacing Asbestos Containing Material which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the asbestos material is inadequate or which has delaminated such that its bond to the substrate (adhesion) is inadequate, or which, for any other reason, lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeat water stains, scrapes, gouges, mares or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM in question may also indicate damage.

Damaged or Significantly Damaged Thermal System Insulation ACM - Thermal system insulation ACM on pipes, boilers, tanks, ducts, and other thermal system insulation equipment where the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water stained, gouged, punctured, missing, or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures, gouges or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris originating from the ACBM in question may also indicating damage.

Delaminate - To separate into layers. In asbestos terms, to separate from the substrate.

Demolition - Means the wrecking, razing, or removal of any structure or load-supporting structural item of any structure, including any related material handling operations, and includes the intentional burning of any structure.

-E-

EPA - Environmental Protection Agency; a federal government agency dealing with environmental regulations; 401 M Street, S.W., Washington, D.C. 20460.

EPA Regulations - Regulatory standards which cover emissions into the outside environment from a workplace and disposal of hazardous wastes from job sites, as well as, asbestos issues in school buildings.

-F-

Fireproofing – Spray or trowel applied fire resistant materials.

Floor Tile – a flat piece of hard clay, stone, or other material that is used for covering floors.

Friable - Any material that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and includes previously nonfriable material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

Friable Asbestos - Any material containing more than 1 percent asbestos as determined using Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Functional Space - A room, group of rooms, or homogeneous area (including crawl spaces or the space between a dropped ceiling and the floor or roof deck above) designated by a person accredited to prepare management plans, design asbestos abatement projects, or conduct asbestos response actions.

-G, H-

Homogenous - Evenly mixed and similar in appearance and texture throughout.

Homogeneous Area - An area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color and texture.

-I-

In Poor Condition - The binding of the asbestos containing material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

Installation - Any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

Inspector - Means an individual who is trained and licensed by the appropriate local, state or federal Department to identify and assess the condition of ACM. Inspectors shall perform their duties in accordance with the techniques, knowledge, training and responsibilities outlined in the appropriate OSHA and EPA regulations.

Intact - ACM that has not been crumbled, pulverized, or otherwise deteriorated.

-J, K, L-

License - Means an authorization issued by the appropriate local, state or federal Department permitting a business entity to engage in an asbestos project.

Linoleum - a material consisting of a canvas backing thickly coated with a preparation of linseed oil and powdered cork, used especially as a floor covering; includes

-M-

MIOSHA – Michigan Occupational Safety and Health Administration.

Miscellaneous ACM - Miscellaneous material that is an 'asbestos containing material' in a building.

Miscellaneous Material - Interior building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and does not include surfacing material or thermal system insulation.

-N-

Non-friable - Material which when dry may not be crumbled, pulverized, or reduced to powder by hand pressure.

Non-friable Asbestos Containing Material (Non friable ACM) - Any material containing more than 1 percent asbestos as determined using Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

-O-

OSHA – the Occupational Health and Safety Administration.

-P-

P.P.E. - Personal Protective Equipment worn to protect a worker from exposure to, or contact with, any harmful material or force. Such as overalls, masks, gloves, safety glasses, steel-toed boots, hearing protection, cool collars, etc.

-Q-

Quantity – all quantities should be considered as estimates.

-R-

Random Sample - An asbestos sample drawn in such a way that there is no set pattern and is designed to give a true representation of the entire area.

Regulated Asbestos-Containing Material (RACM) - Means (a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder

by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Removal - All operations where ACM and/or PACM is taken out or stripped from structures or substrates, including demolition operations.

Remove (Asbestos) - To take out RACM or facility components that contain or are covered with RACM from any facility.

-S-

Significantly Damaged Friable Miscellaneous ACM - Damaged friable miscellaneous Asbestos Containing Material where the damage is extensive and severe.

Structure or Structural Item - Means roofs, walls, ceilings, floors, structural supports, pipes, ducts, fittings and fixtures that have been installed as an integral part of any structure.

Surfacing material - Material that is sprayed, troweled-on or applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members).

Surfacing ACM - Surfacing material which contains more than 1% asbestos.

Suspect Material - Material with the potential for being asbestos containing: synonymous with "presumed asbestos-containing material" (PACM).

-T-

Test Till Positive (TTP) or First Positive Stop (FPS) Sample Analysis – a bulk sample direction given to the laboratory by the asbestos surveyors to instruct the laboratory to stop analyzing multiple samples of the same material after the first sample comes back positive for asbestos. This is most typically utilized to minimize costs.

Thermal System Insulation - Material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

Thermal System Insulation ACM - Thermal system insulation that is an Asbestos Containing Material.

-U, V, W, X, Y, Z -

USEPA (EPA) - United States Environmental Protection Agency

Vermiculite - A micaceous mineral that is sometimes used as a substitute for asbestos which is lightweight and highly water-absorbent.

APPENDIX C

OSHA ABATEMENT PROCEDURES

- Part Number: 1926
- Part Title: Safety and Health Regulations for Construction
 - Subpart: Z
 - Subpart Title: Toxic and Hazardous Substances
 - Standard Number: [1926.1101](#)
 - Title: Asbestos

The following excerpts are taken from the subject Regulation identified above; they are provided to provide work practice guidance with respect to asbestos abatement of the materials identified in the assessment. This section is not a replacement for the entire regulation nor is it a replacement for a project specification; it is a guidance document only. The tables identify an OSHA Class designation for each asbestos containing material identified; those Classes and their respective abatement methods are identified in the following:

[1926.1101\(e\)\(1\)](#)

All **Class I, II and III** asbestos work shall be conducted within regulated areas. All other operations covered by this standard shall be conducted within a regulated area where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed a PEL. Regulated areas shall comply with the requirements of paragraphs (2), (3),(4) and (5) of this section.

1926.1101(e)(2)

Demarcation. The regulated area shall be demarcated in any manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Signs shall be provided and displayed pursuant to the requirements of paragraph (k)(7) of this section.

1926.1101(e)(3)

Access. Access to regulated areas shall be limited to authorized persons and to persons authorized by the Act or regulations issued pursuant thereto.

1926.1101(e)(4)

Respirators. All persons entering a regulated area where employees are required pursuant to paragraph (h)(1) of this section to wear respirators shall be supplied with a respirator selected in accordance with paragraph (h)(2) of this section.

1926.1101(e)(5)

Prohibited activities. The employer shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area.

1926.1101(e)(6)

Competent Persons. The employer shall ensure that all asbestos work performed within regulated areas is supervised by a competent person, as defined in paragraph (b) of this section. The duties of the competent person are set out in paragraph (o) of this section.

1926.1101(g)

Methods of compliance.

1926.1101(g)(1)

Engineering controls and work practices for all operations covered by this section. The employer shall use the following engineering controls and work practices in all operations covered by this section, regardless of the levels of exposure:

1926.1101(g)(1)(i)

Vacuum cleaners equipped with HEPA filters to collect all debris and dust containing ACM and PACM, except as provided in paragraph (g)(8)(ii) of this section in the case of roofing material.

1926.1101(g)(1)(ii)

Wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where employers demonstrate that the use of wet methods is infeasible due to for example, the creation of electrical hazards, equipment malfunction, and, in roofing, except as provide in paragraph (g)(8)(ii) of this section; and

1926.1101(g)(1)(iii)

Prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations, where the procedures specified in paragraph (g)(8)(ii) of this section apply.

1926.1101(g)(2)

In addition to the requirements of paragraph (g)(1) of this section, the employer shall use the following control methods to achieve compliance with the TWA permissible exposure limit and excursion limit prescribed by paragraph (c) of this section;

1926.1101(g)(2)(i)

Local exhaust ventilation equipped with HEPA filter dust collection systems;

1926.1101(g)(2)(ii)

Enclosure or isolation of processes producing asbestos dust;

1926.1101(g)(2)(iii)

Ventilation of the regulated area to move contaminated air away from the breathing zone of employees and toward a filtration or collection device equipped with a HEPA filter;

1926.1101(g)(2)(iv)

Use of other work practices and engineering controls that the Assistant Secretary can show to be feasible.

1926.1101(g)(2)(v)

Wherever the feasible engineering and work practice controls described above are not sufficient to reduce employee exposure to or below the permissible exposure limit and/or excursion limit prescribed in paragraph (c) of this section, the employer shall use them to reduce employee exposure to the lowest levels attainable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of paragraph (h) of this section.

1926.1101(g)(3)

Prohibitions. The following work practices and engineering controls shall not be used for work related to asbestos or for work which disturbs ACM or PACM, regardless of measured levels of asbestos exposure or the results of initial exposure assessments:

1926.1101(g)(3)(i)

High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.

1926.1101(g)(3)(ii)

Compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.

1926.1101(g)(3)(iii)

Dry sweeping, shoveling or other dry clean-up of dust and debris containing ACM and PACM.

1926.1101(g)(3)(iv)

Employee rotation as a means of reducing employee exposure to asbestos.

1926.1101(g)(4)

Class I Requirements. In addition to the provisions of paragraphs (g)(1) and (2) of this section, the following engineering controls and work practices and procedures shall be used.

1926.1101(g)(4)(i)

All **Class I** work, including the installation and operation of the control system shall be supervised by a competent person as defined in paragraph (b) of this section;

1926.1101(g)(4)(ii)

For all **Class I** jobs involving the removal of more than 25 linear or 10 square feet of thermal system insulation or surfacing material; for all other **Class I** jobs, where the employer cannot produce a negative exposure assessment pursuant to paragraph (f)(2)(iii) of this section, or where employees are working in

areas adjacent to the regulated area, while the **Class I** work is being performed, the employer shall use one of the following methods to ensure that airborne asbestos does not migrate from the regulated area:

1926.1101(g)(4)(ii)(A)

Critical barriers shall be placed over all the openings to the regulated area, except where activities are performed outdoors; or

1926.1101(g)(4)(ii)(B)

The employer shall use another barrier or isolation method which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area surveillance during each work shift at each boundary of the regulated area, showing no visible asbestos dust; and perimeter area monitoring showing that clearance levels contained in 40 CFR Part 763, Subpt. E, of the EPA Asbestos in Schools Rule are met, or that perimeter area levels, measured by Phase Contrast Microscopy (PCM) are no more than background levels representing the same area before the asbestos work began. The results of such monitoring shall be made known to the employer no later than 24 hours from the end of the work shift represented by such monitoring. Exception: For work completed outdoors where employees are not working in areas adjacent to the regulated areas, this paragraph (g)(4)(ii) is satisfied when the specific control methods in paragraph (g)(5) of this section are used.

1926.1101(g)(4)(iii)

For all **Class I** jobs, HVAC systems shall be isolated in the regulated area by sealing with a double layer of 6 mil plastic or the equivalent;

1926.1101(g)(4)(iv)

For all **Class I** jobs, impermeable dropcloths shall be placed on surfaces beneath all removal activity;

1926.1101(g)(4)(v)

For all **Class I** jobs, all objects within the regulated area shall be covered with impermeable dropcloths or plastic sheeting which is secured by duct tape or an equivalent.

1926.1101(g)(4)(vi)

For all **Class I** jobs where the employer cannot produce a negative exposure assessment, or where exposure monitoring shows that a PEL is exceeded, the employer shall ventilate the regulated area to move contaminated air away from the breathing zone of employees toward a HEPA filtration or collection device.

1926.1101(g)(5)

*Specific control methods for **Class I** work.* In addition, **Class I** asbestos work shall be performed using one or more of the following control methods pursuant to the limitations stated below:

1926.1101(g)(5)(i)

Negative Pressure Enclosure (NPE) systems: NPE systems may be used where the configuration of the work area does not make the erection of the enclosure infeasible, with the following specifications and work practices.

1926.1101(g)(5)(i)(A)

Specifications:

1926.1101(g)(5)(i)(A)(1)

The negative pressure enclosure (NPE) may be of any configuration,

1926.1101(g)(5)(i)(A)(2)

At least 4 air changes per hour shall be maintained in the NPE,

1926.1101(g)(5)(i)(A)(3)

A minimum of -0.02 column inches of water pressure differential, relative to outside pressure, shall be maintained within the NPE as evidenced by manometric measurements,

1926.1101(g)(5)(i)(A)(4)

The NPE shall be kept under negative pressure throughout the period of its use, and

1926.1101(g)(5)(i)(A)(5)

Air movement shall be directed away from employees performing asbestos work within the enclosure, and toward a HEPA filtration or a collection device.

1926.1101(g)(5)(i)(B)

Work Practices:

1926.1101(g)(5)(i)(B)(1)

Before beginning work within the enclosure and at the beginning of each shift, the NPE shall be inspected for breaches and smoke-tested for leaks, and any leaks sealed.

1926.1101(g)(5)(i)(B)(2)

Electrical circuits in the enclosure shall be deactivated, unless equipped with ground-fault circuit interrupters.

1926.1101(g)(5)(ii)

Glove bag systems may be used to remove PACM and/or ACM from straight runs of piping and elbows and other connections with the following specifications and work practices:

1926.1101(g)(5)(ii)(A)

Specifications:

1926.1101(g)(5)(ii)(A)(1)

Glovebags shall be made of 6 mil thick plastic and shall be seamless at the bottom.

1926.1101(g)(5)(ii)(A)(2)

Glovebags used on elbows and other connections must be designed for that purpose and used without modifications.

1926.1101(g)(5)(ii)(B)

Work Practices:

1926.1101(g)(5)(ii)(B)(1)

Each glovebag shall be installed so that it completely covers the circumference of pipe or other structure where the work is to be done.

1926.1101(g)(5)(ii)(B)(2)

Glovebags shall be smoke-tested for leaks and any leaks sealed prior to use.

1926.1101(g)(5)(ii)(B)(3)

Glovebags may be used only once and may not be moved.

1926.1101(g)(5)(ii)(B)(4)

Glovebags shall not be used on surfaces whose temperature exceeds 150 deg. F.

1926.1101(g)(5)(ii)(B)(5)

Prior to disposal, glovebags shall be collapsed by removing air within them using a HEPA vacuum.

1926.1101(g)(5)(ii)(B)(6)

Before beginning the operation, loose and friable material adjacent to the glovebag/box operation shall be wrapped and sealed in two layers of six mil plastic or otherwise rendered intact,

1926.1101(g)(5)(ii)(B)(7)

Where system uses attached waste bag, such bag shall be connected to collection bag using hose or other material which shall withstand pressure of ACM waste and water without losing its integrity:

1926.1101(g)(5)(ii)(B)(8)

Sliding valve or other device shall separate waste bag from hose to ensure no exposure when waste bag is disconnected:

1926.1101(g)(5)(ii)(B)(9)

At least two persons shall perform **Class I** glovebag removal operations.

1926.1101(g)(5)(iii)

Negative Pressure Glove Bag Systems. Negative pressure glove bag systems may be used to remove ACM or PACM from piping.

1926.1101(g)(5)(iii)(A)

Specifications: In addition to specifications for glove bag systems above, negative pressure glove bag systems shall attach HEPA vacuum systems or other devices to bag to prevent collapse during removal.

1926.1101(g)(5)(iii)(B)

Work Practices:

1926.1101(g)(5)(iii)(B)(1)

The employer shall comply with the work practices for glove bag systems in paragraph (g)(5)(ii)(B)(4) of this section.

1926.1101(g)(5)(iii)(B)(2)

The HEPA vacuum cleaner or other device used to prevent collapse of bag during removal shall run continually during the operation until it is completed at which time the bag shall be collapsed prior to removal of the bag from the pipe.

1926.1101(g)(5)(iii)(B)(3)

Where a separate waste bag is used along with a collection bag and discarded after one use, the collection bag may be reused if rinsed clean with amended water before reuse.

1926.1101(g)(5)(iv)

Negative Pressure Glove Box Systems: Negative pressure glove boxes may be used to remove ACM or PACM from pipe runs with the following specifications and work practices.

1926.1101(g)(5)(iv)(A)

Specifications:

1926.1101(g)(5)(iv)(A)(1)

Glove boxes shall be constructed with rigid sides and made from metal or other material which can withstand the weight of the ACM and PACM and water used during removal:

1926.1101(g)(5)(iv)(A)(2)

A negative pressure generator shall be used to create negative pressure in the system:

1926.1101(g)(5)(iv)(A)(3)

An air filtration unit shall be attached to the box:

1926.1101(g)(5)(iv)(A)(4)

The box shall be fitted with gloved apertures:

1926.1101(g)(5)(iv)(A)(5)

An aperture at the base of the box shall serve as a bagging outlet for waste ACM and water:

1926.1101(g)(5)(iv)(A)(6)

A back-up generator shall be present on site:

1926.1101(g)(5)(iv)(A)(7)

Waste bags shall consist of 6 mil thick plastic double-bagged before they are filled or plastic thicker than 6 mil.

1926.1101(g)(5)(iv)(B)

Work practices:

1926.1101(g)(5)(iv)(B)(1)

At least two persons shall perform the removal:

1926.1101(g)(5)(iv)(B)(2)

The box shall be smoke-tested for leaks and any leaks sealed prior to each use:

1926.1101(g)(5)(iv)(B)(3)

Loose or damaged ACM adjacent to the box shall be wrapped and sealed in two layers of 6 mil plastic prior to the job, or otherwise made intact prior to the job.

1926.1101(g)(5)(iv)(B)(4)

A HEPA filtration system shall be used to maintain pressure barrier in box.

1926.1101(g)(5)(v)

Water Spray Process System. A water spray process system may be used for removal of ACM and PACM from cold line piping if, employees carrying out such process have completed a 40-hour separate training course in its use, in addition to training required for employees performing **Class I** work. The system shall meet the following specifications and shall be performed by employees using the following work practices.

1926.1101(g)(5)(v)(A)

Specifications:

1926.1101(g)(5)(v)(A)(1)

Piping shall be surrounded on 3 sides by rigid framing,

1926.1101(g)(5)(v)(A)(2)

A 360 degree water spray, delivered through nozzles supplied by a high pressure separate water line, shall be formed around the piping.

1926.1101(g)(5)(v)(A)(3)

The spray shall collide to form a fine aerosol which provides a liquid barrier between workers and the ACM and PACM.

1926.1101(g)(5)(v)(B)

Work Practices:

1926.1101(g)(5)(v)(B)(1)

The system shall be run for at least 10 minutes before removal begins.

1926.1101(g)(5)(v)(B)(2)

All removal shall take place within the water barrier.

1926.1101(g)(5)(v)(B)(3)

The system shall be operated by at least three persons, one of whom shall not perform removal, but shall check equipment, and ensure proper operation of the system.

1926.1101(g)(5)(v)(B)(4)

After removal, the ACM and PACM shall be bagged while still inside the water barrier.

1926.1101(g)(5)(vi)

A small walk-in enclosure which accommodates no more than two persons (mini-enclosure) may be used if the disturbance or removal can be completely contained by the enclosure with the following specifications and work practices.

1926.1101(g)(5)(vi)(A)

Specifications:

1926.1101(g)(5)(vi)(A)(1)

The fabricated or job-made enclosure shall be constructed of 6 mil plastic or equivalent:

1926.1101(g)(5)(vi)(A)(2)

The enclosure shall be placed under negative pressure by means of a HEPA filtered vacuum or similar ventilation unit:

1926.1101(g)(5)(vi)(B)

Work practices:

1926.1101(g)(5)(vi)(B)(1)

Before use, the mini-enclosure shall be inspected for leaks and smoke-tested to detect breaches, and breaches sealed.

1926.1101(g)(5)(vi)(B)(2)

Before reuse, the interior shall be completely washed with amended water and HEPA-vacuumed.

1926.1101(g)(5)(vi)(B)(3)

During use, air movement shall be directed away from the employee's breathing zone within the mini-enclosure.

1926.1101(g)(6)

Alternative control methods for Class I work. **Class I** work may be performed using a control method which is not referenced in paragraph (g)(5) of this section, or which modifies a control method referenced in paragraph (g)(5) of this section, if the following provisions are complied with:

1926.1101(g)(6)(i)

The control method shall enclose, contain or isolate the processes or source of airborne asbestos dust, or otherwise capture or redirect such dust before it enters the breathing zone of employees.

1926.1101(g)(6)(ii)

A certified industrial hygienist or licensed professional engineer who is also qualified as a project designer as defined in paragraph (b) of this section, shall evaluate the work area, the projected work practices and the engineering controls and shall certify in writing that the planned control method is adequate to reduce direct and indirect employee exposure to below the PELs under worst-case conditions of use, and that the planned control method will prevent asbestos contamination outside the regulated area, as measured by clearance sampling which meets the requirements of EPA's Asbestos in Schools rule issued under AHERA, or perimeter monitoring which meets the criteria in paragraph (g)(4)(ii)(B) of this section.

1926.1101(g)(6)(ii)(A)

Where the TSI or surfacing material to be removed is 25 linear or 10 square feet or less, the evaluation required in paragraph (g)(6) of this section may be performed by a "competent person", and may omit consideration of perimeter or clearance monitoring otherwise required.

1926.1101(g)(6)(ii)(B)

The evaluation of employee exposure required in paragraph (g)(6) of this section, shall include and be based on sampling and analytical data representing employee exposure during the use of such method under worst-case conditions and by employees whose training and experience are equivalent to employees who are to perform the current job.

1926.1101(g)(7)

Work Practices and Engineering Controls for **Class II** work.

1926.1101(g)(7)(i)

All **Class II** work shall be supervised by a competent person as defined in paragraph (b) of this section.

1926.1101(g)(7)(ii)

For all indoor **Class II** jobs, where the employer has not produced a negative exposure assessment pursuant to paragraph (f)(2)(iii) of this section, or where during the job, changed conditions indicate there may be exposure above the PEL or where the employer does not remove the ACM in a

substantially intact state, the employer shall use one of the following methods to ensure that airborne asbestos does not migrate from the regulated area;

1926.1101(g)(7)(ii)(A)

Critical barriers shall be placed over all openings to the regulated area; or,

1926.1101(g)(7)(ii)(B)

The employer shall use another barrier or isolation method which prevents the migration of airborne asbestos from the regulated area, as verified by perimeter area monitoring or clearance monitoring which meets the criteria set out in paragraph (g)(4)(ii)(B) of this section.

1926.1101(g)(7)(ii)(C)

Impermeable dropcloths shall be placed on surfaces beneath all removal activity;

1926.1101(g)(7)(iii)

[Reserved]

1926.1101(g)(7)(iv)

All **Class II** asbestos work shall be performed using the work practices and requirements set out above in paragraph (g)(1)(i) through (g)(1)(iii) of this section.

1926.1101(g)(8)

*Additional Controls for **Class II** work.* **Class II** asbestos work shall also be performed by complying with the work practices and controls designated for each type of asbestos work to be performed, set out in this paragraph. Where more than one control method may be used for a type of asbestos work, the employer may choose one or a combination of designated control methods. **Class II** work also may be performed using a method allowed for **Class I** work, except that glove bags and glove boxes are allowed if they fully enclose the **Class II** material to be removed.

1926.1101(g)(8)(i)

For removing vinyl and asphalt flooring materials which contain ACM or for which in buildings constructed no later than 1980, the employer has not verified the absence of ACM pursuant to paragraph (g)(8)(i)(I) of this section. The employer shall ensure that employees comply with the following work practices and that employees are trained in these practices pursuant to paragraph (k)(9):

1926.1101(g)(8)(i)(A)

Flooring or its backing shall not be sanded.

1926.1101(g)(8)(i)(B)

Vacuums equipped with HEPA filter, disposable dust bag, and metal floor tool (no brush) shall be used to clean floors.

1926.1101(g)(8)(i)(C)

Resilient sheeting shall be removed by cutting with wetting of the snip point and wetting during delamination. Rip-up of resilient sheet floor material is prohibited.

1926.1101(g)(8)(i)(D)

All scraping of residual adhesive and/or backing shall be performed using wet methods.

1926.1101(g)(8)(i)(E)

Dry sweeping is prohibited.

1926.1101(g)(8)(i)(F)

Mechanical chipping is prohibited unless performed in a negative pressure enclosure which meets the requirements of paragraph (g)(5)(i) of this section.

1926.1101(g)(8)(i)(G)

Tiles shall be removed intact, unless the employer demonstrates that intact removal is not possible.

1926.1101(g)(8)(i)(H)

When tiles are heated and can be removed intact, wetting may be omitted.

1926.1101(g)(8)(i)(I)

Resilient flooring material including associated mastic and backing shall be assumed to be asbestos-containing unless an industrial hygienist determines that it is asbestos-free using recognized analytical techniques.

1926.1101(g)(8)(ii)

For removing roofing material which contains ACM the employer shall ensure that the following work practices are followed:

1926.1101(g)(8)(ii)(A)

Roofing material shall be removed in an intact state to the extent feasible.

1926.1101(g)(8)(ii)(B)

Wet methods shall be used to remove roofing materials that are not intact, or that will be rendered not intact during removal, unless such wet methods are not feasible or will create safety hazards.

1926.1101(g)(8)(ii)(C)

Cutting machines shall be continuously misted during use, unless a competent person determines that misting substantially decreases worker safety.

1926.1101(g)(8)(ii)(D)

When removing built-up roofs with asbestos-containing roofing felts and an aggregate surface using a power roof cutter, all dust resulting from the cutting operation shall be collected by a HEPA dust collector, or shall be HEPA vacuumed by vacuuming along the cut line. When removing built-up roofs

with asbestos-containing roofing felts and a smooth surface using a power roof cutter, the dust resulting from the cutting operation shall be collected either by a HEPA dust collector or HEPA vacuuming along the cut line, or by gently sweeping and then carefully and completely wiping up the still-wet dust and debris left along the cut line.

1926.1101(g)(8)(ii)(E)

Asbestos-containing material that has been removed from a roof shall not be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered to the ground via covered, dust-tight chute, crane or hoist:

1926.1101(g)(8)(ii)(E)(1)

Any ACM that is not intact shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift. While the material remains on the roof it shall either be kept wet, placed in an impermeable waste bag, or wrapped in plastic sheeting.

1926.1101(g)(8)(ii)(E)(2)

Intact ACM shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift.

1926.1101(g)(8)(ii)(F)

Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such manner so as to preclude the dispersion of dust.

1926.1101(g)(8)(ii)(G)

Roof level heating and ventilation air intake sources shall be isolated or the ventilation system shall be shut down.

1926.1101(g)(8)(ii)(H)

Notwithstanding any other provision of this section, removal or repair of sections of intact roofing less than 25 square feet in area does not require use of wet methods or HEPA vacuuming as long as manual methods which do not render the material non-intact are used to remove the material and no visible dust is created by the removal method used. In determining whether a job involves less than 25 square feet, the employer shall include all removal and repair work performed on the same roof on the same day.

1926.1101(g)(8)(iii)

When removing cementitious asbestos-containing siding and shingles or transite panels containing ACM on building exteriors (other than roofs, where paragraph (g)(8)(ii) of this section applies) the employer shall ensure that the following work practices are followed:

1926.1101(g)(8)(iii)(A)

Cutting, abrading or breaking siding, shingles, or transite panels, shall be prohibited unless the employer can demonstrate that methods less likely to result in asbestos fiber release cannot be used.

1926.1101(g)(8)(iii)(B)

Each panel or shingle shall be sprayed with amended water prior to removal.

1926.1101(g)(8)(iii)(C)

Unwrapped or unbagged panels or shingles shall be immediately lowered to the ground via covered dust-tight chute, crane or hoist, or placed in an impervious waste bag or wrapped in plastic sheeting and lowered to the ground no later than the end of the work shift.

1926.1101(g)(8)(iii)(D)

Nails shall be cut with flat, sharp instruments.

1926.1101(g)(8)(iv)

When removing gaskets containing ACM, the employer shall ensure that the following work practices are followed:

1926.1101(g)(8)(iv)(A)

If a gasket is visibly deteriorated and unlikely to be removed intact, removal shall be undertaken within a glovebag as described in paragraph (g)(5)(ii) of this section.

1926.1101(g)(8)(iv)(B)

[Reserved]

1926.1101(g)(8)(iv)(C)

The gasket shall be immediately placed in a disposal container.

1926.1101(g)(8)(iv)(D)

Any scraping to remove residue must be performed wet.

1926.1101(g)(8)(v)

When performing any other **Class II** removal of asbestos containing material for which specific controls have not been listed in paragraph (g)(8)(iv)(A) through (D) of this section, the employer shall ensure that the following work practices are complied with.

1926.1101(g)(8)(v)(A)

The material shall be thoroughly wetted with amended water prior to and during its removal.

1926.1101(g)(8)(v)(B)

The material shall be removed in an intact state unless the employer demonstrates that intact removal is not possible.

1926.1101(g)(8)(v)(C)

Cutting, abrading or breaking the material shall be prohibited unless the employer can demonstrate that methods less likely to result in asbestos fiber release are not feasible.

1926.1101(g)(8)(v)(D)

Asbestos-containing material removed, shall be immediately bagged or wrapped, or kept wetted until transferred to a closed receptacle, no later than the end of the work shift.

1926.1101(g)(8)(vi)

Alternative Work Practices and Controls. Instead of the work practices and controls listed in paragraph (g)(8)(i) through (v) of this section, the employer may use different or modified engineering and work practice controls if the following provisions are complied with.

1926.1101(g)(8)(vi)(A)

The employer shall demonstrate by data representing employee exposure during the use of such method under conditions which closely resemble the conditions under which the method is to be used, that employee exposure will not exceed the PELs under any anticipated circumstances.

1926.1101(g)(8)(vi)(B)

A competent person shall evaluate the work area, the projected work practices and the engineering controls, and shall certify in writing, that the different or modified controls are adequate to reduce direct and indirect employee exposure to below the PELs under all expected conditions of use and that the method meets the requirements of this standard. The evaluation shall include and be based on data representing employee exposure during the use of such method under conditions which closely resemble the conditions under which the method is to be used for the current job, and by employees whose training and experience are equivalent to employees who are to perform the current job.

1926.1101(g)(9)

*Work Practices and Engineering Controls for **Class III** asbestos work.* **Class III** asbestos work shall be conducted using engineering and work practice controls which minimize the exposure to employees performing the asbestos work and to bystander employees.

1926.1101(g)(9)(i)

The work shall be performed using wet methods.

1926.1101(g)(9)(ii)

To the extent feasible, the work shall be performed using local exhaust ventilation.

1926.1101(g)(9)(iii)

Where the disturbance involves drilling, cutting, abrading, sanding, chipping, breaking, or sawing of thermal system insulation or surfacing material, the employer shall use impermeable dropcloths, and shall isolate the operation using mini-enclosures or glove bag systems pursuant to paragraph (g)(5) of this section or another isolation method.

1926.1101(g)(9)(iv)

Where the employer does not produce a "negative exposure assessment" for a job, or where monitoring results show the PEL has been exceeded, the employer shall contain the area using impermeable

dropcloths and plastic barriers or their equivalent, or shall isolate the operation using a control system listed in and in compliance with paragraph (g)(5) of this section.

1926.1101(g)(9)(v)

Employees performing **Class III** jobs, which involve the disturbance of thermal system insulation or surfacing material, or where the employer does not produce a "negative exposure assessment" or where monitoring results show a PEL has been exceeded, shall wear respirators which are selected, used and fitted pursuant to provisions of paragraph (h) of this section.

1926.1101(g)(10)

Class IV asbestos work. **Class IV** asbestos jobs shall be conducted by employees trained pursuant to the asbestos awareness training program set out in paragraph (k)(9) of this section. In addition, all **Class IV** jobs shall be conducted in conformity with the requirements set out in paragraph (g)(1) of this section, mandating wet methods, HEPA vacuums, and prompt clean up of debris containing ACM or PACM.

1926.1101(g)(10)(i)

Employees cleaning up debris and waste in a regulated area where respirators are required shall wear respirators which are selected, used and fitted pursuant to provisions of paragraph (h) of this section.

1926.1101(g)(10)(ii)

Employers of employees who clean up waste and debris in, and employers in control of, areas where friable thermal system insulation or surfacing material is accessible, shall assume that such waste and debris contain asbestos.

