



Maryland Stadium Authority

**Project C.O.R.E.
(Creating Opportunities for Renewal and Enterprise)
Request for Proposals DD-009
Abatement and Demolition Services**

Issue Date: August 4, 2021

KEY INFORMATION SUMMARY SHEET

MARYLAND STADIUM AUTHORITY

**Project C.O.R.E
Request for Proposals No. DD-009
Abatement and Demolition Services**

RFP Issue Date: August 4, 2021

Project Location: 1511 Ashburton Street
Baltimore, MD 21216
and
1600 Rutland Avenue
Baltimore, MD 21213

Procurement Officer: Natasha Speaks
Maryland Stadium Authority
351 West Camden Street, Suite 300
Baltimore, Maryland 21201
Phone: (443) 202-3885
E-mail: nspeaks@mdstad.com

Procurement Method: Competitive Sealed Proposals

MBE Participation Goal: 33% overall, no subgoals

Pre-Proposal Conference: August 10, 2021 at 11:00 a.m.
(Local Time) *via Web*

**Closing Date and Time
Technical Proposals:** August 27, 2021 at 1:00 p.m. (Local Time)

Financial Proposals: Financial proposals will be requested from short-listed Offerors only.

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SECTION 1

GENERAL INFORMATION

1.1 Summary Statement

The Maryland Stadium Authority (“MSA”) is requesting proposals from prime contractors to provide the scope of services set forth in **Attachment E**, generally relating to abatement, and/or demolition for properties identified and selected under Project C.O.R.E. (the “Program”). Specifically, MSA is seeking proposals for abatement and demolition services for 1511 Ashburton Street (former site of Dr. Lillie M. Jackson Elementary School) and 1600 Rutland Ave.

1.2 Abbreviations and Definitions

For purposes of this RFP, the following abbreviations and terms have the meanings indicated below:

- a) **City** - The Baltimore City Department of Housing and Community Development.
- b) **COMAR** - Code of Maryland Regulations (available on-line at www.dsd.state.md.us).
- c) **Contract** –The contract or agreement entered into between MSA and the selected Offeror responding to this RFP. The Contract will include all general MSA terms and conditions, and will incorporate the entire RFP, including any amendments/addenda, and all or indicated portions of the selected Offeror’s proposal. The form contract is attached hereto as **Attachment G**.
- d) **Contract Manager** – The MSA representative for this Contract who is responsible for Contract administration functions, including issuing written direction, compliance with terms and conditions, monitoring this Contract to ensure compliance with its terms and conditions, and to assist the PM in requirements. MSA may change the Contract manager at any time by written notice to the Contractor.
- e) **Contractor** – The Offeror selected under the requirements and procedures contained in this RFP.
- f) **Department** – The Maryland Department of Housing and Community Development (DHCD).
- g) **eMMA** – eMaryland Marketplace Advantage (<https://emma.maryland.gov/>).
- h) **Local Time** – Time in the Eastern Time Zone as observed by the State.

- i) **MBE** – Minority Business Enterprise certified by the Maryland Department of Transportation (MDOT).
- j) **MSA** – Maryland Stadium Authority (website - www.mdstad.com).
- k) **MSA Business Hours** – 8:30 A.M. to 5:00 P.M. local time, Monday through Friday, excluding State holidays.
- l) **MSA Procurement Policies** – MSA procurement policies and procedures (www.mdstad.com).
- m) **Notice to Proceed (NTP)** – A formal notification issued by the Procurement Officer that directs the Contractor to perform work and establishes the date on which the work is to commence on a Project.
- n) **Offeror** – an entity that submits a proposal in response to this RFP.
- o) **Procurement Officer (PO)** – The MSA representative responsible for this RFP.
- p) **Program – Project C.O.R.E.** – The Creating Opportunities for Renewal and Enterprise initiative which purpose is the improvement of blighted properties in a safe and efficient manner, promoting safety, revitalizing Baltimore City through demolition, and stabilization; and converting remaining open parcels into gardens, parks, other green amenities, or redevelopment opportunities. Information concerning Project C.O.R.E. can be obtained at: <http://dhcd.maryland.gov/ProjectCORE/Pages/default.aspx>.
- q) **Project Manager (PM)** – The MSA representative that is primarily responsible for monitoring the daily activities of a contract and providing technical assistance to the Contractor.
- r) **Project Manual** – The Project Manual included in the RFP as **Attachment H** serves as the technical basis for the execution of the abatement, demolition and site stabilization services performed under the Program.
- s) **Proposal** – The technical and financial responses to this RFP.
- t) **Proposal Closing Date** – The date and time provided in section 1.10 of the RFP, as amended by MSA.
- u) **RFP** – Request for Proposals.
- v) **Selection Committee** – The representatives of MSA, and the Department responsible for selecting the Contractor.
- w) **State** – The State of Maryland.

1.3 Contract Type

The contract that results from this RFP will be for a fixed fee. The Contract amount shall not increase unless agreed to by MSA and evidenced by an executed contract modification.

1.4 Contract Term

The term of the Contract will be for a period necessary to complete the scope of work and as agreed upon by MSA and the Contractor. Note that Offerors are to include a detailed schedule for completion of the work based on the scope set forth in this RFP. The final schedule will be incorporated into a contract award.

1.5 Procurement Officer

The sole point-of-contact for purposes of this RFP is the Procurement Officer listed below:

Natasha Speaks
Maryland Stadium Authority
351 West Camden Street, Suite 300
Baltimore, Maryland 21201
Phone: 443-202-3885
Email: nspeaks@mdstad.com

MSA may change the Procurement Officer at any time and will provide written notice to the Offerors if any such change occurs.

1.6 Contract and Project Manager

The Contract and Project Manager is:

Ryan Carter
Maryland Stadium Authority
351 West Camden Street, Suite 300
Baltimore, Maryland 21201

MSA may change the Project Manager at any time and will provide written notice to the Offerors if any such change occurs.

1.7 Pre-Proposal Conference and Site Visit

A web Pre-Proposal Conference will take place on **August 10, 2021 at 11:00 a.m. (Local Time)**. Please click on the link below for details regarding the web pre-proposal conference and to RSVP to the event:

https://us02web.zoom.us/meeting/register/tZwodemhjq8uHtUnJ3TpQrYGDqD_B5bhoJk-

Site visits will take place on August 16th (Rutland Avenue) and August 17th (Ashburton Street) from 10-12 p.m. Please click on the link below to register.

<https://www.eventbrite.com/e/site-visit-project-core-dd-009-abatement-and-demolition-services-tickets-165962009839>

1.8 e-Maryland Marketplace Advantage

In order to receive a Project award, a vendor must be registered on eMMA. Registration is free. You can register at: <https://emma.maryland.gov/>

Click on “New Vendor? Register Now” to begin the process and follow the prompts.

1.9 Questions

Questions regarding this RFP shall be submitted electronically in Word or PDF format via the following upload link no later than **4:00 p.m. (Local Time) on August 17, 2021**:

<https://mdstad.sharefile.com/r-rb28f896363fa4dc8b55e2f322ed56fad>

Please include information regarding the name of the firm, representative’s name, and contact information. Based on the availability of time to research and communicate an answer, the Procurement Officer will decide whether an answer can be given before the proposal closing date. Answers to all substantive questions that have not previously been answered, and are not clearly specific to the requestor, will be provided via addendum to the RFP.

1.10 Proposal Closing Date

To be considered, Technical Proposals must be uploaded to the following link no later than **1:00 p.m. (Local Time) on August 27, 2021**:

<https://mdstad.sharefile.com/r-r74b7f58e9a4a4175b468849c33772853>

Requests for an extension of this date and/or time will not be granted. Offerors should allow sufficient electronic transmission time to ensure timely receipt of

their proposals. Proposals received by MSA after the deadline will not be considered. Proposals will not be reviewed publicly.

1.11 Duration of Offer

Proposals submitted in response to this RFP are irrevocable for **180 days** following the Proposal Closing Date. This period may be extended at the Procurement Officer's request only with the Offeror's written agreement.

1.12 Revisions to the RFP

(a) If the RFP is revised before the Proposal Closing Date, MSA shall post any addenda to the RFP on eMMA and MSA's website and shall endeavor to provide such addenda to all prospective Offerors that were sent this RFP or are otherwise known by the Procurement Officer to have obtained this RFP. It remains the responsibility of all prospective Offerors to check eMMA and MSA's website for any addenda issued prior to the Proposal Submission Deadline.

(b) Acknowledgment of the receipt of all addenda to this RFP issued before the Proposal Closing Date shall be included in the Transmittal Letter accompanying the Offeror's Technical Proposal.

(c) Addenda made after the Proposal Closing Date will be sent only to those Offerors that remain under award consideration as of the issuance date of the addenda.

(d) Acknowledgement of the receipt of addenda to the RFP issued after the Proposal Closing Date shall be in the manner specified in the addendum notice.

(e) Failure to acknowledge receipt of an addendum does not relieve the Offeror from complying with the terms, additions, deletions, or corrections set forth in the addendum, and may cause the Proposal to be deemed not reasonably susceptible of being selected for award.

1.13 Minority Business Enterprises

Minority Business Enterprises are encouraged to respond to this solicitation.

a.) An overall MBE subcontractor participation goal as identified in the Key Information Summary Sheet has been established for this procurement, representing a percentage of the total contract dollar value, including all renewal option terms, if any. All subcontractors named by the Offeror as part of their MBE Schedule must be certified with the Maryland Department of Transportation (MDOT).

b.) Notwithstanding any subgoals established for this RFP, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from

any/all of the various MBE classifications to meet the remainder of the overall MBE participation goal.

- c.) By submitting a response to this solicitation, the Offeror acknowledges the overall MBE subcontractor participation goal and subgoals and commits to achieving the overall goal and subgoals by utilizing certified minority business enterprises or requests a full or partial waiver of the overall goal and subgoals.

An Offeror that does not commit to meeting the entire MBE participation goal must submit a request for waiver with its proposal submission that is supported by good faith efforts documentation to meet the MBE goal made prior to submission of its proposal as outlined in **Attachment D-1B**, Waiver Guidance. Failure of an Offeror to properly complete, sign, and submit **Attachment D-1A** at the time it submits its technical Proposal may result in the rejection of the Proposal and the Offeror being deemed not reasonably susceptible of being selected for award.

d.) Attachments

- (a.) D-1 to D-5 – The following Minority Business Enterprise participation instructions, and forms are provided to assist Offerors:

1. Attachment D-1A MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule (must be submitted with Proposal)
2. Attachment D-1B Waiver Guidance
3. Attachment D-1C Good Faith Efforts Documentation to Support Waiver Request
4. Attachment D-2 Outreach Efforts Compliance Statement
5. Attachment D-3A MBE Subcontractor Project Participation Certification
6. Attachment D-3B MBE Prime Project Participation Certification
7. Attachment D-4A Prime Contractor Paid/Unpaid MBE Invoice Report
8. Attachment D-4B MBE Prime Contractor Report
9. Attachment D-5 Subcontractor Paid/Unpaid MBE Invoice Report

- (b.) The Offeror shall include with its Proposal a completed MBE Utilization and Fair Solicitation Affidavit (Attachment D-1A) whereby:

1. The Offeror acknowledges the certified MBE participation goal and commits to make a good faith effort to achieve the goal and any applicable subgoals, or requests a waiver, and affirms that MBE subcontractors were treated fairly in the solicitation process; and
2. The Offeror responds to the expected degree of MBE

participation, as stated in the solicitation, by identifying the specific commitment of certified MBEs at the time of Proposal submission. The Offeror shall specify the percentage of total contract value associated with each MBE subcontractor identified on the MBE participation schedule, including any work performed by the MBE prime (including a prime participating as a joint venture) to be counted towards meeting the MBE participation goals.

3. The Offeror requesting a waiver should review Attachment D-1B (Waiver Guidance) and D-1C (Good Faith Efforts Documentation to Support Waiver Request) prior to submitting its request.

(c.) If the Offeror fails to submit a complete Attachment D-1A with the technical proposal as required, the Procurement Officer may deem the Proposal not reasonably susceptible of being selected for award.

(d.) Offerors are responsible for verifying that each MBE (including any MBE prime and MBE prime participating in a joint venture) selected to meet the goal and any subgoals and subsequently identified in Attachment D-1A is appropriately certified by the Maryland Department of Transportation and has the correct NAICS codes allowing it to perform the committed work.

(e.) Within ten (10) Business Days from notification that it is the recommended awardee or from the date of the actual award, whichever is earlier, the Offeror must provide the following documentation to the Procurement Officer:

1. Outreach Efforts Compliance Statement (Attachment D-2);
2. MBE Subcontractor/Prime Project Participation Certification (Attachment D-3A/3B); and
3. Any other documentation required by the Procurement Officer to ascertain Offeror responsibility in connection with the certified MBE subcontractor participation goal or any applicable subgoals.
4. Further, if the recommended awardee believes a waiver (in whole or in part) of the overall MBE goal or of any applicable subgoal is necessary, the recommended awardee must submit a fully-documented waiver request that complies with COMAR 21.11.03.11. If the recommended awardee fails to return each completed document within the required time, the Procurement Officer may determine that the recommended awardee is not responsible and, therefore, not eligible for Contract award. If the Agreement has already been awarded, the award is voidable.

(f.) A current directory of certified MBEs is available through the Maryland State Department of Transportation (MDOT), Office of Minority Business Enterprise, 7201 Corporate Center Drive, Hanover,

Maryland 21076. The phone numbers are (410) 865-1269, 1-800-544-6056, or TTY (410) 865-1342. The directory is also available on the MDOT website at <http://mbe.mdot.maryland.gov/directory/>. The most current and up-to-date information on MBEs is available via this website. Only MDOT-certified MBEs may be used to meet the MBE subcontracting goals.