APPENDIX D

ASBESTOS SAMPLE LOG/CHAIN OF CUSTODY



Testing Engineers and Consultants, Inc.
1343 Rochester Road
Troy, Michigan 4083-6015

CHAIN OF CUSTODY

Apex #

114887

Client Name: Wayne County
Address:
City, St., Zip

Phone: 248.585.6200; Fax 248.585.9519

Date of Survey: 12/11/24
Project Name: 11 Highland St. Highland Park / ACM
Project Number: 64659-04
Contact Person: see circled below*

TURN AROUND TIME

Rush	24 Hour	<input checked="" type="checkbox"/>	Asbestos:	Bulk	<input checked="" type="checkbox"/>	Wipe		Prt. Cnt.	PCM
48 Hour	72 Hour		Lead:	Bulk		Wipe	Air		Paint
Other	TTP		Mold:	Bulk		Tape	BioCell		BioSls
			TEM:	AHERA	7400		Bulk/NOB	EPA	Level II

Analytical Method(s) Requested:

Lab ID#	Client ID #	Material/Description	Volume/Area/Location	Results
1A-C		Plaster w/ skimcoat (grey/white)		
2A-G		Textured Application (white)		
3A-B		Brick + mortar (orange)		
4A-B		Brick + mortar (grey)		
5A-B		Pyroblock + mortar (orange/grey)		
6A-B		Gaspet adhesive (Tan)		
7A-B		Pyroblock + mortar (grey)		
8A-B		9" x 9" floor tile w/ mastic (maroon)		
9A-B		9" x 9" floor tile w/ mastic (maroon) Multi-layered flooring with mastic (TOP) (tan)		
10A-B		Construction Adhesive (beige)		
11A-C		Straight Pipe insulation (2" - grey/white)		
12A-B		Ceramic wall tile w/ mortar + grout (white/blue)		
13A-B		Ceramic floor tile w/ mortar + grout (white - hexagon)		
14A-B		Cloth wire insulation (black)		
15A-B		Cloth wire insulation (white)		
16A-B		12" x 12" floor tile w/ mastic (white - faux pebble)		
17A-B		Interior window frame caulk (white)		
18A-B		9" x 9" floor tile w/ mastic (tan)		
19A-B		9" x 9" floor tile w/ mastic (red)		
20A-B		Multi-layered flooring (TOP - Sheeting (tan))		

Received By: *[Signature]* Date: 12/12/24
 Relinquished By: *[Signature]* Date: 12/18/2024

*jkonrad@tectest.com; mkonrad@tectest.com; jllkonrad@tectest.com; jpalach@tectest.com; ekliemann@tectest.com; ihdepartment123456@gmail.com

Zline@tectest.com



Testing Engineers and Consultants, Inc.
 1343 Rochester Road
 Troy, Michigan 4883-6015
 Phone: 248.585.6200; Fax 248.585.9519

CHAIN OF CUSTODY

Apex # **115454**

Client Name: Wayne County
 Address:
 City, St., Zip

Date of Survey: 12/30/24
 Project Name: 111 Highland St. Highland Park, - ACM
 Project Number: 641659-04
 Contact Person: see circled below*

Analytical Method(s) Requested:

TURN AROUND TIME			Analytical Method(s) Requested:					
Rush	24 Hour	72 Hour	Asbestos:	Bulk	Wipe	Pnt. Cnt.	PCM	Soil
	<input checked="" type="checkbox"/>		Lead:	Bulk	Wipe	Air	Paint	Other
Other		<input checked="" type="checkbox"/>	Mold:	Bulk	Tape	BioCell	BioSis	
			TEM:	AHERA	7400	Bulk/NOB	EPA	Level II

Lab ID#	Client ID #	Material/Description	Volume/Area/Location	Results
	30A-C	4" Straight Pipe Insulation (white)		
	31A-C	2 6" Straight Pipe Insulation (white)		
	32A-C	2 2" Pipe Joint Insulation (white)		
	33A-C	4" Pipe Joint Insulation (white)		
	34A-C	2 6" Pipe Joint Insulation (white)		
	35A-C	Roof Insulation (white)		
	36A-C	Cement Patch (Grey)		
	37A-B	9" x 9" Floor Tile w/ Mortar (Brown & Black)		
	38A-B	9" x 9" Floor Tile w/ Mortar (Beige)		
	39A-B	9" x 9" Floor Tile w/ Mortar (Cream)		
	40A-B	Exterior Window Sill (Tan)		
	41A-B	Driveway w/ Joint Compound & Tape (Tan & White)		
	42A-B	9" x 9" Floor Tile w/ Mortar (Black)		
	43A-B	17" x 17" Floor Tile w/ Mortar (White)		
	44A-B	Roof Flashing (Countersink - Black)		
	45A-B	Flashing Materials (Countersink - Black)		
		(EPA)		
		RECEIVED		

Relinquished By: [Signature] Date: 1-17-25 Received By: KD Date: JAN 17 2025
 Relinquished By: _____ Date: _____ Received By: _____ Date: _____
 APEX RESEARCH
 jkonrad@tectest.com | jkonrad@tectest.com | jkonrad@tectest.com | jkonrad@tectest.com | ihdeparment123456@gmail.com
 zline@tectest.com

APPENDIX E

**REPORT OF BULK SAMPLE ANALYSIS
FOR ASBESTOS**

Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
Project: 111 Highland St., Highland Park / ACM
Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 24-114887
 Date Collected: 12/11/24
 Date Received: 12/13/24
 Date Analyzed: 12/14/24
 Date Reported: 12/16/24

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 01 Cust. #: 1A Material: Plaster Skim Coat (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 01a Cust. #: 1A Material: Plaster Base Coat (Grey) Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 02 Cust. #: 1B Material: Plaster Skim Coat (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 40 CFR - Part 763 and/or EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples as submitted and to insure the integrity of the results, may only be reproduced in full. This certificate must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Liability limited to cost of analysis.



Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
 Project: 111 Highland St., Highland Park / ACM
 Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 24-114887
 Date Collected: 12/11/24
 Date Received: 12/13/24
 Date Analyzed: 12/14/24
 Date Reported: 12/16/24

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 02a Cust. #: 1B Material: Plaster Base Coat (Grey) Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 03 Cust. #: 1C Material: Plaster Skim Coat (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 03a Cust. #: 1C Material: Plaster Base Coat (Grey) Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
Project: 111 Highland St., Highland Park / ACM
Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 24-114887
 Date Collected: 12/11/24
 Date Received: 12/13/24
 Date Analyzed: 12/14/24
 Date Reported: 12/16/24

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 04 Cust. #: 2A Material: Textured Application (White) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 05 Cust. #: 2B Material: Textured Application (White) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 06 Cust. #: 2C Material: Textured Application (White) Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 40 CFR - Part 763 and/or EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples as submitted and to insure the integrity of the results, may only be reproduced in full. This certificate must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Liability limited to cost of analysis.



Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
Project: 111 Highland St., Highland Park / ACM
Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 24-114887
 Date Collected: 12/11/24
 Date Received: 12/13/24
 Date Analyzed: 12/14/24
 Date Reported: 12/16/24

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 07 Cust. #: 2D Material: Textured Application (White) Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 08 Cust. #: 2E Material: Textured Application (White) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 09 Cust. #: 2F Material: Textured Application (White) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

Test Method EPA 40 CFR - Part 763 and/or EPA 600/R-93/116 was used to analyze the above samples. Matrix interference and/or resolution limits may yield false/negative results in certain circumstances. Suspect floor tiles containing <1% should be tested with SEM or TEM. This certificate of analysis relates only to the samples as submitted and to insure the integrity of the results, may only be reproduced in full. This certificate must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Liability limited to cost of analysis.



Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
Project: 111 Highland St., Highland Park / ACM
Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 24-114887
 Date Collected: 12/11/24
 Date Received: 12/13/24
 Date Analyzed: 12/14/24
 Date Reported: 12/16/24

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 10 Cust. #: 2G Material: Textured Application (White) Location: Appearance: beige,nonfibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 11 Cust. #: 3A Material: Brick (Orange) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 11a Cust. #: 3A Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 12 Cust. #: 3B Material: Brick (Orange) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 12a Cust. #: 3B Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 13 Cust. #: 4A Material: Brick (Grey) Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 14 Cust. #: 4B Material: Brick (Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 14a Cust. #: 4B Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 15 Cust. #: 5A Material: Pyro block (Orange) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 15a Cust. #: 5A Material: Mortar (Grey) Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 16 Cust. #: 5B Material: Pyro block (Orange) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 16a Cust. #: 5B Material: Mortar (Grey) Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 17 Cust. #: 6A Material: Carpet Adhesive (Tan) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 18 Cust. #: 6B Material: Carpet Adhesive (Tan) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 19 Cust. #: 7A Material: Pyro block (Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 19a Cust. #: 7A Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 20 Cust. #: 7B Material: Pyro block & Mortar (Grey) Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 21 Cust. #: 8A Material: 9"x9" Floor Tile (Maroon) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 21a Cust. #: 8A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 15% Other - 85%
Lab ID #: 114887 - 22 Cust. #: 8B Material: 9"x9" Floor Tile (Maroon) Location: Appearance: brown, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 22a Cust. #: 8B Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 23 Cust. #: 9A Material: Brown Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 23a Cust. #: 9A Material: Green Floor Tile Location: Appearance: green,fibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 23b Cust. #: 9A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 23c Cust. #: 9A Material: Beige Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 24 Cust. #: 9B Material: Green Floor Tile Location: Appearance: green,fibrous,homogenous Layer: 1 of 5	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 114887 - 24a Cust. #: 9B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 24b Cust. #: 9B Material: Floor Tile (Top - Tan) Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 24c Cust. #: 9B Material: Brown Floor Tile Location: Appearance: brown,nonfibrous,homogenous Layer: 4 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 24d Cust. #: 9B Material: Beige Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 25 Cust. #: 10A Material: Construction Adhesive (Beige) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 26 Cust. #: 10B Material: Construction Adhesive (Beige) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 27 Cust. #: 11A Material: Straight Pipe Insulation (<2" - Grey/White) Location: Appearance: grey,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 25%	Cellulose - 50% Other - 25%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 28 Cust. #: 11B Material: Straight Pipe Insulation (<2" - Grey/White) Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 40%	Cellulose - 20% Other - 40%
Lab ID #: 114887 - 29 Cust. #: 11C Material: Straight Pipe Insulation (<2" - Grey/White) Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 40%	Cellulose - 20% Other - 40%
Lab ID #: 114887 - 30 Cust. #: 12A Material: Ceramic Wall Tile (White/Blue) Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Lab ID #: 114887 - 30a Cust. #: 12A Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 31 Cust. #: 12B Material: Ceramic Wall Tile (White/Blue) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 31a Cust. #: 12B Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 32 Cust. #: 13A Material: Ceramic Floor Tile (White - Hexagon) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 32a Cust. #: 13A Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 33 Cust. #: 13B Material: Ceramic Floor Tile (White - Hexagon) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Lab ID #: 114887 - 33a Cust. #: 13B Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 34 Cust. #: 14A Material: Cloth Wire Insulation (Black) Location: Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 114887 - 35 Cust. #: 14B Material: Cloth Wire Insulation (Black) Location: Appearance: black,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 36 Cust. #: 15A Material: Cloth Wire Insulation (White) Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 25% Other - 75%
Lab ID #: 114887 - 37 Cust. #: 15B Material: Cloth Wire Insulation (White) Location: Appearance: black, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 114887 - 38 Cust. #: 16A Material: 12"x12" Floor Tile (White - Faux Pebble) Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO Chrysotile - 0.50% POINT COUNT RESULT	Other - 99.50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 38a Cust. #: 16A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 39 Cust. #: 16B Material: 12"x12" Floor Tile (White - Faux Pebble) Location: Appearance: beige,fibrous,homogenous Layer: 1 of 2	Asbestos Present: NO Chrysotile - 0.25% POINT COUNT RESULT	Other - 99.75%
Lab ID #: 114887 - 39a Cust. #: 16B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Project: 111 Highland St., Highland Park / ACM
Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 24-114887
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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 40 Cust. #: 17A Material: Interior Window Frame Caulk (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 41 Cust. #: 17B Material: Interior Window Frame Caulk (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 42 Cust. #: 18A Material: 9"x9" Floor Tile (Tan) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 42a Cust. #: 18A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 43 Cust. #: 18B Material: 9"x9" Floor Tile (Tan) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 43a Cust. #: 18B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 44 Cust. #: 19A Material: 9"x9" Floor Tile (Red) Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%
Lab ID #: 114887 - 44a Cust. #: 19A Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 114887 - 45 Cust. #: 19B Material: 9"x9" Floor Tile (Red) Location: Appearance: red, fibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 5% Other - 95%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 45a Cust. #: 19B Material: Mastic Location: Appearance: black, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 114887 - 46 Cust. #: 20A Material: Flooring (Top - Sheeting, Tan) Location: Appearance: beige, nonfibrous, homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 46a Cust. #: 20A Material: Flooring Location: Appearance: beige, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 46b Cust. #: 20A Material: Flooring Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 46c Cust. #: 20A Material: Flooring Location: Appearance: brown,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 47 Cust. #: 20B Material: Flooring (Top - Sheeting, Tan) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 47a Cust. #: 20B Material: Flooring Location: Appearance: beige,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 47b Cust. #: 20B Material: Flooring Location: Appearance: brown,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 47c Cust. #: 20B Material: Flooring Location: Appearance: brown,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 48 Cust. #: 21A Material: Floor Sheeting (Maroon) Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 114887 - 49 Cust. #: 21B Material: Floor Sheeting (Maroon) Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 114887 - 50 Cust. #: 22A Material: 12"x12" Floor Tile (Tan) Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 51 Cust. #: 22B Material: 12"x12" Floor Tile (Tan) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 52 Cust. #: 23A Material: Floor Sheeting (Green) Location: Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 52a Cust. #: 23A Material: Adhesive Location: Appearance: black,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 53 Cust. #: 23B Material: Floor Sheeting (Green) Location: Appearance: green,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 53a Cust. #: 23B Material: Adhesive Location: Appearance: black,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 114887 - 54 Cust. #: 24A Material: Floor Sheeting (Cream) Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 55 Cust. #: 24B Material: Floor Sheeting (Cream) Location: Appearance: beige,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 56 Cust. #: 25A Material: Granite Floor Tile Mortar (Gray) Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 57 Cust. #: 25B Material: Granite Floor Tile Mortar (Gray) Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 58 Cust. #: 26A Material: Decorative Plaster (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 59 Cust. #: 26B Material: Decorative Plaster (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 60 Cust. #: 26C Material: Decorative Plaster (White) Location: Appearance: grey,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 61 Cust. #: 26D Material: Decorative Plaster (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 62 Cust. #: 26E Material: Decorative Plaster (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 63 Cust. #: 26F Material: Decorative Plaster (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 64 Cust. #: 26G Material: Decorative Plaster (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 65 Cust. #: 27A Material: 9"x9" Floor Tile (Tan w/ Yellow) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 65a Cust. #: 27A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 66 Cust. #: 27B Material: 9"x9" Floor Tile (Tan w/ Yellow) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 66a Cust. #: 27B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 67 Cust. #: 28A Material: Ceramic Covebase (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 67a Cust. #: 28A Material: Mortar Bed + Grout Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 68 Cust. #: 28B Material: Ceramic Covebase (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 68a Cust. #: 28B Material: Mortar Bed + Grout Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 69 Cust. #: 29A Material: 9"x9" Floor Tile (Brown w/ White) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 69a Cust. #: 29A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 114887 - 70 Cust. #: 29B Material: 9"x9" Floor Tile (Brown w/ White) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
Project: 111 Highland St., Highland Park / ACM
Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 24-114887
 Date Collected: 12/11/24
 Date Received: 12/13/24
 Date Analyzed: 12/14/24
 Date Reported: 12/16/24

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 114887 - 70a Cust. #: 29B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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Robert T. Letarte Jr., Laboratory Director

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Project: 111 Highland St., Highland Park - ACM
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Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 25-115454
 Date Collected: 12/30/24
 Date Received: 01/17/25
 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 01 Cust. #: 30A Material: 4" Straight Pipe Insulation (White) Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 40%	Cellulose - 40% Other - 20%
Lab ID #: 115454 - 02 Cust. #: 30B Material: 4" Straight Pipe Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 03 Cust. #: 30C Material: 4" Straight Pipe Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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NVLAP Lab Code 102118-0

APEX Research Inc., 7717 Kensington Ct., Brighton, MI 48116
 (734) 449-9990, Fax (734) 449-9991

Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
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 Troy, MI 48083

ARI Report # 25-115454
 Date Collected: 12/30/24
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 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 04 Cust. #: 31A Material: >6" Straight Pipe Insulation (White) Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 40%	Cellulose - 40% Other - 20%
Lab ID #: 115454 - 05 Cust. #: 31B Material: >6" Straight Pipe Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 06 Cust. #: 31C Material: >6" Straight Pipe Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 07 Cust. #: 32A Material: <2" Pipe Joint Insulation (White) Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 70%	Other - 30%
Lab ID #: 115454 - 08 Cust. #: 32B Material: <2" Pipe Joint Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 09 Cust. #: 32C Material: <2" Pipe Joint Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 10 Cust. #: 33A Material: 4" Pipe Joint Insulation (White) Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 70%	Other - 30%
Lab ID #: 115454 - 11 Cust. #: 33B Material: 4" Pipe Joint Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 12 Cust. #: 33C Material: 4" Pipe Joint Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 13 Cust. #: 34A Material: >6" Pipe Joint Insulation (White) Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 50%	Mineral Wool - 20% Other - 30%
Lab ID #: 115454 - 14 Cust. #: 34B Material: >6" Pipe Joint Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 15 Cust. #: 34C Material: >6" Pipe Joint Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 16 Cust. #: 35A Material: Tank Insulation (White) Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 40%	Cellulose - 40% Other - 20%
Lab ID #: 115454 - 17 Cust. #: 35B Material: Tank Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 18 Cust. #: 35C Material: Tank Insulation (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 19 Cust. #: 36A Material: Cement Patch (Grey) Location: Appearance: grey, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 10%	Mineral Wool - 25% Other - 65%
Lab ID #: 115454 - 20 Cust. #: 36B Material: Cement Patch (Grey) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 21 Cust. #: 36C Material: Cement Patch (Grey) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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 Date Collected: 12/30/24
 Date Received: 01/17/25
 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 22 Cust. #: 37A Material: 9"x9" Floor Tile (Brown) Location: Appearance: brown, fibrous, homogenous Layer: 1 of 4	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 115454 - 22a Cust. #: 37A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 22b Cust. #: 37A Material: 9"x9" Floor Tile (Black) Location: Appearance: black, fibrous, homogenous Layer: 3 of 4	Asbestos Present: YES Chrysotile - 10%	Other - 90%

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 Troy, MI 48083

ARI Report # 25-115454
 Date Collected: 12/30/24
 Date Received: 01/17/25
 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 22c Cust. #: 37A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 115454 - 23 Cust. #: 37B Material: 9"x9" Floor Tile (Brown) Location: Appearance: Layer: 1 of 4	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 23a Cust. #: 37B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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ARI Report # 25-115454
 Date Collected: 12/30/24
 Date Received: 01/17/25
 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 23b Cust. #: 37B Material: 9"x9" Floor Tile (Black) Location: Appearance: Layer: 3 of 4	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 23c Cust. #: 37B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 24 Cust. #: 38A Material: 9"x9" Floor Tile (Beige) Location: Appearance: brown,fibrous,homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%

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ARI Report # 25-115454
 Date Collected: 12/30/24
 Date Received: 01/17/25
 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 24a Cust. #: 38A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 25 Cust. #: 38B Material: 9"x9" Floor Tile (Beige) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 25a Cust. #: 38B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 26 Cust. #: 39A Material: 9"x9" Floor Tile (Cream) Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 115454 - 26a Cust. #: 39A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 27 Cust. #: 39B Material: 9"x9" Floor Tile (Cream) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 27a Cust. #: 39B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 28 Cust. #: 40A Material: Exterior Window Glaze (Tan) Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 115454 - 29 Cust. #: 40B Material: Exterior Window Glaze (Tan) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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 Date Collected: 12/30/24
 Date Received: 01/17/25
 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 30 Cust. #: 41A Material: Drywall (Tan) Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%
Lab ID #: 115454 - 30a Cust. #: 41A Material: Joint Compound (White) Location: Appearance: white, fibrous, homogenous Layer: 2 of 2	Asbestos Present: YES Chrysotile - 1.75% POINT COUNT RESULT	Other - 98.25%
Lab ID #: 115454 - 31 Cust. #: 41B Material: Drywall (Tan) Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 10% Other - 90%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 31a Cust. #: 41B Material: Joint Compound (White) Location: Appearance: Layer: 2 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 32 Cust. #: 42A Material: 9"x9" Floor Tile (Black) Location: Appearance: black, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%
Lab ID #: 115454 - 32a Cust. #: 42A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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NVLAP Lab Code 102118-0

APEX Research Inc., 7717 Kensington Ct., Brighton, MI 48116
 (734) 449-9990, Fax (734) 449-9991

Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
Project: 111 Highland St., Highland Park - ACM
Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 25-115454
 Date Collected: 12/30/24
 Date Received: 01/17/25
 Date Analyzed: 01/20/25
 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 33 Cust. #: 42B Material: 9"x9" Floor Tile (Black) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 115454 - 33a Cust. #: 42B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 34 Cust. #: 43A Material: 12"x12" Floor Tile (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 34a Cust. #: 43A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 35 Cust. #: 43B Material: 12"x12" Floor Tile (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 35a Cust. #: 43B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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 Date Reported: 01/20/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 36 Cust. #: 44A Material: Roof Flashing (Courtyard - Black) Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 37 Cust. #: 44B Material: Roof Flashing (Courtyard - Black) Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115454 - 38 Cust. #: 45A Material: Flat Roofing Materials (Courtyard - Black) Location: Appearance: black,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%

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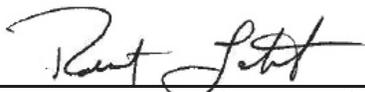
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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115454 - 39 Cust. #: 45B Material: Flat Roofing Materials (Courtyard - Black) Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 35% Other - 65%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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ARI Report # 25-115778
 Date Collected: 1/27-28/25
 Date Received: 02/04/25
 Date Analyzed: 02/05/25
 Date Reported: 02/05/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 01 Cust. #: 1D Material: Plaster Skim Coat (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 01a Cust. #: 1D Material: Plaster Base Coat (Grey) Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 115778 - 02 Cust. #: 1E Material: Plaster Skim Coat (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 02a Cust. #: 1E Material: Plaster Base Coat (Grey) Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 115778 - 03 Cust. #: 1F Material: Plaster Skim Coat (White) Location: Appearance: white, nonfibrous, homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 03a Cust. #: 1F Material: Plaster Base Coat (Grey) Location: Appearance: grey, fibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 04 Cust. #: 1G Material: Plaster Skim Coat (White) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 04a Cust. #: 1G Material: Plaster Base Coat (Grey) Location: Appearance: grey,fibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Hair - 2% Other - 98%
Lab ID #: 115778 - 05 Cust. #: 46A Material: Glue (Black) Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 05a Cust. #: 46A Material: Floor Sheeting Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 05b Cust. #: 46A Material: Glue Location: Appearance: brown,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 06 Cust. #: 46B Material: Glue (Black) Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 06a Cust. #: 46B Material: Floor Sheeting Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 06b Cust. #: 46B Material: Glue Location: Appearance: brown,nonfibrous,homogenous Layer: 3 of 3	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 07 Cust. #: 47A Material: Glue Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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 Date Reported: 02/05/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 07a Cust. #: 47A Material: 12"x12" Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 07b Cust. #: 47A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 07c Cust. #: 47A Material: Sheet Floor/Felt Location: Appearance: brown,nonfibrous,nonhomogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 08 Cust. #: 47B Material: Glue Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 08a Cust. #: 47B Material: 12"x12" Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 08b Cust. #: 47B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 3 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 08c Cust. #: 47B Material: Sheet Floor/Felt Location: Appearance: brown,nonfibrous,nonhomogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 09 Cust. #: 48A Material: 6"x6" Floor Tile (Black) Location: Appearance: black,nonfibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 09a Cust. #: 48A Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 10 Cust. #: 48B Material: 6"x6" Floor Tile (Black) Location: Appearance: black,nonfibrous,nonhomogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 10a Cust. #: 48B Material: Mastic Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 11 Cust. #: 49A Material: 9"x9" Floor Tile (Brown & White - Mottled) Location: Appearance: brown,fibrous,homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 11a Cust. #: 49A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 12 Cust. #: 49B Material: 9"x9" Floor Tile (Brown & White - Mottled) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 12a Cust. #: 49B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 13 Cust. #: 50A Material: Floor Sheeting (Tan) Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 14 Cust. #: 50B Material: Floor Sheeting (Tan) Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 15 Cust. #: 51A Material: 9"x9" Floor Tile (Green) Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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 Date Collected: 1/27-28/25
 Date Received: 02/04/25
 Date Analyzed: 02/05/25
 Date Reported: 02/05/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 16 Cust. #: 51B Material: 9"x9" Floor Tile (Green) Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 17 Cust. #: 52A Material: Floor Sheeting (White/Green) Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 18 Cust. #: 52B Material: Floor Sheeting (White/Green) Location: Appearance: green, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
Project: 111 Highland St., Highland Park - ACM
Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 19 Cust. #: 53A Material: Countertop Sheeting (White) Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 115778 - 20 Cust. #: 53B Material: Countertop Sheeting (White) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 21 Cust. #: 54A Material: 9"x9" Floor Tile (Light Brown) Location: Appearance: brown, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 1.75% POINT COUNT RESULT	Other - 98.25%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 21a Cust. #: 54A Material: Mastic Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 22 Cust. #: 54B Material: 9"x9" Floor Tile (Light Brown) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 22a Cust. #: 54B Material: Mastic Location: Appearance: white,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 23 Cust. #: 55A Material: 9"x9" Floor Tile (Top - Black) Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 23a Cust. #: 55A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 23b Cust. #: 55A Material: Green Floor Tile Location: Appearance: green,fibrous,homogenous Layer: 3 of 4	Asbestos Present: YES Chrysotile - 10%	Other - 90%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 23c Cust. #: 55A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 24 Cust. #: 55B Material: 9"x9" Floor Tile (Top - Black) Location: Appearance: black,nonfibrous,homogenous Layer: 1 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 24a Cust. #: 55B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 24b Cust. #: 55B Material: Green Floor Tile Location: Appearance: Layer: 3 of 4	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 24c Cust. #: 55B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 25 Cust. #: 56A Material: 9"x9" Floor Tile (Top - Red) Location: Appearance: red,fibrous,homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 10%	Other - 90%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 25a Cust. #: 56A Material: Sheet Floor/Felt Location: Appearance: red, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 26 Cust. #: 56B Material: 9"x9" Floor Tile (Top - Red) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 26a Cust. #: 56B Material: Sheet Floor/Felt Location: Appearance: red, fibrous, nonhomogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 27 Cust. #: 57A Material: 6"x6" Floor Tile (Maroon) & Felt Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 28 Cust. #: 57B Material: 6"x6" Floor Tile (Maroon) & Felt Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 29 Cust. #: 58A Material: 12"x12" Faux Stick-On Wood Tile (Brown) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 29a Cust. #: 58A Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 30 Cust. #: 58B Material: 12"x12" Faux Stick-On Wood Tile (Brown) Location: Appearance: brown,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 30a Cust. #: 58B Material: Glue Location: Appearance: clear,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Robert T. Letarte Jr., Laboratory Director

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 31 Cust. #: 59A Material: 9"x9" Floor Tile (Tan w/ Gold Specks) Location: Appearance: beige, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%
Lab ID #: 115778 - 31a Cust. #: 59A Material: Mastic Location: Appearance: black, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 32 Cust. #: 59B Material: 9"x9" Floor Tile (Tan w/ Gold Specks) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

For Layered Samples, each component will be analyzed and reported separately.

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 32a Cust. #: 59B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 33 Cust. #: 60A Material: 9"x9" Floor Tile (Tan w/ Green) Location: Appearance: beige,fibrous,homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 115778 - 33a Cust. #: 60A Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 34 Cust. #: 60B Material: 9"x9" Floor Tile (Tan w/ Green) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 34a Cust. #: 60B Material: Mastic Location: Appearance: black,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 35 Cust. #: 61A Material: 9"x9" Floor Tile (Black) Location: Appearance: black,fibrous,homogenous Layer: 1 of 4	Asbestos Present: YES Chrysotile - 1.75% POINT COUNT RESULT	Other - 98.25%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 35a Cust. #: 61A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 35b Cust. #: 61A Material: 9"x9" Floor Tile (Tan) Location: Appearance: brown,fibrous,homogenous Layer: 3 of 4	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%
Lab ID #: 115778 - 35c Cust. #: 61A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 36 Cust. #: 61B Material: 9"x9" Floor Tile (Black) Location: Appearance: Layer: 1 of 4	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 36a Cust. #: 61B Material: Glue Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 36b Cust. #: 61B Material: 9"x9" Floor Tile (Tan) Location: Appearance: Layer: 3 of 4	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 36c Cust. #: 61B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 4 of 4	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 37 Cust. #: 62A Material: Countertop Sheeting (Green) Location: Appearance: green,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 115778 - 38 Cust. #: 62B Material: Countertop Sheeting (Green) Location: Appearance: green,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 39 Cust. #: 63A Material: Floor Sheeting (Brown) Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 30% Other - 70%
Lab ID #: 115778 - 40 Cust. #: 63B Material: Floor Sheeting (Brown) & Mesh Location: Appearance: brown, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 20% Other - 80%
Lab ID #: 115778 - 41 Cust. #: 64A Material: Blown-In Insulation (White) Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Mineral Wool - 90% Other - 10%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 42 Cust. #: 64B Material: Blown-In Insulation (White) Location: Appearance: white, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Mineral Wool - 90% Other - 10%
Lab ID #: 115778 - 43 Cust. #: 65A Material: 9"x9" Floor Tile (White - Faux Marble) & Felt Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 44 Cust. #: 65B Material: 9"x9" Floor Tile (White - Faux Marble) & Felt Location: Appearance: white, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%

For Layered Samples, each component will be analyzed and reported separately.

Robert T. Letarte Jr., Laboratory Director

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Certificate of Laboratory Analysis
Test Method, Polarized Light Microscopy (PLM)
 Project: 111 Highland St., Highland Park - ACM
 Project #: 64659-04



Report To:

Mr. Joe Konrad
 Testing Engineers & Consultants, Inc.
 1343 Rochester Road
 Troy, MI 48083

ARI Report # 25-115778
 Date Collected: 1/27-28/25
 Date Received: 02/04/25
 Date Analyzed: 02/05/25
 Date Reported: 02/05/25

Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 45 Cust. #: 66A Material: 12"x12" Floor Tile (Cream - Patterned) Location: Appearance: white, fibrous, homogenous Layer: 1 of 2	Asbestos Present: YES Chrysotile - 1.50% POINT COUNT RESULT	Other - 98.50%
Lab ID #: 115778 - 45a Cust. #: 66A Material: Mastic Location: Appearance: yellow, nonfibrous, homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 46 Cust. #: 66B Material: 12"x12" Floor Tile (Cream - Patterned) Location: Appearance: Layer: 1 of 2	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 46a Cust. #: 66B Material: Mastic Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 47 Cust. #: 67A Material: Floor Tile (Top - Green, Patterned) Location: Appearance: green,fibrous,homogenous Layer: 1 of 5	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 115778 - 47a Cust. #: 67A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 47b Cust. #: 67A Material: Beige Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 1% Other - 99%
Lab ID #: 115778 - 47c Cust. #: 67A Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 4 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 47d Cust. #: 67A Material: Sheet Floor/Felt Location: Appearance: grey,fibrous,nonhomogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 48 Cust. #: 67B Material: Floor Tile (Top - Green, Patterned) Location: Appearance: Layer: 1 of 5	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 48a Cust. #: 67B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 2 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 48b Cust. #: 67B Material: Beige Floor Tile Location: Appearance: beige,nonfibrous,homogenous Layer: 3 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%

For Layered Samples, each component will be analyzed and reported separately.

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 48c Cust. #: 67B Material: Glue Location: Appearance: yellow,nonfibrous,homogenous Layer: 4 of 5	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 48d Cust. #: 67B Material: Sheet Floor/Felt Location: Appearance: grey,fibrous,nonhomogenous Layer: 5 of 5	Asbestos Present: NO No Asbestos Observed	Cellulose - 40% Other - 60%
Lab ID #: 115778 - 49 Cust. #: 68A Material: Vibration Dampener Location: Appearance: brown,fibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 90% Other - 10%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 50 Cust. #: 68B Material: Vibration Dampener Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 90% Other - 10%
Lab ID #: 115778 - 51 Cust. #: 69A Material: Flat Roofing Material (Black) Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 115778 - 52 Cust. #: 69B Material: Flat Roofing Material (Black) Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 53 Cust. #: 70A Material: Exterior Door/Window Frame Caulk (Tan - Painted Green) Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 10%	Other - 90%
Lab ID #: 115778 - 54 Cust. #: 70B Material: Exterior Door/Window Frame Caulk (Tan - Painted Green) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 55 Cust. #: 71A Material: Roof Flashing (Black) Location: Appearance: black, fibrous, nonhomogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 10%	Cellulose - 20% Other - 70%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 56 Cust. #: 71B Material: Roof Flashing (Black) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	
Lab ID #: 115778 - 57 Cust. #: 72A Material: Exterior Caulk (Brown - Painted Cream) Location: Appearance: brown, fibrous, homogenous Layer: 1 of 1	Asbestos Present: YES Chrysotile - 5%	Other - 95%
Lab ID #: 115778 - 58 Cust. #: 72B Material: Exterior Caulk (Brown - Painted Cream) Location: Appearance: Layer: 1 of 1	Asbestos Present: NOT ANALYZED	

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 59 Cust. #: 73A Material: Limestone (Tan) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 59a Cust. #: 73A Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 60 Cust. #: 73B Material: Limestone (Tan) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 60a Cust. #: 73B Material: Mortar Location: Appearance: grey,nonfibrous,homogenous Layer: 2 of 2	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 61 Cust. #: 74A Material: Exterior Pipe Sealant (Black) Location: Appearance: brown,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%
Lab ID #: 115778 - 62 Cust. #: 74B Material: Exterior Pipe Sealant (Black) Location: Appearance: brown,fibrous,nonhomogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Cellulose - 50% Other - 50%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 63 Cust. #: 75A Material: Textured Wall Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 64 Cust. #: 75B Material: Textured Wall Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 65 Cust. #: 75C Material: Textured Wall Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 66 Cust. #: 75D Material: Textured Wall Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 67 Cust. #: 75E Material: Textured Wall Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 68 Cust. #: 75F Material: Textured Wall Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 69 Cust. #: 75G Material: Textured Wall Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 70 Cust. #: 76A Material: Textured Ceiling Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 71 Cust. #: 76B Material: Textured Ceiling Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 72 Cust. #: 76C Material: Textured Ceiling Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 73 Cust. #: 76D Material: Textured Ceiling Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 74 Cust. #: 76E Material: Textured Ceiling Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%

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Sample Information	Asbestos Type/Percent	Non-Asbestos Material
Lab ID #: 115778 - 75 Cust. #: 76F Material: Textured Ceiling Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: 115778 - 76 Cust. #: 76G Material: Textured Ceiling Application (White/Grey) Location: Appearance: white,nonfibrous,homogenous Layer: 1 of 1	Asbestos Present: NO No Asbestos Observed	Other - 100%
Lab ID #: Cust. #: Material: Location: Appearance: Layer: of	Asbestos Present:	

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APPENDIX F
PHOTOGRAPHIC LOG



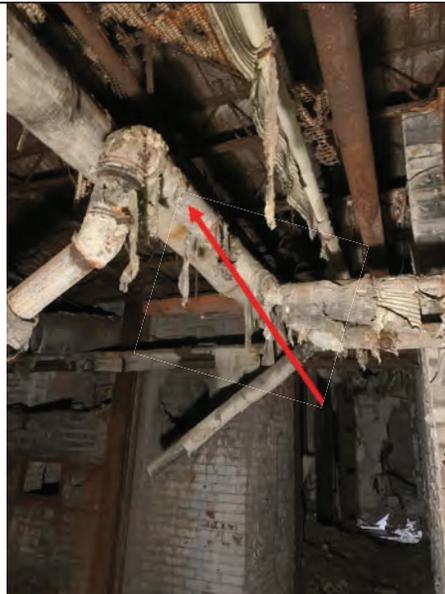
111 Highland Street, Highland Park MI,
48203



**Asbestos-Containing HM# 9 – 9”x9” Floor Tile
(Green) w/ Mastic**



**Asbestos-Containing HM# 11 – Straight Pipe
Insulation (<2” – Grey/White)**



**Asbestos-Containing HM #30 –4” Stright Pipe
Insulation (White)**



**Asbestos-Containing HM #31 ->6" Stright Pipe
Insulation (White)**



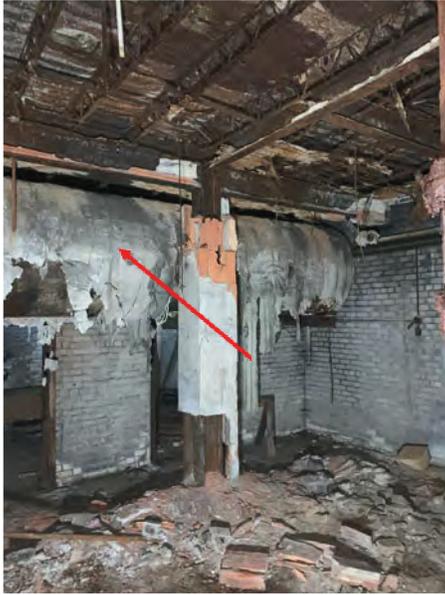
**Asbestos-Containing HM #32 -<2" Pipe Joint
Insulation (White)**



**Asbestos-Containing HM #33 -4" Pipe Joint
Insulation (White)**



**Asbestos-Containing HM #34 ->6" Pipe Joint
Insulation (White)**



**Asbestos-Containing HM #35 – Tank Insulation
(White)**



**Asbestos-Containing HM #36 – Cement Patch
(Grey)**



**Asbestos-Containing HM #37 – 9”x9” Floor Tile
(Black & Brown) w/ Mastic**



**Asbestos-Containing HM #38 – 9”x9” Floor Tile
(Beige) w/ Mastic**



**Asbestos-Containing HM #39 – 9”x9” Floor Tile
(Cream) w/ Mastic**



**Asbestos-Containing HM #40 – Exterior Window
Glaze**



**Asbestos-Containing HM# 41 – Drywall & Joint
Compound (Tan/White)**



**Asbestos-Containing HM #42 – 9”x9” Floor Tile
(Black) w/ Mastic**



**Asbestos-Containing HM #49 – 9”x9” Floor Tile
(White & Brown - Mottled) w/ Mastic**



**Asbestos-Containing HM #53 – Countertop
Sheeting (White)**



**Asbestos-Containing HM #54 – 9”x9” Floor Tile
(Light Brown) w/ Mastic**



**Asbestos-Containing HM #55 – 9”x9” Floor Tile
(Top – Black) w/ Mastic & Green Floor Tile w/
Mastic**



**Asbestos-Containing HM #56 – 9”x9” Floor Tile
(Top - Red) w/ Floor Sheet/Felt**



**Asbestos-Containing HM #59 – 9”x9” Floor Tile
(Tan w/ Gold Specks) w/ Mastic**



**Asbestos-Containing HM #60 – 9”x9” Floor Tile
(Tan w/ Green) w/ Mastic**



**Asbestos-Containing HM #61 – 9”x9” Floor Tile
(Black) w/ Glue & 9”x9” Floor Tile (Tan) w/ Glue**

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TEC PROJECT NUMBER: 64659-04



Asbestos-Containing HM #66 – 12”x12” Floor Tile (Cream – Patterned) w/ Mastic



Asbestos-Containing HM #67 – 12”x12” Floor Tile (Top – Green - Patterned) w/ Glue & Beige Floor Tile w/ Glue & Sheet Floor/Felt



Asbestos-Containing HM #70 – Exterior Door/Window Frame Caulk (Tan – Painted Green)



Asbestos-Containing HM #71 – Roof Flashing (Black)



**Asbestos-Containing HM #72 – Exterior Caulk
(Brown – Painted Cream)**



**Asbestos-Containing Textured Wall & Ceiling
Application (White)**



**Debris Contaminated w/ Asbestos-Containing
Material**



General Building Pictures of Inaccessibility



General Building Pictures of Inaccessibility



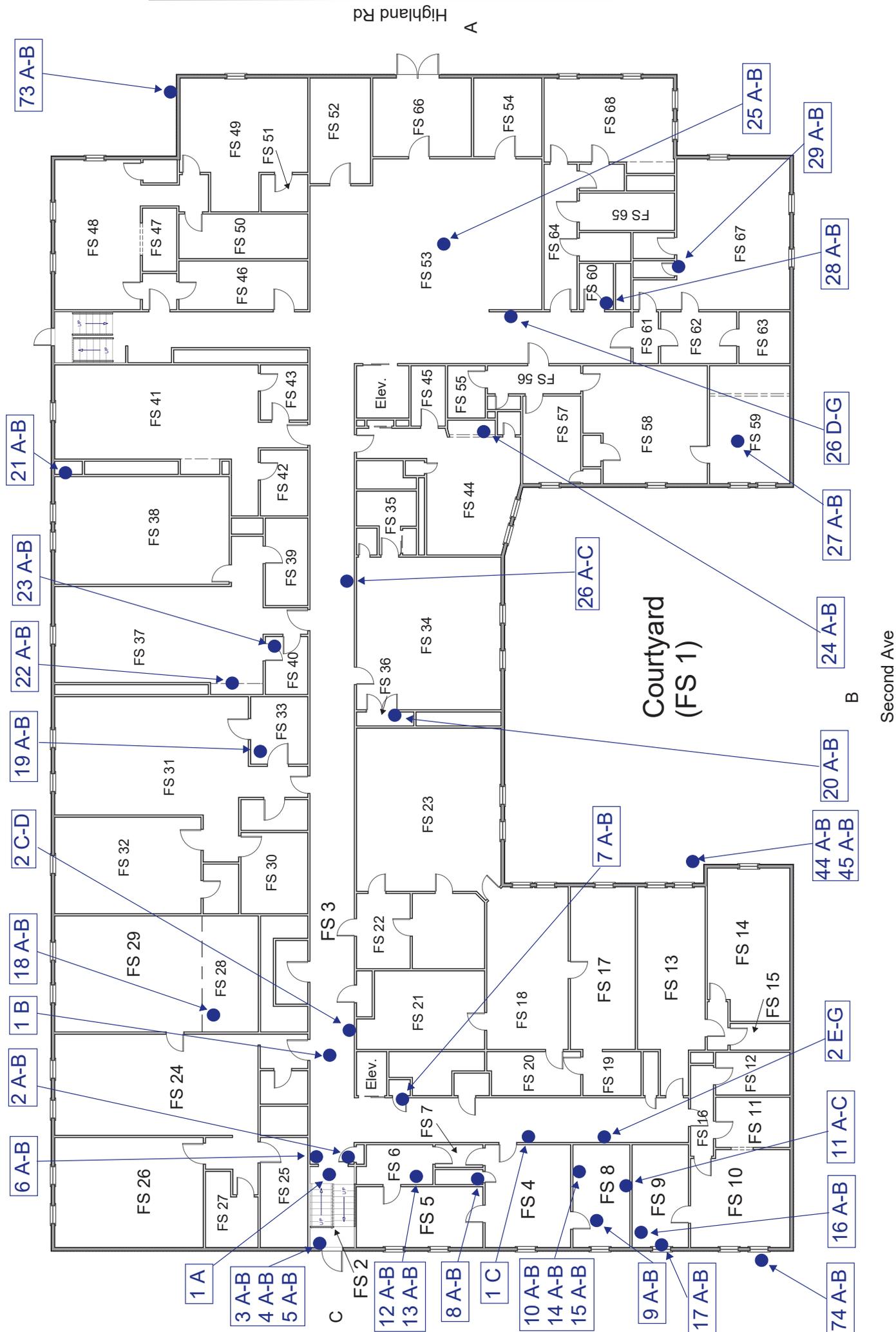
General Building Pictures of Inaccessibility

APPENDIX G
SAMPLE LOCATION MAP

TEC Sample Location Map First Floor
111 Highland Rd, Highland Park, MI
TEC Project Number: 64659-04



D FS 1 (Exterior)



TEC Sample Location Map Basement
111 Highland Rd, Highland Park, MI
TEC Project Number: 64659

FS 1 (Exterior) D

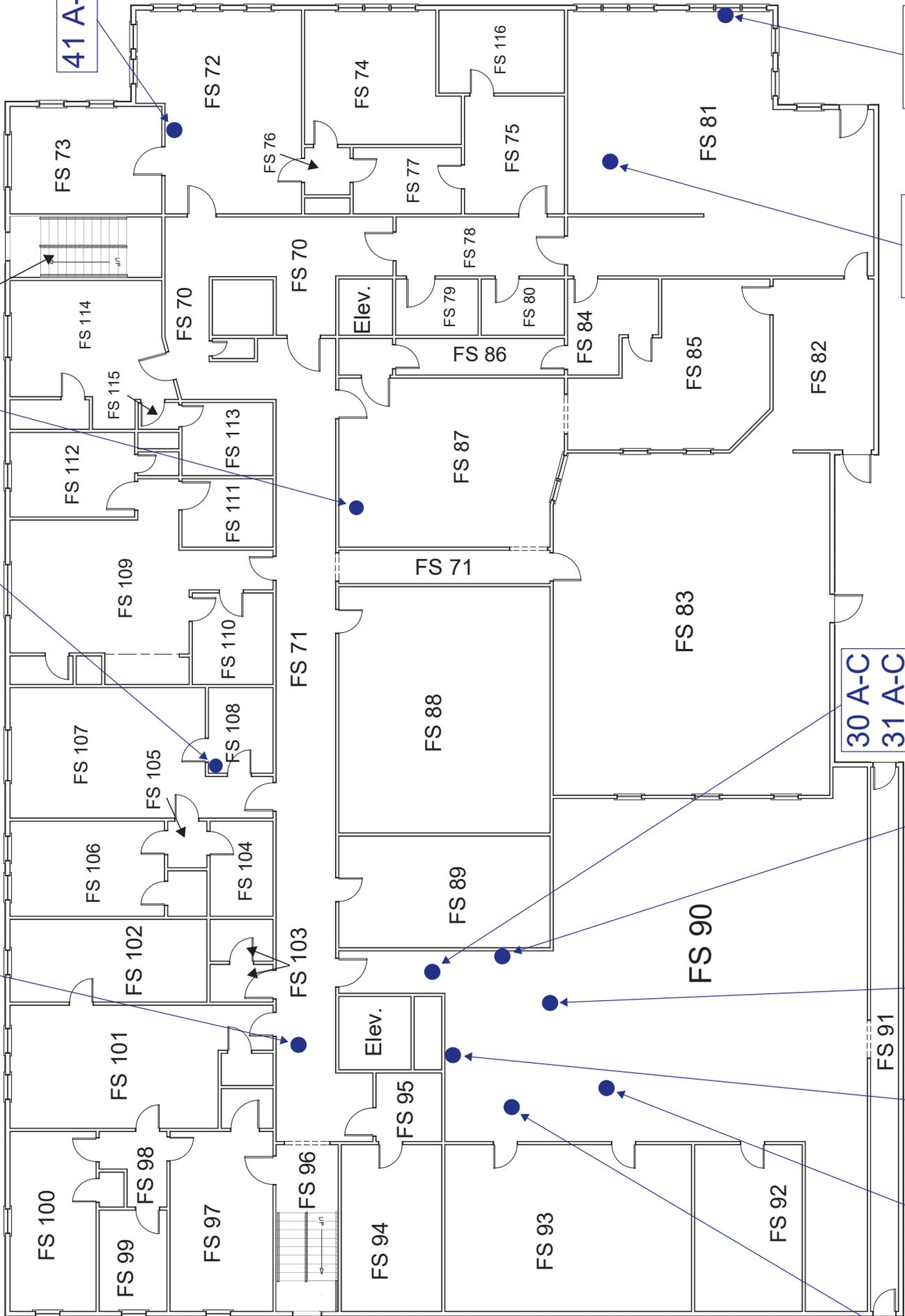


A Highland Rd

38 A-B

1 D

37 A-B



C

40 A-B

39 A-B

30 A-C
31 A-C

32 A-C

33 A-C

36 A-C

34 A-C

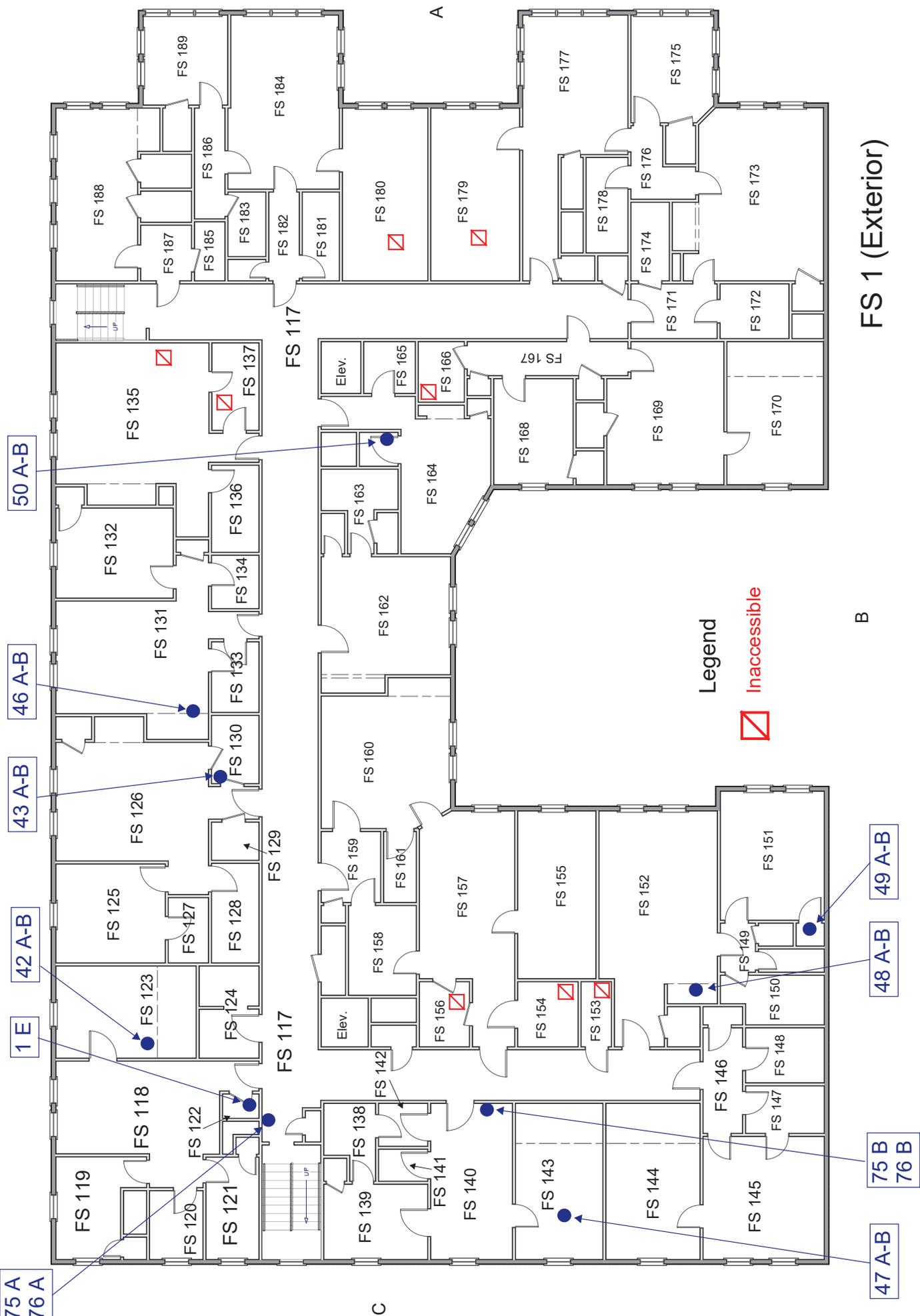
35 A-C

B
Second Ave

TEC Sample Location Map Second Floor
 111 Highland Rd, Highland Park, MI
 TEC Project Number: 64659-04



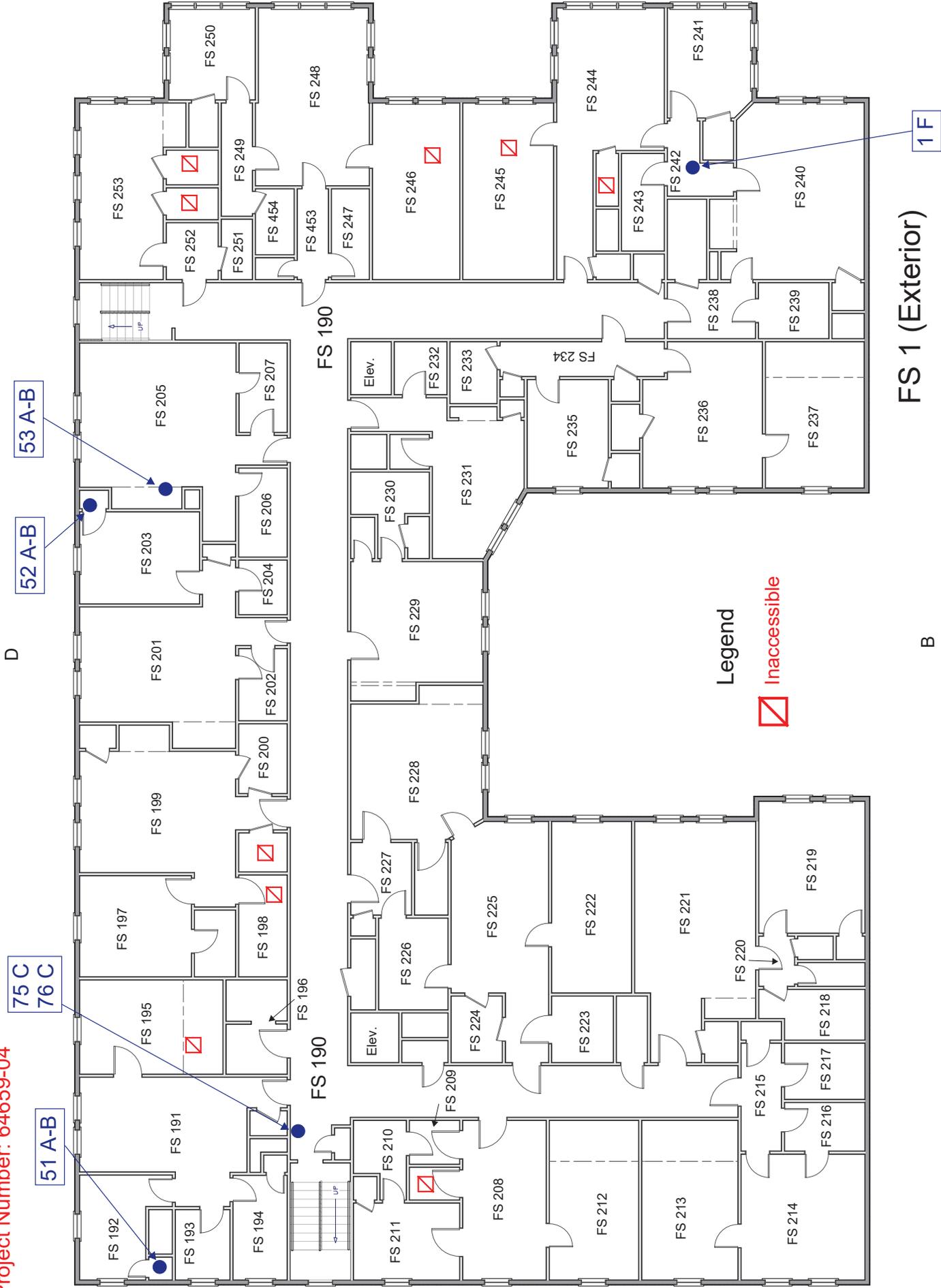
Highland Rd



FS 1 (Exterior)

Second Ave

TEC Sample Location Map Third Floor
111 Highland Rd, Highland Park, MI
TEC Project Number: 64659-04



FS 1 (Exterior)

B

Second Ave

C

A

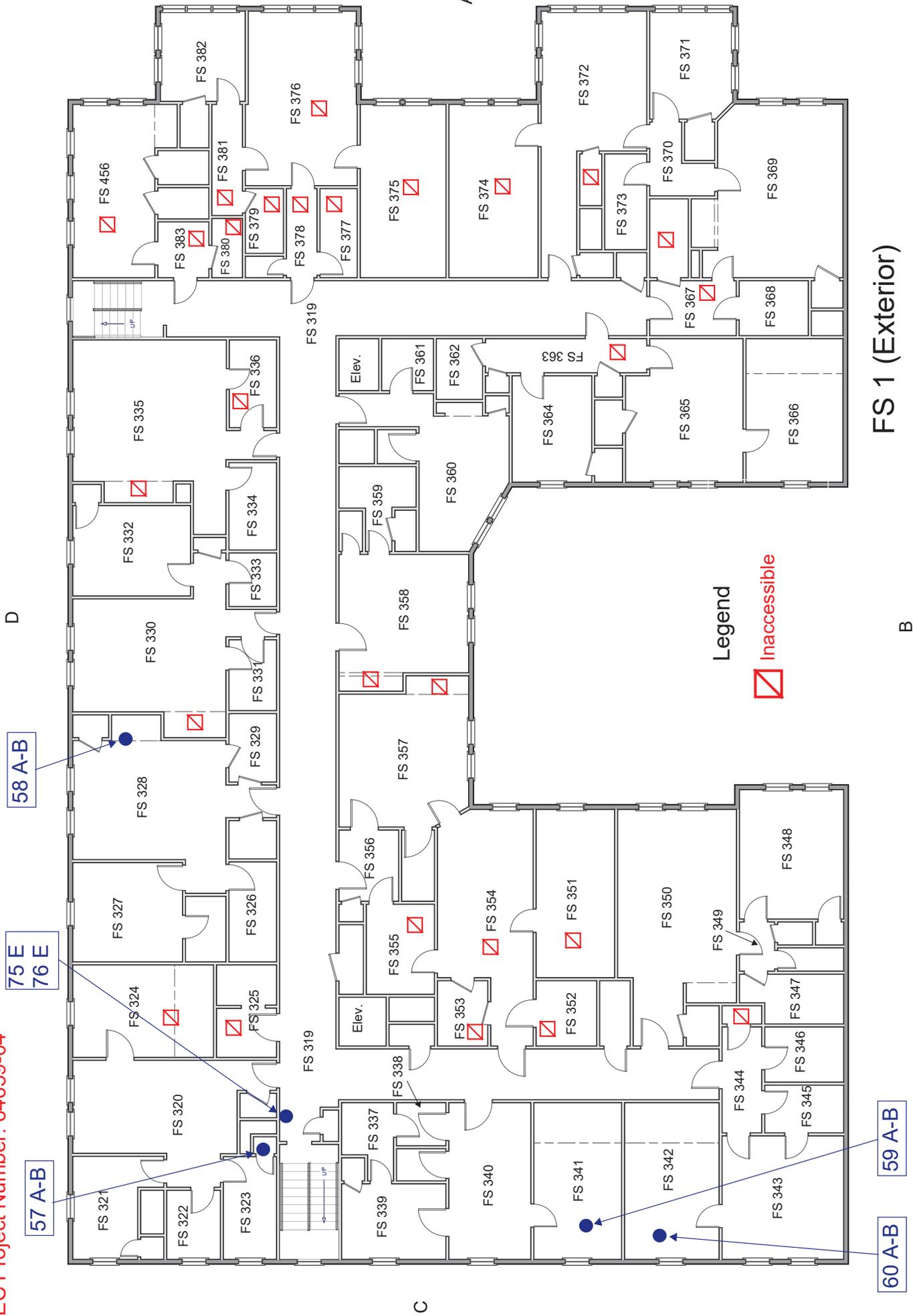
Highland Rd

TEC Sample Location Map Fourth Floor
111 Highland Rd, Highland Park, MI
TEC Project Number: 64659-04

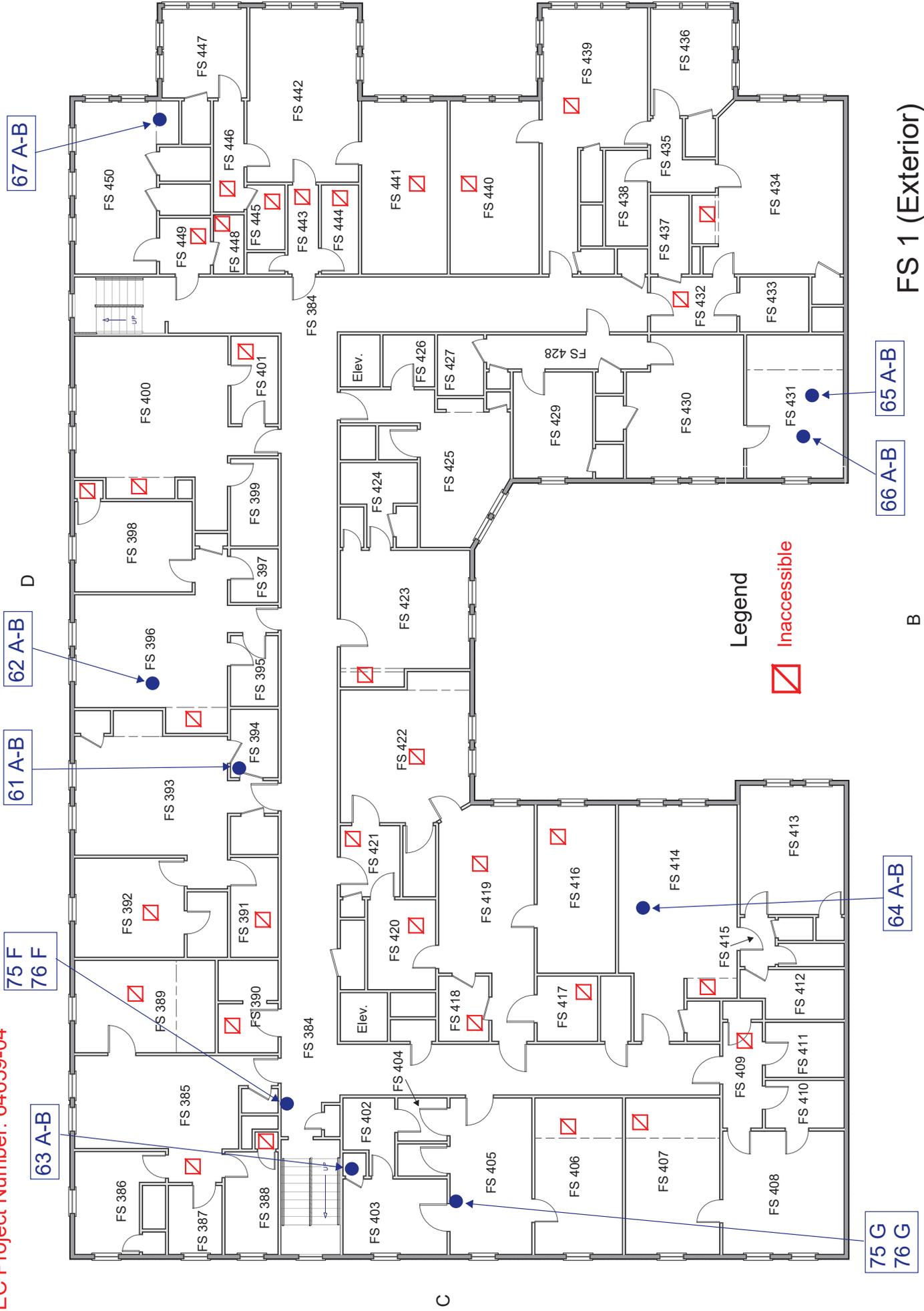


TEC Sample Location Map Fourth Floor
111 Highland Rd, Highland Park, MI
TEC Project Number: 64659-04

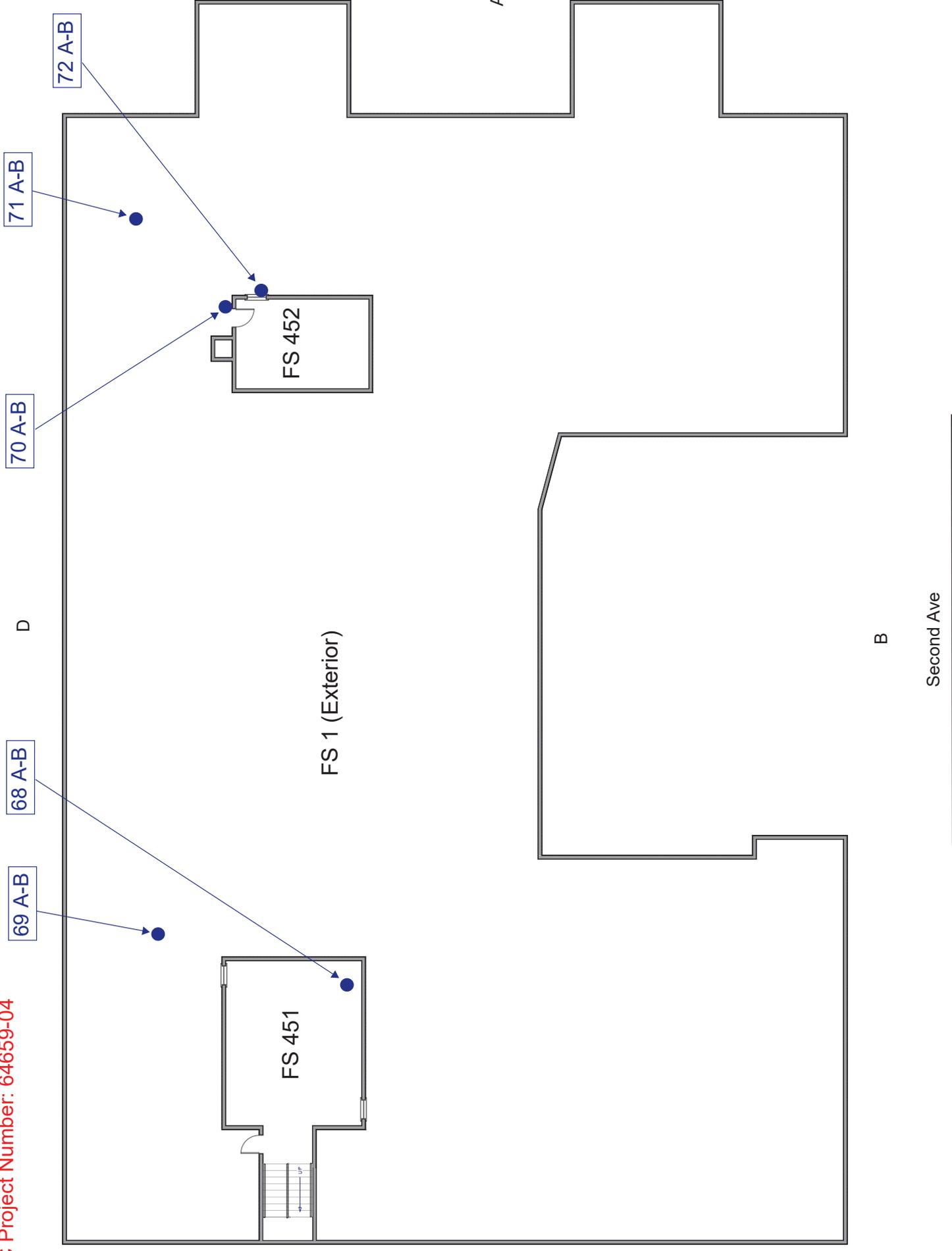
TEC Sample Location Map Fifth Floor
111 Highland Rd, Highland Park, MI
TEC Project Number: 64659-04



TEC Sample Location Map Sixth Floor
111 Highland Rd, Highland Park, MI
TEC Project Number: 64659-04



TEC Sample Location Map Roof
111 Highland Rd, Highland Park, MI
TEC Project Number: 64659-04



APPENDIX H

PM Environmental Pre-Renovation Hazardous Materials Survey (2017)



Environmental & Engineering Services Nationwide



ENVIRONMENTAL SERVICES

BUILDING ARCHITECTURE,
ENGINEERING & SCIENCE

INDUSTRIAL HYGIENE SERVICES

BROWNFIELDS & ECONOMIC
INCENTIVES CONSULTING

PRE-RENOVATION HAZARDOUS MATERIALS SURVEY

111 Highland Street | Highland Park, Michigan
PM Project Number 02-7709-0-0019

Prepared for:

Detroit-Wayne County Brownfields Assessment Coalition
500 Griswold, 30th Floor
Detroit, Michigan 48226

Prepared by:

PM Environmental, Inc.
3400 Russell Street, #255
Detroit, Michigan 48207

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t: 616.285.8857

March 3, 2017

Mr. Khalil Rahal
Detroit-Wayne County Brownfields Assessment Coalition
Guardian Building
Detroit, Michigan 48226

**Re: Pre-Renovation Hazardous Materials Survey
For the Cortland Community Impact Center
Located at 111 Highland Street, Highland Park, Michigan
PM Environmental, Inc. Project No. 02-7709-0-0019**

Dear Mr. Rahal:

PM Environmental, Inc. (PM) was retained by Detroit-Wayne County Brownfields Assessment Coalition to perform a Pre-Renovation Hazardous Materials Survey of the Cortland Community Impact Center located at the above referenced address (i.e., the subject property). The purpose of the survey was to identify Asbestos Containing Materials (ACMs) and Hazardous Materials prior to renovation activities.