- (g.) An Offeror that requests a waiver of the goal or any of the applicable subgoals will be responsible for submitting the Good Faith Efforts Documentation to Support Waiver Request (**Attachment D-1C**) and all documentation within ten (10) Business Days from notification that it is the recommended awardee or from the date of the actual award, whichever is earlier, as required in COMAR 21.11.03.11.
- (h.) All documents, including the MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule (**Attachment D-1A**), completed and submitted by the Offeror in connection with its certified MBE participation commitment shall be considered a part of the Contract and are hereby expressly incorporated into the Contract by reference thereto. All of the referenced documents will be considered a part of the Proposal for order of precedence purposes (see **Attachment G**).
- (i.) The Offeror is advised that liquidated damages will apply in the event the Contractor fails to comply in good faith with the requirements of the MBE program and pertinent Contract.

1.14 Cancellations; Discussions

MSA reserves the right to cancel this RFP, or, to accept or reject any and all proposals in whole or in part, received in response to this RFP; to waive or permit cure of minor irregularities; and to conduct discussions with any or all qualified or potentially qualified Offerors in any manner necessary to serve the best interests of MSA. This may be followed by submission of Offeror-revised Proposals and best and final offers (BAFO). MSA also reserves the right, in its sole discretion, to award a contract based upon written proposals received, without prior discussions or negotiations.

1.15 Incurred Expenses; Economy of Preparation

MSA will not be responsible for any costs incurred by an Offeror in preparing and submitting a proposal, in making an oral presentation, in providing a demonstration or in performing any other activities relative to this RFP. Proposals should be prepared simply and economically, providing a straightforward and concise description of how the Offeror proposes to meet the requirements of this RFP.

1.16 Protests/Disputes

Any protest or dispute related to this RFP will be subject to Section 10 of MSA's Procurement Policies and Procedures and the relevant provisions of the Contract. MSA Procurement Policies are available for review on the MSA website at www.mdstad.com/contracting or may be obtained by contacting the Procurement Officer.

1.17 Public Information Act Notice

(a) The Offeror should give specific attention to the clear identification of those portions of its Proposal that it considers confidential and/or proprietary commercial information or trade secrets, and provide justification why such materials, upon request, should not be disclosed by MSA under the Public Information Act, Md. Code Ann., General Provisions Article, Title 4 (See also RFP Section 1.31 "Confidentiality").

(b) This information should be identified by page and section number and placed after the Title Page and before the Table of Contents in the Technical Proposal and if applicable, separately in the Financial Proposal

(c) Offerors are advised that, upon request for this information from a third party, the Procurement Officer is required to make an independent determination whether the information must be disclosed.

1.18 Offeror Responsibilities

(a) The Offerors shall be able to provide all goods and services required by this RFP and the successful Offeror shall be responsible for Contract performance including any subcontractor participation.

(b) All subcontractors must be identified, and a complete description of their roles relative to the Proposal must be included in the Offeror's Proposal. If applicable, subcontractors utilized in meeting the established MBE participation goal for this solicitation shall be identified as provided in the appropriate Attachment(s) to this RFP (see Section 1.13 "Minority Participation Goal").

(c) If an Offeror is the subsidiary of another entity, all information submitted by the Offeror including but not to, references and financial reports, or experience and documentation (e.g. insurance policies, bonds, letters of credit) used to meet the minimum qualifications, if any shall pertain exclusively to the Offeror, unless the parent organization will guarantee the performance of the subsidiary. If applicable, the Offeror's Proposal shall contain an explicit statement, signed by an authorized representative of the parent entity, stating that the parent entity will guarantee the performance of the subsidiary.

(d) A performance guarantee by a parent entity of the Offeror under this Section

will not automatically result in crediting the Offeror with the experience or qualifications of the parent under any evaluation criteria pertaining to the actual Offeror's experience and qualifications. Instead, the Offeror will be evaluated on the extent to which MSA determines that the experience and qualifications of the parent are applicable to and shared with the Offeror, any stated intent by the parent to be directly involved in the performance of the Contract, and the value of the parent's participation as determined by MSA.

1.19 Patents, Copyrights, and Intellectual Property

a) If the Contractor furnishes any design, device, material, process, or other item, that is covered by a patent or copyright, or that is proprietary to, or a trade secret of another, it shall obtain the necessary permission or license to permit the MSA, the City or the Department to use such item.

b) The Contractor will defend or settle, at its own expense, any claim or suit against the MSA, the City or the Department alleging that any such item furnished by the Contractor infringes any patent, trademark, copyright, or trade secret. If a third party claims that a product infringes that party's patent, trademark, copyright, or trade secret, the Contractor will defend the MSA, the City or the Department against that claim at the Contractor's expense and will pay all damages, costs, and attorneys' fees that a court finally awards, provided the MSA, the City or the Department: (i) promptly notifies the Contractor in writing of the claim; and (ii) allows the Contractor to control, and cooperates with the Contractor in, the defense and any related settlement negotiations. The obligations of this paragraph are in addition to those stated in the next paragraph.

c) If any products furnished by the Contractor become, or in the Contractor's opinion are likely to become, the subject of a claim of Infringement, the Contractor will, at its option and expense: (i) procure for MSA, the City or the Department the right to continue using the applicable item; (ii) replace the product with a non-infringing product substantially complying with the item's specifications; or (iii) modify the item so that it becomes non-infringing and performs in a substantially similar manner to the original item.

1.20 Non-Exclusive Use

Neither this RFP nor any resulting Contract shall be construed to require MSA, the City or the Department to use any Offeror, or exclusively use the Contractor for the services described in this RFP. MSA, the City and the Department reserve the right to obtain services of any nature from other sources when it is in the best interest of MSA, the City or the Department to do so and without notice to any party. MSA, the City nor the Department make any guarantee that it will purchase any products or services from the Contractor resulting from this RFP.

1.21 Sustainability Policies

MSA is committed to procuring all supplies, services, maintenance, construction, and architect-engineer services in a manner consistent with the promotion of sound environmental practices.

1.22 Payments by Electronic Fund Transfer

By submitting a response to this RFP, the Offeror agrees to accept payments by electronic funds transfer (EFT) unless the State Comptroller's Office grants an exemption from this method of payment. The awarded Contractor shall register using the COT/GAD X-10 Vendor Electronic Funds Transfer (ETF) Registration Request form. MSA will provide the required EFT forms to the awarded Contractor. Requests for exemption are strictly the responsibility of the awarded Contractor.

1.23 Confidentiality

Subject to the Maryland Public Information Act and any other applicable laws, all confidential or proprietary information and documentation relating to either party to a Contract resulting from this RFP (including without limitation any information or data stored within the Contractor's computer systems) shall be held in absolute confidence by the other party. Each party shall, however, be permitted to disclose relevant confidential information to its officers, agents, and employees to the extent that such disclosure is necessary for the performance of their duties under the Contract, provided that the data may be collected, used, disclosed, stored, and disseminated only as provided by and consistent with the law. The provisions of this section shall not apply to information that (a) is lawfully in the public domain; (b) has been independently developed by the other party without violation of the Contract; (c) was already in the possession of such party; (d) was supplied to such party by a third-party lawfully in possession thereof and legally permitted to further disclose the information; or (e) such party is required to disclose by law.

1.24 Proposal (Bid) Security

The following proposal security requirements are to be included with the Offeror's response to the RFP. Failure to comply with these requirements will render the Offeror's response unacceptable.

a) The Offeror shall furnish (include with the Financial Proposal) a Bid/Proposal Bond Form issued by a surety company licensed to issue bonds in the State of Maryland. The bond must be in an amount not less than five percent (5%) of the total amount of the Financial Proposal.

b) A certified check or cash escrow may be accepted in lieu of a proposal bond. If approved by the Attorney General, an Offeror may furnish a personal

bond, property bond, or bank letter of credit on certain designated funds in the face amount required for the proposal bond. Approval shall be granted only upon determination that the alternative form of security offered affords protection to MSA, equivalent to a corporate surety bond.

c) If for any reason the Offeror to whom the Contract is awarded fails to execute the Contract within ten (10) days after notification of award, then an amount equal to the difference between the accepted price and that of the Offeror to whom the award subsequently is made shall be paid to MSA not as a penalty but as liquidated damages.

1.25 Certified Payrolls

The Contractor shall be responsible for submission of Certified Payroll Reports to MSA within five (5) business days of the end of each payroll period.

1.26 MBE and Prevailing Wage Compliance System

As part of MSA's commitment to assisting firms in complying with legal and contractual requirements, MSA maintains a web-based MBE and prevailing wage compliance system. The system was designed to provide various work-flow automation features that improve the project reporting process. This system will monitor contract compliance for all contracts. The prime firm, its first-tier consultants, and all MBE participation subcontractors awarded contracts will be required to use the web-based system to submit project information including, but not limited to, certification of payments made and received and certified payroll records (if the contract includes prevailing wage and/or workforce development requirements). MSA may require additional information related to the contract to be provided electronically through the system at any time before, during, or after contract award.

SECTION 2

OFFEROR'S QUALIFICATIONS

The following minimum qualification must be met in order to be considered for this RFP:

- a) The Offeror shall be a firm experienced with providing abatement and demolition services as a prime contractor for programs or projects similar in size and scope to that described in the RFP;
- b) The Offeror shall have significant experience participating in all phases of construction including pre-construction (procurement, submittal review, etc.); construction (contract administration and enforcement, scheduling, budgeting, etc.); and, post-construction (close out documentation, final reporting, etc.);
- c) The Offeror shall have a minimum of five (5) years of experience providing prime contracting services on abatement and demolition projects; and
- d) The Offeror's key personnel must include an industrial hygienist, with a minimum of three (3) years of experience in the field.

SECTION 3

PURPOSE AND SCOPE OF WORK

3.1 Purpose

As described in Section 1.1, MSA is soliciting proposals from prime contractors to provide abatement, and/or demolition services for properties identified and selected under the Program. MSA is the State unit responsible for the oversight of abatement, deconstruction and demolition services, including the selection of qualified contractors, consultants, engineers, and others as the circumstances may require. The Department is the State agency to which the General Assembly has allocated funding for the Program. The respective obligations and responsibilities of MSA, the City and the Department to each other under the Program are set forth in a separate Memorandum of Agreement between the parties.

3.2 Scope of Work – Requirements

The scope of work is attached hereto as **Attachment E**. Specifically, MSA is seeking proposals for abatement and demolition services for 1511 Ashburton Street (former site of Dr. Lillie M. Jackson Elementary School) and 1600 Rutland Ave. The Contractor shall work closely with MSA and the Environmental Contractor, as defined by the Project Manual (**Attachment H**), as appropriate throughout all phases of the Project. MSA reserves the right to add or delete scope in a manner necessary to serve the best interests of MSA. MSA reserves the right to proceed with all or a partial portion of the scope of work at any point throughout the project.

3.3 Contractor's Work Force

Contractor shall provide a work force sufficient to complete the work as it is specified. Contractor shall report without delay any damage to any equipment or property and shall be held responsible for the repair and/or replacement of any such damage caused by his/her crew or equipment.

3.4 Working Hours

Regular working hours shall mean between 7:00 a.m. and 5:00 p.m. Monday through Friday, MSA holidays and weekends excluded.

3.5 Coordination/Planning

All work must be conducted in a manner which meets the approval of MSA. There may be meetings on-site between the Contractor and Program Manager to certify the accomplishment of work. Any specific problem area which does not meet the contract requirements set forth herein shall be called to the attention of the

Contractor along with the action required to satisfy the requirements. MSA reserve the right to perform similar work by MSA forces or other contractual means in the immediate vicinity or adjacent to the work being performed by the Contractor.

3.6 Contractor's Use of Premises

The Contractor shall confine operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. The Contractor shall conform to site rules and regulations affecting work while engaged in contract work.

3.7 Safety

The Contractor shall take all necessary precautions for the safety of employees on the work crew to prevent accidents or injury to persons on, about, or adjacent to the premises where the work is being performed. All work to be done in accordance with all applicable laws and codes.

3.8 Insurance Requirements

Upon Contract award, the insurance requirements are as follows:

a) Commercial General Liability Insurance

The Contractor shall obtain and maintain, from Contract execution and through the duration of the Contract term, insurance coverage for general liability claims (including, but not limited to, claims for bodily injury and property damage, including loss of use) arising from the operations of the Contractor, subcontractors, and suppliers that satisfies the following requirements:

1. Commercial General Liability ("CGL") insurance to be provided through the use of ISO Coverage Form CG-00-01-1001 or its equivalent.
2. Minimum coverage limits of: \$1,000,000 as a per occurrence limit; \$2,000,000 as a general aggregate limit (applied separately to claims arising from the Contractor's performance under the Contract); and \$2,000,000 as a products/completed operations limit.
3. MSA, State of Maryland, City of Baltimore, the City and the Department shall be added as Additional Insured's by additional insured endorsements ISO CG-20-10 and CG-20-37 or their equivalents. As Additional Insureds, MSA, State of Maryland, City of Baltimore, City and the Department shall have coverage for liability arising out of the Contractor's ongoing and completed operations performed for MSA, the City or the Department.
4. The CGL insurance policy shall include waivers of subrogation in favor

- of MSA, the City and the Department.
5. The CGL insurance policy shall be primary and noncontributory with respect to the coverage afforded to MSA, the City and the Department.
 6. The CGL insurance policy shall not contain any exclusion for: X, C and/or U hazards; third party actions over claims; or punitive damages.
 7. The CGL insurance policy shall include Blanket Written Contractual Liability covering all contractual liabilities and indemnities assumed by the Contractor pursuant to the Contract.
 8. The CGL insurance policy shall also include the following extensions:
 - i. The general aggregate limit shall apply separately to the Contract;
 - ii. Premises/Operations;
 - iii. Actions of Independent Contractors, subcontractors and subcontractors;
 - iv. Products/Completed Operations to be maintained for at least two (2) years after the expiration or termination of the Contract;
 - v. Personal injury liability including coverage for offenses related to employment and for offenses assumed under the Contract (including deletion of any standard employment and/or contractual exclusions if contained in the personal injury coverage section); and
 - vi. If a Project encroaches within fifty (50) feet of the centerline of a railroad, the CGL insurance policy shall include ISO Endorsement CG- 24-17 or its equivalent prior to the Contractor beginning any work on such Project.

b) Automobile Liability

The Contractor shall obtain and maintain, from and after the date of the Contract, insurance coverage for third party legal liability claims arising from bodily injury and/or damage to property of others resulting from the ownership, maintenance, or use of any motor vehicle (whether owned, hired, or not owned), both on-site and off-site. Such Business Automobile Liability (“BAL”) insurance shall also include coverage against uninsured motorists and automobile contractual liability. The BAL insurance shall satisfy the following requirements:

1. Minimum \$1,000,000 combined single limit on coverage.
2. The BAL insurance policy shall include waivers of subrogation in favor of MSA, the City and the Department.
3. The BAL insurance policy shall name MSA, State of Maryland, the City, City of Baltimore, and the Department as Additional Insureds.
4. If a Project encroaches within fifty (50) feet of the centerline of a railroad, the BAL insurance policy shall include ISO Endorsement

CA-20-70 or its equivalent prior to the Contractor beginning any work on such Project.

c) Workers Compensation and Employers Liability

The Contractor shall obtain and maintain, from and after the date of the Contract, insurance coverage for claims arising from Workers Compensation statutes and from Employer's Liability or other third party legal liability claims arising from bodily injury, disease, or death of the Contractor's employees. Such insurance shall satisfy the following requirements:

1. The Contractor shall provide Workers Compensation coverage for all employees and require that its subcontractors provide Workers Compensation coverage for all their employees in accordance with the statutory requirements of the jurisdiction in which the work is being performed.
2. The policy shall provide for both Workers Compensation coverage ("Part A") and Employers Liability coverage ("Part B").
3. The minimum limits of coverage for Part A (Workers Compensation) shall be in accordance with the statutory requirements of the jurisdiction in which the work is being performed. The minimum limits of coverage for Part B (Employers Liability) shall be \$1,000,000 for each accident, \$1,000,000 for each employee, and a \$1,000,000 aggregate policy limit for disease.
4. Part B (Employers Liability) of such insurance policy shall include waivers of subrogation in favor of MSA, State of Maryland, City of Baltimore, the City and the Department. These parties shall also be named as Additional Insureds with respect to Part B (Employers Liability).

d) Excess Liability/Umbrella Liability

The Contractor shall obtain and maintain, from and after the date of the Contract, insurance coverage for third party legal liability claims against the Contractor that exceed the per occurrence or general aggregate limits of the CGL insurance policy, the BAL insurance policy, and Part B (Employer's Liability) of the Workers' Compensation and Employer's Liability insurance policy. Such excess/umbrella insurance shall satisfy the following requirements:

1. Unless otherwise specified by the Procurement Officer, the required minimum coverage limits for such insurance is \$1,000,000 per occurrence.
2. MSA, State of Maryland, City of Baltimore, the City and the Department shall be named as Additional Insureds with respect to such excess/umbrella liability insurance.
3. The excess/umbrella liability insurance policy shall include waivers

of subrogation in favor of MSA, State of Maryland, City of Baltimore, the City and the Department.

4. The excess/umbrella liability insurance shall be primary and noncontributory with respect to the coverage afforded to MSA, State of Maryland, City of Baltimore, the City, and the Department.

e) Additional insurance requirements

1. The amount of insurance coverage specified herein shall be the minimum amount of insurance available to satisfy claims. The Contractor shall purchase and maintain such insurance with a minimum of the limits of liability as specified herein, as otherwise specified by the Procurement Officer with respect to a particular Project, or as required by law, whichever is greatest.
2. A policy is not acceptable if it allows the costs associated with investigating, managing, or defending against any claim or any other costs incurred by the insured or the insurer to be deducted from the policy limits.
3. Required insurance shall be purchased from and maintained with a company or companies lawfully authorized to do business in the State of Maryland. Insurance companies providing coverage as required herein shall have an AM Best rating of A-VII or better. All policies must be on a primary basis. All policies, except Professional Liability and Workers' Compensation, shall name MSA, State of Maryland, City of Baltimore, the City and the Department as "Additional Insured."
4. Contractor shall be responsible for the maintenance of this insurance regardless of whether the work is performed directly by Contractor, by any subcontractor, by any person employed by the Contractor or any subcontractor, or by anyone for whose acts the Contractor may be liable.
5. The Contractor agrees, for itself and for its insurers, that neither Contractor nor its insurers may raise or use in the adjustment of claims or in the defense of suits against MSA, State of Maryland, City of Baltimore, the City, and the Department, any immunity from or limitation of liability for torts (including under the Maryland Tort Claims Act and/or the Maryland Local Government Tort Claims Act) unless requested by MSA.
6. MSA prefers that all liability insurance policies (whether for professional liability, commercial general liability, business automobile liability, excess and/or umbrella liability, employer liability, or otherwise) be written on an "occurrence basis." However, if any liability insurance policy is on a "claims made" basis, the insurance must be maintained for a period of no less than ten (10) years after the end of the term of the Contract and the retroactive date must be listed as prior to or on the date on which the Contract is executed. If the policy is scheduled to be cancelled, not renewed, or not replaced prior to the expiration of such ten (10) year period, then prior to such cancellation, nonrenewal, or non- replacement, the

Contractor must purchase an Extended Reporting Coverage (Tail) to cover the exposures past the cancellation, termination, or expiration date, as applicable.

3.9 Payment and Performance Bond

Contractor shall obtain a 100% performance and payment bond from a surety company acceptable to MSA. The Payment and Performance Bond shall be executed using a form approved by the MSA.

3.10 Invoicing

The Contractor shall submit monthly invoices after completion of the work.

3.11 Schedule

The scope of work is to be completed in a timeline as agreed upon by MSA and the Contractor upon Contract award subject to any contract modifications agreed to, or change orders issued during the Contract term.

SECTION 4

PROPOSAL SUBMISSION & REQUIREMENTS

4.1 Submission – General Requirements

a) Separation of Technical Proposal and Financial Proposal.

Offerors will submit Proposals in two separate volumes:

Volume I – Technical Proposal; and
Volume II – Financial Proposal

Each volume shall be labeled as follows: “**Project C.O.R.E. - Request for Proposals No. DD-009 – Abatement & Demolition Services - Volume [I or II].**”

- b) Offerors shall submit the Technical Proposals by the due date and time set forth in the Key Information Summary Sheet, as revised by any addendum. Technical proposals must be uploaded electronically to the link provided in Section 1.10. **The electronic submissions (formatted as .pdf file) shall include the firm’s name in the file name and shall be formatted so each page can be printed in 8 ½ x 11.**

Upon receipt of submissions, the Selection Committee will review the Offerors’ technical Proposals. Firms deemed as meeting all requirements will be ranked and, based on the achieved rankings, selected firms will then be “short listed.” The Selection Committee will then request financial proposals from the “short listed” firms.

NOTE: Offerors must respond to all requirements identified in the RFP. Offerors who fail to do so may be deemed non-responsive and not reasonably susceptible of being selected for award.

4.2 Volume I – Technical Proposal

This section provides specific instructions for submission of the Offeror’s Technical Proposal.

The Technical Proposal shall include:

a) Transmittal Letter

A Transmittal Letter shall accompany the Technical Proposal package. The purpose of this letter is to transmit the Offeror’s proposal and acknowledge the receipt of any addenda. The Transmittal Letter commits the Offeror to the services and requirements as stated in this RFP and must be signed by an

authorized Representative. The Transmittal Letter shall include the following:

- name and address of the Offeror;
- name, title, e-mail address, and telephone number of primary contact for the Offeror current EMR Rating;
- solicitation Title and Proposal Number that the submission is in response to;
- signature of Authorized Representative, typed name, and title of the individual authorized to commit the Offeror to its proposal;
- Federal Employer Identification Number (FEIN) of the Prime Offeror;
- Acceptance of all terms and conditions of the RFP including all RFP Attachments; and
- Acknowledgement of all addenda, if any, to this RFP.

Any information which is claimed to be confidential is to be noted by reference and included after the Transmittal Letter. An explanation for each claim of confidentiality shall be included.

b) Experience and Work Plan

Offerors shall include the following in their Technical Proposal:

1. Provide a narrative detailing the Offeror's experience serving in a prime capacity on prior demolition projects that include hazardous materials. Specifically, highlight the number of years having provided these services and any prior experience you have performing abatement and demolition services on similar sized structures.
2. Resume of the proposed key personnel for the project. Resumes shall include an employment history with dates, titles and a list of completed projects (inclusive of project descriptions, cost of work, commencement and completion dates) in which the proposed personnel previously served in a similar capacity. Resumes for the following key personnel are required:
 - Project Executive
 - Project Manager
 - Field Superintendents (2)
3. Names of all subcontractors and the work that they will be performing for the Project. Please identify if the subcontractor is an MBE firm certified by MDOT.
4. Provide a brief narrative detailing how the Offeror intends to approach abatement and demolition operations described in the scope of services.

5. Provide a schedule that clearly identifies timelines associated with both preconstruction activities and the performance of actual field operations. Clearly indicate the total duration to complete all work associated with the identified properties.

c) **Required Submissions**

Offerors must submit the following items in the Technical Proposal:

1. A completed Bid/Proposal Affidavit (**Attachment A**);
2. A completed Conflict of Interest Information/Affidavit and Disclosure (**Attachment B**);
3. Verification from the Offeror's insurance carrier/provider identifying deductible amount and coverage limits for Commercial General Liability, Excess/Umbrella, Automobile, and Worker's Comp/Employer Liability;
4. Transmittal Letter with requested information
5. Prior Firm Experience;
6. Resume of Proposed Project Manager and Field Superintendent;
7. List of Subcontractors and the work they will be performing;
8. Work Plan;
9. Firm's corporate profile (**Attachment O**)
10. Capacity summary sheet for key personnel (**Attachment N**)
11. An accurately completed and signed MBE Form D1-A – "MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule." Per COMAR regulation 21.11.03.09.C(5), failure to include and or accurately complete this form shall result in a determination that the proposal is not susceptible for award.

Failure to submit any of the above listed requirements may result in the Offeror's proposal being found non-responsive and deemed not susceptible for award recommendation.

4.3 Volume II - Financial Proposal

This section provides specific instructions for submission of the Offeror's Financial Proposal. The Financial Proposal shall include:

a) **Required Submissions**

Offerors must submit the following items in the Financial Proposal:

1. Pricing Form attached hereto as **Attachment F**. Please note that all clarifications of the scope must be included in the Transmittal letter included in the Technical Proposal. Pricing forms that include any qualification or clarification will be rejected.
2. Proposal (Bid) Security per section 1.24 of the RFP.

SECTION 5

EVALUATION CRITERIA AND SELECTION PROCEDURE

5.1 Evaluation Criteria

Evaluation of the Proposals will be performed by the Selection Committee and will be based on the criteria set forth below. Technical criteria shall be given more weight than financial criteria.

5.2 Technical Criteria

Criteria used to rate the Technical Proposal includes, without limitation, the following:

- a.) Adequacy of the Work Plan to provide the proposed services; including project specific approach and schedule.
- b.) Experience and qualifications of the Offeror and its key management personnel (staffing plan), with specific emphasis on similar projects.
- c.) Past Performance and References for the Offeror.
- d.) Overall quality of submission.

5.3 Financial Criteria

All qualified short-listed Offerors will be given a score based on their evaluated financial proposal. The lowest evaluated financial proposal will receive the maximum score. The score for each other financial proposal will be determined on a pro-rata basis compared to the lowest evaluated financial proposal.

5.4 Reciprocal Preference

Although Maryland law does not authorize procuring agencies to favor resident Offeror in awarding procurement contracts, many other states do grant their resident businesses preferences over Maryland contractors. Therefore, as described in COMAR 21.05.01.04, a resident business preference may be given if: a responsible Offeror whose headquarters, principal base of operations, or principal site that will primarily provide the services required by this RFP is in another state submits the most advantageous offer; the other state gives a preference to its residents through law, policy, or practice; and the preference does not conflict with a federal law or grant affecting the Contract. The preference given will be identical to the preference that the other state, through law, policy, or practice gives to its residents.

5.5 General Selection Process

- a) Submissions will be reviewed by a selection committee comprised of representatives of MSA, the City and the Department.
- b) The Contract will be awarded in accordance with the competitive sealed proposals process under Section 3(C) of MSA's Procurement Policies.
- c) Prior to award of a contract pursuant to this RFP, MSA may require any or all Offerors to submit such additional information bearing upon the Offeror's ability to perform the contract as MSA may deem appropriate. MSA may also consider any information otherwise available concerning the financial, technical and other qualifications or abilities of the Offeror.
- d) MSA may hold discussions with any or all Offerors deemed reasonably susceptible of being selected for award, or potentially so. MSA also reserves the right to develop a short-list of Offerors deemed most qualified based upon their Technical Proposals and conduct discussions with only the short-listed Offerors. However, MSA also reserves the right to make an award without holding discussions. Whether or not discussions are held, MSA may determine an Offeror to be not responsible or not reasonably susceptible of being selected for award, in its sole and absolute discretion, at any time after the initial closing date for receipt of proposals and the review of those proposals.

5.6 Award Determination

Upon completion of all evaluations, discussions and negotiations, and reference checks, the Procurement Officer will recommend award of the contract to the responsible Offeror(s) whose proposal is determined to be the most advantageous to MSA, the City and the Department considering technical evaluation factors and price factors as set forth in this RFP. The award is subject to approval by the MSA Board of Directors.

5.7 Contracts

The Contract will be managed and held by MSA.