The Hazardous Materials Survey Report for the above referenced property represents the product of PM's professional expertise and judgment in the environmental consulting industry, and it is reasonable for DETROIT-WAYNE COUNTY BROWNFIELDS ASSESSMENT COALITION, WAYNE METROPOLITAN COMMUNITY ACTION AGENCY, EXCELLENT CONSTRUCTION, LLC, AND THE MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY to rely on PM's report.

Please feel free to contact our office at (800) 313-2966 to discuss this report.

Sincerely,
PM ENVIRONMENTAL, INC.
PM Environmental, Inc.

Trevor M. Drost
Industrial Hygienist

PM Environmental, Inc.

Wayne Krupp
Regional Industrial Hygiene Manager

EXECUTIVE SUMMARY

PM Environmental, Inc., (PM) has completed a Pre-Renovation Hazardous Material (Hazmat) Survey of the Cortland Community Impact Center Property located at 111 Highland Street, Highland Park, Michigan (hereafter referred to as the “subject property”). This survey was conducted in general accordance with the scope of services identified in PM’s proposal (01008026) to Detroit-Wayne County Brownfields Assessment Coalition dated November 22, 2016. The objective of the Hazmat Survey was to identify items of environmental interest that would require remediation or disposal prior to or during building renovation activities.

This survey provides a summary of on-site building materials and equipment that were found to contain building components or features that are of environmental interest. In general, these items include: asbestos containing materials (ACM), fluorescent light fixtures, mercury-containing devices, and PCB-containing devices. Based on the findings of this assessment, the following conclusions and recommendations were identified:

The results of the asbestos survey identified the following ACM:

- Air Cell Straight Pipe Insulation and Associated Fittings (5,760 LF)
- 9" x 9" Floor Tile and Mastic - Black and Red Intermixed (600 SF)
- 12" x 12" Floor Tile and Mastic - Brown Pebble Pattern (270 SF)
- 9" x 9" Floor Tile and Mastic - Tan with Light Tan Specks (320 SF)
- Drywall and Joint Compound (1,150 SF)
- Multi-Layered Sheet Flooring - Basement – Second-most SE Room (200 SF)
- Wall and Ceiling Texture (199,800 SF)
- 12" x 12" Floor Tile and Mastic - Light Tan (340 SF)
- 9" x 9" Floor Tile and Mastic - Light Tan (860 SF)
- 9" x 9" Floor Tile and Mastic - Orange Marbled (650 SF)
- 9" x 9" Floor Tile and Mastic - Tan with Cream Streaks (400 SF)
- 9" x 9" Floor Tile and Mastic - Black with Gold Flake Pattern (360 SF)
- Residual Mastic (40 SF)
- 9" x 9" Floor Tile and Mastic – All Black (120 SF)
- 9" x 9" Floor Tile and Mastic - Green with White Streaks (635 SF)
- Multi-Layered Kitchen Flooring and Mastic - Room Adjacent to Northwest Stairwell (120 SF)
- 9" x 9" Floor Tile and Mastic – Yellow (20 SF)
- 9" x 9" Floor Tile and Mastic - White and Black Intermixed (170 SF)
- 12" x 12" Floor Tile and Mastic - Tan Flower Pattern (20 SF)
- 12" x 12" Floor Tile and Mastic - Tan with Cross Pattern (60 SF)
- Exterior Window Glazing (152 SF)
- Black Roof Flashing (2,040 SF)
- Exterior Door Caulk – White (4 SF)
- Multi-Layered Flooring – Inaccessible Areas (3,980 SF)

Due to the severe deterioration of building components that are present throughout the building, it is recommended that all identified materials and associated debris should be removed and disposed of as ACM. This will also be necessary to access asbestos-containing flooring and/or mastics found under debris piles.

Regulated materials identified include components or materials that include, but not limited to, the following:

- Low level smoke detectors,
- Mercury containing equipment,
- PCB Transformers,
- PCB ballasts,
- Paint cans and spray paint cans,
- Electronics
- Various janitorial cleaning supplies

These materials can be removed by the demolition contractor as part of initial site demolition activities. The regulated materials and general maintenance products that have specific disposal requirements as specified on their respective safety datasheets (SDS) should be removed by a contractor aware of local, State and Federal regulations governing removal, packaging, transportation, and disposal.

The summary presented above is general in nature and should not be considered apart from the entire text of the report, which contains the qualifications, considerations and subject property details mentioned herein. Details of findings and conclusions are elaborated upon in this survey report.

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APPENDICES

Appendix A:	PM Site Specific Sampling and Analysis Plan
Appendix B:	Photo Log from Site Reconnaissance
Appendix C:	Asbestos Analytical Data and Chain of Custody Documentation
Appendix D:	J3 Labs, Inc. NVLAP Certificate

1.0 INTRODUCTION

PM Environmental, Inc. (PM) was retained by Detroit-Wayne County Brownfields Assessment Coalition to perform a Pre-Renovation Hazardous Material (Hazmat) Survey of the Cortland Community Impact Center Property located at 111 Highland Street, Highland Park, Michigan. The purpose of the survey was to identify Asbestos Containing Materials (ACMs) and Hazardous Materials which would require removal or special handling prior to renovation activities.

2.0 DESCRIPTION OF BUILDING STRUCTURE

The subject property consists of a vacant six-story apartment building complete with 92 rooms, a basement, and is roughly 66,000 square feet in size. At the time of the survey, the building was in a severely damaged state, which hindered PM to fully inspect all areas of the building.

The interior finished building materials generally consist of wall and ceiling plaster, air cell straight pipe insulation and associated fittings, pyro-block and mortar, various types of sheet flooring and their associated mastic, various types of floor tile and their associated mastics, wood floor vapor barrier, wall and ceiling drywall and joint compound, brown cove base and adhesive, window glazing, various types of multi-layered sheet flooring, wall and ceiling texture finishes, residual mastic, and expansion joint. Exterior finished building materials consist of flat roofing material, roof flashing, window glazing, door caulk, brick siding, and roofing shingles.

3.0 LIMITATIONS AND EXCEPTIONS OF SURVEY

Locating and identifying materials containing asbestos in buildings and structures is a difficult and time-consuming task. All buildings have hidden spaces that may not be immediately obvious to a surveyor who is not intimately familiar with the building and who has only a limited time in the building. Complicating this task is the fact that asbestos was used in many forms and in many types of materials in the construction of buildings. In some of these materials, asbestos is present, not as an intentional ingredient, but as a contaminant.

Although PM uses trained and licensed inspectors in attempting to locate and identify materials potentially containing asbestos, PM cannot verify that all materials containing asbestos have been identified. It is possible that there are materials containing asbestos that were not found because they were not visible or accessible to the inspector or for various other reasons were not sampled. During the inspection, PM staff followed the site specific sampling and analysis plan, attached as Appendix A.

Quantities of identified ACM that are reported in this survey are often used to generate cost projections for abatement projects. The survey is designed to aid the building owner, architect, construction manager, general contractors, and potential abatement contractors in locating hazardous or regulated building materials. No other representation, expressed or implied, is made.

During preparation of the ACM Survey, the following limitations were encountered and are described below.

Extensive debris was present throughout the building at the time of the inspection which hindered PM to fully inspect all areas of the building. Various kitchen areas throughout the building contained extensive debris which rendered inspections of various kitchen floorings throughout the building as inaccessible.

The site survey activities were conducted by PM on various dates from January 16, 2017, through January 23, 2017 in general accordance with industry standards and procedures at the time of this project. The conclusions and recommendations are based on the applicable standards of our profession at the time this report was prepared. The field survey activities were completed by accredited and trained asbestos inspection professionals.

The analysis and recommendations submitted in this report are based in part on the data obtained from specific and discrete sampling locations. The nature and extent of variations between the sampling locations may not become evident until planned renovation and/or demolition procedures commence. If potential variations are identified during renovation activities, it may be necessary to conduct additional sampling. Further, it is possible that some materials were inaccessible. Such areas may include previously mentioned inaccessible rooms or wall cavities. If a newly identified suspect material is found, the material should be sampled prior to disturbance, and considered a non-ACM only after laboratory analysis has shown asbestos is not present in regulated quantities.

4.0 ASBESTOS CONTAINING MATERIALS

During the inspection, an ACM survey of the building was performed for the purpose of identifying the location, quantities, and condition of ACM within the survey area. PM understands that information obtained from this survey will be used to assist in the proper removal and disposal of these materials before Renovation activities. The following subsections describe the sampling plan and sample collection phases of the survey.

4.1 Building Walk Through and Inspection Activities

PM performed a walk-through of the interior and exterior of the buildings using guidelines established by the United States Environmental Protection Agency (U.S. EPA) in the publication *Guidance for Controlling Asbestos-Containing Materials in Buildings*, Office of Pesticides and Toxic Substances, DOC No. 560/5-85-024 and 40 CFR Part 763, of the Asbestos Hazard and Emergency Response Act (AHERA). For the purposes of this inspection, suspect ACM were placed in three material categories: thermal systems insulation (TSI), surfacing materials (SM), and miscellaneous materials (MM). The locations within the building were inspected physically by functional space and Homogeneous Areas (HA)¹ to determine the presence of ACM. The inspection of the building included access to the requested survey areas. The inspection activities were performed by Mr. Tyler Maraskine (State of Michigan Asbestos Inspector Accreditation No. A47893), Mr. Trevor Drost (State of Michigan Asbestos Inspector Accreditation No. A46867), and Mr. Brett Kabat of PM. Figures of general floor plans with sampling locations are attached as Figures 1 through 8.

Accessible locations within the survey area were physically inspected to determine the presence of ACM. Suspect materials in each functional space, including materials located above the

¹ Homogeneous Area is defined as material that is uniform in texture and color, and appears identical in every other respect.

suspended ceiling (i.e., the plenum), were categorized prior to the collection of bulk samples. During the inspection, the friable² or non-friable nature of the suspect ACM was determined and cataloged. A summary of the findings of the inspection is provided in Tables 1-4. Photographs of general site conditions were collected as Appendix B.

4.2 Bulk Sample Collection

PM conducted bulk sampling of accessible friable and non-friable suspected ACM in general compliance with the requirements of AHERA for bulk sampling (40 CFR 763.86) and consistent with the scope of services outlined in PM's proposal. During the inspection, bulk samples of suspect ACM containing in some cases multiple layers of discrete materials were collected for analysis. All samples were assigned an identification number and chain of custody forms accompanied the samples to the laboratory.

As previously noted, additional suspect ACM may exist in areas that were inaccessible. A summary of the asbestos-containing materials identified during sampling activities is provided in the attached Table 3.

4.3 Bulk Sampling Protocol and Analytical Methods

PM conducted bulk sampling of accessible friable and non-friable suspected ACM in general compliance with the requirements of AHERA for bulk sampling (40 CFR 763.86) and consistent with the scope of services outlined in PM's Master Service Agreement. During the inspection, bulk samples of suspect ACM containing, in some cases, multiple layers of discrete materials were collected for analysis. All samples were assigned an HA number and Chain of Custody forms accompanied the samples to the laboratory. As previously noted, additional suspect ACM may exist in areas that were inaccessible.

Bulk samples of suspect asbestos containing building materials were obtained using standard industrial hygiene techniques including wetting the material to minimize fiber release. Our sampling strategy for suspect friable surfacing materials was based on the guidelines outlined in the EPA publication *Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials*, and the procedures outlined in 40 CFR 763, Subpart E (AHERA). For non-friable suspect materials, AHERA requires the building inspector to determine the appropriate number of samples to obtain and analyze. Usually one to three samples of non-friable materials are collected. For each homogeneous material identified by visual inspection as suspect material, random samples are obtained. A single bulk sample is randomly selected from each homogeneous material for first-round testing. If the sample is positive, the remaining samples are not analyzed; if the sample is negative, the other samples are submitted for study. Every sample must be reported negative if the material is to be considered non-asbestos containing. The bulk samples were delivered to an independent laboratory that participates in the bulk sample proficiency analysis program conducted by the United States Environmental Protection Agency and is accredited by the National Voluntary Laboratory Program (NVLAP). The samples were analyzed using Polarized Light Microscopy (PLM) with dispersion staining to estimate the percent of asbestos composition by volume. Samples with no observable asbestiform minerals are designated as None-Detected. Samples in which asbestiform minerals are observed, all other samples are designated as asbestos containing with the appropriate percent of asbestos noted.

²Friable ACBM as defined by the U.S. EPA, is any material that contains more than one percent asbestos and can be crumbled, pulverized, or reduced to powder by hand pressure.

4.4 Asbestos Laboratory Analytical Procedures and Methodologies

Inspection personnel completed Chain of Custody (COC) forms for all samples submitted to the laboratory. Following completion, the sampling personnel signed and dated the form and submitted the samples to the laboratory. The COC forms with all signatures are provided with the final reports from the laboratory in Appendix C.

Laboratory analytical services using Polarized Light Microscopy (PLM) were performed by J3 Resources, Inc. (J3) located at 6110 West 34th Street, Houston, Texas. J3 is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for Bulk Asbestos Fiber Analysis. Bulk samples of suspect ACM were analyzed by PLM Method 198.1 for the criteria set by the NESHAPs, 40 CFR Part 61.

5.0 REGULATORY INFORMATION

ACM is defined by AHERA as any material or product containing more than one percent asbestos. Materials containing more than one percent asbestos are subject to the requirements of the Asbestos NESHAP. The Asbestos NESHAP requires that all ACM classified as Regulated Asbestos Containing Materials (RACM) be handled in the following manner dependent on its characteristics as summarized below.

- All friable RACM must be removed from a building or structure that is being demolished or renovated before any wrecking or dismantling is performed.
- ACM that is determined to be non-friable in nature must be classified as a Category I or Category II material. This classification then determines, based on handling procedures, whether the material must be removed prior to renovation or demolition and the means and methods to remove the ACM in accordance with the Asbestos NESHAP.
- Non-Friable Category I Materials that may become friable if subjected to sanding, grinding, cutting, or abrading during demolition or renovation must be removed.
- Category II Non-Friable Materials with a high probability of becoming crumbled, pulverized, or reduced to a powder during construction activities (i.e., including renovation and demolition) must be removed.

The Occupational Safety and Health Administration (OSHA) Construction Standard for Asbestos (29 CFR 1926.1101) identifies building or facility owner responsibilities pertaining to asbestos containing materials. Specifically, the Standard requires building and facility owners to determine the presence, location and quantity of ACM and to provide this information to prospective employers (i.e., contractors) applying or bidding for work, whose employees may be reasonably expected to work in areas within or adjacent to areas containing such materials.

6.0 UNIVERSAL WASTE - SUMMARY OF ITEMS OF INTEREST OBSERVED ON-SITE

During the inspection, PM conducted an inspection of the buildings to identify accessible building items that may contain regulated and/or hazardous building materials. These items include: polychlorinated biphenyl (PCB) containing equipment, mercury containing equipment, and abandoned containers that may be of unknown purpose or contents.

For location purposes, PM categorized the identified universal waste, and other items of interest through each specific tenant space and building. The results of these observations are detailed in the attached Table 5.

7.0 FINDINGS

This section presents the findings of this assessment based on the results of the material sampling and laboratory analyses.

7.1 Methodology and Limiting Conditions

A survey of the buildings was performed to identify ACM and hazardous materials that will require proper management prior to or during the general renovation of the building. During these activities, limiting conditions were encountered and are summarized in this assessment.

7.2 Asbestos Containing Materials

An asbestos inspection of the buildings was performed to identify the location and condition of ACM. An inventory of these materials is provided on in the attached tables. Based on the results of this assessment, the following findings concerning ACM were identified:

- Thirty-seven different homogenous building materials were identified as suspect for asbestos content throughout the buildings included as part of this project. During the inspection, bulk samples of suspect ACM were collected for laboratory analysis by PLM.
- A total of 87 samples were collected for laboratory analysis using sampling algorithms specified by U.S. EPA and OSHA regulations. Asbestos content was determined using PLM methods. Laboratory datasheets and chain of custody documentation is provided in Attachment B.
- Analytical results identified the following materials to contain concentrations of asbestos greater than one percent and therefore are considered ACM:
 - Air cell straight pipe insulation and associated fittings
 - Various 9" x 9" floor tile and mastic
 - Various 12" x 12" floor tile and mastic
 - Joint compound associated with drywall walls and ceilings
 - Various multi-layered sheet flooring
 - Wall and ceiling texture
 - Residual mastic
 - Exterior window glazing
 - Roof flashing
 - Exterior door caulk
- A tabular summary of ACM described by homogeneous area, material description, quantities present, location, and condition is present in the attached tables.
- A summary of limitations and exceptions of the survey are discussed above under the subject matter heading concerning limitations and exceptions of this survey. Please consult this section for additional information concerning the limitations of this survey.

7.3 Universal Waste

During the completion of this assessment, the building was assessed for regulated materials. An inventory of these items is provided for review on Table 5. Based on the results of this assessment, the following findings were identified:

- Lighting systems containing fluorescent bulbs and ballasts were identified in the basement and 1st floor. The fluorescent bulbs are suspect for mercury content and the ballasts are suspect for PCBs. These materials should be handled as a Universal Waste by the remediation contractor.
- One smoke detector was identified in the basement and could contain low levels of radiation (i.e. Americium 241). This equipment should be recycled or disposed of in accordance with manufacturer guidelines that can be found on the underside of most articles.
- Televisions were identified intermittently throughout the building and may contain cathode ray tubes with heavy metals (i.e. lead). Pole-mounted transformers were identified near the exterior of the building and may also contain PCBs.
- Various cleaning solutions and paint cans and canisters were also observed throughout the building. If these cleaning solutions and paint containers are to be left for demolition, they should be removed by a trained and certified technician for recycling or proper disposal. Material safety datasheets can be used to help in proper disposal procedures.
- PM observed two aboveground storage tanks (AST's) found in the basement and on the 6th floor. PM was able to determine that both tanks were free of product.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The survey identified the existence of asbestos containing materials and regulated materials in the building at the subject property. PM recommends the following practices be implemented before building renovation activities commence:

- The results of the asbestos survey indicate Asbestos Containing Materials were identified within the subject property, which will require removal by a licensed abatement contractor prior to renovation activities. These materials include:
 - **Air Cell Straight Pipe Insulation and Associated Fittings (5,760 LF)**
 - **9" x 9" Floor Tile and Mastic – Black and Red Intermixed (600 SF)**
 - **12" x 12" Floor Tile – Brown Pebble Pattern (270 SF)**
 - **9" x 9" Floor Tile – Tan with Light Tan Specks (320 SF)**
 - **Drywall and Joint Compound (1,150 SF)**
 - **Multi-Layered Sheet Flooring – Basement – Second-most Southeast Room (200 SF)**
 - **Wall and Ceiling Texture (199,800 SF)**
 - **12" x 12" Floor Tile – Light Tan (340 SF)**
 - **9" x 9" Floor Tile – Light Tan (860 SF)**
 - **9" x 9" Floor Tile – Orange Marbled (650 SF)**
 - **9" x 9" Floor Tile – Tan with Cream Streaks (400 SF)**

- 9" x 9" Floor Tile – Black with Gold Flake Pattern (360 SF)
 - Residual Mastic (40 SF)
 - 9" x 9" Floor Tile – All Black (120 SF)
 - 9" x 9" Floor Tile – Green with White Streaks (635 SF)
 - Multi-Layered Kitchen Flooring – Room Adjacent to Northwest Stairwell (120 SF)
 - 9" x 9" Floor Tile – Yellow (20 SF)
 - 9" x 9" Floor Tile – White and Black Intermixed (170 SF)
 - 12" x 12" Floor Tile – Tan Flower Pattern (20 SF)
 - 12" x 12" Floor Tile – Tan with Cross Pattern (60 SF)
 - Exterior Window Glazing (152 SF)
 - Black Roof Flashing (2,040 SF)
 - Exterior Door Caulk – White (4 SF)
 - Multi-Layered Flooring – Inaccessible Areas (3,980 SF)
- Universal waste and other identified potential hazardous materials as identified in Table 5 should be handled, removed, transported and disposed of in accordance with applicable local, state and federal requirements.

PM notes that if additional suspect materials are identified during renovation, that these materials should be sampled to determine their characteristics (i.e. whether they must be treated as ACM or not) or assumed to be ACM and handled accordingly prior to their removal and disposal. **PM's reporting of quantities and materials are to be interpreted as good faith estimates for contractors inspecting and bidding on project abatement and/or renovation activities; however, contractors should use their own estimates of material quantities as a basis for their project cost estimates.**

This report has been reviewed for its completeness and accuracy. Please feel free to contact our office at (800) 313-2966 to discuss this report.

REPORT PREPARED BY:
PM Environmental, Inc.



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State of Michigan Asbestos Inspector
Accredited No. A46867

REPORT REVIEWED BY:
PM Environmental, Inc.

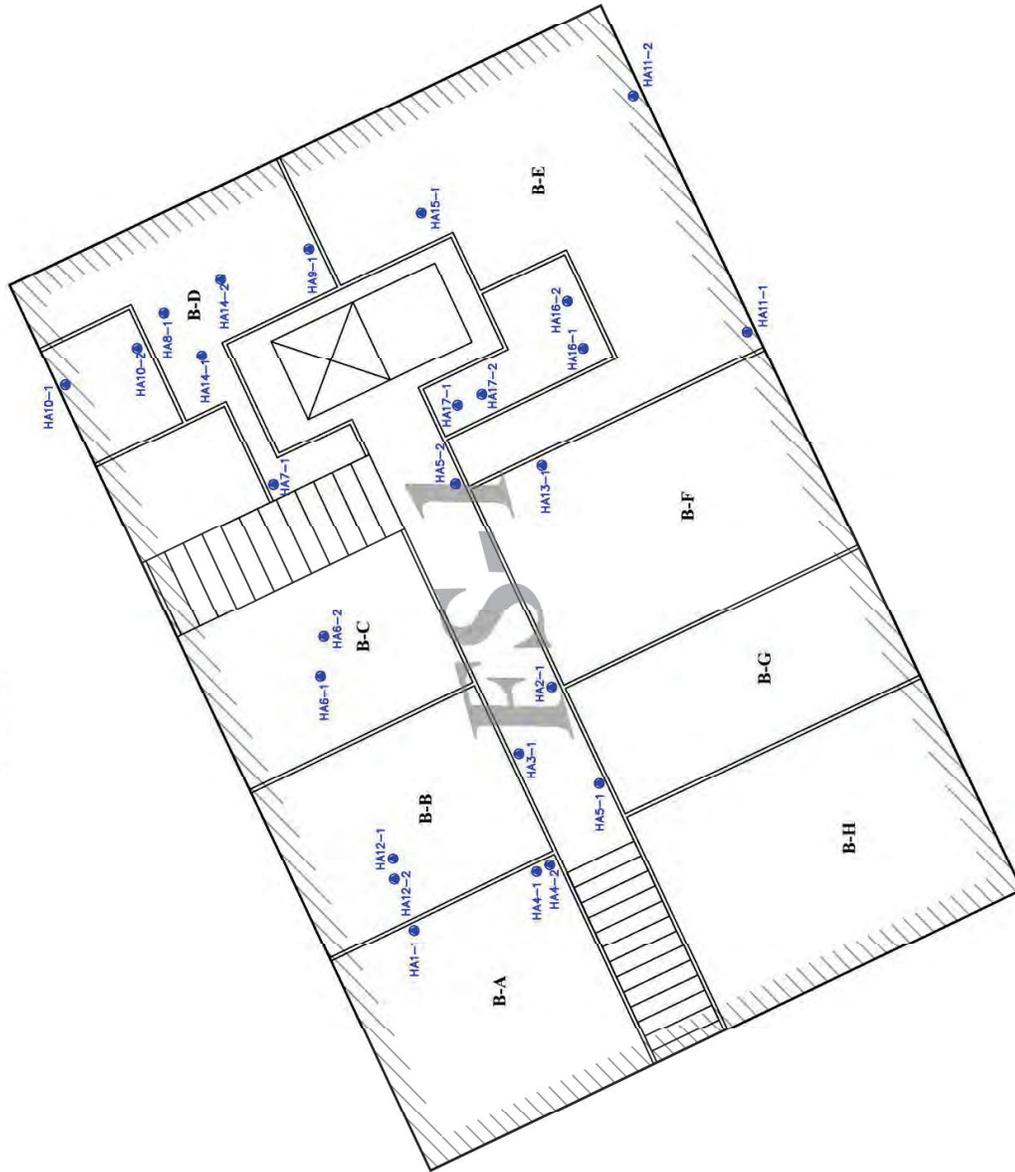


Wayne Krupp
Regional Industrial Hygiene Manager

Figures



BASEMENT



LEGEND:

- FS FUNCTIONAL SPACE
- ASBESTOS SAMPLE



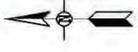
FIGURE 1
GENERALIZED DIAGRAM OF THE BASEMENT

PROJ:

ROSELAWN APARTMENTS
111 HIGHLAND STREET
HIGHLAND PARK, MI

TITLE IS NOT A LEGAL SURVEY	DATE: 2/3/2017
SCALE: 1" = 10'	SCALE: 1" = 10'
DRN BY: CS	CHKD BY: JB
FILE NAME: 02-7709-0-019F00F00	

1ST FLOOR



LEGEND:

- FS FUNCTIONAL SPACE
- ASBESTOS SAMPLE



FIGURE 2
GENERALIZED DIAGRAM OF THE 1ST FLOOR

PROJ:

ROSELAWN APARTMENTS
111 HIGHLAND STREET
HIGHLAND PARK, MI

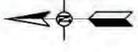
THIS IS NOT A LEGAL SURVEY	DRN BY: CS	DATE: 2/3/2017
VERTICAL SCALE	CHKD BY: JB	SCALE: 1" = 20'
0		
FILE NAME: 02-7709-0-019F00F00		

EXTERIOR
FS-8

2ND FLOOR



EXTERIOR
FS-8



LEGEND:

- FS FUNCTIONAL SPACE
- ASBESTOS SAMPLE



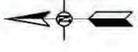
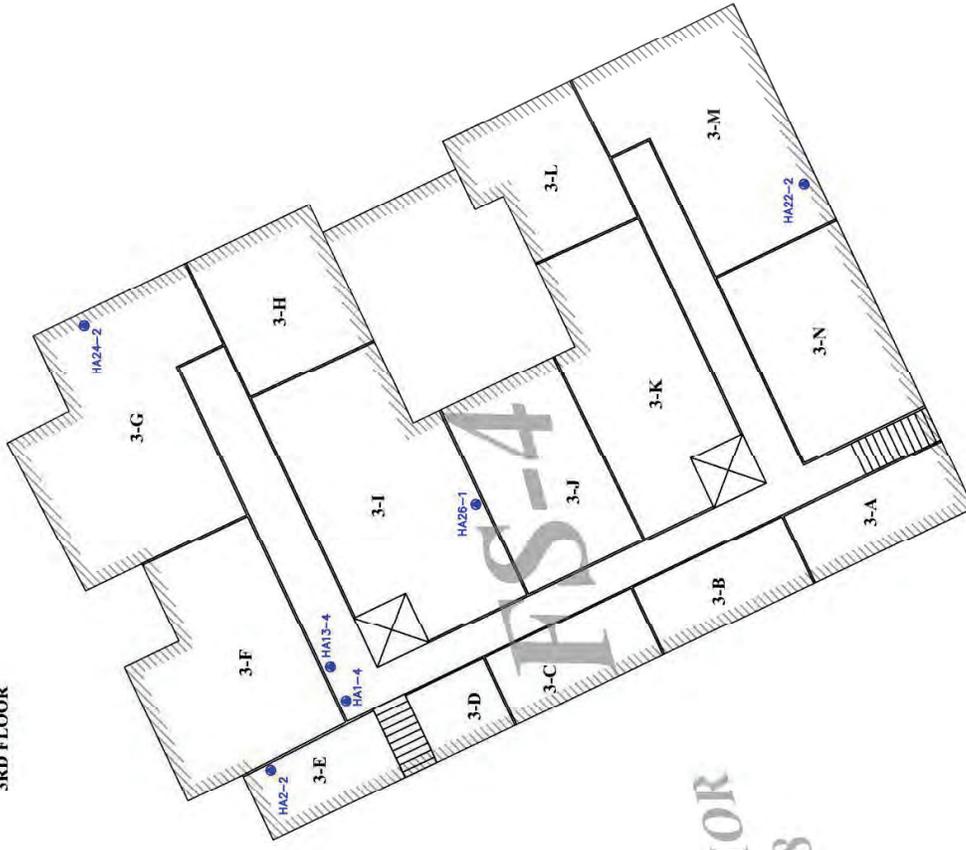
FIGURE 3
GENERALIZED DIAGRAM OF THE 2ND FLOOR

PROJECT: ROSELAWN APARTMENTS
111 HIGHLAND STREET
HIGHLAND PARK, MI

THIS IS NOT A LEGAL SURVEY	DATE: 2/3/2017
SCALE: 1" = 20'	DRN BY: CS
SCALE: 1" = 20'	CHKD BY: JB
FILE NAME: 02-7709-0-019F00F00	

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THIS IS NOT A LEGAL SURVEY
SCALE: 1" = 20'
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3RD FLOOR



LEGEND:

- FS FUNCTIONAL SPACE
- ASBESTOS SAMPLE



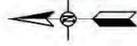
FIGURE 4
GENERALIZED DIAGRAM OF THE 3RD FLOOR

PROJECT: ROSELAWN APARTMENTS
111 HIGHLAND STREET
HIGHLAND PARK, MI

THIS IS NOT A LEGAL SURVEY	DATE: 2/3/2017
SCALE: 1" = 20'	DRN BY: CS
SCALE: 20'	CHKD BY: JB
FILE NAME: 02-7709-0-019F00F00	

EXTERIOR
FS-8

4TH FLOOR



LEGEND:

- FS FUNCTIONAL SPACE
- ASBESTOS SAMPLE



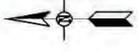
FIGURE 5
GENERALIZED DIAGRAM OF THE 4TH FLOOR

PROJ:

ROSELAWN APARTMENTS
111 HIGHLAND STREET
HIGHLAND PARK, MI

THIS IS NOT A LEGAL SURVEY	DATE: 2/3/2017
SCALE: 1" = 20'	DRN BY: CS
FILE NO: 02-7709-0-019F00F00	CHKD BY: JB

6TH FLOOR



LEGEND:

- FS FUNCTIONAL SPACE
- ASBESTOS SAMPLE



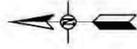
FIGURE 7
GENERALIZED DIAGRAM OF THE 6TH FLOOR

PROJECT: ROSELAWN APARTMENTS
111 HIGHLAND STREET
HIGHLAND PARK, MI

THIS IS NOT A LEGAL SURVEY	DATE: 2/3/2017
SCALE: 1" = 20'	DRN BY: CS
SCALE: 1" = 20'	CHKD BY: JB
FILE NAME: 02-7709-0-019F00F00	

0
THIS IS NOT A LEGAL SURVEY
SCALE: 1" = 20'
IF ANY PART OF THIS DRAWING IS TO BE USED FOR ANY OTHER PURPOSE, THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMISSIONS FROM THE ORIGINAL AUTHOR.

ROOF TOP



LEGEND:

- FS FUNCTIONAL SPACE
- ASBESTOS SAMPLE



FIGURE 8
GENERALIZED DIAGRAM OF THE ROOF TOP

PROJECT:

ROSELAWN APARTMENTS
111 HIGHLAND STREET
HIGHLAND PARK, MI

THIS IS NOT A LEGAL SURVEY	DATE: 2/3/2017
SCALE: 1" = 20'	DRN BY: CS
CHNG BY: JB	SCALE: 1" = 20'
FILE NAME: 02-7709-0-019F00F00	

EXTERIOR
FS-8

Tables

Table 1
Description of Functional Spaces
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

Functional Space No.	Functional Space Description	Floor
1	Basement	Basement
2	First Floor	1st
3	Second Floor	2nd
4	Third Floor	3rd
5	Fourth Floor	4th
6	Fifth Floor	5th
7	Sixth Floor	6th
8	Exterior	Exterior

Table 1 Notes:

The term Functional Space (FS) is defined as one or more spatially distinct units or areas within a building. During the survey, the demarcation of these spaces is based on the judgement of the inspector(s), site plans, or other use features deemed appropriate at the time of the survey.

Table 2
Summary of Homogeneous Areas
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Asbestos Content
1	Plaster	None Detected
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	55% Chrysotile
3	Pyro-Block and Mortar	None Detected
4	Gray Sheet Flooring and Mastic	None Detected
5	9" x 9" Floor Tile and Mastic - Black and Red Intermixed	Black Floor Tile: 5% Chrysotile, Mastic: 2% Chrysotile, Red Floor Tile: 5% Chrysotile, Mastic: 2% Chrysotile
6	Wood Floor Vapor Barrier	None Detected
7	12" x 12" Floor Tile and Mastic - Brown Pebble Pattern	Floor Tile: 3% Chrysotile, Mastic: None Detected
8	9" x 9" Floor Tile and Mastic - Tan with Light Tan Specks	Floor Tile: 2% Chrysotile, Mastic: None Detected
9	Drywall and Joint Compound	Joint Compound: 2% Chrysotile, Wallboard: None Detected
10	Brown Cove Base and Adhesive	None Detected
11	Interior Window Glazing	None Detected
12	Multi-Layered Sheet Flooring - Basement - Room B-G	Beige Floor Tile: 3% Chrysotile, Yellow Mastic: None Detected, Black Floor Tile: None Detected, Black Mastic: None Detected, Black Sheet Flooring: None Detected
13	Wall and Ceiling Texture on Plaster	3% Chrysotile
14	12" x 12" Floor Tile and Mastic - Light Tan	Floor Tile: 2% Chrysotile, Mastic: None Detected
15	9" x 9" Floor Tile and Mastic - Light Tan	Floor Tile: 2% Chrysotile, Mastic: None Detected
16	9" x 9" Floor Tile and Mastic - Orange Marbled	Floor Tile: 5% Chrysotile, Mastic: None Detected
17	9" x 9" Floor Tile and Mastic - Tan with Cream Streaks	Floor Tile: 5% Chrysotile, Mastic: None Detected

Table 2
Summary of Homogeneous Areas
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Asbestos Content
18	9" x 9" Floor Tile and Mastic - Black with Gold Flake Pattern	Floor Tile: 3% Chrysotile, Mastic: None Detected
19	12" x 12" Floor Tile and Mastic - Tan Brick Pattern	None Detected
20	Sheet Flooring and Mastic - Tan 9" Square Pattern	None Detected
21	Residual Mastic	2% Chrysotile
22	9" x 9" Floor Tile and Mastic - All Black	Floor Tile: 3% Chrysotile, Mastic: None Detected
23	9" x 9" Floor Tile and Mastic - Green with White Streaks	Floor Tile: 4% Chrysotile, Mastic: None Detected
24	9" x 9" Floor Tile and Mastic - All Red	None Detected
25	Multi-Layered Kitchen Flooring and Mastic - Room Adjacent SE to NW Stairwell	Black/Brown Sheet Flooring: None Detected, Brown/Black Sheet Flooring: None Detected, Floor Tile: 3% Chrysotile, Adhesive: None Detected
26	Black Sheet Flooring and Mastic	None Detected
27	9" x 9" Floor Tile and Mastic - Yellow	Floor Tile: 2% Chrysotile, Mastic: None Detected
28	9" x 9" Floor Tile and Mastic - White and Black Intermixed	Floor Tile: 2% Chrysotile, Mastic: None Detected
29	12" x 12" Floor Tile and Mastic - Tan Flower Pattern	Beige Floor Tile: None Detected, Yellow Mastic: None Detected, Grey Floor Tile: 3% Chrysotile, Black Mastic: None Detected, Black Sheet Flooring: None Detected

Table 2
Summary of Homogeneous Areas
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Asbestos Content
30	12" x 12" Floor Tile and Mastic - Tan with Cross Pattern	Floor Tile: 3% Chrysotile, Mastic: None Detected
31	Exterior Window Glazing	2% Chrysotile
32	Tan Pipe Insulation	None Detected
33	Black Expansion Joint	None Detected
34	Black Roofing Material	None Detected
35	Black Roof Flashing	5% Chrysotile
36	Exterior Door Caulk - White	15% Chrysotile
37	Roofing Shingles	None Detected
38	Multi-Layered Flooring - Inaccessible Area (Assumed ACM)	Assumed ACM

Table 2 Notes and Acronyms:

1. Asbestos is a group of fibrous minerals that include: actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite.
2. Homogeneous Areas listed in bold text were identified to contain asbestos by laboratory analysis or were assumed to contain asbestos based on the scope of work requirements.
3. Homogeneous Area (HA) is defined as an area of surfacing materials, thermal surface insulation, or miscellaneous material that is uniform in color and texture.

Table 3
Summary of ACM and Material Characteristics
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	EPA Category	Abatement Recommendations	Estimated Quantity
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	Damaged	Yes	Friable ACM	Abate Prior to Renovation Activities	5,760 LF
5	9" x 9" Floor Tile and Mastic - Black and Red Intermixed	Damaged	No	Category I	Abate Prior to Renovation Activities	600 SF
7	12" x 12" Floor Tile and Mastic - Brown Pebble Pattern	Damaged	No	Category I	Abate Prior to Renovation Activities	270 SF
8	9" x 9" Floor Tile and Mastic - Tan with Light Tan Specks	Damaged	No	Category I	Abate Prior to Renovation Activities	320 SF
9	Drywall and Joint Compound	Damaged	No	Category II	Abate Prior to Renovation Activities	1,150 SF
12	Multi-Layered Sheet Flooring - Basement - Room B-G	Damaged	No	Category I	Abate Prior to Renovation Activities	200 SF
13	Wall and Ceiling Texture on Plaster	Damaged	No	Category II	Abate Prior to Renovation Activities	199,800 SF
14	12" x 12" Floor Tile and Mastic - Light Tan	Damaged	No	Category I	Abate Prior to Renovation Activities	340 SF
15	9" x 9" Floor Tile and Mastic - Light Tan	Damaged	No	Category I	Abate Prior to Renovation Activities	860 SF
16	9" x 9" Floor Tile and Mastic - Orange Marbled	Damaged	No	Category I	Abate Prior to Renovation Activities	650 SF
17	9" x 9" Floor Tile and Mastic - Tan with Cream Streaks	Damaged	No	Category I	Abate Prior to Renovation Activities	400 SF
18	9" x 9" Floor Tile and Mastic - Black with Gold Flake Pattern	Damaged	No	Category I	Abate Prior to Renovation Activities	360 SF
21	Residual Mastic	Damaged	No	Category I	Abate Prior to Renovation Activities	40 SF
22	9" x 9" Floor Tile and Mastic - All Black	Damaged	No	Category I	Abate Prior to Renovation Activities	120 SF
23	9" x 9" Floor Tile and Mastic - Green with White Streaks	Damaged	No	Category I	Abate Prior to Renovation Activities	635 SF
25	Multi-Layered Kitchen Flooring and Mastic - Room Adjacent SE to NW Stairwell	Damaged	No	Category I	Abate Prior to Renovation Activities	120 SF
27	9" x 9" Floor Tile and Mastic - Yellow	Damaged	No	Category I	Abate Prior to Renovation Activities	20 SF

Table 3
Summary of ACM and Material Characteristics
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	EPA Category	Abatement Recommendations	Estimated Quantity
28	9" x 9" Floor Tile and Mastic - White and Black Intermixed	Damaged	No	Category I	Abate Prior to Renovation Activities	170 SF
29	12" x 12" Floor Tile and Mastic - Tan Flower Pattern	Damaged	No	Category I	Abate Prior to Renovation Activities	20 SF
30	12" x 12" Floor Tile and Mastic - Tan with Cross Pattern	Damaged	No	Category I	Abate Prior to Renovation Activities	60 SF
31	Exterior Window Glazing	Damaged	No	Category II	Abate Prior to Renovation Activities	152 SF
35	Black Roof Flashing	Damaged	No	Category I	Abate Prior to Renovation Activities	2,040 SF
36	Exterior Door Caulk - White	Damaged	No	Category II	Abate Prior to Renovation Activities	4 SF
38	Multi-Layered Flooring - Inaccessible Area (Assumed ACM)	Damaged	No	Category I	Abate Prior to Renovation Activities	3,980 SF

Table 3 Notes and Acronyms:

- Homogeneous Area (HA) is defined as an area of surfacing materials, thermal surface insulation, or miscellaneous material that is uniform in color and texture.
- EPA Category I non-friable ACM consist of asbestos containing packings, gaskets, resilient floor coverings, and asphalt roofing materials. These materials can be left in-place during Renovation Activities if materials remain intact and non-friable. If concrete is planned to be recycled as part of Renovation Activities activities, all Category I non-friable flooring materials must be removed.
- SF = Square Feet; LF = Linear Feet; CF = Cubic Feet; EA = Each

Table 4
Summary of Homogeneous Areas by Functional Space
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	Estimated Quantity	ACM (Yes/No)	Comments/Recommendation
FS - 1 Basement						
1	Plaster	Damaged	Yes	13,000 SF	No	walls and ceiling throughout
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	Damaged	Yes	720 LF*	Yes	on pipes intermittently throughout basement; intermittently mixed throughout basement as debris; roughly one third of pipe insulation is debris mixed in basement on floor; pipe insulation as debris is approximately 300 SF intermittently throughout basement
3	Pyro-Block and Mortar	Damaged	Yes	6,500 SF	No	on all walls behind plaster
4	Gray Sheet Flooring and Mastic	Damaged	No	30 SF	No	Room B-A
5	9" x 9" Floor Tile and Mastic - Black and Red Intermixed	Damaged	No	600 SF	Yes	basement level; in central hallway and northeast hallway
6	Wood Floor Vapor Barrier	Damaged	Yes	3,000 SF	No	present intermittently intermittently throughout all rooms
7	12" x 12" Floor Tile and Mastic - Brown Pebble Pattern	Damaged	No	100 SF	Yes	in hallway outside of room B-D
8	9" x 9" Floor Tile and Mastic - Tan with Light Tan Specks	Damaged	No	180 SF	Yes	under carpet in room B-D
9	Drywall and Joint Compound	Damaged	No	1,100 SF	Yes	present in room B-D and storage room in room B-E
10	Brown Cove Base and Adhesive	Damaged	No	30 LF	No	Room B-D
11	Interior Window Glazing	Damaged	Yes	280 LF	No	on 7 windows at 5' x 5'; all in room B-E
12	Multi-Layered Sheet Flooring - Basement - Room B-G	Damaged	Yes	200 SF	Yes	under debris

Table 4
Summary of Homogeneous Areas by Functional Space
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	Estimated Quantity	ACM (Yes/No)	Comments/Recommendation
FS - 1 Basement						
13	Wall and Ceiling Texture on Plaster	Damaged	No	2,800 SF	Yes	ceilings and walls throughout room B-C
14	12" x 12" Floor Tile and Mastic - Light Tan	Damaged	No	150 SF	Yes	under carpet in room B-D
15	9" x 9" Floor Tile and Mastic - Light Tan	Damaged	No	700 SF	Yes	under carpet in room B-E
16	9" x 9" Floor Tile and Mastic - Orange Marbled	Damaged	No	650 SF	Yes	storage room of room B-E
17	9" x 9" Floor Tile and Mastic - Tan with Cream Streaks	Damaged	No	400 SF	Yes	storage room of room B-E
FS - 2 First Floor						
1	Plaster	Damaged	Yes	39,400 SF	No	walls and ceilings throughout the floor
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	Damaged	Yes	740 LF*	Yes	in all rooms behind kitchen and bathroom walls
3	Pyro-Block and Mortar	Damaged	No	25,000 SF	No	behind plaster on all walls of hallway; on interior walls of all rooms
7	12" x 12" Floor Tile and Mastic - Brown Pebble Pattern	Damaged	No	150 SF	Yes	room 1-E kitchen under carpet
9	Drywall and Joint Compound	Damaged	No	50 SF	Yes	north common area
13	Wall and Ceiling Texture on Plaster	Damaged	No	39,400 SF	Yes	walls and ceilings throughout the floor
14	12" x 12" Floor Tile and Mastic - Light Tan	Damaged	No	120 SF	Yes	room 1-D kitchen
15	9" x 9" Floor Tile and Mastic - Light Tan	Damaged	No	40 SF	Yes	room 1-M kitchen under carpet; also in room 1-L kitchen
18	9" x 9" Floor Tile and Mastic - Black with Gold Flake Pattern	Damaged	No	240 SF	Yes	in room 1-G kitchen and room 1-A kitchen
19	12" x 12" Floor Tile and Mastic - Tan Brick Pattern	Damaged	No	110 SF	No	room 1-C kitchen; room 1-B kitchen; room 1-J kitchen
20	Sheet Flooring and Mastic - Tan 9" Square Pattern	Damaged	No	20 SF	No	Room 1-I kitchen
38	Multi-Layered Flooring - Inaccessible Area (Assumed ACM)	Damaged	No	280 SF	Yes	room 1-H kitchen; room 1-K kitchen; room 1-N kitchen

Table 4
Summary of Homogeneous Areas by Functional Space
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	Estimated Quantity	ACM (Yes/No)	Comments/Recommendation
FS - 3 Second Floor						
1	Plaster	Damaged	Yes	39,400 SF	No	walls and ceilings throughout the floor
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	Damaged	Yes	740 LF*	Yes	in all rooms behind kitchen and bathroom walls
3	Pyro-Block and Mortar	Damaged	No	25,000 SF	No	behind plaster on all walls of hallway; on interior walls of all rooms
7	12" x 12" Floor Tile and Mastic - Brown Pebble Pattern	Damaged	No	20 SF	Yes	room 2-K kitchen
13	Wall and Ceiling Texture on Plaster	Damaged	No	39,400 SF	Yes	
21	Residual Mastic	Damaged	No	40 SF	Yes	in room 2-C kitchen; room 2-J kitchen
22	9" x 9" Floor Tile and Mastic - All Black	Damaged	No	60 SF	Yes	room 2-H kitchen
23	9" x 9" Floor Tile and Mastic - Green with White Streaks	Damaged	No	120 SF	Yes	room 2-M kitchen; room 2-L kitchen
24	9" x 9" Floor Tile and Mastic - All Red	Damaged	No	35 SF	No	room 2-M closet
25	Multi-Layered Kitchen Flooring and Mastic - Room Adjacent SE to NW Stairwell	Damaged	No	120 SF	Yes	room 2-D kitchen
38	Multi-Layered Flooring - Inaccessible Area (Assumed ACM)	Damaged	No	660 SF	Yes	room 2-E kitchen; room 2-A kitchen; room 2-I kitchen; room 2-B kitchen; room 2-F kitchen; room 2-G kitchen; room 2-N kitchen

Table 4
Summary of Homogeneous Areas by Functional Space
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	Estimated Quantity	ACM (Yes/No)	Comments/Recommendation
FS - 4 Third Floor						
1	Plaster	Damaged	Yes	39,400 SF	No	walls and ceilings throughout the floor
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	Damaged	Yes	740 LF*	Yes	in all rooms behind kitchen and bathroom walls
3	Pyro-Block and Mortar	Damaged	No	25,000 SF	No	behind plaster on all walls of hallway; on interior walls of all rooms
13	Wall and Ceiling Texture on Plaster	Damaged	No	39,400 SF	Yes	
22	9" x 9" Floor Tile and Mastic - All Black	Damaged	No	60 SF	Yes	room 3-M
23	9" x 9" Floor Tile and Mastic - Green with White Streaks	Damaged	No	275 SF	Yes	room 3-H kitchen; room 3-N
24	9" x 9" Floor Tile and Mastic - All Red	Damaged	No	120 SF	No	room 3-G closet; room 3-H
26	Black Sheet Flooring and Mastic	Damaged	No	20 SF	No	room 3-I kitchen
38	Multi-Layered Flooring - Inaccessible Area (Assumed ACM)	Damaged	No	700 SF	Yes	room 3-E kitchen; room 3-C kitchen; room 3-F kitchen; room 3-G kitchen; room 3-J kitchen; room 3-K kitchen; room 3-L kitchen; room 3-A kitchen; room 3-B kitchen; room 3-D kitchen

Table 4
Summary of Homogeneous Areas by Functional Space
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	Estimated Quantity	ACM (Yes/No)	Comments/Recommendation
FS - 5 Fourth Floor						
1	Plaster	Damaged	Yes	39,400 SF	No	walls and ceilings throughout the floor
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	Damaged	Yes	740 LF*	Yes	in all rooms behind kitchen and bathroom walls
3	Pyro-Block and Mortar	Damaged	No	25,000 SF	No	behind plaster on all walls of hallway; on interior walls of all rooms
13	Wall and Ceiling Texture on Plaster	Damaged	No	39,400 SF	Yes	
14	12" x 12" Floor Tile and Mastic - Light Tan	Damaged	No	70 SF	Yes	room 4-H
23	9" x 9" Floor Tile and Mastic - Green with White Streaks	Damaged	No	120 SF	Yes	room 4-N kitchen
26	Black Sheet Flooring and Mastic	Damaged	No	50 SF	No	room 4-B closet
27	9" x 9" Floor Tile and Mastic - Yellow	Damaged	No	20 SF	Yes	room 4-J kitchen
28	9" x 9" Floor Tile and Mastic - White and Black Intermixed	Damaged	No	90 SF	Yes	room 4-M
38	Multi-Layered Flooring - Inaccessible Area (Assumed ACM)	Damaged	No	820 SF	Yes	room 4-A kitchen; room 4-D kitchen; room 4-E kitchen; room 4-F kitchen; room 4-G kitchen; room 4-K kitchen; room 4-L kitchen; room 4-C kitchen; room 4-I kitchen

Table 4
Summary of Homogeneous Areas by Functional Space
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	Estimated Quantity	ACM (Yes/No)	Comments/Recommendation
FS - 6 Fifth Floor						
1	Plaster	Damaged	Yes	39,400 SF	No	walls and ceilings throughout the floor
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	Damaged	Yes	740 LF*	Yes	in all rooms behind kitchen and bathroom walls
3	Pyro-Block and Mortar	Damaged	No	25,000 SF	No	behind plaster on all walls of hallway; on interior walls of all rooms
13	Wall and Ceiling Texture on Plaster	Damaged	No	39,400 SF	Yes	
18	9" x 9" Floor Tile and Mastic - Black with Gold Flake Pattern	Damaged	No	120 SF	Yes	room 5-N kitchen
19	12" x 12" Floor Tile and Mastic - Tan Brick Pattern	Damaged	No	20 SF	No	room 5-B kitchen
24	9" x 9" Floor Tile and Mastic - All Red	Damaged	No	50 SF	No	room 5-C closet
38	Multi-Layered Flooring - Inaccessible Area (Assumed ACM)	Damaged	No	980 SF	Yes	room 5-A kitchen; room 5-C kitchen; room 5-D kitchen; room 5-E kitchen; room 5-F kitchen; room 5-G kitchen; room 5-H kitchen; room 5-I kitchen; room 5-J kitchen; room 5-K kitchen; room 5-L kitchen; room 5-M kitchen

Table 4
Summary of Homogeneous Areas by Functional Space
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	Estimated Quantity	ACM (Yes/No)	Comments/Recommendation
FS - 7 Sixth Floor						
1	Plaster	Damaged	Yes	39,400 SF	No	walls and ceilings throughout the floor
2A/2B	Air Cell Straight Pipe Insulation and Associated Fittings	Damaged	Yes	1,340 LF*	Yes	in all rooms behind kitchen and bathroom walls; roughly half is present above the ceiling
3	Pyro-Block and Mortar	Damaged	No	25,000 SF	No	behind plaster on all walls of hallway; on interior walls of all rooms
8	9" x 9" Floor Tile and Mastic - Tan with Light Tan Specks	Damaged	No	140 SF	Yes	room 6-F kitchen; room 6-I kitchen
13	Wall and Ceiling Texture on Plaster	Damaged	No	39,400 SF	Yes	
15	9" x 9" Floor Tile and Mastic - Light Tan	Damaged	No	120 SF	Yes	room 6-N kitchen
23	9" x 9" Floor Tile and Mastic - Green with White Streaks	Damaged	No	120 SF	Yes	room 6-K kitchen
24	9" x 9" Floor Tile and Mastic - All Red	Damaged	No	25 SF	No	room 6-I
28	9" x 9" Floor Tile and Mastic - White and Black Intermixed	Damaged	No	80 SF	Yes	room 6-H; room 6-L
29	12" x 12" Floor Tile and Mastic - Tan Flower Pattern	Damaged	No	20 SF	Yes	room 6-E kitchen
30	12" x 12" Floor Tile and Mastic - Tan with Cross Pattern	Damaged	No	60 SF	Yes	room 6-H
38	Multi-Layered Flooring - Inaccessible Area (Assumed ACM)	Damaged	No	540 SF	Yes	room 6-A kitchen; room 6-B kitchen; room 6-C kitchen; room 6-D kitchen; room 6-G kitchen; room 6-J kitchen; room 6-M kitchen

Table 4
Summary of Homogeneous Areas by Functional Space
111 Highland Street, Highland Park, MI
PM Project No. 02-7709-0-0019

HA No.	Homogeneous Area Description	Condition	Friable (Yes/No)	Estimated Quantity	ACM (Yes/No)	Comments/Recommendation
FS - 8	Exterior					
31	Exterior Window Glazing	Damaged	No	152 SF	Yes	Approx. 0.4 SF per windows - 110 each on S face; 68 each on - W face; 118 each on - N face; 154 each on - E face; 2 each on the 6th floor roof
32	Tan Pipe Insulation	Damaged	Yes	10 LF	No	rooftop mechanical room
33	Black Expansion Joint	Damaged	Yes	5 SF	No	rooftop mechanical room
34	Black Roofing Material	Damaged	No	3,900 SF	No	above sixth floor; parallel with 1st floor
35	Black Roof Flashing	Damaged	No	2,040 SF	Yes	above sixth floor; parallel with 1st floor
36	Exterior Door Caulk - White	Damaged	No	4 SF	Yes	rooftop doors
37	Roofing Shingles	Damaged	No	200 SF	No	1st floor roof

Table 4 Notes and Acronyms:

1. Functional Space (FS) is defined as a one or more spatially distinct units within a building or structure.
2. Homogeneous Areas listed in bold text were identified to contain asbestos by laboratory analysis or were assumed to contain asbestos based on the scope of work requirements.
3. Homogeneous Area (HA) is defined as an area of surfacing materials, thermal surface insulation, or miscellaneous material that is uniform in color and texture.
4. SF = Square Feet; LF = Linear Feet; CF = Cubic Feet; EA = Each

*Additional quantities of asbestos-containing pipe insulation may be present within wall and ceiling cavities, which were inaccessible.

Table 5
Inventory of Hazardous Materials/Universal Waste
111 Highland Street, Highland Park, Michigan
PM Project No. 02-7709-0-0019

Component Description	Size	Comments	Quantity	Disposal Aspect
FS - 1 Basement				
Fluorescent Bulb	8'	-	7 EA	Mercury Vapor
Smoke Detectors	6"	-	1 EA	Americium 241
Ballasts	N/A	-	6 EA	PCBs
Appliances/Electronics	30"	T.V	1 EA	Cathode Ray Tubes, Lead/Metals
Tire	24"	-	1 EA	-
Spray Paint Cans	8 - 15 oz	-	6 EA	See SDS
Paint Cans	1 - 5 gal	-	22 EA	See SDS
Various Janitor Cleaning Supplies	N/A	Janitors Closet	20 Bottles	See SDS
FS - 2 1st Floor				
Fluorescent Bulb	4'	-	4 EA	Mercury Vapor
Spray Paint Cans	8 - 15 oz	-	3 EA	See SDS
Paint Cans	5 gal	-	1 EA	See SDS
Anit-Freeze	1 gal	-	1 EA	See SDS
Ballasts	N/A	-	4 EA	PCBs
FS - 3 2nd Floor				
Spray Paint Cans	8 - 15 oz	-	2 EA	See SDS
Paint Cans	1 gal	-	1 EA	See SDS
FS - 4 3rd Floor				
Appliances/Electronics	30"	T.V.	4 EA	Cathode Ray Tubes, Lead/Metals
FS - 5 4th Floor				
Tire	24"	-	1 EA	-
Paint Cans	5 gal	-	1 EA	See SDS
Appliances/Electronics	30"	T.V.	1 EA	Cathode Ray Tubes, Lead/Metals

Table 5
Inventory of Hazardous Materials/Universal Waste
111 Highland Street, Highland Park, Michigan
PM Project No. 02-7709-0-0019

Component Description	Size	Comments	Quantity	Disposal Aspect
FS - 6 5th Floor				
Spray Paint Cans	8 - 15 oz	-	2 EA	See SDS
Paint Cans	1 gal	-	1 EA	See SDS
FS - 7 6th Floor				
Spray Paint Cans	8 - 15 oz	-	3 EA	See SDS
Paint Cans	5 gal	-	2 EA	See SDS
FS - 8 Exterior				
High Intensity Discharge Lighting	N/A	-	4 EA	Mercury Vapor
Transformers	N/A	Pole-Mounted	2 EA	PCBs

Table 5 Notes and Acronyms:

1. PCB - Polychlorinated Biphenyl
2. CFC - Chlorofluorocarbon
3. SDS - Safety Data Sheet
4. SF = Square Feet; LF = Linear Feet; CF = Cubic Feet; EA = Each

Appendix A





Detroit
3400 Russell Street #255
Detroit, MI 48207
f: 877.884.6775
t: 313.324.8172

Berkley
4080 W. 11 Mile Road
Berkley, MI 48072
f: 877.884.6775
t: 248.336.9988

Lansing
3340 Ranger Road
Lansing, MI 48906
f: 877.884.6775
t: 517.321.3331

Grand Rapids
560 5th Street NW
Suite 301
Grand Rapids, MI 49504
f: 877.884.6775
t: 616.285.8857

**PM ENVIRONMENTAL, INC., PROJECT NUMBER 02-7709-0-019
SAMPLING AND ANALYSIS PLAN**

Location:

*Cortland Community Impact Center
111 Highland Street
In Highland Park, Wayne County, Michigan 48203*

Prepared For:

*Detroit-Wayne County Brownfields Assessment Coalition
500 Griswold, 28th Floor
Detroit, Michigan 48226*

**SAMPLING AND ANALYSIS PLAN
111 HIGHLAND STREET
IN HIGHLAND PARK, WAYNE COUNTY,
MICHIGAN 48203**

December 16, 2016

Prepared by:

PM Environmental, Inc.
3400 Russell Street #255
Detroit, Michigan 48207

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FIGURES

Figure 1 - Generalized Diagram of the Subject Property

APPENDICES

Appendix A - Site Specific Health and Safety Plan

1.0 INTRODUCTION

This Sampling and Analysis Plan (SAP) has been prepared on behalf of Detroit-Wayne County Brownfields Assessment Coalition as a part of their United States Environmental Protection Agency (USEPA) FY13 Site Assessment Grant Program, for the property located at 111 Highland Street in Highland Park, Wayne County, Michigan 48203 (subject property). Since significant renovation/demolition activities are planned, PM will perform a Pre-Demolition Hazardous Materials Survey in order to comply with State and Federal requirements.

All work conducted for this project will be conducted according to the Quality Assurance Project Plan (QAPP) and this SAP. The QAPP was prepared for Detroit-Wayne County Brownfield Coalition USEPA Site Assessment Grant Program.

2.0 SITE DESCRIPTION AND SUMMARY OF PREVIOUS INVESTIGATIONS

The subject property is occupied by a multifamily residential building, which is approximately 66,000 square feet in size, containing 90 units and constructed in 1920. PM has been requested to survey this building for ACMs and other regulated materials.

Based upon the dates of construction for the building the potential exists for suspect Asbestos Containing Materials (ACMs) to be present. Based on the construction date of the building prior to 1978, the potential exists for Lead Based Paint (LBP) to be present. Because the purchaser intends to demolish the current building, any identified friable RACM (Regulated Asbestos Containing Material) would have to be removed from the building prior to renovation.

3.0 PURPOSE OF THE SURVEY

The purpose of this survey is to identify, locate, classify, analyze, and estimate quantities of Hazardous Materials that must be removed or managed according to Federal, State, or local agency requirements prior to or during its renovation and demolition activities. The findings from this survey will be used by the developer in the planning and execution of renovation and demolition activities at the subject property.

4.0 PROPOSED SAP ACTIVITIES

This assessment will be conducted in accordance with the scope of services submitted to Detroit-Wayne County Brownfields Assessment Coalition as part of the Brownfield Assessment Grant.

Hazardous Materials Survey

Summary of Field Inspection Activities

The Hazmat Survey can be broken into four sequential components: a) the environmental records review; b) property survey and inspection; c) sampling and analysis of suspect materials; and d) preparation of a report that details the findings and recommendations of the survey. Each of these components is described below.

PM personnel will conduct a visual inspection of the subject property and on-site building/structures to identify and quantify known regulated materials located in specific areas of the buildings and identify materials that should be sampled and analyzed to determine if said materials require special handling during future demolition efforts.

During the survey, PM will require access into all relevant areas, such as maintenance rooms, equipment rooms, storage closets, vaults/substations, roof tops, etc. PM will coordinate with the client or its designated representatives to facilitate this access prior to the property inspection. During the inspection, the following materials will be identified and noted:

- Asbestos Containing Materials (ACM);
- Mechanical and electrical systems and specific building coats that may contain PCBs;
- Potentially hazardous or regulated materials/wastes in containers, drums, or equipment reservoirs;
- Mercury containing equipment (e.g., switches, thermostats, bulbs, etc.);
- Universal Wastes including electronic items (i.e., computer monitors, telephone switching gear, etc.); and
- Chlorofluorocarbon (CFC) containing refrigerants

As part of the on-site inspection and survey, PM will conduct a visual check of sub-grade structures, if known to be present, to document if potential hazardous materials may be present in these areas.

Sampling and Analysis of Suspect Building Materials and System Components

Sampling and analysis of certain potentially-regulated materials may be needed to confirm the qualitative findings of the inspection. PM will collect samples of building construction materials and building system components and submit them to a laboratory for analysis to determine the content, of regulated materials or hazardous constituents.

The proposed sampling and analysis approach is based on the information available at this time and is in part based on PM's experience with similar projects. .

Inspection Methods and Techniques

During the property inspection and sampling, the following inspection methods and techniques will be employed and are summarized below.

Asbestos Assessment and Sampling

Prior to performing an inspection for asbestos containing building materials, PM collects the following information:

1. PM collects general information concerning the building, including its age, location, ownership, renovations, and other pertinent information (if available). PM obtains information concerning the presence and age of additions, and, whenever possible, a floor plan, blueprints, or other written documentation concerning the building.
2. PM collects information from any previous asbestos inspection(s), abatement actions, operations and maintenance activities, personnel training, and any other information relating the presence of asbestos or asbestos containing building materials (ACBM). PM attempts to determine any limitations that may have been present in previous inspections. On-site information from a knowledgeable custodian or other knowledgeable person is also obtained.

3. PM may in some cases, submit a Freedom of Information Act (FOIA) request to federal, state, or local agencies for information regarding previous abatements, renovations or demolitions at the subject site.

In building inspections, PM follows the asbestos protocol specified in AHERA (40 CFR 763 as amended). PM determines homogenous materials to be sampled based on the date of construction, size, color, and texture. PM determines which materials are suspect ACM and generally collects samples in triplicate. Materials such as Category II non-friable materials (i.e. roofing materials, floor tile, linoleum, etc.) may only have one sample collected based on the inspector's judgment and square footage of the material. Materials such as surfacing, thermal system insulation, and miscellaneous (i.e. drywall, plaster, ceiling tile, textured wall surfaces, pipe wrap, etc.) are generally collected utilizing AHERA's 3, 5, 7 rule which bases the number of samples collected on square footage of the material. Such materials are sampled based on a random pattern with a sample number corresponding to the material description, sample number, and location of the sampled material identified on the chain of custody.

Surfacing Materials (i.e. plaster, joint compounds, textured ceiling material, fireproofing, etc.) is sampled in accordance to the quantity of material present as measured by its square footage and is further defined below.

- If less than 1,000 square feet of material is present, a minimum of three bulk samples must be collected and analyzed by PLM;
- If between 1,000 and 5,000 square feet of material is present, a minimum of five bulk samples must be collected and analyzed by PLM; and
- If greater than 5,000 square feet of material is present, a minimum of seven samples must be space collected and analyzed by PLM.