ATTACHMENTS

Please click on the following Share File link to access a copy of all attachments:

<https://mdstad.sharefile.com/d-se26b89189ca240109349d206ddb29a7a>

- A. BID/PROPOSAL AFFIDAVIT**
- B. CONFLICT OF INTEREST AFFIDAVIT/DISCLOSURE**
- C. CONTRACT AFFIDAVIT**
- D. MBE FORMS & INSTRUCTIONS**
- E. SCOPE OF WORK**
- F. PRICING FORM**
- G. FORM CONTRACT**
- H. PROJECT MANUAL**
- I. SAMPLE PROJECT SIGN**
- J. SAMPLE PREVAILING WAGE DETERMINATION**
- K. PRE-PROPOSAL INSTRUCTIONS (not applicable)**
- L. HAZARDOUS MATERIALS INSPECTION REPORTS**
- M. PROJECT MAPS & DOCUMENTS**
- N. CAPACITY SUMMARY FORM**
- O. CORPORATE PROFILE**

ATTACHMENT A
BID/PROPOSAL AFFIDAVIT

Attachment A. Bid/Proposal Affidavit

A. AUTHORITY

I hereby affirm that I, _____ (name of affiant) am the _____ (title) and duly authorized representative of _____ (name of business entity) and that I possess the legal authority to make this affidavit on behalf of the business for which I am acting.

B. CERTIFICATION REGARDING COMMERCIAL NONDISCRIMINATION

The undersigned Bidder/Offeror hereby certifies and agrees that the following information is correct: In preparing its Bid/proposal on this project, the Bidder/Offeror has considered all Bid/proposals submitted from qualified, potential subcontractors and suppliers, and has not engaged in “discrimination” as defined in § 19-103 of the State Finance and Procurement Article of the Annotated Code of Maryland. “Discrimination” means any disadvantage, difference, distinction, or preference in the solicitation, selection, hiring, or commercial treatment of a vendor, subcontractor, or commercial customer on the basis of race, color, religion, ancestry, or national origin, sex, age, marital status, sexual orientation, sexual identity, genetic information or an individual’s refusal to submit to a genetic test or make available the results of a genetic test, disability, or any otherwise unlawful use of characteristics regarding the vendor’s, supplier’s, or commercial customer’s employees or owners. “Discrimination” also includes retaliating against any person or other entity for reporting any incident of “discrimination”. Without limiting any other provision of the solicitation on this project, it is understood that, if the certification is false, such false certification constitutes grounds for the State to reject the Bid/proposal submitted by the Bidder/Offeror on this project, and terminate any contract awarded based on the Bid/proposal. As part of its Bid/proposal, the Bidder/Offeror herewith submits a list of all instances within the past four (4) years where there has been a final adjudicated determination in a legal or administrative proceeding in the State of Maryland that the Bidder/Offeror discriminated against subcontractors, vendors, suppliers, or commercial customers, and a description of the status or resolution of that determination, including any remedial action taken. Bidder/Offeror agrees to comply in all respects with the State’s Commercial Nondiscrimination Policy as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland.

B-1. CERTIFICATION REGARDING MINORITY BUSINESS ENTERPRISES.

The undersigned Bidder/Offeror hereby certifies and agrees that it has fully complied with the State Minority Business Enterprise Law, State Finance and Procurement Article, § 14-308(a)(2), Annotated Code of Maryland, which provides that, except as otherwise provided by law, a contractor may not identify a certified minority business enterprise in a Bid/proposal and:

- (1) Fail to request, receive, or otherwise obtain authorization from the certified minority business enterprise to identify the certified minority bid/proposal;
- (2) Fail to notify the certified minority business enterprise before execution of the contract of its inclusion in the Bid/proposal;
- (3) Fail to use the certified minority business enterprise in the performance of the contract; or
- (4) Pay the certified minority business enterprise solely for the use of its name in the Bid/proposal.

Without limiting any other provision of the solicitation on this project, it is understood that if the certification is false, such false certification constitutes grounds for the State to reject the

Bid/proposal submitted by the Bidder/Offeror on this project, and terminate any contract awarded based on the Bid/proposal.

B-2. CERTIFICATION REGARDING VETERAN-OWNED SMALL BUSINESS ENTERPRISES.

The undersigned Bidder/Offeror hereby certifies and agrees that it has fully complied with the State veteran-owned small business enterprise law, State Finance and Procurement Article, § 14-605, Annotated Code of Maryland, which provides that a person may not:

- (1) Knowingly and with intent to defraud, fraudulently obtain, attempt to obtain, or aid another person in fraudulently obtaining or attempting to obtain public money, procurement contracts, or funds expended under a procurement contract to which the person is not entitled under this title;
- (2) Knowingly and with intent to defraud, fraudulently represent participation of a veteran-owned small business enterprise in order to obtain or retain a Bid/proposal preference or a procurement contract;
- (3) Willfully and knowingly make or subscribe to any statement, declaration, or other document that is fraudulent or false as to any material matter, whether or not that falsity or fraud is committed with the knowledge or consent of the person authorized or required to present the declaration, statement, or document;
- (4) Willfully and knowingly aid, assist in, procure, counsel, or advise the preparation or presentation of a declaration, statement, or other document that is fraudulent or false as to any material matter, regardless of whether that falsity or fraud is committed with the knowledge or consent of the person authorized or required to present the declaration, statement, or document;
- (5) Willfully and knowingly fail to file any declaration or notice with the unit that is required by COMAR 21.11.13; or
- (6) Establish, knowingly aid in the establishment of, or exercise control over a business found to have violated a provision of § B-2(1) -(5) of this regulation.

C. AFFIRMATION REGARDING BRIBERY CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business (as is defined in Section 16-101(b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, § 6-220, Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows (indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and their current positions and responsibilities with the business):

D. AFFIRMATION REGARDING OTHER CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

- (1) Been convicted under state or federal statute of:
 - (a) A criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or
 - (b) Fraud, embezzlement, theft, forgery, falsification or destruction of records or receiving stolen property;
- (2) Been convicted of any criminal violation of a state or federal antitrust statute;
- (3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. § 1961 et seq., or the Mail Fraud Act, 18 U.S.C. § 1341 et seq., for acts in connection with the submission of Bids/Proposals for a public or private contract;
- (4) Been convicted of a violation of the State Minority Business Enterprise Law, § 14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;
- (5) Been convicted of a violation of § 11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;
- (6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsections (1)— (5) above;
- (7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of Bids/Proposals for a public or private contract;
- (8) Been found in a final adjudicated decision to have violated the Commercial Nondiscrimination Policy under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland with regard to a public or private contract;
- (9) Been convicted of a violation of one or more of the following provisions of the Internal Revenue Code:
 - (a) §7201, Attempt to Evade or Defeat Tax;
 - (b) §7203, Willful Failure to File Return, Supply Information, or Pay Tax,
 - (c) §7205, Fraudulent Withholding Exemption Certificate or Failure to Supply Information;
 - (d) §7206, Fraud and False Statements, or
 - (e) §7207 Fraudulent Returns, Statements, or Other Documents;
- (10) Been convicted of a violation of 18 U.S.C. §286 Conspiracy to Defraud the Government with Respect to Claims, 18 U.S.C. §287, False, Fictitious, or Fraudulent Claims, or 18 U.S.C. §371, Conspiracy to Defraud the United States;
- (11) Been convicted of a violation of the Tax-General Article, Title 13, Subtitle 7 or Subtitle 10, Annotated Code of Maryland;
- (12) Been found to have willfully or knowingly violated State Prevailing Wage Laws as provided in the State Finance and Procurement Article, Title 17, Subtitle 2, Annotated Code of Maryland, if:

- (a) A court:
 - (i) Made the finding; and
 - (ii) Decision became final; or
 - (b) The finding was:
 - (i) Made in a contested case under the Maryland Administrative Procedure act; and
 - (ii) Not overturned on judicial review;
- (13) Been found to have willfully or knowingly violated State Living Wage Laws as provided in the State Finance and Procurement Article, Title 18, Annotated Code of Maryland, if:
- (a) A court:
 - (i) Made the finding; and
 - (ii) Decision became final; or
 - (b) The finding was:
 - (i) Made in a contested case under the Maryland Administrative Procedure act; and
 - (ii) Not overturned on judicial review;
- (14) Been found to have willfully or knowingly violated the Labor and Employment Article, Title 3, Subtitles 3, 4, or 5, or Title 5, Annotated Code of Maryland, if:
- (a) A court:
 - (i) Made the finding; and
 - (ii) Decision became final; or
 - (b) The finding was:
 - (i) Made in a contested case under the Maryland Administrative Procedure act; and
 - (ii) Not overturned on judicial review; or
- (15) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in §§ B and C and subsections D(1)—(14) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the business, and the status of any debarment):

E. AFFIRMATION REGARDING DEBARMENT

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities, including obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the

name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment or suspension, and the details of each person's involvement in any activity that formed the grounds of the debarment or suspension).

F. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES

I FURTHER AFFIRM THAT:

- (1) The business was not established and does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and
 - (2) The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows (you must indicate the reasons why the affirmations cannot be given without qualification):
-
-

G. SUBCONTRACT AFFIRMATION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

H. AFFIRMATION REGARDING COLLUSION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business has:

- (1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying Bid/proposal that is being submitted; or
- (2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the Bid/proposal price of the Bidder/Offeror or of any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying Bid/proposal is submitted.

I. CERTIFICATION OF TAX PAYMENT

I FURTHER AFFIRM THAT:

Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, State Department of Assessments and Taxation, and Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

J. CONTINGENT FEES

I FURTHER AFFIRM THAT:

The business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the business, to solicit or secure the Contract, and that the business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency, any fee or any other consideration contingent on the making of the Contract.

K. CERTIFICATION REGARDING INVESTMENTS IN IRAN

- (1) The undersigned certifies that, in accordance with State Finance and Procurement Article, §17-705, Annotated Code of Maryland:
 - (a) It is not identified on the list created by the Board of Public Works as a person engaging in investment activities in Iran as described in State Finance and Procurement Article, §17-702, Annotated Code of Maryland; and
 - (b) It is not engaging in investment activities in Iran as described in State Finance and Procurement Article, §17-702, Annotated Code of Maryland.
- (2) The undersigned is unable to make the above certification regarding its investment activities in Iran due to the following activities:

L. CONFLICT MINERALS ORIGINATED IN THE DEMOCRATIC REPUBLIC OF CONGO (FOR SUPPLIES AND SERVICES CONTRACTS)

I FURTHER AFFIRM THAT:

The business has complied with the provisions of State Finance and Procurement Article, §14-413, Annotated Code of Maryland governing proper disclosure of certain information regarding conflict minerals originating in the Democratic Republic of Congo or its neighboring countries as required by federal law.

M. PROHIBITING DISCRIMINATORY BOYCOTTS OF ISRAEL

I FURTHER AFFIRM THAT:

In preparing its bid/proposal on this project, the Bidder/Offeror has considered all bid/proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor, vendor, or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity on the basis of Israeli national origin, or residence or incorporation in Israel and its territories. The Bidder/Offeror also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. Without limiting any other provision of the solicitation for bid/proposals for this project, it is understood and agreed that, if this certification is false, such false certification will constitute grounds for the State to reject the bid/proposal submitted by the Bidder/Offeror on this project, and terminate any contract awarded based on the bid/proposal.

N. I FURTHER AFFIRM THAT:

Any claims of environmental attributes made relating to a product or service included in the bid or bid/proposal are consistent with the Federal Trade Commission's Guides for the Use of Environmental Marketing Claims as provided in 16 C.F.R. §260, that apply to claims about the environmental attributes of a product, package or service in connection with the marketing, offering for sale, or sale of such item or service.

O. ACKNOWLEDGEMENT

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the Procurement Officer and may be distributed to units of: (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this Bid/proposal shall be construed to supersede, amend, modify or waive, on behalf of the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this Affidavit, (2) the contract, and (3) other Affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

By:

Signature of Authorized Representative and Affiant

Printed Name:

Printed Name of Authorized Representative and Affiant

Title:

Title

Date:

Date

ATTACHMENT B
CONFLICT OF INTEREST AFFIDAVIT/DISCLOSURE

Attachment B. Conflict of Interest Affidavit and Disclosure

Reference COMAR 21.05.08.08

A. "Conflict of interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the State, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage.

B. "Person" has the meaning stated in COMAR 21.01.02.01B (64) and includes a Offeror, Contractor, consultant, or subcontractor or sub-consultant at any tier, and also includes an employee or agent of any of them if the employee or agent has or will have the authority to control or supervise all or a portion of the work for which a Proposal is made.

C. The Offeror warrants that, except as disclosed in §D, below, there are no relevant facts or circumstances now giving rise or which could, in the future, give rise to a conflict of interest.

D. The following facts or circumstances give rise or could in the future give rise to a conflict of interest (explain in detail — attach additional sheets if necessary):

E. The Offeror agrees that if an actual or potential conflict of interest arises after the date of this affidavit, the Offeror shall immediately make a full disclosure in writing to the procurement officer of all relevant facts and circumstances. This disclosure shall include a description of actions which the Offeror has taken and proposes to take to avoid, mitigate, or neutralize the actual or potential conflict of interest. If the contract has been awarded and performance of the contract has begun, the Contractor shall continue performance until notified by the procurement officer of any contrary action to be taken.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: _____ By: _____

(Authorized Representative and Affiant)

SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL

ATTACHMENT C
CONTRACT AFFIDAVIT

Contract Affidavit

A. AUTHORITY

I hereby affirm that I, _____ (name of affiant) am the _____ (title) and duly authorized representative of _____ (name of business entity) and that I possess the legal authority to make this affidavit on behalf of the business for which I am acting.

B. CERTIFICATION OF REGISTRATION OR QUALIFICATION WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION

I FURTHER AFFIRM THAT:

The business named above is a (check applicable box):

- (1) Corporation - domestic or foreign;
- (2) Limited Liability Company - domestic or foreign;
- (3) Partnership - domestic or foreign;
- (4) Statutory Trust - domestic or foreign;
- (5) Sole Proprietorship.

and is registered or qualified as required under Maryland Law. I further affirm that the above business is in good standing both in Maryland and (IF APPLICABLE) in the jurisdiction where it is presently organized, and has filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation. The name and address of its resident agent (IF APPLICABLE) filed with the State Department of Assessments and Taxation is:

Name and Department ID Number: _____

Address: _____

and that if it does business under a trade name, it has filed a certificate with the State Department of Assessments and Taxation that correctly identifies that true name and address of the principal or owner as:

Name and Department ID Number: _____

Address: _____

C. FINANCIAL DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, the provisions of State Finance and Procurement Article, §13-221, Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate \$100,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches \$100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

D. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, Election Law Article, Title 14, Annotated Code of Maryland, which requires that every person that enters into a procurement contract with the State, a county, or a municipal corporation, or other political subdivision of the State, during a calendar year in which the person receives a contract with a governmental entity in the amount of

\$200,000 or more, shall file with the State Board of Elections statements disclosing: (a) any contributions made during the reporting period to a candidate for elective office in any primary or general election; and (b) the name of each candidate to whom one or more contributions in a cumulative amount of \$500 or more were made during the reporting period. The statement shall be filed with the State Board of Elections: (a) before execution of a contract by the State, a county, a municipal corporation, or other political subdivision of the State, and shall cover the 24 months prior to when a contract was awarded; and (b) if the contribution is made after the execution of a contract, then twice a year, throughout the contract term, on or before: (i) May 31, to cover the six (6) month period ending April 30; and (ii) November 30, to cover the six (6) month period ending October 31.

E. DRUG AND ALCOHOL FREE WORKPLACE

(Applicable to all contracts unless the contract is for a law enforcement agency and the agency head or the agency head's designee has determined that application of COMAR 21.11.08 and this certification would be inappropriate in connection with the law enforcement agency's undercover operations.)

I CERTIFY THAT:

- (1) Terms defined in COMAR 21.11.08 shall have the same meanings when used in this certification.
- (2) By submission of its Proposal, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:
 - (a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;
 - (b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business' workplace and specifying the actions that will be taken against employees for violation of these prohibitions;
 - (c) Prohibit its employees from working under the influence of drugs or alcohol;
 - (d) Not hire or assign to work on the contract anyone who the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;
 - (e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;
 - (f) Establish drug and alcohol abuse awareness programs to inform its employees about:
 - (i) The dangers of drug and alcohol abuse in the workplace;
 - (ii) The business's policy of maintaining a drug and alcohol free workplace;
 - (iii) Any available drug and alcohol counseling, rehabilitation, and employee assistance programs; and
 - (iv) The penalties that may be imposed upon employees who abuse drugs and alcohol in the workplace;
 - (g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §E(2)(b), above;
 - (h) Notify its employees in the statement required by §E(2)(b), above, that as a condition of continued employment on the contract, the employee shall:
 - (i) Abide by the terms of the statement; and

- (ii) Notify the employer of any criminal drug or alcohol abuse conviction for an offense occurring in the workplace not later than 5 days after a conviction;
- (i) Notify the procurement officer within 10 days after receiving notice under §E(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;
- (j) Within 30 days after receiving notice under §E(2)(h)(ii), above, or otherwise receiving actual notice of a conviction, impose either of the following sanctions or remedial measures on any employee who is convicted of a drug or alcohol abuse offense occurring in the workplace:
 - (i) Take appropriate personnel action against an employee, up to and including termination; or
 - (ii) Require an employee to satisfactorily participate in a bona fide drug or alcohol abuse assistance or rehabilitation program; and
- (k) Make a good faith effort to maintain a drug and alcohol free workplace through implementation of §E(2)(a)—(j), above.
- (3) If the business is an individual, the individual shall certify and agree as set forth in §E(4), below, that the individual shall not engage in the unlawful manufacture, distribution, dispensing, possession, or use of drugs or the abuse of drugs or alcohol in the performance of the contract.
- (4) I acknowledge and agree that:
 - (a) The award of the contract is conditional upon compliance with COMAR 21.11.08 and this certification;
 - (b) The violation of the provisions of COMAR 21.11.08 or this certification shall be cause to suspend payments under, or terminate the contract for default under COMAR 21.07.01.11 or 21.07.03.15, as applicable; and
 - (c) The violation of the provisions of COMAR 21.11.08 or this certification in connection with the contract may, in the exercise of the discretion of the Board of Public Works, result in suspension and debarment of the business under COMAR 21.08.03.

F. CERTAIN AFFIRMATIONS VALID

I FURTHER AFFIRM THAT:

To the best of my knowledge, information, and belief, each of the affirmations, certifications, or acknowledgements contained in that certain Proposal Affidavit dated _____, 202____, and executed by me for the purpose of obtaining the contract to which this Exhibit is attached remains true and correct in all respects as if made as of the date of this Contract Affidavit and as if fully set forth herein.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: _____

By: _____ (print name of Authorized Representative and Affiant)
 _____ (signature of Authorized Representative and Affiant)

ATTACHMENT D
MBE FORMS & INSTRUCTIONS

Attachment D. Minority Business Enterprise (MBE) Forms

D-1A MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT & MBE PARTICIPATION SCHEDULE

PART 1 - INSTRUCTIONS

PLEASE READ BEFORE COMPLETING THIS DOCUMENT

This form includes Instructions and the MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule which must be submitted with the bid/proposal. If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award unless the inaccuracy is determined to be the result of a minor irregularity that is waived or cured in accordance with COMAR 21.06.02.04.

1. Contractor shall structure its procedures for the performance of the work required in this Contract to attempt to achieve the minority business enterprise (MBE) subcontractor participation goal stated in the Invitation for Bids or Request for Proposals. Contractor agrees to exercise good faith efforts to carry out the requirements set forth in these Instructions, as authorized by the Code of Maryland Regulations (COMAR) 21.11.03.
2. MBE Goals and Subgoals: Please review the solicitation for information regarding the Contract's MBE overall participation goals and subgoals. After satisfying the requirements for any established subgoals, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from the various MBE classifications to meet the remainder of the overall MBE participation goal.
3. MBE means a minority business enterprise that is certified by the Maryland Department of Transportation ("MDOT"). Only MBEs certified by MDOT may be counted for purposes of achieving the MBE participation goals. In order to be counted for purposes of achieving the MBE participation goals, the MBE firm, including a MBE prime, must be MDOT-certified for the services, materials or supplies that it is committed to perform on the MBE Participation Schedule. A firm whose MBE certification application is pending may not be counted.
4. Please refer to the MDOT MBE Directory at <https://mbe.mdot.maryland.gov/directory/> to determine if a firm is certified with the appropriate North American Industry Classification System ("NAICS") Code **and** the product/services description (specific product that a firm is certified to provide or specific areas of work that a firm is certified to perform). For more general information about NAICS codes, please visit <https://www.census.gov/eos/www/naics/>. Only those specific products and/or services for which a firm is certified in the MDOT Directory can be used for purposes of achieving the MBE participation goals. **CAUTION:** If the firm's NAICS Code is in graduated status, such services/products may not be counted for purposes of achieving the MBE participation goals. A NAICS Code is in the graduated status if the term "Graduated" follows the Code in the MDOT MBE Directory.
5. **Guidelines Regarding MBE Prime Self-Performance.** Please note that when a certified MBE firm participates as a prime contractor on a Contract, a procurement agency may count the distinct, clearly defined portion of the work of the Contract that the certified MBE firm performs with its own workforce toward fulfilling up to, but no more than, fifty-percent (50%) of the overall

MBE participation goal, including up to one hundred percent (100%) of not more than one of the MBE participation subgoals, if any, established for the Contract.

- ✓ In order to receive credit for self-performance, an MBE prime must be certified in the appropriate NAICS code to do the work and must list its firm in the MBE Participation Schedule, including the certification category under which the MBE prime is self-performing and include information regarding the work it will self-perform.
 - ✓ For the remaining portion of the overall goal and the remaining subgoals, the MBE prime must also identify on the MBE Participation Schedule the other certified MBE subcontractors used to meet those goals or request a waiver.
 - ✓ These guidelines apply to the work performed by the MBE Prime that can be counted for purposes of meeting the MBE participation goals. These requirements do not affect the MBE Prime's ability to self-perform a greater portion of the work in excess of what is counted for purposes of meeting the MBE participation goals.
 - ✓ Please note that the requirements to meet the MBE participation overall goal and subgoals are distinct and separate. If the contract has subgoals, regardless of MBE Prime's ability to self-perform up to 50% of the overall goal (including up to 100% of any subgoal), the MBE Prime must either commit to use other MBEs for each of any remaining subgoals or request a waiver. As set forth in Attachment 1-B Waiver Guidance, the MBE Prime's ability to self-perform certain portions of the work of the Contract will not be deemed a substitute for the good faith efforts to meet any remaining subgoal or the balance of the overall goal.
 - ✓ In certain instances where the percentages allocated to MBE participation subgoals add up to more than 50% of the overall goal, the portion of self-performed work that an MBE Prime may count toward the overall goal may be limited to less than 50%. Please refer to the Governor's Office of Small Minority & Women Business Affairs' website for the MBE Prime Regulations Q&A for illustrative examples.
http://www.goMDsmallbiz.maryland.gov/Documents/MBE_Toolkit/MBEPrimeRegulation_QA.pdf
6. Subject to items 1 through 5 above, when a certified MBE performs as a participant in a joint venture, a procurement agency may count a portion of the total dollar value of the Contract equal to the distinct, clearly-defined portion of the work of the Contract that the certified MBE performs with its own forces toward fulfilling the Contract goal, and not more than one of the Contract subgoals, if any.
7. The work performed by a certified MBE firm, including an MBE prime, can only be counted towards the MBE participation goal(s) if the MBE firm is performing a commercially useful function on the Contract. Please refer to COMAR 21.11.03.12-1 for more information regarding these requirements.
8. **Materials and Supplies: New Guidelines Regarding MBE Participation.**
- ✓ Regular Dealer (generally identified as a wholesaler or supplier in the MDOT Directory): Up to 60% of the costs of materials and supplies provided by a certified MBE may be counted towards the MBE participation goal(s) if such MBE is a Regular Dealer of such materials and supplies. Regular Dealer is defined as a firm that owns, operates, or maintains a store, a warehouse, or any other establishment in which the materials, supplies, articles, or equipment are of the general character described by the specifications required under the contract and are bought, kept in stock, or regularly sold or leased to the

public in the usual course of business; and does not include a packager, a broker, a manufacturer's representative, or any other person that arranges or expedites transactions.

Example for illustrative purposes of applying the 60% rule:

Overall contract value: \$2,000,000

Total value of supplies: \$100,000

Calculate Percentage of Supplies to overall contract value: \$100,000 divided by \$2,000,000 = 5%

Apply 60% Rule - Total percentage of Supplies/Products 5% x 60% = 3%

3% would be counted towards achieving the MBE Participation Goal and Subgoal, if any, for the MBE supplier in this example.

- ✓ **Manufacturer:** A certified MBE firm's participation may be counted in full if the MBE is certified in the appropriate NAICS code(s) to provide products and services as a manufacturer.
- ✓ **Broker:** With respect to materials or supplies purchased from a certified MBE that is neither a manufacturer nor a regular dealer, a unit may apply the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, fees, or transportation charges for the delivery of materials and supplies required on a procurement toward the MBE contract goals, provided a unit determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. A unit may not apply any portion of the costs of the materials and supplies toward MBE goals.
- ✓ **Furnish and Install and other Services:** The participation of a certified MBE supplier, wholesaler, and/or regular dealer certified in the proper NAICS code(s) to furnish and install materials necessary for successful contract completion may be counted in full. Includes the participation of other MBE service providers in the proper NAICS code(s) may be counted in full.

9. Dually certified firms. An MBE that is certified in more than one subgroup category may only be counted toward goal fulfillment of ONE of those categories with regard to a particular contract.

Example: A woman-owned Hispanic American (dually certified) firm may be used to fulfill the women-owned OR Hispanic American subgoal, but not both on the same contract.

10. CAUTION: The percentage of MBE participation, computed using the percentage amounts determined for all of the MBE firms listed in PART 3, MUST meet or exceed the MBE participation goal and subgoals (if applicable) as set forth in PART 2- for this solicitation. If a bidder/offeror is unable to meet the MBE participation goal or any subgoals (if applicable), then the bidder/offeror must request a waiver in PART 2 or the bid will be deemed not responsive, or the proposal not reasonably susceptible of being selected for award. You may wish to use the attached Goal/Subgoal Worksheet to assist in calculating the percentages and confirming that your commitment meets or exceeds the applicable MBE participation goal and subgoals (if any).

11. If you have any questions as to whether a firm is certified to perform the specific services or provide specific products, please contact MDOT's Office of Minority Business Enterprise at 1-

800-544-6056 or via email to mbe@mdot.state.md.us sufficiently prior to the submission due date.

Subgoals (if applicable)

Total African American MBE Participation:	_____	%
Total Asian American MBE Participation:	_____	%
Total Hispanic American MBE Participation:	_____	%
Total Women-Owned MBE Participation:	_____	%

Overall Goal

Total MBE Participation (include all categories):	_____	%
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**PART 2 - MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT &
MBE PARTICIPATION SCHEDULE**

This MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule must be completed in its entirety and included with the bid/proposal. If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award.