In some cases, PM does not collect presumed ACM, such as 9" x 9" floor tile or materials such as linoleum or roofing materials as they may be demolished in place during demolition (if in good condition) or may not be sampled due to the destructive nature of the sampling. In these cases, any un-sampled suspect ACM are considered ACM until sampled.

Following the American Society for Testing and Materials (ASTM) E2356-14 Standard for Comprehensive Building Asbestos Surveys guidelines, samples are collected by misting, wetting, or removed in a manner to minimize dust and placed in laboratory provided, sealed plastic bags. A small amount of the materials, making sure to penetrate all layers, is collected. Each sample is given a unique sample identification number. Sampler decontamination is done between samples. Coring samplers are used once. When samples are collected with knives or other sharp objects, the sampler edges are cleaned between samples with alcohol impregnated disposable materials. Field notes regarding sampling are recorded.

In K-12 school inspections, PM uses Building Inspection and Management Planning forms. Inspection reports for commercial building and/or other inspections contain the same information in an abbreviated form. Both kinds of reports generally include the following information:

1. The date of the inspection.
2. Building (s) description. Each addition of a building is inspected as a "stand alone" section.
3. The name(s), signature(s), and accreditation numbers of inspectors who collect bulk

samples are recorded on the final asbestos report. PM uses only accredited inspectors to identify potential asbestos containing building materials (ACBM), collect samples and evaluate results. As part of the report, PM includes blueprints, diagrams, or written descriptions that clearly identify homogenous areas sampled for asbestos containing building materials (ACBM), or areas assumed to be ACBM.

4. The sample locations are recorded in field notes as well as the description of the sampled materials condition and friability. PM labels all sampling locations in the field, and/or locates them so that later inspectors can verify the sampling locations.
5. The approximate square or linear footage of each material sampled is determined and recorded in the field notes
6. PM submits samples with a chain of custody showing who collected the sample(s), who submitted the sample(s), the individual at the laboratory who received the sample(s), and who analyzed the samples(s). PM uses only NVLAP accredited laboratories for K-12 school samples analyses, and NVLAP or AIHA accredited laboratories for all other bulk sample analyses.
7. PM evaluates the condition of any identified ACBM according to AHERA specifications (damaged, significantly damaged, etc.). In PM's report, PM recommends repair, abatement, or other actions necessary for the ACBM to protect health and the environment.
8. In its report, PM may recommend additional inspections and testing that may evaluate existing problems. PM may also recommend two hour asbestos awareness training for custodial employees, and 16 hour training for employees who may conduct operations and maintenance actions. PM may recommend further actions that may be necessary to mitigate actual or potential hazards.
9. A photocopy of the laboratory's analysis report is provided as a report appendix.
10. Photographs and/or other information may also be included as an appendix.

In its final report, PM relates its findings and recommendations for each of the categories above to the regulatory conditions appropriate for PM's clients.

Hazardous Materials

The survey for hazardous or regulated materials will be completed according to the following protocol:

- PM will visually inspect the accessible areas of the building for potential hazardous materials such as PCB containing light ballasts, transformers, and mercury light tubes, switches, and thermostats. The inspection will be performed in each identified interior space and will include an inspection of approximately ten percent of all accessible fluorescent ceiling light fixtures for possible PCB-containing ballasts systems. In addition, PM will inspect onsite electrical switches and light bulbs to determine if potential mercury-containing materials exist in this equipment. No contact with manufacturers, sample collection, or testing of this equipment is proposed as part of this scope of work.
- PM will visually inspect electrical and mechanical equipment onsite to identify the potential for reservoirs that may contain lubricants or hydraulic fluids. As part of this proposal the sampling of hydraulic reservoirs will be performed provided that the equipment has been deemed non-operational as well as de-energized of its energy potential.

- PM will perform an inspection of the interior of the building to identify the location of containers, drums, batteries, oil/water separator basins, or other features that may contain wastes classified as hazardous, regulated, or universal in nature. Labeling observed on the containers and equipment will be noted in the assessment report. In addition, an evaluation of the condition (i.e., indications of leakage, corrosion, etc.) of the containers will be performed. As part of this assessment, no sampling of liquid, solid, or gaseous materials will be performed.

During the preparation of this survey, PM will perform these services using reasonable best efforts consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

5.0 PROJECT STAFF

The following is a list of staff that will be involved with this project. This list can also be found in the Site Health and Safety Plan (See Appendix A).

- Project Manager: Jon Balsamo
- Project Staff: Rich Michalski and Jacob Burt

6.0 SCHEDULE

The project activities will be scheduled immediately following the approval of this SAP. The Services shall be scheduled and performed once written acceptance and authorization is received by PM. PM reserves the right to extend the report delivery schedule as a result of any delay caused by:

- A delay in PM's receipt of an acceptable written authorization to proceed; and
- Delays in access to the subject property.

PM will notify the client of any changes in the expected report delivery date as a result of any of the aforementioned circumstances

Upon notification from client to proceed, PM will complete services in general accordance with the following schedule:

Prepare an Asbestos Survey Report: 15 - 20business days after completing field activities

7.0 HEALTH AND SAFETY PLAN

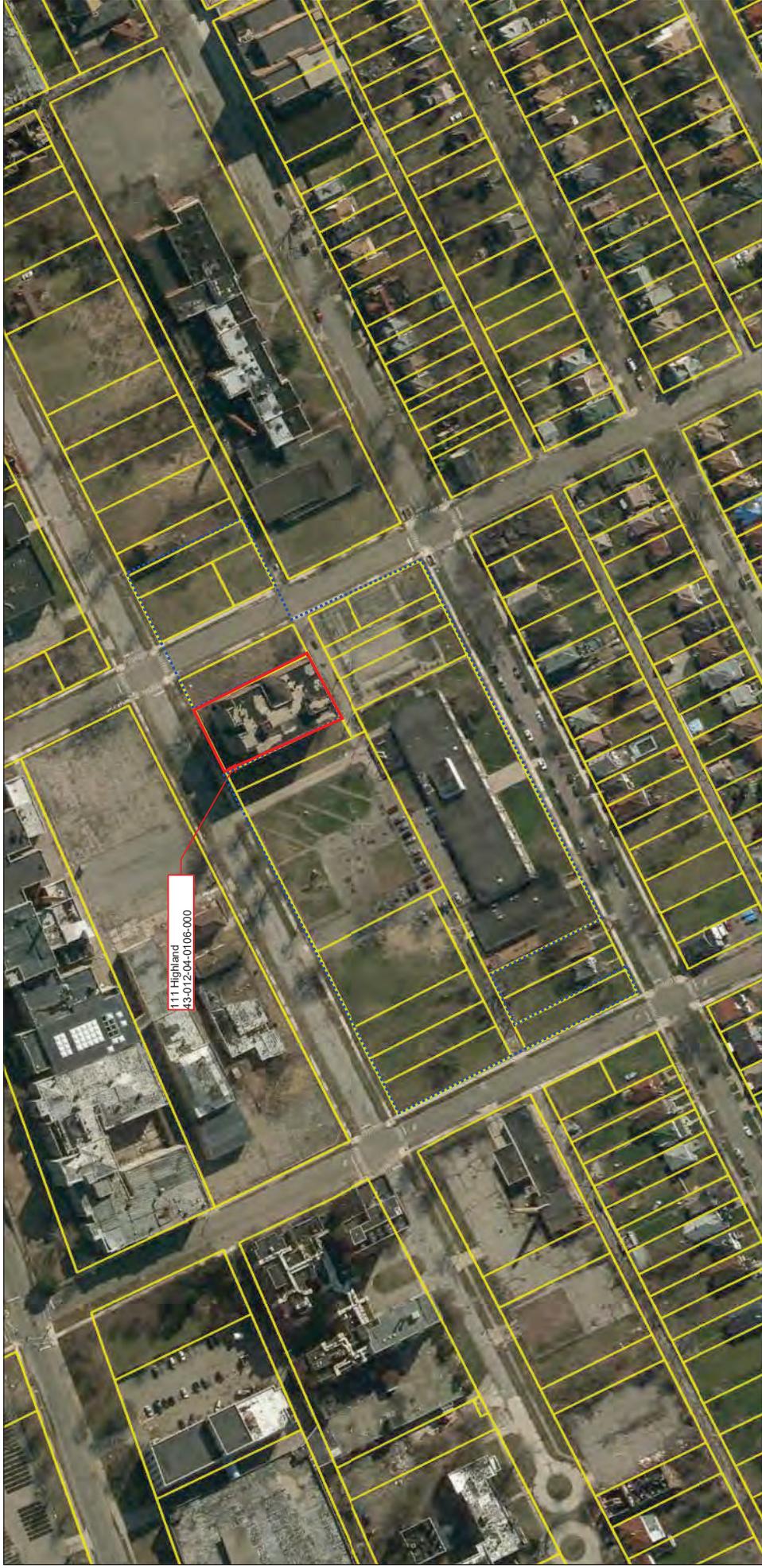
The attached Site-specific Health and Safety Plan (HASP) has been developed for this project. The plan lists a safety officer, emergency telephone numbers, directions to the nearest hospital/emergency room, and emergency procedures.

Field personnel will be required to review, sign and date the HASP before beginning any site activities within each project phase. A copy of the HASP is provided as Appendix A.

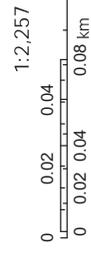
Figures



Wayne County Parcel Viewer



November 22, 2016



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendix A



Site-Specific Health and Safety Plan
Located at 111 Highland Street, Highland Park, Wayne County, Michigan 48203

This Health and safety Plan (HASP) documentation is designed to assist PM Environmental, Inc. (PM) personnel with providing for a safe work environment and is intended to be a site specific reference guide for PM's internal Health and Safety Program and accompanying Health and Safety Plan Manual

SITE EMERGENCY FORM

Contaminants of Concern: Asbestos Containing Materials (ACM) and Lead-Based Paint (LBP)

Minimum Level of Protection: Level-D PPE

Hazard Determination: Serious _____ Moderate _____ Low X

Do not endanger your own life. Survey the situation before taking any action.

PM Office Telephone:	248-336-9988
Site Location Address:	111 Highland Street, Highland Park, MI
Telephone Located at:	Use PM Employee Cell Phones

EMERGENCY PHONE NUMBERS
CONTACT PROJECT MANAGER (PM) OR HEALTH AND SAFETY MANAGER

Ambulance	911
Fire	911
Police	911
Hospital Name	Henry Ford Hospital
Hospital Phone Number	(313) 916-2600
Project Manager	Jon Balsamo (248) 688-7387
Health and Safety Manager	Same as above
Client Contact	Khalil Rahal (313-967-1034)
State Agency	MDEQ (586-753-3700)

UTILITY MARKER EMERGENCY TELEPHONE NUMBERS

Utility	Color Code	Telephone Number
Water	Blue	313-865-1876
Gas	Yellow	800-947-5000
Electric	Red	800-477-4747
Telephone/Cable	Orange	800-924-9420
Sewer	Green	313-865-1876
Dig Safe (MISSDIG or equivalent) Telephone Number: 800-482-7171		

HOSPITAL LOCATION MAP

111 Highland Street

Highland Park, MI 48203

Get on M-10 S in Detroit from Glendale Ave

-  1. Head southwest on Highland St toward 3rd Ave 3 min (0.8 mi)
-  2. Turn right at the 1st cross street onto 3rd Ave 0.1 mi
-  3. Turn left at the 1st cross street onto Glendale Ave 0.1 mi
-  4. Turn left to merge onto M-10 S 0.5 mi
-  5. Merge onto M-10 S 0.1 mi

Follow M-10 S to John C Lodge Service Dr. Take exit 5A from M-10 S

-  5. Merge onto M-10 S 2 min (2.0 mi)
-  6. Take exit 5A toward Pallister Ave 1.9 mi
-  7. Keep right at the fork and merge onto John C Lodge Service Dr 0.1 mi
-  8. Merge onto John C Lodge Service Dr 62 ft

Follow Pallister Ave to Byron St

-  8. Merge onto John C Lodge Service Dr 2 min (0.4 mi)
-  9. Turn right onto Pallister Ave 30 ft
-  10. Turn left onto Byron St 0.2 mi
-  11. Merge onto John C Lodge Service Dr 0.2 mi

Henry Ford Hospital

2799 West Grand Boulevard, Detroit, MI 48202

EMERGENCY FIRST AID

- Ingestion: DO NOT INDUCE VOMITING. Call Poison Control - follow instructions. Administer cardiopulmonary resuscitation (CPR), if necessary. Seek medical attention.
- Inhalation: Remove person from contaminated environment. Administer CPR if necessary. Seek medical attention. DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLESS PROPERLY EQUIPPED AND A STANDBY PERSON IS PRESENT.
- Skin Contact: Brush off dry material, remove wet or contaminated clothing. Flush skin thoroughly with water. Seek medical attention if irritation persists.
- Eye Contact: Flush eyes with water for 15 minutes. Seek medical attention.
- Exposure Headache, dizziness, nausea, drowsiness, irritation of eyes, nose, throat, Symptoms: breathing difficulties.
- Contingency Plan: Report incident to PM and Health and Safety Manager (HSM) after emergency procedures have been implemented.

RESPONDER MUST HAVE A CURRENT CERTIFICATE TO ADMINISTER FIRST AID OR CPR

1. Survey the situation. Do not endanger your own life. DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLESS PROPERLY EQUIPPED AND TRAINED. ENSURE ALL PROTOCOLS ARE FOLLOWED INCLUDING THAT A STANDBY PERSON IS PRESENT.
2. Call 911 (if available) or the fire department **IMMEDIATELY**. Explain the physical injury, chemical exposure, fire, or release.
3. Decontaminate the victim without delaying life-saving procedures.
4. If the victim's condition appears to be noncritical, but seems to be more severe than minor cuts, he/she should be transported to the nearest hospital by trained Emergency Medical Services (EMS) personnel: let the doctor assume the responsibility for determining the severity of the injury. If the condition is obviously serious, EMS must transport the victim.
5. Notify the PM and the HSM.

EMERGENCY FIRST AID PROCEDURES	
To Stop Bleeding	CPR
1. Give medical statement.	1. Give medical statement.
2. Assure airway, breathing, circulation.	2. Arousal: Check for consciousness.
3. Use DIRECT PRESSURE over the wound with clean dressing or your hand (use non-permeable gloves). Direct pressure will control most bleeding.	3. Open airway with chin-lift.
4. Bleeding from an artery or several injury sites may require DIRECT PRESSURE on a PRESSURE POINT . Use pressure points for 30 - 60 seconds to help control severe bleeding.	4. Look. Listen, and feel for breathing.
5. Continue primary care and seek medical aid as needed.	5. If breathing is absent, give 2 slow, full rescue breaths.
	6. Check the pulse for 5 to 10 seconds.
	7. If pulse is present, continue rescue breathing: 1 breath every 5 seconds .
	8. If pulse is absent, initiate CPR; 15 compressions for each two breaths.

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Hazard Analysis Matrix

Hazards	Tasks					
	Drilling Boring Auguring	Soil Sampling	Water Sampling	Geophysical Investigation	Test Pits / Trenching	Building Materials
Contaminants of Concern Exposure						X
OSHA Chemicals Exposure						X
Mechanical Equipment/ Construction						
Electrical						
Fire and Explosion						
Heat/Cold Stress						X
Vehicular Traffic						
Pedestrian Traffic						
Overhead Utilities						
Underground Utilities						
Noise						
Confined Space Entry (CSE)						X
Poisonous Plants						
Snakes/ Spiders/ Insects						X

AGREEMENT AND ACKNOWLEDGEMENT SHEET

PM personnel have the authority to stop field activities at this site if any activity is not performed in accordance with the requirements of the HASP. All PM project personnel, subcontractor personnel, and visitors are required to sign the Agreement and Acknowledgement Sheet **prior** to conducting field activities at this site.

AGREEMENT AND ACKNOWLEDGEMENT STATEMENT	
<p>1. I have read and fully understand the HASP and my responsibilities.</p> <p>2. I agree to abide by the provisions of the HASP.</p>	
Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date

Appendix B





Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 1



Exterior View of Subject Property

Photograph 2



View of Plaster (HA1)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 3



View of Asbestos-Containing Air Cell
Straight Pipe Insulation and Associated
Fittings (HA2)

Photograph 4



View of Pyro-Block and Mortar (HA3)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 5



View of Gray Sheet Flooring and Mastic (HA4)

Photograph 6



View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - Black and Red Intermixed
(HA5)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 7



View of Wood Floor Vapor Barrier (HA6)

Photograph 8



View of Asbestos-Containing 12" x 12" Floor
Tile and Mastic - Brown Pebble Pattern
(HA7)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 9



**View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - Tan with Light Tan Specks
(HA8)**

Photograph 10



**View of Asbestos-Containing Drywall and
Joint Compound (HA9)**



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 11



View of Brown Cove Base and Adhesive
(HA10)

Photograph 12



View of Interior Window Glazing (HA11)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 13



View of Asbestos-Containing Multi-Layered Sheet Flooring - Basement - Second most SE Room (HA12)

Photograph 14



View of Asbestos-Containing Wall and Ceiling Texture (HA13)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 15



View of Asbestos-Containing 12" x 12" Floor
Tile and Mastic - Light Tan (HA14)

Photograph 16



View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - Light Tan (HA15)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 17



**View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - Orange Marbled (HA16)**

Photograph 18



**View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - Tan with Cream Streaks
(HA17)**



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 19



View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - Black with Gold Flake
Pattern (HA18)

Photograph 20



View of 12" x 12" Floor Tile and Mastic - Tan
Brick Pattern (HA19)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 21



View of Sheet Flooring and Mastic - Tan 9"
Square Pattern (HA20)

Photograph 22



View of Asbestos-Containing Residual
Mastic (HA21)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 23



View of 9" x 9" Floor Tile and Mastic - All Black
(HA22)

Photograph 24



View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - Green with White Streaks
(HA23)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 25



View of 9" x 9" Floor Tile and Mastic - All Red (HA24)

Photograph 26



View of Asbestos-Containing Multi-Layered Kitchen Flooring and Mastic - Room Adjacent E to S Stairwell (HA25)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 27



View of Black Sheet Flooring and Mastic
(HA26)

Photograph 28



View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - Yellow (HA27)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 29



**View of Asbestos-Containing 9" x 9" Floor
Tile and Mastic - White and Black Intermixed
(HA28)**

Photograph 30



**View of Asbestos-Containing 12" x 12"
Floor Tile and Mastic - Tan Flower Pattern
(HA29)**



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 31



**View of Asbestos-Containing 12" x 12" Floor
Tile and Mastic - Tan with Cross Pattern
(HA30)**

Photograph 32



**View of Asbestos-Containing Exterior
Window Glazing (HA31)**



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 33



View of Tan Pipe Insulation (HA32)

Photograph 34



View of Black Expansion Joint (HA33)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 35



View of Black Roofing Material (HA34)

Photograph 36



View of Asbestos-Containing Black Roof Flashing (HA35)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 37



View of Asbestos-Containing Exterior Door
Caulk - White (HA36)

Photograph 38



View of Roofing Shingles (HA37)



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 39



View of a Typical Inaccessible Kitchen

Photograph 40



View of a Typical Fluorescent Bulb



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 41



View of a Typical Ballast

Photograph 42



View of Typical TVs



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
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Location: 111 Highland Street, Highland Park, Michigan

Photograph 43



View of Typical Spray Paint Cans

Photograph 44



View of Typical Paint Cans



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 45



View of Typical Janitorial Cleaning Supplies

Photograph 46



View of Typical Antifreeze



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 47



View of a Typical Tire

Photograph 48



View of Typical High Intensity Discharge
Lighting



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 49



View of Typical Transformers

Photograph 50

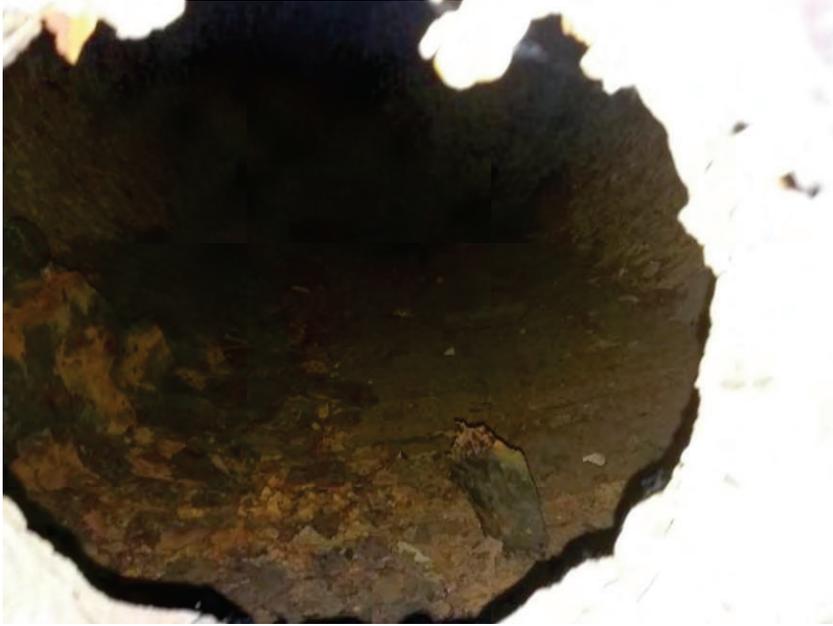


View of Empty AST on 6th floor



Photographs From Site Reconnaissance
Taken by Mr. Trevor M. Drost on January 11 - January 23, 2017
PM Project No. 02-7709-0-0019
Location: 111 Highland Street, Highland Park, Michigan

Photograph 51



View of Interior of Empty AST on 6th floor

Photograph 52



View Empty AST in Basement (Note: Vertical pipe beneath tank was open, verifying tank is empty)

Appendix C



J3 Resources, Inc.

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Bulk Asbestos Fiber Analysis by Polarized Light Microscopy (PLM)

EPA 600/M4-82-020; 600/R-93/116

Trevor Drost
PM Environmental, Inc.
3340 Ranger Rd.
Lansing MI 48906

J3 Order #: JH1782613
Project #: 02-7709-0-0019
Date Received: 25-Jan-2017
Date Analyzed: 31-Jan-2017
Date Reported: 31-Jan-2017

111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 1-1	LAYER 1 Plaster, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Plaster, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%
HA 1-2	LAYER 1 Plaster, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Plaster, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%
HA 1-3	LAYER 1 Plaster, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Plaster, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%
HA 1-4	LAYER 1 Plaster, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Plaster, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%
HA 1-5	LAYER 1 Plaster, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Plaster, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%

Duane Salinas

Analyst


Scott Ward, Ph.D. Lab Director

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NVLAP Lab Code: 200525-0

AIHA Lab ID: 157714

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Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 1-6	LAYER 1 Plaster, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Plaster, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%
HA 1-7	LAYER 1 Plaster, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Plaster, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%
HA 2-1	Aircell, Gray, Homogeneous	Chrysotile 55%	Cellulose Fiber 20% Other Non-Fibrous Material 25%
HA 2-2	Aircell, Gray, Homogeneous	Chrysotile 55%	Cellulose Fiber 20% Other Non-Fibrous Material 25%
HA 2-3	Aircell, Gray, Homogeneous	Chrysotile 55%	Cellulose Fiber 20% Other Non-Fibrous Material 25%
HA 3-1	LAYER 1 Pyro Block, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Mortar, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%
HA 3-2	LAYER 1 Pyro Block, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Mortar, Gray, Homogeneous	None Detected	Hair <1% Other Non-Fibrous Material 100%

Duane Salinas

Analyst


Scott Ward, Ph.D. Lab Director

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111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 4-1	LAYER 1 Sheet Flooring, Gray, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 2 Tar Paper, Black, Homogeneous	None Detected	Cellulose Fiber 65% Other Non-Fibrous Material 35%
	LAYER 3 Mastic, Brown, Homogeneous	None Detected	Cellulose Fiber <1% Other Non-Fibrous Material 100%
HA 4-2	LAYER 1 Sheet Flooring, Gray, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 2 Tar Paper, Black, Homogeneous	None Detected	Cellulose Fiber 65% Other Non-Fibrous Material 35%
	LAYER 3 Mastic, Brown, Homogeneous	None Detected	Cellulose Fiber <1% Other Non-Fibrous Material 100%
HA 5-1	LAYER 1 Floor Tile, Black, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 2 Mastic, Black, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 3 Floor Tile, Red-Brown, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 4 Mastic, Black, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%

Multi-Layered Flooring

Duane Salinas

Analyst


Scott Ward, Ph.D. Lab Director

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Date Analyzed: 31-Jan-2017
Date Reported: 31-Jan-2017

111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 5-2	LAYER 1 Floor Tile, Black, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 2 Mastic, Black, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 3 Floor Tile, Red-Brown, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 4 Mastic, Black, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
Multi-Layered Flooring			
HA 6-1	Tar Paper, Black, Homogeneous	None Detected	Cellulose Fiber 65% Other Non-Fibrous Material 35%
HA 6-2	Tar Paper, Black, Homogeneous	None Detected	Cellulose Fiber 65% Other Non-Fibrous Material 35%
HA 7-1	LAYER 1 Floor Tile, Brown/ Pebble Pattern, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Mastic, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 7-2	LAYER 1 Floor Tile, Brown/ Yellow/ Pebble Pattern, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 8-1	LAYER 1 Floor Tile, Tan w/ Light Tan Specks, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%

Duane Salinas

Analyst


Scott Ward, Ph.D. Lab Director

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Bulk Asbestos Fiber Analysis by Polarized Light Microscopy (PLM)

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Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 8-2	Floor Tile, Tan w/ Light Tan Specks, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
HA 9-1	LAYER 1 Joint Compound, Off White, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Wallboard, Brown/ White, Homogeneous	None Detected	Cellulose Fiber 10% Other Non-Fibrous Material 90%
HA 9-2	LAYER 1 Joint Compound, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Wallboard, Brown/ White, Homogeneous	None Detected	Cellulose Fiber 10% Fibrous Glass <1% Other Non-Fibrous Material 90%
HA 10-1	LAYER 1 Cove Base, Brown, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Mastic, Brown, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 10-2	LAYER 1 Cove Base, Brown, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Mastic, Brown, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 11-1	Window Glazing, Off White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 11-2	Window Glazing, Off White, Homogeneous	None Detected	Other Non-Fibrous Material 100%

Duane Salinas

Analyst


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111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 12-1	LAYER 1 Floor Tile, Beige, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 2 Mastic, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 3 Floor Tile, Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 4 Mastic, Black, Homogeneous	None Detected	Cellulose Fiber 10% Other Non-Fibrous Material 90%
	LAYER 5 Sheet Flooring, Black, Homogeneous	None Detected	Cellulose Fiber 20% Hair 5% Synthetic Fiber 5% Other Non-Fibrous Material 70%

Multi-Layered Flooring

HA 12-2	LAYER 1 Floor Tile, Beige, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 2 Mastic, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 3 Floor Tile, Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 4 Mastic, Black, Homogeneous	None Detected	Cellulose Fiber 10% Other Non-Fibrous Material 90%
	LAYER 5 Sheet Flooring, Black, Homogeneous	None Detected	Cellulose Fiber 20% Hair 5% Synthetic Fiber 5% Other Non-Fibrous Material 70%

Multi-Layered Flooring

Duane Salinas

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111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 13-1	Painted Texture, White, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
HA 13-2	Painted Texture, Off White/ White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 13-3	Painted Texture, Off White/ White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 13-4	Painted Texture, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 13-5	Painted Texture, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 13-6	Painted Texture, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 13-7	Painted Texture, White, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 14-1	LAYER 1 Floor Tile, Light Tan, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 14-2	LAYER 1 Floor Tile, Light Tan, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 15-1	LAYER 1 Floor Tile, Light Tan, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%

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Date Analyzed: 31-Jan-2017
Date Reported: 31-Jan-2017

111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 15-2	LAYER 1 Floor Tile, Light Tan, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 16-1	LAYER 1 Floor Tile, Orange Marbled, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 16-2	LAYER 1 Floor Tile, Orange Marbled, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 17-1	LAYER 1 Floor Tile, Tan/ Cream Streaks, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 17-2	LAYER 1 Floor Tile, Tan/ Cream Streaks, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 18-1	LAYER 1 Floor Tile, Gray/ Gold, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%

Duane Salinas

Analyst


Scott Ward, Ph.D. Lab Director

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NVLAP Lab Code: 200525-0

AIHA Lab ID: 157714

TDSHS License: 30-0273

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J3 Resources, Inc.