In connection with the bid/proposal submitted in response to Solicitation No. Project C.O.R.E - DD 009 - Abatement & Demolition Services, I affirm the following:

1. **MBE Participation (PLEASE CHECK ONLY ONE)**

I acknowledge and intend to meet IN FULL both the overall certified Minority Business Enterprise (MBE) participation goal of 33% percent and all of the following subgoals:

Therefore, I am not seeking a waiver pursuant to COMAR 21.11.03.11. I acknowledge that by checking the above box and agreeing to meet the stated goal and subgoal(s), if any, I **must** complete PART 3 - MBE Participation Schedule and Part 4 Signature Page in order to be

OR

considered for award.

After making good faith outreach efforts prior to making this submission, I conclude that I am unable to achieve the MBE participation goal and/or subgoals. I hereby request a waiver, in whole or in part, of the overall goal and/or subgoals I acknowledge that by checking this box and requesting a partial waiver of the stated goal and/or one or more of the stated subgoal(s) if any, I **must** complete Part 3, the MBE Participation Schedule and Part 4 Signature Page for the portion of the goal and/or subgoal(s) if any, for which I am not seeking a waiver, in order to be considered for award. I acknowledge that by checking this box and requesting a full waiver of the stated goal and the stated subgoal(s) if any, I **must** complete Part 4 Signature Page in order to be considered for award.

Additional MBE Documentation

I understand that if I am notified that I am the apparent awardee or as requested by the Procurement Officer, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier:

- (a) Good Faith Efforts Documentation to Support Waiver Request (Attachment D-1C)
- (b) Outreach Efforts Compliance Statement (Attachment D-2);
- (c) MBE Subcontractor/MBE Prime Project Participation Statement (Attachments D-3A and 3B);
- (d) Any other documentation, including additional waiver documentation if applicable, required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal and subgoals, if any.

I understand that if I fail to return each completed document within the required time, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has already been awarded, the award is voidable.

Information Provided to MBE firms

In the solicitation of subcontract quotations or offers, MBE firms were provided not less than the same information and amount of time to respond as were non-MBE firms.

PART 3 - MBE PARTICIPATION SCHEDULE

SET FORTH BELOW ARE THE (I) CERTIFIED MBEs I INTEND TO USE, (II) THE PERCENTAGE OF THE TOTAL CONTRACT VALUE ALLOCATED TO EACH MBE FOR THIS PROJECT AND, (III) THE ITEMS OF WORK EACH MBE WILL PROVIDE UNDER THE CONTRACT. I HAVE CONFIRMED WITH THE MDOT DATABASE THAT THE MBE FIRMS IDENTIFIED BELOW (INCLUDING ANY SELF-PERFORMING MBE PRIME FIRMS) ARE PERFORMING WORK ACTIVITIES FOR WHICH THEY ARE MDOT-CERTIFIED.

Prime Contractor	Project Description	Project/Contract Number
	Project C.O.R.E - DD 009 - Abatement & Demolition Services	

LIST INFORMATION FOR EACH CERTIFIED MBE FIRM YOU AGREE TO USE TO ACHIEVE THE MBE PARTICIPATION GOAL AND SUBGOALS, IF ANY. **MBE PRIMES:** PLEASE COMPLETE BOTH SECTIONS A AND B BELOW.

SECTION A: For MBE Prime Contractors ONLY (including MBE Primes in a Joint Venture)

<p>MBE Prime Firm Name: _____</p> <p>MBE Certification Number: _____</p> <p>(If dually certified, check only one box.)</p> <p><input type="checkbox"/> African American-Owned <input type="checkbox"/> Hispanic American- Owned <input type="checkbox"/> Asian American-Owned <input type="checkbox"/> Women-Owned <input type="checkbox"/> Other MBE Classification</p> <p>NAICS code: _____</p>	<p>Percentage of total Contract Value to be performed with own forces and counted towards the MBE overall participation goal (up to 50% of the overall goal): _____% Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.</p> <p>Percentage of total Contract Value to be performed with own forces and counted towards the subgoal, if any, for my MBE classification (up to 100% of not more than one subgoal): _____%</p> <p><input type="checkbox"/> Supplier, wholesaler and/or regular dealer (count 60%) <input type="checkbox"/> Manufacturer (count 100%) <input type="checkbox"/> Broker (count reasonable fee/commission only) <input type="checkbox"/> Furnish and Install and other Services (count 100%)</p> <p>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work your firm is self-performing to calculate amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</p> <p>A. Percentage amount of subcontract where the MBE Prime firm is being used for manufacturer, furnish and install, and/or services (excluding products / services from suppliers, wholesalers, regular dealers and brokers) ___%</p> <p>B. Percentage amount for items of work where the MBE Prime firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule). Total percentage of Supplies/Products ___% x 60% = ___%</p> <p>C. Percentage amount of fee where the MBE Prime firm is being used as broker (count reasonable fee/commission only) ___%</p> <p>Description of the work to be performed with MBE prime's own forces: _____ _____</p>
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SECTION B: For all Contractors (including MBE Primes and MBE Primes in a Joint Venture)

<p>MBE Firm Name: _____</p> <p>MBE Certification Number: _____</p> <p>(If dually certified, check only one box.)</p> <p><input type="checkbox"/> African American-Owned</p> <p><input type="checkbox"/> Hispanic American- Owned</p> <p><input type="checkbox"/> Asian American-Owned</p> <p><input type="checkbox"/> Women-Owned</p> <p><input type="checkbox"/> Other MBE Classification</p> <p>NAICS code: _____</p>	<p>Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.</p> <p><input type="checkbox"/> Supplier, wholesaler and/or regular dealer (count 60%)</p> <p><input type="checkbox"/> Manufacturer (count 100%)</p> <p><input type="checkbox"/> Broker (count reasonable fee/commission only)</p> <p><input type="checkbox"/> Furnish and Install and other Services (count 100%)</p> <p>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</p> <p>A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers) ___ %</p> <p>B. Percentage of total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule). Total percentage of Supplies/Products ___% X 60% = ___ %</p> <p>C. Percentage amount of fee where the MBE firm is being used as broker (count reasonable fee/commission only) ___ %</p> <p>Description of the work to be performed: _____ _____</p>
<p>MBE Firm Name: _____</p> <p>MBE Certification Number: _____</p> <p>(If dually certified, check only one box.)</p> <p><input type="checkbox"/> African American-Owned</p> <p><input type="checkbox"/> Hispanic American- Owned</p> <p><input type="checkbox"/> Asian American-Owned</p> <p><input type="checkbox"/> Women-Owned</p> <p><input type="checkbox"/> Other MBE Classification</p> <p>NAICS code: _____</p>	<p>Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.</p> <p><input type="checkbox"/> Supplier, wholesaler and/or regular dealer (count 60%)</p> <p><input type="checkbox"/> Manufacturer (count 100%)</p> <p><input type="checkbox"/> Broker (count reasonable fee/commission only)</p> <p><input type="checkbox"/> Furnish and Install and other Services (count 100%)</p> <p>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE Firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</p> <p>A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers) ___ %</p> <p>B. Percentage of total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule). Total percentage of Supplies/Products ___% X 60% = ___ %</p> <p>C. Percentage amount of fee where the MBE firm is being used as broker (count reasonable fee/commission only) ___ %</p> <p>Description of the work to be performed: _____ _____</p>

<p>MBE Firm Name: _____</p> <p>MBE Certification Number: _____</p> <p>(If dually certified, check only one box.)</p> <p><input type="checkbox"/> African American-Owned</p> <p><input type="checkbox"/> Hispanic American- Owned</p> <p><input type="checkbox"/> Asian American-Owned</p> <p><input type="checkbox"/> Women-Owned</p> <p><input type="checkbox"/> Other MBE Classification</p> <p>NAICS code: _____</p>	<p>Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.</p> <p><input type="checkbox"/> Supplier, wholesaler and/or regular dealer (count 60%)</p> <p><input type="checkbox"/> Manufacturer (count 100%)</p> <p><input type="checkbox"/> Broker (count reasonable fee/commission only)</p> <p><input type="checkbox"/> Furnish and Install and other Services (count 100%)</p> <p>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that for the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</p> <p>A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers) ___%</p> <p>B. Percentage of the total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule). Total percentage of Supplies/Products ___% X 60% = ___%</p> <p>C. Percentage amount of fee where the MBE firm is being used as broker (count reasonable fee/commission only) ___%</p> <p>Description of the work to be performed: _____ _____</p>
<p>MBE Firm Name: _____</p> <p>MBE Certification Number: _____</p> <p>(If dually certified, check only one box.)</p> <p><input type="checkbox"/> African American-Owned</p> <p><input type="checkbox"/> Hispanic American- Owned</p> <p><input type="checkbox"/> Asian American-Owned</p> <p><input type="checkbox"/> Women-Owned</p> <p><input type="checkbox"/> Other MBE Classification</p> <p>NAICS code: _____</p>	<p>Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.</p> <p><input type="checkbox"/> Supplier, wholesaler and/or regular dealer (count 60%)</p> <p><input type="checkbox"/> Manufacturer (count 100%)</p> <p><input type="checkbox"/> Broker (count reasonable fee/commission only)</p> <p><input type="checkbox"/> Furnish and Install and other Services (count 100%)</p> <p>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</p> <p>A. Percentage of total contract amount where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers) ___%</p> <p>B. Percentage of total contract amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule). Total percentage of Supplies/Products ___% X 60% = ___%</p> <p>C. Percentage amount of fee where the MBE firm is being used as broker ___%</p> <p>Description of the work to be performed: _____ _____</p>

CONTINUE ON SEPARATE PAGE IF NEEDED

PART 4 – SIGNATURE PAGE

**To complete Affidavit committing to MBE(s) or requesting waiver,
Bidder/Offeror must sign below:**

I solemnly affirm under the penalties of perjury that: (i) I have reviewed the instructions for the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule, and (ii) the information contained in the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule is true to the best of my knowledge, information and belief.

Bidder/Offeror Name
(PLEASE PRINT OR TYPE)

Signature of Authorized Representative

Address

Printed Name and Title

City, State and Zip Code

Date

SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL

D-1B WAIVER GUIDANCE

GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET MBE PARTICIPATION GOALS

In order to show that it has made good faith efforts to meet the Minority Business Enterprise (MBE) participation goal (including any MBE subgoals) on a contract, the Offeror must either (1) meet the MBE Goal(s) and document its commitments for participation of MBE Firms, or (2) when it does not meet the MBE Goal(s), document its Good Faith Efforts to meet the goal(s).

I. Definitions

MBE Goal(s) – “MBE Goal(s)” refers to the MBE participation goal and MBE participation subgoal(s).

Good Faith Efforts - The “Good Faith Efforts” requirement means that when requesting a waiver, the Offeror must demonstrate that it took all necessary and reasonable steps to achieve the MBE Goal(s), which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient MBE participation, even if those steps were not fully successful. Whether the Offeror that requests a waiver made adequate good faith efforts will be determined by considering the quality, quantity, and intensity of the different kinds of efforts that the Offeror has made. The efforts employed by the Offeror should be those that one could reasonably expect the Offeror to take if the Offeror were actively and aggressively trying to obtain MBE participation sufficient to meet the MBE contract goal and subgoals. Mere *pro forma* efforts are not good faith efforts to meet the MBE contract requirements. The determination concerning the sufficiency of the Offeror's good faith efforts is a judgment call; meeting quantitative formulas is not required.

Identified Firms – “Identified Firms” means a list of the MBEs identified by the procuring agency during the goal setting process and listed in the procurement as available to perform the Identified Items of Work. It also may include additional MBEs identified by the Offeror as available to perform the Identified Items of Work, such as MBEs certified or granted an expansion of services after the procurement was issued. If the procurement does not include a list of Identified Firms, this term refers to all of the MBE Firms (if State-funded) the Offeror identified as available to perform the Identified Items of Work and should include all appropriately certified firms that are reasonably identifiable.

Identified Items of Work – “Identified Items of Work” means the Proposal items identified by the procuring agency during the goal setting process and listed in the procurement as possible items of work for performance by MBE Firms. It also may include additional portions of items of work the Offeror identified for performance by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved. If the procurement does not include a list of Identified Items of Work, this term refers to all of the items of work the Offeror identified as possible items of work for performance by MBE Firms and should include all reasonably identifiable work opportunities.

MBE Firms – “MBE Firms” refers to firms certified by the Maryland Department of Transportation (“MDOT”) under COMAR 21.11.03. Only MDOT-certified MBE Firms can participate in the State's MBE Program.

II. Types of Actions Agency will Consider

The Offeror is responsible for making relevant portions of the work available to MBE subcontractors and suppliers and select those portions of the work or material needs consistent with the available MBE subcontractors and suppliers, so as to facilitate MBE participation. The following is a list of types of actions the procuring agency will consider as part of the Offeror's Good Faith Efforts when the Offeror fails to meet the MBE Goal(s). This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Identify Proposal Items as Work for MBE Firms

1. Identified Items of Work in Procurements

- (a) Certain procurements will include a list of Proposal items identified during the goal setting process as possible work for performance by MBE Firms. If the procurement provides a list of Identified Items of Work, the Offeror shall make all reasonable efforts to solicit quotes from MBE Firms to perform that work.
- (b) Offerors may, and are encouraged to, select additional items of work to be performed by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved.

2. Identified Items of Work by Offerors

- (a) When the procurement does not include a list of Identified Items of Work or for additional Identified Items of Work, Offerors should reasonably identify sufficient items of work to be performed by MBE Firms.

- (b) Where appropriate, Offerors should break out contract work items into economically feasible units to facilitate MBE participation, rather than perform these work items with their own forces. The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the Offeror of the responsibility to make Good Faith Efforts.

B. Identify MBE Firms to Solicit

1. MBE Firms Identified in Procurements

- (a) Certain procurements will include a list of the MBE Firms identified during the goal setting process as available to perform the items of work. If the procurement provides a list of Identified MBE Firms, the Offeror shall make all reasonable efforts to solicit those MBE firms.
- (b) Offerors may, and are encouraged to, search the MBE Directory to identify additional MBEs who may be available to perform the items of work, such as MBEs certified or granted an expansion of services after the solicitation was issued.