6110 W. 34th Street, Houston, Texas 77092

Phone: (713) 290-0221 - Fax: (713) 290-0248

J3Resources.com



Bulk Asbestos Fiber Analysis by Polarized Light Microscopy (PLM)

EPA 600/M4-82-020; 600/R-93/116

Trevor Drost
PM Environmental, Inc.
3340 Ranger Rd.
Lansing MI 48906

J3 Order #: JH1782613
Project #: 02-7709-0-0019
Date Received: 25-Jan-2017
Date Analyzed: 31-Jan-2017
Date Reported: 31-Jan-2017

111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 18-2	LAYER 1 Floor Tile, Gray/ Gold, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 19-1	LAYER 1 Floor Tile, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Adhesive, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 19-2	LAYER 1 Floor Tile, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Adhesive, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 20-1	LAYER 1 Sheet Flooring, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Adhesive, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 20-2	LAYER 1 Sheet Flooring, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Adhesive, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 21-1	Residual Mastic, Black/ White, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
HA 21-2	Residual Mastic, Black/ White, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%

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Analyst


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Date Received: 25-Jan-2017
Date Analyzed: 31-Jan-2017
Date Reported: 31-Jan-2017

111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 22-1	LAYER 1 Floor Tile, Black/ White, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 22-2	Sheet Flooring, Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
HA 23-1	LAYER 1 Floor Tile, Green, Homogeneous	Chrysotile 4%	Other Non-Fibrous Material 96%
	LAYER 2 Mastic, Black, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 23-2	Floor Tile, Green, Homogeneous	Chrysotile 4%	Other Non-Fibrous Material 96%
HA 24-1	LAYER 1 Sheet Flooring, Red/ Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 2 Mastic, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 24-2	LAYER 1 Sheet Flooring, Red/ Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 2 Mastic, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%

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111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 25-1	LAYER 1 Sheet Flooring, Black/ Brown, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 2 Sheet Flooring, Brown/ Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 3 Floor Tile, Black/ White, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 4 Adhesive, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%
Multi-Layered Flooring			
HA 25-2	LAYER 1 Sheet Flooring, Black/ Brown, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 2 Sheet Flooring, Brown/ Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 3 Floor Tile, Black/ White, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 4 Adhesive, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%
Multi-Layered Flooring			
HA 26-1	LAYER 1 Sheet Flooring, Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 2 Mastic, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%

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Date Received: 25-Jan-2017
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111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 26-2	LAYER 1 Sheet Flooring, Black, Homogeneous	None Detected	Cellulose Fiber 25% Other Non-Fibrous Material 75%
	LAYER 2 Mastic, Tan, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 27-1	LAYER 1 Floor Tile, Tan, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Mastic, Beige, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 27-2	LAYER 1 Floor Tile, Tan, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Mastic, Beige, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 28-1	LAYER 1 Floor Tile, White, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Adhesive, Clear, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 28-2	LAYER 1 Floor Tile, White, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
	LAYER 2 Adhesive, Clear, Homogeneous	None Detected	Other Non-Fibrous Material 100%

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Analyst


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Bulk Asbestos Fiber Analysis by Polarized Light Microscopy (PLM)

EPA 600/M4-82-020; 600/R-93/116

Trevor Drost
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Lansing MI 48906

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Project #: 02-7709-0-0019
Date Received: 25-Jan-2017
Date Analyzed: 31-Jan-2017
Date Reported: 31-Jan-2017

111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 29-1	LAYER 1 Floor Tile, Beige, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Mastic, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 3 Floor Tile, Gray, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 4 Adhesive, Clear, Homogeneous	None Detected	Other Non-Fibrous Material 100%
Multi-Layered Flooring			
HA 29-2	LAYER 1 Floor Tile, Beige, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 2 Mastic, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
	LAYER 3 Floor Tile, Gray, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 4 Adhesive, Clear, Homogeneous	None Detected	Other Non-Fibrous Material 100%
Multi-Layered Flooring			
HA 30-1	LAYER 1 Floor Tile, Beige/ Pattern, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 2 Mastic, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 30-2	LAYER 1 Floor Tile, Beige/ Pattern, Homogeneous	Chrysotile 3%	Other Non-Fibrous Material 97%
	LAYER 2 Mastic, Yellow, Homogeneous	None Detected	Other Non-Fibrous Material 100%
HA 31-1	Window Glazing, Gray, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%

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EPA 600/M4-82-020; 600/R-93/116

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J3 Order #: JH1782613
Project #: 02-7709-0-0019
Date Received: 25-Jan-2017
Date Analyzed: 31-Jan-2017
Date Reported: 31-Jan-2017

111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 31-2	Window Glazing, Gray, Homogeneous	Chrysotile 2%	Other Non-Fibrous Material 98%
HA 32-1	Insulation, Gray/ Tan, Homogeneous	None Detected	Synthetic Fiber 20% Other Non-Fibrous Material 80%
HA 32-2	Insulation, Gray/ Tan, Homogeneous	None Detected	Synthetic Fiber 20% Other Non-Fibrous Material 80%
HA 32-3	Insulation, Gray/ Tan, Homogeneous	None Detected	Synthetic Fiber 20% Other Non-Fibrous Material 80%
HA 33-1	Canvas, Black/ Brown, Homogeneous	None Detected	Cellulose Fiber 95% Other Non-Fibrous Material 5%
HA 33-2	Canvas, Black/ Brown, Homogeneous	None Detected	Cellulose Fiber 95% Other Non-Fibrous Material 5%
HA 33-3	Canvas, Black/ Brown, Homogeneous	None Detected	Cellulose Fiber 95% Other Non-Fibrous Material 5%
HA 34-1	Roof Tar / Felts, Black, Homogeneous	None Detected	Cellulose Fiber 30 % Hair 3% Other Non-Fibrous Material 67%
HA 34-2	Roof Tar / Felts, Black, Homogeneous	None Detected	Cellulose Fiber 30 % Hair 3% Other Non-Fibrous Material 67%

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Date Received: 25-Jan-2017
Date Analyzed: 31-Jan-2017
Date Reported: 31-Jan-2017

111 Highland St, Highland Park, MI

Sample ID #	Sample Description	Asbestos Constituents	Non-Asbestos Constituents
HA 35-1	LAYER 1 Roof Flashing, Black, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 2 Roofing Tar / Felts, Black, Homogeneous	None Detected	Cellulose Fiber 10% Other Non-Fibrous Material 90%
HA 35-2	LAYER 1 Roof Flashing, Black, Homogeneous	Chrysotile 5%	Other Non-Fibrous Material 95%
	LAYER 2 Roofing Tar / Felts, Black, Homogeneous	None Detected	Cellulose Fiber 10% Other Non-Fibrous Material 90%
HA 36-1	Caulking, Tan, Homogeneous	Chrysotile 15%	Other Non-Fibrous Material 85%
HA 36-2	Caulking, Tan, Homogeneous	Chrysotile 15%	Other Non-Fibrous Material 85%
HA 37-1	Roofing Shingle, White/ Black, Homogeneous	None Detected	Fibrous Glass 12% Other Non-Fibrous Material 88%
HA 37-2	Roofing Shingle, White/ Black, Homogeneous	None Detected	Fibrous Glass 12% Other Non-Fibrous Material 88%

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CHAIN OF CUSTODY

82613

Page 1 of 4



Your Name: <u>Trevor M. Drast</u>		Bill to: <u>SAME</u>	
Company: <u>AM Environmental</u>		Address:	
Address: <u>3340 Ranger Road</u>		City/State: _____ Zip: _____	
City/State: <u>Lansing/MI</u> Zip: <u>48906</u>		PO #:	
Project Information			
Project #/Name: <u>02-7709-0-0019/Perk, MI</u>		E-Mail: <u>Accounts Payable@pmenv.com</u>	
Results To: <u>IHS@pmenv.com</u>		Tel: <u>248-884-3008</u>	
Report Options: Verbal <input type="checkbox"/> E-Mail <input checked="" type="checkbox"/> Fax <input type="checkbox"/> USPS <input type="checkbox"/> Fax:			
Requested Turnaround Time			
Emergency* <input type="checkbox"/>	1 Day <input type="checkbox"/>	2 Day <input type="checkbox"/>	3 Day <input type="checkbox"/>
		5 Day <input checked="" type="checkbox"/>	
Media and Methodology			
TEM - AIR <input type="checkbox"/> AHERA <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> Level II	TEM - BULK <input type="checkbox"/> Qualitative +/- <input type="checkbox"/> NOB 198.4 / Chatfield <input type="checkbox"/> Gravimetric Reduction	PLM - BULK <input checked="" type="checkbox"/> EPA 600/R-93/116 <input type="checkbox"/> Point Count (400) <input type="checkbox"/> NOB 198.6 <input type="checkbox"/> Gravimetric Reduction	MOLD - AIR <input type="checkbox"/> Spore Traps (Air-O-Cell / Allergenco) <input type="checkbox"/> Culture Plates
TEM - WATER <input type="checkbox"/> Drinking Water 100.2 / 198.2 <input type="checkbox"/> Wastewater	TEM - DUST (ASTM 5755) <input type="checkbox"/> Micro-Vac Quantitative <input type="checkbox"/> Micro-Vac Qualitative	PCM - AIR <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> OSHA: TWA	LEAD - FAA <input type="checkbox"/> Paint (EPA 7420) <input type="checkbox"/> Dust/Wipes <input checked="" type="checkbox"/> Air (NIOSH 7082) <input type="checkbox"/> TCLP (EPA 1311)
		MOLD - BULK <input type="checkbox"/> Tape Lift/Bulk: ID Only <input type="checkbox"/> Culture Plates: ID Only	LEAD - GFAA <input type="checkbox"/> Water (EPA 7421) <input type="checkbox"/> Effluent <input type="checkbox"/> Air
Sample Information			
SAMPLE NUMBER	LOCATION	VOLUME	
<u>HAI-1</u>	<u>Plaster / Basement - SE corner room wall</u>		
<u>1-2</u>	<u>1st Floor - SE stairwell near</u>		
<u>1-3</u>	<u>2nd Floor - hallway near SE stairwell</u>		
<u>1-4</u>	<u>3rd Floor - NE hallway end</u>		
<u>1-5</u>	<u>4th Floor - SE corner room kitchen</u>		
Total Number of Samples Submitted: <u>87</u>			
Signatures			
Relinquished By: <u>Trevor M. Drast</u>	Date: <u>1/24/18</u>	Time: <u>11:30 am</u>	
Received By: <u>[Signature]</u>	Date: <u>1/25/18</u>	Time: <u>1:50 PM</u>	
Relinquished By: _____	Date: _____	Time: _____	
Received By: _____	Date: _____	Time: _____	

* Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.

SAMPLE IDENTIFICATION



Project Name/Number

Page 2 of 4

SAMPLE NUMBER	LOCATION	VOLUME (if applicable)
1-6	Plaster / 5th Fl. near SE stairwell	
1-7	6th Fl. SE corner room	
HA2-1	Aicell Straight Pipe Ins. w/ fittings	N central hallway - Basement
2-2		3rd Floor - adjacent fl. of stairs to room kitchen
2-3		6th fl. SW corner room kitchen
HA3-1	Pyro block and Mortar	Basement - central hallway
3-2		6th Fl. room adjacent to SW corner room
HA4-1	Grey Sheet Flooring and Mortar	Basement - SE corner room closet
4-2		Basement - SE corner room closet
HA5-1	9" x 9" VFT & M - Black and Red Intermixed	Basement hallway - East
5-2		Basement hallway - West
HA6-1	Wood Floor Vapor Barrier	Basement - SW room
6-2		"
HA7-1	12" x 12" VFT & M - Brown Pebble Pattern	Basement - SW hallway
7-2		2nd Fl. S. Tower corner K.
HA8-1	9" x 9" VFT & M - Tan with light Tan Specks	Basement - SW corner room
8-2		6th fl. W. corner room
HA9-1	Pyro and Joint Compound	Basement SE corner room
9-2		1st Floor North common area
HA10-1	Brown Cove Base and Adhesive	Basement SE corner room
10-2		" "
HA11-1	Interior Window Glazing	Basement SW corner room
11-2		" "
HA12-1	Multi-layered flooring and Mortar	Basement - 2nd most SE room
12-2		
HA13-1	Wall and Ceiling Texture	Basement - 2nd most NW room wall
13-2		1st Floor - SE stairwell
13-3		2nd Fl. - hallway near SE stairwell
13-4		3rd Fl. NE hallway end
13-5		4th fl. SE corner room living room

SAMPLE IDENTIFICATION



Project Name/Number

Page 3 of 4

SAMPLE NUMBER	LOCATION	VOLUME (if Applicable)
HA 13-6	Wall and Ceiling Texture / 5th Fl. near SE stairwell	
13-7	6th Fl. SE corner room	
HA 14-1	12" x 12" VFT & M - Light Tan / Basement - NW room	
14-2	Basement - NW room	
HA 15-1	9" x 9" VFT & M - Light Tan / Basement - NE room	
15-2	6th Fl. adjacent to SE stairwell	
HA 16-1	9" x 9" VFT & M - Orange Mottled / Basement NE room storage	
16-2	" "	
HA 17-1	9" x 9" VFT & M - Tan w/ Cream Streaks / Basement NE room	
17-2	" " storage	
HA 18-1	9" x 9" VFT & M - Black w/ Gold Flakes / 1st Fl. SW room Kitchen	
18-2	" "	
HA 19-1	12" x 12" VFT & M - Tan Brick Pattern / 1st Floor 2nd most SW room Kitchen	
19-2	" "	
HA 20-1	Sheet Flooring & Matrix - Tan 9" Square / 1st Floor Colored room 1st Fl.	
20-2	" "	
HA 21-1	Residual Floor Tile Matrix / 2nd Floor Counter SW room Kitchen	
21-2	" "	
HA 22-1	9" x 9" VFT & M - All Black / 2nd Floor Kitchen room adjacent N to Winner corner room	
22-2	3rd Floor - Kitchen room E corner	
HA 23-1	9" x 9" VFT & M - Green with White Streaks / 2nd Fl. NE corner room Kitchen	
23-2	NE inner corner room Kitchen circle	
HA 24-1	9" x 9" VFT & M - Red / 2nd Fl. NE corner room closet	
24-2	3rd Fl. NE corner room closet	
HA 25-1	Multi-layered Kitchen Flooring and Matrix / 2nd floor room adjacent to NW SE stairwell	
25-2	" " " "	
HA 26-1	Black Sheet Flooring and Matrix / 3rd Fl. Winner corner room Kitchen	
26-2	4th Fl. closet adjacent to SW room	
HA 27-1	9" x 9" VFT & M - Yellow / 4th Floor - adj. to Winner corner room	
27-2	4th Floor - adj. Winner corner room	

Appendix D



United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200525-0

J3 Resources, Inc.
Houston, TX

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

Asbestos Fiber Analysis

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2016-04-01 through 2017-03-31

Effective Dates



David F. Alderman

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

J3 Resources, Inc.

6110 W 34th Street

Houston, TX 77092

Mr. Lee W. Poye III

Phone: 713-290-0221 Fax: 713-290-0248

Email: lpoye@j3resources.com

<http://www.J3Resources.com>

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200525-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

David F. Alderman

For the National Voluntary Laboratory Accreditation Program

McDowell & Associates

Geotechnical, Environmental & Hydrogeological Services • Materials Testing & Inspection

21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157
www.mcdowasc.com

January 16, 2026

Wayne County Land Bank
500 Griswold
Suite 2800
Detroit, Michigan 48226

Job No. 25-16728

Subject: Structural Integrity Opinion
Existing Six-Story Apartment Building
111 Highland Street
Highland Park, Wayne County, Michigan

Dear Ms. Wistow:

I have been asked by our Environmental staff to provide a professional engineering opinion on the structural integrity of the subject building relative to personal safety related to asbestos abatement and building demolition. My personal experience relative to the structural integrity of buildings includes the initial testing for the Central Train Station, the Fisher and Penobscot buildings and over 40 façade inspections of buildings within the City of Detroit.

I have reviewed photos of the interior and exterior of the building that were collected by McDowell & Associates and others between 2017 and 2025. I also reviewed an aerial photograph of the building. Select photos and the aerial are displayed in the attached document.

The aerial photograph indicated that the roof is in poor condition which would allow water intrusion and degradation of structural components. It is also my understanding that fires have been set within the interior of the building.

Review of a Condition Assessment Report completed by IMEG on December 21, 2021 indicated that, at that time, there were many joists that had severe rust, a portion of the roof over the first floor had collapsed, and it appeared that much of the top layer of EPDM roof material over the roof base was gone. Water leaking through the roof and disintegration of the ceiling and partition walls were noted.

Based on the above statements, it is my professional opinion that personal safety is a major issue, as the building appears to be structurally unsound and unsafe to enter.

If you have any questions or need further assistance, please do not hesitate to call.



Very truly yours,

McDOWELL & ASSOCIATES

A handwritten signature in black ink that reads "Carl D. Harlow".

Carl D. Harlow, M.S., P.E.
Special Projects Manager

CDH/

Attachment: Exhibit – Site Photos

Site Photos

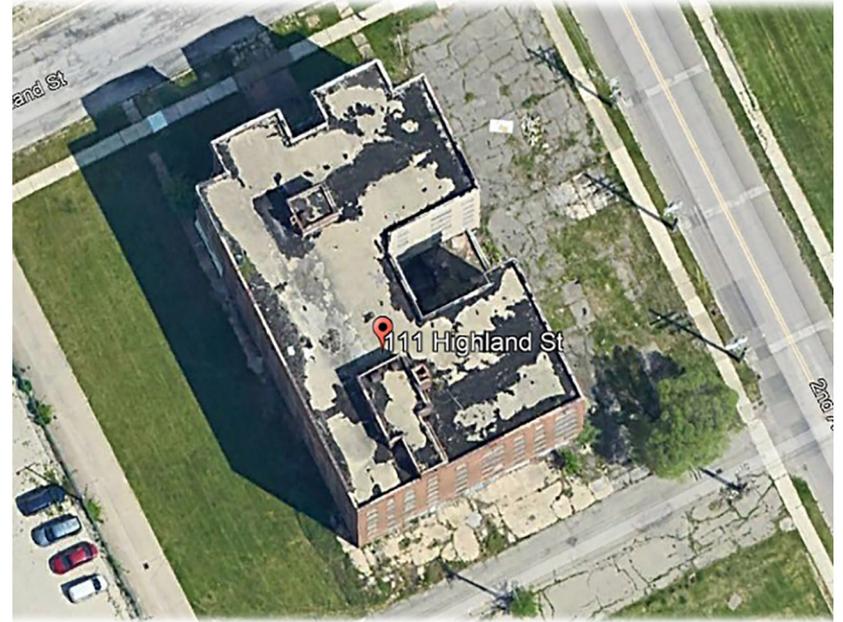




Exhibit C - Blight Elimination Grant Guidelines



State Land Bank Authority
Blight Elimination Program
Interim Guidelines
FY2023 – 2026

Issue Date: August 3, 2025

Subject to change and updates as needed.

Synopsis

The State Land Bank Authority (SLBA) received two appropriations for addressing blight conditions statewide in fiscal year 2023 through the end of calendar year 2026. The first source of funds is State general fund dollars and totaled \$21.55M. The second source of funds is federal Fiscal Recovery Funds (FRF) dollars and totaling \$75M.

The SLBA staff developed parameters for awarding grant funds relative to their enabling legislation and source of funds in an ongoing focus to eliminate blight statewide while returning property to productive use.

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Program Overview

The Blight Elimination Program (Program) is a state and federally funded initiative conducted in 4 rounds of awards between October 2022 and December 2026. The Program will invest in disproportionately impacted communities around the state which will attract more investment at the neighborhood level leading directly to the Department of Labor and Economic Opportunity’s (LEO) goal of Building Strong Communities and, eventually, to increasing labor force and household income growth. Specific eligible activities are demolition or stabilization of public or privately-owned structures as well as environmental remediation or rehabilitation of publicly owned structures. Rehabilitation as an eligible activity only applies to the federal funds (Rounds 3 and 4).

Enabling Legislation

	Round 1 & 2	Round 3 & 4
State Appropriation	PA 166 of 2022, Section 1094f. (2) through (6)	PA 1 of 2023, Section 301
Source of funds	State dollars	Federal dollars
Related Regulations		31 CFR Part 35 Final Rule-Coronavirus State and Local Fiscal Recovery Funds (SLFRF), as amended 2 CFR Part 200 Uniform Guidance

***Note: the term ‘grantee’ will be used throughout these guidelines, although Round 3 and 4 recipients are in fact a ‘subrecipient’ as defined in SLFRF.*

Definitions:

“Blight” is defined as one of the following:

1. The property has been declared a public nuisance in accordance with a local housing, building, plumbing, fire, or other related code or ordinance; OR

2. The property has had utilities, plumbing, heating, or sewerage disconnected, destroyed, removed, or rendered ineffective for a period of 1 year or more, rendering the property unfit for its intended use; OR
3. The property is tax-reverted and owned by this state, a county, or a municipality.

"Eligible Properties" is defined as one of the following:

1. Any property owned or under the control of a land bank fast track authority under the land bank fast track act, 2003 PA 258, MCL 124.751 to 124.774; OR
2. Any vacant residential, commercial, or industrial property that is blighted.

"Rural County" means a county with a population of 50,000 or less, according to the most recent decennial census.

"State Land Bank Municipal Partnership" or "SLBMP" means a partnership between the state land bank authority and a municipality that includes a land banking agreement for the given municipality where the state manages a portfolio of parcels for that municipality.

Eligibility Requirements

For Rounds 1 and 2 of the Blight Elimination Program (state general funds), the State of Michigan legislature earmarked a total of \$21.55M for competitive blight elimination grants. The same legislation provided a guarantee for local land banks, as well as Rural Counties, to receive a minimum allocation of \$200,000 each. Additionally, 5% was required to be distributed to each of the ten (10) Prosperity Regions as identified by the Michigan Economic Development Corporation (MEDC).

For Rounds 3 and 4 of the Blight Elimination Program (federal funds), the State of Michigan legislature earmarked \$2.5M to each of the 10 land banks and/or SLBMP with the largest inventory numbers and \$500,000 to each of the remaining county land banks (Round 3). Additionally, up to \$30,500,000 is available for a statewide competitive grant program open to all land banks, as well as municipalities or counties not served by a county land banks (Round 4). Specific eligible activities are demolition or stabilization of public or privately-owned structures as well as environmental remediation or rehabilitation of publicly owned structures.

Rehabilitation as an eligible activity only applies to the federal funds (Rounds 3 and 4). All funds in Rounds 3 and 4 must be expended by September 30, 2026, by the grantees. This allows adequate time for SLBA to prepare its final reports. Grantees may receive up to 8% of the total activity cost of each project for their administration expenses directly related to the eligible grant activities.

In Rounds 3 and 4, there are three tracks of eligibility to ensure investment is made to disproportionately impacted areas or individuals:

- a) Enumerated: Eliminate blight county-wide in the 67 counties where the median household income is less than the 3 person 300% FPG. The data points are from 2021, as that is the latest year for which income data is available from the Census. This can be through demolition, stabilization, environmental remediation, or rehabilitation; the removal of blight fulfills the obligation requirements.

Those counties are:

Alcona, Alger, Alpena, Antrim, Arenac, Baraga, Bay, Berrien, Branch, Calhoun, Cass, Charlevoix, Cheboygan, Chippewa, Clare, Crawford, Delta, Dickinson, Emmet, Genesee, Gladwin, Gogebic, Gratiot, Hillsdale, Houghton, Huron, Ingham, Ionia, Iosco, Iron, Isabella, Jackson, Kalamazoo, Kalkaska, Keweenaw, Lake, Lenawee, Luce, Mackinac, Manistee, Marquette, Mason, Mecosta, Menominee, Missaukee, Montcalm, Montmorency, Muskegon, Newaygo, Oceana, Ogema, Ontonagon, Osceola, Oscoda, Otsego, Presque Isle, Roscommon, Saginaw, Sanilac, Schoolcraft, Shiawassee, St. Clair, St. Joseph, Tuscola, Van Buren, Wayne and Wexford.

b) Enumerated: Eliminate blight in Qualified Census Tract (QCT) areas in the 16 counties where the median household income is greater than the 3 person 300% FPG. This can be through demolition, stabilization, environmental remediation, or rehabilitation. Four of the 16 counties do not contain any QCTs, Barry, Benzie, Leelanau, and Livingston, and must only utilize the eligibility requirements in c) below.

Those 16 counties are:

Allegan, Barry, Benzie, Clinton, Eaton, Grand Traverse, Kent, Lapeer, Leelanau, Livingston, Macomb, Midland, Monroe, Oakland, Ottawa and Washtenaw.

c) Designating Other Impacted Classes through Expanded Presumptive Eligibility (**SLFRF permits funds to be used, among other uses, to combat the public health and negative economic impacts (PH-NEI) of the pandemic.**): Eliminate blight in non-QCT areas of counties in the 16 counties where the median household income is greater than the 3 person 300% FPG. This can be through renovation of a house that is then sold to a low-to-moderate (LMI) household at 80% AMI or less OR rented to a LMI household at 65% AMI or less – both must have an affordability period of 20 years maintained through a legal instrument. So long as that occurs, the entire amount (acquisition/renovation) will be counted toward the obligation deadline regardless of sales proceeds created when selling the house to a LMI household.

Eligible Applicants and Award Parameters

Round #	Eligible Applicants	Award Parameters
1	*County and City Land Banks *Local units of government when there is no local land bank	*5% of program funds are allocated to each Prosperity Region *\$200,000 guaranteed to county or city land banks for eligible activities
2	*County and City Land Banks *County or local units of government not served by a county land bank	*\$200,000 guaranteed to rural counties, as defined
3	*County and City Land Banks and SLBMP	*10 largest land banks or SLBMP will receive a grant of up to \$2.5M for eligible activities *Remaining land banks will receive a grant of up to \$500,000 for eligible activities *Activities must be designed to address a documented economic harm to a beneficiary or class of beneficiaries resulting from or exacerbated by the COVID-19 public health emergency and must be reasonably proportional to the extent and type of harm experienced
4	*County and City Land Banks *County or local units of government not served by a county land bank	*\$30,500,000 competitive grant program for eligible activities *Activities must be designed to address a documented economic harm to a beneficiary or class of beneficiaries resulting from or exacerbated by the COVID-19 public health emergency and must be reasonably proportional to the extent and type of harm experienced

Applicants for grant funds must be in good standing with the State of Michigan and the SLBA. This includes, but is not limited to:

- Land Banks must be in compliance with their Intergovernmental Agreement with the SLBA. This includes regular meetings as defined in their bylaws and the annual filing of a report with the SLBA.
- Local units of Government (LUG) must not be in arrears on payments of the Eligible Tax Reverted Property Specific Tax on properties sold in their jurisdiction by the SLBA.

Timeline



Eligible Activities

Round #	Eligible Activities
1	*Demolition of vacant residential, commercial, or industrial property that is Blighted, Eligible Property *Stabilization of vacant residential, commercial, or industrial property that is Blighted, Eligible Property and identified for future rehabilitation *Gap funding for Environmental Remediation need to comply with EGLE and limited site preparation costs on <i>publicly owned</i> residential, commercial, or industrial Blighted, Eligible Property *Project Administration fee capped at 8% of grant award
2	
3	*Demolition of vacant residential, commercial, or industrial property that is Blighted, Eligible Property *Stabilization of vacant residential, commercial, or industrial property that is Blighted, Eligible Property and identified for future rehabilitation *Gap funding for Environmental Remediation need to comply with EGLE and limited site preparation costs on <i>publicly owned</i> residential, commercial, or industrial Blighted, Eligible Property. ~~NOTE: ARP funds cannot be used as match to other federal funds.~~ *Rehabilitation of vacant residential, commercial, or industrial <i>publicly owned</i> structure that is Blighted, Eligible Property *Project Administration fee capped at 8% of grant award *Must occur within the geographic limits defined by 35 CFR Part 35 or income eligible limits for rehabilitation outside a QTC *Response/activity must be in line with the impact to those presumed to be 'impacted' or 'disproportionately impacted'
4	

Demolition activities include costs directly related to demolition of a structure, including, but are not necessarily limited to: title work related to acquisition; due care plans; acquisition; disconnect fees; permit fees; asbestos and hazardous materials survey; abatement of hazardous materials; abatement clearance air monitoring and/or visual inspection; the replacement of damaged sidewalks or re-curbings at the street; and/or restoration of the site including topsoil, seeding and mulching.

Stabilization activities may include but are not limited to: title work related to acquisition; acquisition (Rounds 3 and 4 only); debris removal that stabilizes the property; exterior security materials to deter trespassing and vandalism; and interior and exterior repairs needed to protect against further deterioration and meet local exterior property maintenance requirements. Any activity undertaken must contribute to the structures continued integrity. Activities may not include items typically associated with rehabilitation of a structure not contributing to the continued integrity of the structure.

Rehabilitation activities (Rounds 3 and 4 only) include costs directly related to rehabilitation of a structure, including, but are not necessarily limited to: title work related to acquisition; acquisition; appraisal for completed purchases; title work; closing fees; due care plans; permit fees; utility expenses and site maintenance from acquisition to sale; property insurance; lead paint, asbestos and hazardous material surveys; abatement of asbestos containing materials, hazardous materials and lead paint; abatement clearance air monitoring and/or visual inspection; repairs to structure including, but not limited to, roofs, siding, drywall, kitchen and bath updates, floor covering, painting, structural repairs, electrical, plumbing, heating, the replacement of damaged sidewalks, well and septic upgrades/replacement/closure as required by local codes; and/or reasonable landscaping of the site. The scope of the rehabilitation must be reasonable. To determine that, a proforma must be completed for each address. The property MUST be 100% publicly owned.

Rehabilitation expenses must be reasonable with the goal of eliminating blight by returning the property to habitable standards.

Match or gap funding for environmental remediation provides partial funding on remediation projects that need to comply with the Michigan Department of Environment, Great Lakes and Energy (EGLE) standards. Included in that remediation effort may be limited site preparation costs to remove other predevelopment hurdles. The property MUST be 100% publicly owned.

Projects using only BEP funds are not eligible. The preparation of Phase I, II and/or BEA as the only activity is not an eligible project.

Projects that utilize funding under ARP may not use the dollars to match other federal funds.

Project administration of up to 8% of the grant award is allowed. In Rounds 3 and 4, grantees should be prepared to justify with accurate, detailed records that the expenses are directly related to eligible activities on approved projects. Grantees may utilize the sample Self-certification of Administrative Expense form in Appendix 1 or similar to document employee time. Other types of documentation may include, but not be limited to: payments to third party administrators of the grant funds; electronic payroll detail; travel expenses; etc.

Determination of Property Eligibility

Rounds 1, 2 and 4 projects will be solicited through a Request for Proposals (RFP) process. In that process, property eligibility will be determined according to the legislative definitions (see page 3) with supporting documentation, as well as any other criteria required by the source of the funds.

Round 3 grantees will have an initial grant agreement issued and each project must be reviewed against the following required criteria before the grantee may expend any grant funds. Failure to have written preapproval of the project from the SLBA will result in the project not being reimbursed.

- *Proof of Blight
- *Eligibility of the proposed activity undertaken
- *Budget of the proposed activity
- *Site Control/ownership
- *Eligible disproportionately impacted area or class

Acquisition Price

Acquisition reimbursement amounts can be no more than fair market value (FMV) as determined by a third-party appraisal, two (2) times State Equalized Value (SEV), or the auction price of the property if grantee participates in the auction. It is acceptable for other non-ARP funds to be used to fund acquisition costs above the allowable reimbursement amount set forth here.

Uniform Relocation Act

In cases where grantees are acquiring property from a private owner for a project in Rounds 3 and/or 4 through donation or purchase, the grantee must be mindful of the provisions of the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (42 USC 4601), as amended. It is recommended that a document be executed during the closing process that indicates the seller is selling the property **voluntarily**, as well as delivery of the document titled “When a Public Agency Acquires Your Property”. This document can be found at: <https://www.hud.gov/sites/dfiles/CPD/documents/BROCHURE-acq-2-05.pdf>.

Indiana Office of Community and Rural Affairs has some sample documents here: <https://www.in.gov/ocra/cdbg/cdbg-handbook-and-forms/>. Scroll down to “Acquisition and Relocation” Forms 7-10 to see examples.

Lien Requirements

In Rounds 1 and 2, all privately owned properties will be required to have a lien placed on the title of the property for a period of 7 years. Owners must sign a Note and Notice of Lien prior to the commencement of the approved eligible activity. This will mitigate the risk of private individuals or companies from being unduly enriched through the grant program. The lien will be for the amount of the activity performed on the property and will be in favor of the State Land Bank Authority.

In cases where local units of government have obtained a court order allowing demolition to occur and a lien (tax or administrative) placed on the property in the name of the LUG, this type of lien will supersede the requirement that the lien be in favor of the SLBA.

Round 1 and 2 waiver guidelines for liens on the title of a property will be announced at a future date.

In Rounds 3 and 4, the lien requirements will be as follows:

- All *privately owned* properties will be required to have a lien placed on the title of the property for a period of 7 years. Owners must sign a Note and Notice of Lien prior to the commencement of the approved eligible activity.
- In cases where local units of government have obtained a court order allowing demolition to occur and a lien (tax or administrative) placed on the property in the name of the LUG, this type of lien will supersede the requirement that the lien be in the name of the SLBA. Funds collected from this local lien would need to be repaid to the SLBA under the terms of Sale Proceeds outlined below.
- No waivers of the liens can be granted for properties funded under Rounds 3 and 4.
- If rehabilitation is the eligible activity and the eligibility criteria is based on up to 80% AMI, an affordability period of 20 years must be maintained on the property through a legal instrument.

Sale Proceeds

For properties funded under Rounds 3 and 4 and subsequently sold, there is no 'program income' which is commonly defined as funds that can be reused by the grantee for similar, eligible activities. Rather, all sale proceeds in excess of what the grantee has invested in the project from other sources (on a ratio basis) must be returned to the SLBA provided they exceed the de minimis level of \$5,000. A sale worksheet and instructions for approval of the disposition of a property is available in CAPGEMS Get Help for calculation of sale proceed disbursement.

Return of sale proceeds does decrease your obligated amount of grant funds and allows you to re-obligate those dollars on a new activity/project; provided the deadline to do so has not passed.

All sale worksheets must be reviewed by the SLBA prior to any sale on or before December 31, 2031.

Further guidance on sales can be found in the document titled "Guidelines for the Sale/Disposition of Round 3 and 4 Funded Properties" or review the "Instructions for Sale/Disposition of Property" memo issued July 22, 2025.

Income from Rent or Lease of Property (Rounds 3 and 4 only)

Should a grantee retain ownership of a property and engage in the rent or lease of any portion of that property, this does create a probable 'program income' situation. However, current guidance provided by U.S. Treasury is limited in addressing how it relates to the Blight Elimination Program. Interpretation of the requirements would default to Uniform Guidance rules.

Under **2 CFR § 200.307**, program income earned under a federal award must be used for allowable costs in accordance with the terms and conditions of the award. Specifically: “Program income includes but is not limited to income from fees for services performed, the use or rental of real or personal property acquired under federal awards, the sale of commodities or items fabricated under a federal award, license fees and royalties on patents and copyrights, and interest on loans made with federal award funds.”

“To the extent that the federal awarding agency does not specify otherwise, program income must be deducted from total allowable costs to determine the net allowable costs.”

However, the U.S. Treasury has not issued specific guidance on the treatment or reporting of program income generated **after** the SLFRF performance period ends on December 31, 2026.

Recommendation:

In light of the above, and until further federal guidance is issued, SLBA recommends consideration of the following:

1. **Establish a Capital Reserve Fund:** Retain all program income generated by the Round3/4 Blight Elimination Program project in a dedicated capital reserve fund through December 31, 2031. These funds cannot be co-mingled with funds from any other source.
2. **Allowable Use of Funds:** Restrict the use of these funds to allowable activities under SLFRF, such as the maintenance and operation of the property that generated the income. The grantee should recognize that payment of funds into this Capital Reserve fund should not be considered by the grantee as an expenditure but instead as a method of accounting for rents collected and expenditures that are goods received, or services rendered.
3. **Recordkeeping:** Maintain detailed records of all program income and expenditures from this fund in accordance with SLFRF Guidance which requires retention of records for five years after the end of the performance period.
4. **Federal Reporting:** Continue to monitor Treasury updates and consult with the Stimulus PMO team regarding whether this income must be included in additional close-out reporting requirements.

This approach provides a conservative and compliant path forward that protects both the recipient agency and grantees from potential future audit findings or recoupment actions.

Subawards

In Rounds 1 and 2, grantees are able to make subawards to local municipalities with written consent of the SLBA. Grantees, in general, will be encouraged to avoid subawards to individuals or other non-governmental entities as the public transparency is lost. In all subawards, procurement measures outlined in these Guidelines must be followed. The grantee retains the responsibility of monitoring and ensuring compliance with all Program requirements. All subawards must be pre-approved in writing by the SLBA, as well as the subaward documents. The SLBA does not assume responsibility for the contractual relationship between the Grantee and any LUG they subaward to.

In Rounds 3 and 4, grantees may make subawards to a LUG, but the grantee retains the responsibility of monitoring and ensuring compliance with all federally related regulations. All subawards must be pre-approved in writing by the SLBA, as well as the subaward documents.

The SLBA does not assume responsibility for the contractual relationship between the grantee and any LUG they subaward to. Subawards to private individuals, companies, developers, or non-profit organizations are strictly prohibited.

Procurement Requirements

In Rounds 1 and 2, grantees must follow their locally established procurement requirements. If a local land bank does not have written procurement requirements, they must follow their home County's procurement processes and requirements. If a LUG does not have written procurement procedures, they must procure contractors competitively and in a public-facing manner.

In Rounds 3 and 4, grantees must follow either the procurement standards outlined in the Uniform Guidance 2 CFR 200.320, *or a more restrictive procurement standard for their organization*. In a nutshell, Uniform Guidance provides for:

- **Micro-purchases** - The acquisition of supplies or services where the aggregate dollar amount of which does not exceed the micro-purchase threshold which is generally \$10,000 (see 48 CFR Part 2, subpart 2.1), may be awarded without soliciting competitive price or rate quotations if the grantee considers the price to be reasonable based on research, experience, purchase history or other information and documents it files accordingly.
- **Small Purchases** - The acquisition of property or services, the aggregate dollar amount of which is higher than the micro-purchase threshold but does not exceed the simplified acquisition threshold which is \$250,000 (see 48 CFR Part 2, subpart 2.1). If small purchase procedures are used, price or rate quotations must be obtained from an adequate number of qualified sources as determined appropriate by the grantee.
- **Formal Procurement methods** - When the value of the procurement for property or services under this grant award exceeds the Small Purchases threshold, formal procurement methods are required. Normal procurement methods require following documented procedures. Formal procurement methods also require public advertising unless a non-competitive procurement can be used in accordance with § 200.319 or paragraph (c) of this section. The following formal methods of procurement are used for procurement of property or services above the simplified acquisition threshold or a value below the simplified acquisition threshold the grantee determines to be appropriate:
 - Sealed bids - bids are publicly solicited and a firm fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price.
 - Proposals - either a fixed price or cost-reimbursement type contract is awarded. Proposals are generally used when conditions are not appropriate for the use of sealed bids.

All vendors and contractors must be verified for the following, as appropriate. Grantee must retain a copy of their verifications collected.

- Federal Debarment (all contractors): www.sam.gov
- Licensed in the State of Michigan
 - Asbestos Inspector - [Asbestos Home Page \(state.mi.us\)](http://state.mi.us)
 - Abatement Worker and/or Supervisor - [Asbestos Home Page \(state.mi.us\)](http://state.mi.us)
 - Abatement Contractors - [Asbestos Home Page \(state.mi.us\)](http://state.mi.us)

- Lead Paint Inspector - <https://www.michigan.gov/mileadsafe/lead-services/hire-lead-professional>
- Lead Paint Worker and/or Supervisor - <https://www.michigan.gov/mileadsafe/lead-services/hire-lead-professional>
- Residential Builder or Maintenance and Alterations Contractor - [Accela Citizen Access](#)
- Electrical, HVAC or Plumbing - [Accela Citizen Access](#)
- Well Driller - <https://www.michigan.gov/-/media/Project/Websites/egle/Documents/Programs/DWEHD/Water-Well-Construction/Registered-Water-Well-Contractors-List.pdf?rev=db3747c23b704295a6d16c8470f92802>
- Others which may not be listed but require licensure in the State of Michigan or local county registration or licensure.

Insurance Requirements

Grantees must require contractors to hold Builder’s Risk insurance on all properties engaged in a rehabilitation activity. Once the property is insurable, grantee must obtain, and provide to SLBA as soon as it is obtained, proof of insurance on the property against fire, theft, vandalism, and acts of nature. This insurance should be of a sufficient amount to ensure replacement should the structure be a total loss. This is required by Uniform Guidance 2 CFR 200.310.

Properties engaged in demolition, stabilization and environmental remediation are assumed to be un-insurable by traditional companies, so the grantee will be considered ‘self-insured’ on these properties. Additional grant funds cannot be used to repair any damages to improvements already funded by the grant.

For all projects, contractors must carry and provide proof of insurance for Automobile, Commercial General Liability and Worker’s Compensation, for the duration of their contract with the grantee.

Davis-Bacon Act/Prevailing Wage Requirement

Rounds 1 and 2 are not funded with federal funds and prevailing wage does not apply.

Rounds 3 and 4 are funded with federal funds therefore Davis-Bacon rules apply. Further, since all grant agreements under the SLBA total over \$10M, rehabilitation and stabilization must utilize prevailing wage. Demolition may be required to use Davis-Bacon rules – see below.

Under Davis-Bacon, all prime construction contracts in excess of \$2,000 awarded by the grantees must include a provision for compliance with the Davis–Bacon Act (40 U.S.C. §§ 3141–3144, and 3146–3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”).

Further, the August, 2023, revision of the Davis-Bacon Act regulations states:

“...the Department has understood the Davis-Bacon labor standards to cover demolition and removal under certain circumstances. First, demolition and removal activities are covered by Davis-Bacon labor standards when such activities in and of themselves constitute construction, alteration, or repair of a

public building or work.... Second, the Department has consistently maintained that if future construction that will be subject to the Davis-Bacon labor standards is contemplated at the location where the demolition occurs—either because the demolition is part of a contract for such construction or because such construction is contemplated as part of a future contract, then the demolition of the previously existing structure is considered part of the construction of the subsequent building or work and therefore within the scope of the Davis-Bacon labor standards.”

“the Department proposed to clarify that demolition work is covered under Davis-Bacon in any of three circumstances: (1) Where the demolition and/or removal activities themselves constitute construction, alteration, and/or repair of an existing public building or work; (2) where subsequent construction covered in whole or in part by Davis-Bacon labor standards is planned or contemplated at the site of the demolition or removal, either as part of the same contract or as part of a future contract; or (3) where otherwise required by statute.”

“While a determination of whether demolition is performed in contemplation of a future construction project is a fact-specific question, the proposed rule also included a nonexclusive list of factors that can inform this determination, including the existence of engineering or architectural plans or surveys; the allocation of, or an application for, Federal funds; contract negotiations or bid solicitations; the stated intent of the relevant government officials; the disposition of the site after demolition (e.g., whether it is to be sealed and abandoned or left in a state that is prepared for future construction); and other factors. Based on these guidelines, Davis-Bacon coverage may apply, for example, to the removal and disposal of contaminated soil in preparation for construction of a building, or the demolition of a parking lot to prepare the site for a future public park. In contrast, **Davis-Bacon likely would not apply to the demolition of an abandoned, dilapidated, or condemned building to eliminate it as a public hazard, to reduce likelihood of squatters or trespassers, or to make the land more desirable for sale to private parties for purely private construction. (emphasis added)**”

This proposed language was accepted in whole as 29 CFR Part 5, §5.2

In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the US Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The grantee must place a copy of the current prevailing wage determination issued by the US Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination.

Wage determinations include both direct wages and indirect benefits given to the employee. Any difference between the minimum fringe benefit amount per hour detailed in the wage determination and what a contractor pays per hour for fringe benefits must be made up to the worker by adding that difference to their hourly wage.

For contracts where Davis-Bacon applies, grantees are required to collect self-certification documents from their contractor(s) and their subcontractors for every week that contractor(s)

spends on eligible activity. Grantee will be required to submit one sample wage and benefits statement with each quarterly report. All documentation must be retained per the Record Retention Schedule noted in these Guidelines.

Effective August 3, 2025, all grantees are advised to use this link to access Federal prevailing wage: <https://sam.gov/search/?index=dbra&page=1&pageSize=25&sort=-modifiedDate>

Utilize either the Residential or, if it is a commercial project, the Building selection to identify the federal prevailing wage for your project. If it is a Residential project and there are missing classifications, you may use a combination of Residential and Commercial to incorporate the missing classifications. Any missing classifications would also require engaging in a process to request those rates. Please see the Job Aid in CAPGEMS Get Help for detailed instructions.

Grantees should retain copies of the prevailing wages used for each project. Appendix 2 has links to the Prevailing Wage Certification form and instructions.

Elliott Larsen Civil Rights Act

All grantees shall not discriminate against any employee or applicant for employment, to be employed in the performance of the grant agreement, with respect to his or her hire, tenure, terms, conditions, or privileges of employment, or any matter directly or indirectly related to employment, because of his or her race, religion, color, national origin, age, sex, height, weight, marital status, or physical or mental disability that is unrelated to the individual's ability to perform the duties of a particular job or position. This same requirement applies to procured contractors and their subcontractors.

Grantee Risk Assessment

In Rounds 1 and 2, respondents to the Request for Proposals have the option to self-identify capacity and experience issues and request the SLBA to assist with the funded activities. The assistance will be provided by SLBA staff at the level indicated by the requesting respondent/grantee.

In Rounds 3 and 4, respondent/grantee will perform a self-assessment using a provided scoring tool designed to identify risks of non-compliance in the potential grantee pool. The SLBA staff will review and score the responses provided by the grantees and may include other variables such as past grant performance.

For Rounds 3 and 4, SLBA will engage the services of a compliance consultant to assist grantees in meeting State and Federal requirements. All grantees whose score indicates they would significantly benefit from additional assistance to fully comply with all grant requirements shall be required to work with a compliance consultant procured and funded by SLBA. The compliance consultant will review grantees grant administration process throughout the funding period including, but not limited to:

- Create standardized reports, forms, checklists, toolkits, and/or templates for SLBA and its grantees' use.
- Develop documentation standards and guidelines to demonstrate compliance.

- Develop guidance for cost categorization determinations based on programmatic, governmental accounting requirements, and/or [Uniform Guidance](#).
- Maximize federal reimbursement by ensuring SLBA, and its grantees, are able to identify and capture allowable expenditures.
- Provide guidance on best practices for tracking and documenting expenditures.
- Develop financial and programmatic tracking mechanisms.
- Provide programmatic and policy advice on federal programs.
- Develop processes and documentation requirements around grantees' risk assessment, monitoring and management, including training materials for grantees use on funding and programmatic requirements.
- Review proposed contracts and purchasing documentation for compliance with programmatic rules, [Uniform Guidance](#), and governmental accounting standards.
- Assist with standardizing SLBA program files.
- Streamline the reporting process to ensure continued compliance and implement post-award procedures.

Additionally, grantees awarded funds for demolition in all Rounds are *required* to attend a training session with experienced SLBA staff on the requirements for a successful demolition. Grantees awarded funds for rehabilitation in Round 3 and/or 4 are required to attend training sessions with experienced SLBA staff on the requirements for a successful rehabilitation project.

Disbursement of Grant Funds

All grants will be on a reimbursement basis at the conclusion of the funded activity(ies). Should a grantee have insufficient funds to fully fund a project in its entirety before being reimbursed, grantee may request a milestone-based reimbursement schedule, which shall be developed in conjunction with SLBA's Grant Manager.

Once all activities/project are completed, the grantee will submit all activity related documents as outlined in their respective grant agreements, as amended, along with their Request for Payment form provided with their grant agreement. Submissions are to be sent to the Grant Manager listed on their grant agreement.

- 1) Reimbursement package comes in.
- 2) Grant Manager, or their designee, reviews for completeness.
- 3) Any missing documentation is requested by the Grant Manager, or their designee.
- 4) Once all documentation is provided and approved, SLBA will submit to LEO Finance for processing.
- 5) Funds will be sent via Electronic Funds Transfer (EFT) to the account listed on grantee's documentation.

Grantees should plan to receive funds 30-45 days from successful submission, although care is taken to process as soon as possible.

Reporting Requirements

Rounds 1 and 2 grantees have no ongoing reporting requirements. All required final documentation is to be submitted at the time of final reimbursement.

Rounds 3 and 4 grantees will be required to file quarterly and annual reports. Through CAPGEMS, SLBA will provide a template reporting guide to capture the required data. Failure to provide reports for Rounds 3 and 4 will result in up to a \$500 penalty per occurrence. Quarterly report forms are in Appendix 3 and Annual report forms are in Appendix 4 for reference only – the data will be submitted through CAPGEMS.

Quarterly Report Dates:

Year	Calendar Quarter	Program Year/Quarter	Period Covered	Due Date to SLBA
2023	3	2024 / 1	July 1 – September 30	Reports Waived
2023	4	2024 / 2	October 1 – December 31	Reports Waived
2024	1	2024 / 3	January 1 – March 31	Reports Waived
2024	2	2024 / 4	April 1 – June 30	July 10
2024	3	2025 / 1	July 1 – September 30	October 10
2024	4	2025 / 2	October 1 – December 31	January 10
2025	1	2025 / 3	January 1 – March 31	April 10
2025	2	2025 / 4	April 1 – June 30	July 10
2025	3	2026 / 1	July 1 – September 30	October 10
2025	4	2026 / 2	October 1 – December 31	January 10
2026	1	2026 / 3	January 1 – March 31	April 10
2026	2	2026 / 4	April 1 – June 30	July 10
2026	3	2027 / 1	July 1 – September 30	October 10
2026	4	2027 / 2	October 1 – December 31	January 10

Annual Report Dates:

Report	Period Covered	Due Date to SLBA
1	July 1, 2023 – June 30, 2024	July 10, 2024
2	July 1, 2024 – June 31, 2025	July 10, 2025
3	July 1, 2025 – June 31, 2026	July 10, 2026
4	April 1, 2023 – December 31, 2026	January 10, 2027

Final Annual Reports will be may be made available sooner than the end of the fourth quarter for grantees filing final reports in earlier quarters. This ends the grantee’s reporting requirement. However, records must be kept according to the Record Retention Schedule noted in these Guidelines.

Personally Identifiable Information Protections

OMB defines “Personally Identifiable Information” (PII) as information that can be used to distinguish or trace an individual’s identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. “Sensitive Information” is considered any unclassified information whose loss, misuse, or unauthorized access to or

modification of could adversely affect the interest or the conduct of federal programs or the privacy to which individuals are entitled under the Privacy Act.

Grantees have a responsibility to protect any and all PII that comes into their possession related to this grant program. All grantees must ensure the privacy of all PII obtained from participants in an eligible blight elimination project and to protect such information from unauthorized disclosure. Grantees must ensure that PII used during their grant has been obtained in conformity with applicable federal and state laws and policies governing the confidentiality of information. All PII transmitted via e-mail or stored on external drives must be encrypted. All PII stored onsite must be kept safe from unauthorized individuals at all times and must be managed with appropriate information technology (IT) services. Accessing, processing, and storing of PII data on personally owned equipment at off-site locations (e.g. employee's home, and non-grantee managed IT services, e.g. Yahoo mail, Gmail, etc.) is strictly prohibited. All parties who will have access to sensitive/confidential/proprietary/private data must be advised of the confidential nature of the information, the safeguards with which they must comply to protect the information, and that they may be liable to civil and criminal sanctions for improper disclosure. Access to any PII obtained through the grant must be restricted to only those employees of the grant recipient who need it in their official capacity to perform duties in connection with the scope of work in the grant agreement. All PII data must be processed in a manner that will protect the confidentiality of the records/documents and is designed to prevent unauthorized persons from retrieving such records by computer, remote terminal, or any other means.

Monitoring

Grantees will be subject to in-person monitoring as outlined in the Monitoring Plans for Rounds 1 and 2 and for Rounds 3 and 4. The addition of the CAPGEMS online system, is designed to provide SLBA sufficient documentation at time of reimbursement, in general, to determine that the requirements of the funding source have been met. However, to verify that and meet the guidelines of the federal SLFRF program, there will be local monitoring conducted. This will include, but is not limited to, site visits and review of original documentation. Please refer to additional documentation released specific to the BEP Monitoring Plan.

Audit Requirements

In general, state, local, and tribal governments and not-for-profit organizations expending at least \$750,000 of federal awards in a single fiscal year are required to have a single audit conducted. All grantees that fall within that threshold will be required to provide copies of their single audits conducted during grant period.

Records Retention

Round #	Retention Date
1 and 2	Three years after grant agreement end date or final payment, whichever is later
3 and 4	12/31/31

All records, reports and documentation must be retained by all grantees and their vendors. While SLBA has provided CAPGEMS for use in Rounds 3 and 4 where most of the documentation will be uploaded, grantees should not rely on this as meeting their requirement for record retention.

CAPGEMS

For Rounds 3 and 4, the SLBA, in conjunction with our consultant, is providing an online system to provide much of the documentation required for funded projects. The goals of developing this system are:

- To provide long-term storage and access to required eligible activity documentation;
- Assist the grantees in achieving 100% compliance with federal and state requirements;
- Create a tool to enhance the grantee's quarterly and annual reporting requirements;
- Provide ongoing feedback as project's progress from beginning to end; and
- Provide a 'one-stop' location for future monitoring and reviews by the State of Michigan and/or federal agencies.

Grant Close Out Procedure

Round 1 & 2

{To be determined}

Rounds 3 and 4

Once the final reimbursement has been completed, SLBA will schedule a meeting with the Signatory to review any concerns over the process or documentation related to the grant. Upon final review, SLBA will complete the closeout ticket in CAPGEMS which may include a letter of concern or a letter of finding for any deficiencies in the administration of the grant agreement or in execution of the funded activity.

Appendix 1 - Administration Expenditure Self Certification Sample Form

Blight Elimination Program

Grantee Name: Super Land Bank
 SLBA-Issued Grant ID#: XX-XX

Employee Name: Lawrence Welk

Administrative Hours Tracking Summary Sheet

Pay Period From: 10/1/2023 To: 10/14/2023

This sheet summarizes hours by project for the two-week pay period detailed above.

Hours Type: Standard Hours AY | Indiv | PCA

	Week 1							Total	Week 2							Total	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		
Regular	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

** Other refers to annual leave, sick leave, holiday leave, or other non-standard time.

Blight Elimination Program - Project 1

Project Address/Description: 123 Main Street, Christmas

	Week 1							Total	Week 2							Total	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		
Regular	0.0	0.0	2.0	0.0	4.5	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	8.0	0.0	8.0	8.0

Blight Elimination Program - Project 2

Project Address/Description:

	Week 1							Total	Week 2							Total	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		
Regular	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Blight Elimination Program - Project 3

Project Address/Description:

	Week 1							Total	Week 2							Total	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		
Regular	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Blight Elimination Program - Project 4

Project Address/Description:

	Week 1							Total	Week 2							Total	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		
Regular	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Grant Admin Hours

	Week 1							Total	Week 2							Total	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Sun	Mon	Tue	Wed	Thu	Fri	Sat		
Regular	0.0	0.0	2.0	0.0	4.5	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	8.0	0.0	8.0	8.0
Hourly wage & benefit multiplier								\$ 34.45								\$ 34.45	
Week 1 Amount Administrative Expense								\$ 223.93								\$ 275.60	

Total Hours	0.0	0.0	2.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Standard								8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0

Self Certification: By signing below, I am attesting that the documented time was spent on eligible activities of the blight elimination grant.

Signed by: Lawrence Welk
 Signature: *Lawrence Welk*

Appendix 2: Davis Bacon/Prevailing Wage Form

<https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf>

Instructions:

<https://www.dol.gov/agencies/whd/forms/wh347>

Appendix 3: Quarterly Reporting Tool

This report will be captured through CAPGEMS. Please check for reporting instructions in CAPGEMS.

Grantee Name: _____ SLBA-Issued Grant ID#: _____

For the period beginning: _____ and ending: _____

Grantee UEI Number: _____ Grant Amount: _____

Obligations and Expenditures

Current period amount obligated:	\$ _____	Current period amount expended:	\$ _____
Cumulative amount obligated:	\$ _____	Cumulative amount expended:	\$ _____

Project Status. Report on each funded project's status each reporting period.

Address/Project Name	Census Tract #	Not Started	Completed less than 50%	Completed more than 50%	Completed
<i>e.g. 8530 E Colby Rd, Crystal</i>	<i>9706</i>		X		

Add additional pages as needed...

Sale Proceeds. Report any sale proceeds earned and any expended to cover eligible project costs during this period, if applicable.

Address/Project Name	Census Tract #	Date Sold	Amount sold for	Sale Proceeds
<i>e.g. 8530 E Colby Rd, Crystal</i>	<i>9706</i>	<i>2/30/2024</i>	<i>\$70,000</i>	<i>\$25,000</i>

Subawards. Provide the following information, as applicable, on a separate sheet on any subaward you have made:

- Subrecipient identifying and demographic information (e.g., legal name, UEI number, location)
- Award number (e.g., Award number, Contract number, Loan number)
- Award date, type, amount, and description
- Award payment method (reimbursable or lump sum payment(s))
- For loans, expiration date (date when loan expected to be paid in full)
- Primary place of performance
- Related project name(s)
- Related project identification number(s) (created by the State)
- Period of performance start date
- Period of performance end date
- Quarterly obligation amount
- Quarterly expenditure amount
- Project(s)

Davis-Bacon/Prevailing Wage Reporting:

Do you certify that all laborers and mechanics employed by contractors and subcontractors in the performance of the project are paid wages at rates not less than those prevailing, as determined by the U.S. Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code (commonly known as the “Davis-Bacon Act”) or the State of Michigan? Yes No

If no, answer the following questions:

- Number of employees of Contractors and Subcontractors working on the project(s): _____
- Number of employees on the project hired directly: _____
- Number of employees on the project(s) hired through a third party: _____

Have you verified that wages and benefits paid to workers on the project(s) are at or above prevailing wage for the worker classifications as determined by US Secretary of Labor or State of Michigan, whichever is higher? Yes No

Do you certify that sufficient records to substantiate labor information will be made available upon request? Yes No

Provide entity name, contact person, phone number and address for all contracts and subcontractors working on project(s).

Key Performance Indicators (KPI) summary. For projects completed in this quarter, please provide the following information:

Demolition:

Key Performance Indicator	This Annual Period	Cumulative Completed	Number
# of Residential buildings demo'd			
# of Commercial buildings demo'd			
# of Industrial buildings demo'd			
# of Mixed-Use buildings demo'd			
# of employees working on demolition activities			
# of minority-owned companies engaged on demolition activities			

Stabilization

Key Performance Indicator	This Annual Period	Cumulative Completed	Number
# of Residential buildings stabilized			
# of Commercial buildings stabilized			
# of Industrial buildings stabilized			
# of Mixed-Use buildings stabilized			

# of employees working on demolition activities		
# of minority-owned companies engaged on demolition activities		

Environmental Remediation

Key Performance Indicator	This Annual Period	Cumulative Completed	Number
# of properties remediated			
# of employees working on demolition activities			
# of minority-owned companies engaged on demolition activities			

Rehabilitation

Key Performance Indicator	This Annual Period	Cumulative Completed	Number
# of Residential buildings rehabbed			
# of Commercial buildings rehabbed			
# of Industrial buildings rehabbed			
# of Mixed-Use buildings rehabbed			
# of employees working on demolition activities			
# of minority-owned companies engaged on demolition activities			
Homeowners—Under 65% AMI *			
Homeowners—65% - 80% AMI *			
Renters – Under 60% AMI *			
Renters – 60% - 80% AMI *			

*In non-QCTs only

I have read and understand the above. I understand that the responses above will be utilized by SLBA to comply with SLFRF regulations. I certify that the above information is accurate, complete, and true.

Signature: _____

Date: _____

Print Name: _____

Title: _____

Appendix 4: Annual Reporting Tool

This report will be captured through CAPGEMS. Please check for reporting instructions in CAPGEMS.

Grantee Name: _____ SLBA-Issued Grant ID#: _____

For the period beginning: _____ and ending: _____

Grantee UEI Number: _____ Grant Amount: _____

Obligations and Expenditures.

Current period amount obligated:	\$ _____	Current period amount expended:	\$ _____
Cumulative amount obligated:	\$ _____	Cumulative amount expended:	\$ _____

Project Status. Report on project status each reporting period, in four categories:

Address/Project Name	Census Tract #	Not Started	Completed less than 50%	Completed more than 50%	Completed
<i>e.g. 8530 E Colby Rd, Crystal</i>	<i>9706</i>		X		

Sale Proceeds. Report any sale proceeds earned and any expended to cover eligible project costs during this period, if applicable.

Address/Project Name	Census Tract #	Date Sold	Amount sold for	Sale Proceeds
<i>e.g. 8530 E Colby Rd, Crystal</i>	<i>9706</i>	<i>2/30/2024</i>	<i>\$70,000</i>	<i>\$25,000</i>

Subawards. Provide the following information, as applicable, on a separate sheet on any subaward you have made:

- Subrecipient identifying and demographic information (e.g., legal name, UEI number, location)
- Award number (e.g., Award number, Contract number, Loan number)
- Award date, type, amount, and description
- Award payment method (reimbursable or lump sum payment(s))
- For loans, expiration date (date when loan expected to be paid in full)
- Primary place of performance
- Related project name(s)
- Related project identification number(s) (created by the State)
- Period of performance start date
- Period of performance end date
- Quarterly obligation amount
- Quarterly expenditure amount
- Project(s)
- Capital expenditures
- Constraints or challenges

Civil Rights Compliance. Description of the grantee’s, or subrecipients’ compliance with Title VI of the Civil Rights Act of 1964. This information should include:

Yes OR No: Grantee has included Civil Right Compliance requirements in all contracts or subcontracts to vendors notifying them of nondiscrimination requirements on the basis of race, color, national origin, religion, sex, disability and age.

Yes OR No: Grantee covenants that it shall not discriminate against any employee or applicant for employment, to be employed in the performance of this Contract, with respect to his or her hire, tenure, terms, conditions, or privileges of employment, or any matter directly or indirectly related to employment, because of his or her race, religion, color, national origin, age, sex, height, weight, marital status, or physical or mental disability that is unrelated to the individual’s ability to perform the duties of a particular job or position.

Provide any other details of how grantee meets the requirements of the Civil Rights Act of 1964, as amended. _____

Promoting equitable outcomes: describe efforts to date, intended outcomes to promote equity, and an update, using qualitative and quantitative data, on how the recipients’ approach achieved or promoted equitable outcomes or progressed against equity goals during the performance period. Also describe any constraints or challenges that affected project success in terms of increasing equity. In particular, this section must describe the geographic and demographic distribution of funding, including whether it is targeted toward traditionally marginalized communities.

Other Sources of Federal Funds. Provide a list of all other sources of federal funds being used to fund approved blight elimination projects.

Key Performance Indicators (KPI) summary. For completed projects, please provide the following information:

Demolition:

Key Performance Indicator	This Annual Period	Cumulative Completed	Number
# of Residential buildings demo'd			
# of Commercial buildings demo'd			
# of Industrial buildings demo'd			
# of Mixed-Use buildings demo'd			
# of employees working on demolition activities			
# of minority-owned companies engaged on demolition activities			

Stabilization

Key Performance Indicator	This Annual Period	Cumulative Completed	Number
# of Residential buildings stabilized			
# of Commercial buildings stabilized			
# of Industrial buildings stabilized			
# of Mixed-Use buildings stabilized			
# of employees working on demolition activities			
# of minority-owned companies engaged on demolition activities			

Environmental Remediation

Key Performance Indicator	This Annual Period	Cumulative Completed	Number
# of properties remediated			
# of employees working on demolition activities			
# of minority-owned companies engaged on demolition activities			

Rehabilitation

Key Performance Indicator	This Annual Period	Cumulative Number Completed
# of Residential buildings rehabbed		
# of Commercial buildings rehabbed		
# of Industrial buildings rehabbed		
# of Mixed-Use buildings rehabbed		
# of employees working on demolition activities		
# of minority-owned companies engaged on demolition activities		
Homeowners—Under 65% AMI *		
Homeowners—65% - 80% AMI *		
Renters – Under 60% AMI *		
Renters – 60% - 80% AMI *		

*In non-QCTs only

I have read and understand the above. I understand that the responses above will be utilized by SLBA to comply with SLFRF regulations. I certify that the above information is accurate, complete, and true.

Signature: _____ Date: _____

Print Name: _____

Title: _____

Exhibit D - Required Federal and State Provisions

REQUIRED FEDERAL AND STATE PROVISIONS

A. RECORDKEEPING REQUIREMENTS Generally, all contractors and subcontractors must maintain records and financial documents related to this contract until at least December 31, 2031. U.S. Treasury may request the transfer of records of long-term value at the end of such period. Wherever practicable, such records should be collected, transmitted, and stored in open and machine-readable formats. See generally, 2 CFR 200.334 through 200.338.

All contractors and subcontractors must agree to provide or make available such records to Treasury upon request, and to the Government Accountability Office (GAO), Treasury's Office of Inspector General (OIG), and their authorized representative in order to conduct audits or other investigations.

B. UNIFORM GUIDANCE. Under the Final Rule issued by the U.S. Department of the Treasury (Treasury) referenced at <https://home.treasury.gov/system/files/136/SLFRF-Final-Rule-FAQ.pdf>, this contract is subject to the requirements set forth in the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, (the "Uniform Guidance") at 2 CFR 200.317 through 200.327. All payments requested under this program should be accounted for with supporting documentation. All contractors and subcontractors should maintain documentation evidencing that the Program Funds were expended in accordance with federal, state, and local regulations.

C. TERMINATION/RECOVERY OF PROGRAM FUNDS. Treasury requires any Program Funds received pursuant to this Agreement and any attachments that are expended in a manner that fails to comply with SLFRF and all other applicable laws to be returned to Treasury. The State reserves the right to monitor the Subrecipient and their contractors and subcontractors and take such corrective action for noncompliance as it deems necessary and appropriate, including but not limited to, termination of the Grant Agreement and return of Program Funds previously provided thereunder.

D. ALL CONTRACTS IN EXCESS OF \$10,000 must address the contract's termination for cause and termination for convenience by the subrecipient including the manner by which it will be affected and the basis for settlement, if any.

E. EQUAL EMPLOYMENT OPPORTUNITY Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR Part 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR Part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

F. DAVIS-BACON ACT, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144,

and 3146–3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.

In addition, contractors must be required to pay wages not less than once a week. The non–Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non–Federal entity must report all suspected or reported violations to the Federal awarding agency.

G. COPELAND “ANTI–KICKBACK” ACT (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each contractor or Subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non–Federal entity must report all suspected or reported violations to the Federal awarding agency.

H. DEBARMENT AND SUSPENSION (Executive Orders 12549 and 12689). A contract or grant award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR Part 1986 Comp., p. 189) and 12689 (3 CFR Part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. All contractors and subcontractors must be vetted for debarment. If debarment action has been taken against the contractor, the contract shall be terminated. If debarment action has been taken against any subcontractor, the contractor shall provide an alternative subcontractor within 10 days of notification. The debarred subcontractor may not work on the project.

I. DOMESTIC PREFERENCES FOR PROCUREMENTS (2 CFR 200.322).

a. As appropriate and to the extent consistent with law, the non–Federal entity should, to the greatest extent practicable under a federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.

b. For purposes of this section:

(i) “Produced in the United States” means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(ii) “Manufactured products” means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

J. CONFLICT OF INTEREST (2 CFR 200.318 and 24 CFR 570.611) The general rule is that no persons who exercise or have exercised any functions or responsibilities with respect to activities assisted, or who are in a position to participate in a decision making process or gain inside information with regard to such activities, may obtain a financial interest or benefit from an assisted activity, or have a financial interest in any contract, subcontract, or agreement with respect to an assisted activity, or with respect to the proceeds of the assisted activity, either for themselves or those with whom they have business or immediate family ties, during their tenure or for one year thereafter.

K. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (40 U.S.C. 3701–3708). Where applicable, all contracts awarded in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Contract Work Hours and Safety Standards Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

L. BYRD ANTI-LOBBYING AMENDMENT (31 U.S.C. 1352). Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

M. CLEAN AIR ACT (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act (33 U.S.C. 1251–1387) as amended. Contracts, grant agreements, and subgrants of amounts in excess of \$150,000 must agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

N. LEAD RENOVATION, REPAIR AND PAINTING PROGRAM Prohibition of Use of Lead-Based Paint. The construction or rehabilitation of residential structures is subject to the HUD Lead-Based Paint regulations promulgated at 24 CFR Part 35, 24 CFR 570.608, and 24 CFR Section 745, Subpart E, as applicable. The Contractor and his/her subcontractors shall comply with the provisions for the notification and elimination of lead-based paint hazards of said regulations.

O. PROCUREMENT OF RECOVERED MATERIALS (2 CFR 200.323). A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

P. FAIR HOUSING AND EQUAL OPPORTUNITY REGULATIONS

1. (Title VI of the Civil Rights Act of 1964; Public Law 88-352 implemented in 24 CFR Part 1)
2. No person shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the Department of Housing and Urban Development. 24 CFR Part 570.904 and Title VIII of the Civil Rights Act of 1968, Equal Opportunity and Fair Housing

Q. PROTECTION OF RESIDENT WORKERS The City of Dearborn supports the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verification and non-discrimination. The contractor is held responsible to establish appropriate procedures and controls so no services under this contract will be performed by any worker who is not legally eligible to perform such services. The City of Dearborn shall have the right to terminate the contract if the City determines that the contractor has failed to perform satisfactorily with respect to its employment practices in support of INA.

R. NON-DISCRIMINATION CLAUSE The respondent agrees not to discriminate against any employee or applicant for employment, to be employed in the performance of such contract, with respect to hire, tenure, terms, conditions or privileges, of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, or marital status. Breach of this covenant may be regarded as material breach of the contract as provided for in Act 220 and Act 453 of the Public Acts of 1976, as amended, entitled "Michigan Handicapper's Civil Rights Act" and the Michigan Elliott Larson Civil Rights Act." The respondent further agrees to require similar provisions from any subcontractors, or suppliers.

S. IRAN ECONOMIC SANCTIONS ACT: Further, Contractor certifies it is in compliance with in the State of Michigan’s Iran Economic Sanctions Act and is not an Iran linked business. By signing this document, I certify and agree on behalf of myself and the company submitting this bid/proposal the following:

- a) that I am duly authorized to legally bind the company submitting this bid; and
- b) that the company submitting this bid is not an “Iran-linked business,” as that term is defined in Section 2(e) of the Iran Economic Sanctions Act, being Michigan Public Act No. 517 of 2012; and
- c) That I and the company submitting this bid will immediately comply with any further certifications or information submissions requested by the City in this regard