2. MBE Firms Identified by Offerors

- (a) When the procurement does not include a list of Identified MBE Firms, Offerors should reasonably identify the MBE Firms that are available to perform the Identified Items of Work.
- (b) Any MBE Firms identified as available by the Offeror should be certified to perform the Identified Items of Work.

C. Solicit MBEs

1. Solicit all Identified Firms for all Identified Items of Work by providing written notice. The Offeror should:

- (a) provide the written solicitation at least 10 days prior to Proposal opening to allow sufficient time for the MBE Firms to respond;
- (b) send the written solicitation by first-class mail, facsimile, or e-mail using contact information in the MBE Directory, unless the Offeror has a valid basis for using different contact information; and
- (c) provide adequate information about the plans, specifications, anticipated time schedule for portions of the work to be performed by the MBE, and other requirements of the contract to assist MBE Firms in responding. (This information may be provided by including hard copies in the written solicitation or by electronic means as described in C.3 below.)

2. “All” Identified Firms includes the MBEs listed in the procurement and any MBE Firms you identify as potentially available to perform the Identified Items of Work, but it does not include MBE Firms who are no longer certified to perform the work as of the date the Offeror provides written solicitations.

3. “Electronic Means” includes, for example, information provided *via* a website or file transfer protocol (FTP) site containing the plans, specifications, and other requirements of the contract. If an interested MBE cannot access the information provided by electronic means, the Offeror must make the information available in a manner that is accessible to the interested MBE.

4. Follow up on initial written solicitations by contacting MBEs to determine if they are interested. The follow up contact may be made:

- (a) by telephone using the contact information in the MBE Directory, unless the Offeror has a valid basis for using different contact information; or
- (b) in writing *via* a method that differs from the method used for the initial written solicitation.

5. In addition to the written solicitation set forth in C.1 and the follow up required in C.4, use all other reasonable and available means to solicit the interest of MBE Firms certified to perform the work of the contract. Examples of other means include:

- (a) attending any pre-Proposal meetings at which MBE Firms could be informed of contracting and subcontracting opportunities; and
- (b) if recommended by the procurement, advertising with or effectively using the services of at least two minority focused entities or media, including trade associations, minority/women community organizations, minority/women contractors' groups, and local, state, and federal minority/women business assistance offices listed on the MDOT Office of Minority Business Enterprise website.

D. Negotiate with Interested MBE Firms

Offerors must negotiate in good faith with interested MBE Firms.

1. Evidence of negotiation includes, without limitation, the following:
 - (a) the names, addresses, and telephone numbers of MBE Firms that were considered;
 - (b) a description of the information provided regarding the plans and specifications for the work selected for subcontracting and the means used to provide that information; and
 - (c) evidence as to why additional agreements could not be reached for MBE Firms to perform the work.
2. The Offeror using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration.
3. The fact that there may be some additional costs involved in finding and using MBE Firms is not in itself sufficient reason for the Offeror's failure to meet the contract MBE goal(s), as long as such costs are reasonable. Factors to take into consideration when determining whether an MBE Firm's quote is excessive or unreasonable include, without limitation, the following:
 - (a) dollar difference between the MBE subcontractor's quote and the average of the other subcontractors' quotes received by the Offeror;
 - (b) percentage difference between the MBE subcontractor's quote and the average of the other subcontractors' quotes received by the Offeror;
 - (c) percentage that the MBE subcontractor's quote represents of the overall contract amount;
 - (d) number of MBE firms that the Offeror solicited for that portion of the work;
 - (e) whether the work described in the MBE and Non-MBE subcontractor quotes (or portions thereof) submitted for review is the same or comparable; and
 - (f) number of quotes received by the Offeror for that portion of the work.
4. The above factors are not intended to be mandatory, exclusive, or exhaustive, and other evidence of an excessive or unreasonable price may be relevant.
5. The Offeror may not use its price for self-performing work as a basis for rejecting an MBE Firm's quote as excessive or unreasonable.
6. The "average of the other subcontractors' quotes received" by the Offeror refers to the average of the quotes received from all subcontractors. Offeror should attempt to receive quotes from at least three subcontractors, including one quote from an MBE and one quote from a Non-MBE.
7. The Offeror shall not reject an MBE Firm as unqualified without sound reasons based on a thorough investigation of the firm's capabilities. For each certified MBE that is rejected as unqualified or that placed a subcontract quotation or offer that the Offeror concludes is not acceptable, the Offeror must provide a written detailed statement listing the reasons for this conclusion. The Offeror also must document the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.
 - (a) The factors to take into consideration when assessing the capabilities of an MBE Firm, include, but are not limited to the following: financial capability, physical capacity to perform, available personnel and equipment, existing workload, experience performing the type of work, conduct and performance in previous contracts, and ability to meet reasonable contract requirements.
 - (b) The MBE Firm's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of Proposals in the efforts to meet the project goal.

E. Assisting Interested MBE Firms

When appropriate under the circumstances, the decision-maker will consider whether the Offeror made reasonable efforts to assist interested MBE Firms in obtaining:

1. The bonding, lines of credit, or insurance required by the procuring agency or the Offeror; and
2. Necessary equipment, supplies, materials, or related assistance or services.

III. Other Considerations

In making a determination of Good Faith Efforts the decision-maker may consider engineering estimates, catalogue prices, general market availability and availability of certified MBE Firms in the area in which the work is to be performed, other Proposals or offers and subcontract Proposals or offers substantiating significant variances between certified MBE and Non-MBE costs of participation, and their impact on the overall cost of the contract to the State and any other relevant factors.

The decision-maker may take into account whether the Offeror decided to self-perform subcontract work with its own forces, especially where the self-performed work is Identified Items of Work in the procurement. The decision-maker also may take into account the performance of other Offerors in meeting the contract. For example, when the apparent successful Offeror fails to meet the contract goal, but others meet it, this reasonably raises the question of whether, with additional reasonable efforts, the apparent successful Offeror could have met the goal. If the apparent successful Offeror fails to meet the goal, but meets or exceeds the average MBE participation obtained by other Offerors, this, when viewed in conjunction with other factors, could be evidence of the apparent successful Offeror having made Good Faith Efforts.

IV. Documenting Good Faith Efforts

At a minimum, the Offeror seeking a waiver of the MBE Goal(s) or a portion thereof must provide written documentation of its Good Faith Efforts, in accordance with COMAR 21.11.03.11, within 10 Business Days after receiving notice that it is the apparent awardee. The written documentation shall include the following:

A. Items of Work (Complete Good Faith Efforts Documentation Attachment D-1C, Part 1)

A detailed statement of the efforts made to select portions of the work proposed to be performed by certified MBE Firms in order to increase the likelihood of achieving the stated MBE Goal(s).

B. Outreach/Solicitation/Negotiation

1. The record of the Offeror's compliance with the outreach efforts prescribed by COMAR 21.11.03.09C(2)(a). **(Complete Outreach Efforts Compliance Statement - D-2).**
2. A detailed statement of the efforts made to contact and negotiate with MBE Firms including:
 - (a) the names, addresses, and telephone numbers of the MBE Firms who were contacted, with the dates and manner of contacts (letter, fax, e-mail, telephone, etc.) **(Complete Good Faith Efforts Attachment D-1C- Part 2, and submit letters, fax cover sheets, e-mails, etc. documenting solicitations);** and
 - (b) a description of the information provided to MBE Firms regarding the plans, specifications, and anticipated time schedule for portions of the work to be performed and the means used to provide that information.

C. Rejected MBE Firms (Complete Good Faith Efforts Attachment D-1C, Part 3)

1. For each MBE Firm that the Offeror concludes is not acceptable or qualified, a detailed statement of the reasons for the Offeror's conclusion, including the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.
2. For each certified MBE Firm that the Offeror concludes has provided an excessive or unreasonable price, a detailed statement of the reasons for the Offeror's conclusion, including the quotes received from all MBE and Non-MBE firms proposing on the same or comparable work. **(Include copies of all quotes received.)**
3. A list of MBE Firms contacted but found to be unavailable. This list should be accompanied by an MBE Unavailability Certificate (see **D-1B - Exhibit A** to this Part 1) signed by the MBE contractor or a statement from the Offeror that the MBE contractor refused to sign the MBE Unavailability Certificate.

D. Other Documentation

1. Submit any other documentation requested by the Procurement Officer to ascertain the Offeror's Good Faith Efforts.
2. Submit any other documentation the Offeror believes will help the Procurement Officer ascertain its Good Faith Efforts.

D-1B - Exhibit A
MBE Subcontractor Unavailability Certificate

1. It is hereby certified that the firm of _____
(Name of Minority firm)

located at _____
(Number) (Street)

(City) (State) (Zip)

was offered an opportunity to bid on Solicitation No. _____

in _____ County by _____
(Name of Prime Contractor's Firm)

2. _____ (Minority Firm), is either unavailable for the work/service or unable to prepare a Proposal for this project for the following reason(s):

(Signature of Minority Firm's MBE Representative) (Title) (Date)

(MDOT Certification #) (Telephone #)

3. To be completed by the prime contractor if Section 2 of this form is not completed by the minority firm.

To the best of my knowledge and belief, said Certified Minority Business Enterprise is either unavailable for the work/service for this project, is unable to prepare a Proposal, or did not respond to a request for a price Proposal and has not completed the above portion of this submittal.

(Signature of Prime Contractor) (Title) (Date)

D-1C
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST

PAGE __ OF __

Prime Contractor:	Project Description:	PROJECT/CONTRACT
Offeror Company Name, Street Address, Phone		Solicitation #:

Parts 1, 2, and 3 must be included with this certificate along with all documents supporting your waiver request.

I affirm that I have reviewed **Attachment D-1B**, Waiver Guidance. I further affirm under penalties of perjury that the contents of Parts 1, 2, and 3 of this **Attachment D-1C** Good Faith Efforts Documentation Form are true to the best of my knowledge, information, and belief.

Company:

Company Name (please print or type)

By:

Signature of Authorized Representative

Printed Name:

Printed Name

Title:

Title

Date:

Date

Address:

Company Address

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST
PART 1 – IDENTIFIED ITEMS OF WORK OFFEROR MADE AVAILABLE TO MBE FIRMS

PAGE __ OF __

Prime Contractor:	Project Description:	PROJECT/CONTRACT
Offeror Company Name, Street Address, Phone		Solicitation #:

Identify those items of work that the Offeror made available to MBE Firms. This includes, where appropriate, those items the Offeror identified and determined to subdivide into economically feasible units to facilitate the MBE participation. For each item listed, show the anticipated percentage of the total contract amount. It is the Offeror’s responsibility to demonstrate that sufficient work to meet the goal was made available to MBE Firms, and the total percentage of the items of work identified for MBE participation equals or exceeds the percentage MBE goal set for the procurement. Note: If the procurement includes a list of Proposal items identified during the goal setting process as possible items of work for performance by MBE Firms, the Offeror should make all of those items of work available to MBE Firms or explain why that item was not made available. If the Offeror selects additional items of work to make available to MBE Firms, those additional items should also be included below.

Identified Items of Work	Was this work listed in the procurement?	Does Offeror normally self-perform this work?	Was this work made available to MBE Firms? If no, explain why not.
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Please check if Additional Sheets are attached.

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST

PART 2 – IDENTIFIED MBE FIRMS AND RECORD OF SOLICITATIONS

PAGE __ OF __

Prime Contractor:	Project Description:	PROJECT/CONTRACT
<i>Offeror Company Name, Street Address, Phone</i>		Solicitation #:

Identify the MBE Firms solicited to provide quotes for the Identified Items of Work made available for MBE participation. Include the name of the MBE Firm solicited, items of work for which quotes were solicited, date and manner of initial and follow-up solicitations, whether the MBE provided a quote, and whether the MBE is being used to meet the MBE participation goal. MBE Firms used to meet the participation goal must be included on the MBE Participation Schedule. Note: If the procurement includes a list of the MBE Firms identified during the goal setting process as potentially available to perform the items of work, the Offeror should solicit all of those MBE Firms or explain why a specific MBE was not solicited. If the Offeror identifies additional MBE Firms who may be available to perform Identified Items of Work, those additional MBE Firms should also be included below. Copies of all written solicitations and documentation of follow-up calls to MBE Firms must be attached to this form. This list should be accompanied by a Minority Contractor Unavailability Certificate signed by the MBE contractor or a statement from the Offeror that the MBE contractor refused to sign the Minority Contractor Unavailability Certificate (**Attachment D-1B - Exhibit A**). If the Offeror used a Non-MBE or is self-performing the identified items of work, Part 4 must be completed.

Name of Identified MBE Firm & MBE Classification	Describe Item of Work Solicited	Initial Solicitation Date & Method	Follow-up Solicitation Date & Method	Details for Follow-up Calls	Quote Rec'd	Quote Used	Reason Quote Rejected
Firm Name: MBE Classification (Check only if requesting waiver of MBE subgoal.) <input type="checkbox"/> African American-Owned <input type="checkbox"/> Hispanic American- Owned <input type="checkbox"/> Asian American-Owned <input type="checkbox"/> Women-Owned <input type="checkbox"/> Other MBE Classification		Date: <input type="checkbox"/> Mail <input type="checkbox"/> Facsimile <input type="checkbox"/> E-mail	Date: <input type="checkbox"/> Phone <input type="checkbox"/> Mail <input type="checkbox"/> Facsimile <input type="checkbox"/> E-mail	Time of Call: Spoke with: _____ <input type="checkbox"/> Left Message	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Used Other MBE <input type="checkbox"/> Used Non-MBE <input type="checkbox"/> Self-performing
Firm Name: MBE Classification (Check only if requesting waiver of MBE subgoal.) <input type="checkbox"/> African American-Owned <input type="checkbox"/> Hispanic American- Owned <input type="checkbox"/> Asian American-Owned <input type="checkbox"/> Women-Owned <input type="checkbox"/> Other MBE Classification		Date: <input type="checkbox"/> Mail <input type="checkbox"/> Facsimile <input type="checkbox"/> E-mail	Date: <input type="checkbox"/> Phone <input type="checkbox"/> Mail <input type="checkbox"/> Facsimile <input type="checkbox"/> E-mail	Time of Call: Spoke with: _____ <input type="checkbox"/> Left Message	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Used Other MBE <input type="checkbox"/> Used Non-MBE <input type="checkbox"/> Self-performing

Please check if Additional Sheets are attached.

**GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST
PART 3 – ADDITIONAL INFORMATION REGARDING REJECTED MBE QUOTES**

PAGE __ OF __

Prime Contractor:	Project Description:	PROJECT/CONTRACT NUMBER:
<i>Offeror Company Name, Street Address, Phone</i>		Solicitation #:

This form must be completed if Part 1 indicates that an MBE quote was rejected because the Offeror is using a Non-MBE or is self-performing the Identified Items of Work. Provide the Identified Items Work, indicate whether the work will be self-performed or performed by a Non-MBE, and if applicable, state the name of the Non-MBE. Also include the names of all MBE and Non-MBE Firms that provided a quote and the amount of each quote.

Describe Identified Items of Work Not Being Performed by MBE (Include spec/ section number from Proposal)	Self-performing or Using Non-MBE (Provide name)	Amount of Non-MBE Quote	Name of Other Firms who Provided Quotes & Whether MBE or Non-MBE	Amount Quoted	Indicate Reason Why MBE Quote Rejected & Briefly Explain
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE _____	\$ _____	_____ <input type="checkbox"/> MBE <input type="checkbox"/> Non-MBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE _____	\$ _____	_____ <input type="checkbox"/> MBE <input type="checkbox"/> Non-MBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE _____	\$ _____	_____ <input type="checkbox"/> MBE <input type="checkbox"/> Non-MBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE _____	\$ _____	_____ <input type="checkbox"/> MBE <input type="checkbox"/> Non-MBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE _____	\$ _____	_____ <input type="checkbox"/> MBE <input type="checkbox"/> Non-MBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE _____	\$ _____	_____ <input type="checkbox"/> MBE <input type="checkbox"/> Non-MBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other

Please check if Additional Sheets are attached.

D- 2
OUTREACH EFFORTS COMPLIANCE STATEMENT

Complete and submit this form within 10 Business Days of notification of apparent award or actual award, whichever is earlier.

In conjunction with the Proposal submitted in response to Solicitation No. _____, I state the following:

1. Offeror identified subcontracting opportunities in these specific work categories:

2. Attached to this form are copies of written solicitations (with Proposal instructions) used to solicit certified MBE firms for these subcontract opportunities.

3. Offeror made the following attempts to personally contact the solicited MDOT-certified MBE firms:

4. **Please Check One:**

- This project does not involve bonding requirements.
- Offeror assisted MDOT-certified MBE firms to fulfill or seek waiver of bonding requirements. (DESCRIBE EFFORTS):

5. **Please Check One:**

- Offeror did attend the pre-Proposal conference.
- No pre -Proposal meeting/conference was held.
- Offeror did not attend the pre-Proposal conference.

PLEASE PRINT OR TYPE

Company:

Company Name (please print or type)

By:

Signature of Authorized Representative

Printed Name:

Printed Name

Title:

Title

Date:

Date

Address:

Company Address

D-3A
CERTIFIED MBE SUBCONTRACTOR PARTICIPATION CERTIFICATION

INSTRUCTIONS:

PRIME CONTRACTOR: After completing SECTIONS A, B, and D, provide this form to *each* certified Minority Business Enterprise subcontractor (MBE) listed on the MBE Participation Schedule (Attachment D-1A) allowing sufficient time for the MBE to respond within the required timeframe.

CERTIFIED MBE SUBCONTRACTOR: Complete SECTION C to acknowledge and certify the information in SECTION A. Return the completed form directly to the Procurement Officer identified in SECTION D within 10 days after notice from the Prime Contractor of the State’s intent to award the Contract. Provide a copy to the Prime Contractor.

IF THIS FORM IS NOT RETURNED WITHIN THE REQUIRED TIME, THE PROCUREMENT OFFICER MAY DETERMINE THAT THE PRIME CONTRACTOR IS NOT RESPONSIBLE AND THEREFORE NOT ELIGIBLE FOR CONTRACT AWARD.

SECTION A

Provided that (Prime Contractor) _____ is awarded the State contract in conjunction with Solicitation Number _____, (Prime Contractor) _____ intends to enter into a subcontract with (Certified MBE Subcontractor) _____ with MDOT Certification Number _____ committing to participation by (Certified MBE Subcontractor) _____ of at least \$ _____ which equals _____% of the Total Contract Value for the following products/services:

NAICS CODE	WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE)	DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES

The Contractor and certified MBE each acknowledge that, for purposes of determining the accuracy of the information provided herein, the Procurement Officer may request additional information, including, without limitation, copies of the subcontract agreements and quotes. The Contractor and certified MBE each solemnly affirms under the penalties of perjury that: (i) the information provided in this Certified MBE Subcontractor Participation Certification is true to the best of its knowledge, information and belief, and (ii) it has fully complied with the State Minority Business Enterprise law, State Finance and Procurement Article §14-308(a)(2), Annotated Code of Maryland which provides that, except as otherwise provided by law, a Contractor may not identify a certified MBE in a Bid/Proposal and:

- (1) fail to request, receive, or otherwise obtain authorization from the MBE to identify the MBE in its Bid/Proposal;
- (2) fail to notify the MBE before execution of the Contract of its inclusion of the Bid/Proposal;
- (3) fail to use the MBE in the performance of the Contract; or
- (4) pay the MBE solely for the use of its name in the Bid/Proposal.

SECTION B – Prime Contractor

Signature of Representative:

Printed Name and Title:

Prime Firm's Name: _____

Federal Identification Number: _____

Street Address, City, State, Zip Code:

Phone: _____

Date: _____

SECTION C – Certified MBE Subcontractor

Signature of Representative:

Printed Name and Title:

MBE Firm's Name: _____

Federal Identification Number: _____

Street Address, City, State, Zip Code:

Phone: _____

Date: _____

SECTION D

This completed form is due to the Procurement Officer on or before: _____

Solicitation #: _____ Solicitation Title: _____

Agency/Dept.: _____ Procurement Officer: _____

Phone: _____ Email: _____

Street Address, City, State, Zip Code:

D-3B
MBE PRIME PROJECT PARTICIPATION CERTIFICATION

Please complete and submit this form to attest to each specific item of work that your MBE firm has listed on the MBE Participation Schedule (Attachment D-1A) for purposes of meeting the MBE participation goals. This form must be submitted within 10 Business Days of notification of apparent award. If the Offeror fails to return this affidavit within the required time, the Procurement Officer may determine that Proposal is not susceptible of being selected for Contract award.

Provided that _____ (Prime Contractor's Name) with Certification Number _____ is awarded the State contract in conjunction with Solicitation No. _____, such MBE Prime Contractor intends to perform with its own forces at least \$ _____ which equals to ___ % of the Total Contract Amount for performing the following goods and services for the Contract:

NAICS CODE	WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE) For Construction Projects, General Conditions must be listed separately	DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES	VALUE OF THE WORK

MBE Prime Contractor

Company:

Company Name (please print or type)

FEIN:

Federal Identification Number

Company Address: _____

 Phone:

 Printed Name:

 Title:

 By:

Signature of Authorized Representative

 Date:

D-4A
Minority Business Enterprise Participation
Prime Contractor Paid/Unpaid Invoice Report

Report #:	Contract #:
Reporting Period (Month/Year):	Contracting Unit:
Prime Contractor: Report is due to the MBE Liaison by the 10th of the month following the month the services were provided. Note: Please number reports in sequence	Contract Amount:
	MBE Subcontract Amt:
	Project Begin Date:
	Project End Date:
	Services Provided:

Prime Contractor:		Contact Person:	
Address:			
City:		State:	ZIP:
Phone:	FAX:	E-mail:	
MBE Subcontractor Name:		Contact Person:	
Phone:	FAX:	E-mail:	
Subcontractor Services Provided:			
List all payments made to MBE subcontractor named above during this reporting period:		List dates and amounts of any outstanding invoices:	
	Invoice #	Amount	
	Invoice #	Amount	
1.			1.
2.			2.
3.			3.
4.			4.
Total Dollars Paid: \$		Total Dollars Unpaid: \$	

- If more than one MBE subcontractor is used for this contract, you must use separate **Attachment D-4A** forms. Information regarding payments that the MBE prime will use for purposes of meeting the MBE participation goals must be reported separately in **Attachment D-4B**.
- **Return one copy (hard or electronic) of this form to the following addresses (electronic copy with signature and date is preferred):**

Contract Monitor Name

Address

Email

Signature (Required)

Contracting Unit

City, State Zip

Phone Number

Date

D-4B
Minority Business Enterprise Participation
MBE Prime Contractor Report

MBE Prime Contractor:	Contract #:
Certification Number:	Contracting Unit:
Report #:	Contract Amount:
Reporting Period (Month/Year):	Total Value of the Work to the Self-Performed for purposes of Meeting the MBE participation goal/subgoals:
MBE Prime Contractor: Report is due to the MBE Liaison by the 10th of the month following the month the services were provided. Note: Please number reports in sequence	Project Begin Date:
	Project End Date:

Contact Person:			
Address:			
City:		State:	
Phone:		FAX:	E-mail:

Invoice Number	Value of the Work	NAICS Code	Description of Specific Products and/or Services

Return one copy (hard or electronic) of this form to the following addresses (electronic copy with signature and date is preferred):

Contract Monitor Name	Contracting Unit
Address	City, State Zip
Email	Phone Number
Signature (Required)	Date

D-5
Minority Business Enterprise Participation
MBE Subcontractor Paid/Unpaid Invoice Report

Report #:	Contract #:
Reporting Period (Month/Year):	Contracting Unit:
Report is due by the 10th of the month following the month the services were performed.	MBE Subcontract Amt:
	Project Begin Date:
	Project End Date:
	Services Provided:

MBE Subcontractor Name:					
MDOT Certification #:					
Contact Person:					
Address:					
City:			State:		ZIP:
Phone:		FAX:		E-mail:	
Subcontractor Services Provided:					
List all payments received from Prime Contractor during reporting period indicated above.			List dates and amounts of any unpaid invoices over 30 days old.		
	Invoice Amount	Date		Invoice Amount	Date
1.			1.		
2.			2.		
3.			3.		
4.			4.		
Total Dollars Paid: \$			Total Dollars Unpaid: \$		
Prime Contractor:			Contract Person:		

Return one copy of this form to the following addresses (electronic copy with signature and date is preferred):

_____	_____
Contract Monitor Name	Contracting Unit
_____	_____
Address	City, State Zip
_____	_____
Email	Phone Number
_____	_____
Signature (Required)	Date

ATTACHMENT E
SCOPE OF WORK

DD-009 Scope of Work

General

The successful Offeror shall be responsible for performing the items listed below, in addition to other requirements stated in the RFP:

1. Coordinating with the City for procurement of all necessary permits required to complete abatement, demolition and site stabilization operations.
2. Providing all required submittals in accordance with the Contract Documents.
3. Providing a project schedule that incorporates mobilization, rodenticide, abatement, demolition, stabilization and demobilization activities.
4. Conducting Pre-work Inspections.
5. Posting site signage, including but not limited to, posting the Public Notice of Demolition prior to commencing demolition as well as furnishing and installing the Project Construction Sign.
6. Identifying the "Project Superintendent" who will be responsible for daily oversight of the abatement, demolition/debris removal and site stabilization activities. The Project Superintendent will be responsible for overseeing the dust suppression mitigation and any other environmentally sensitive activities.
7. Creating and submitting a Waste Management Plan inclusive of a site logistics plan, list of anticipated waste streams and the expected disposal methods, in accordance with the contract documents.
8. Performing utility abandonments (cut, capped and made safe) prior to beginning demolition activities, in accordance with the Contract Documents.
9. Completing rodenticide of all interior and exterior areas of the properties to be demolished in accordance with the Contract Documents.
10. Completing installation, maintenance and removal of site security measures in accordance with the Contract Documents. This includes but is not limited to any required security fencing, barriers and signage. Security fencing must be at least eight (8) feet high and is to be covered with a windscreen.
11. Completing installation, maintenance and removal of S&E controls, in accordance with the contract documents. S&E controls are required around the entire site perimeter.
12. Performing hazardous/regulated materials abatement services in accordance with the Contract Documents. The Contractor is responsible for performing work under the supervision of a certified Industrial Hygienist and will be responsible for providing required clearance documentation.
13. Performing building demolition services in accordance with the Contract Documents. Building demolition services are to include the razing and removal of the complete building structure inclusive of basement foundations, in accordance with the contract documents.
14. Conducting demolition and removal of debris. These operations are to be performed via use of a bucket-claw loader or similar controlled demolition device, in accordance with the Contract Documents.
15. Demolition and debris removal operations are to be performed in accordance with the Contract Documents.
16. Performing site grading and stabilization services in accordance with the Contract Documents. This includes the protection of mature trees, removal of "weed trees", removal and hauling of excavated soils, backfilling of open excavations via use of clean fill, final site grading and seeding/stabilization operations in accordance with the

Contract Documents. The use of recycled materials during backfill operations is not allowed.

17. Watering and site maintenance, as required, to ensure mature vegetative growth.
18. Removal of existing sidewalks adjacent to structure being demolished. These areas are to be graded and seeded following the sidewalk removal.
19. Providing any required notifications and close-out documentation to the appropriate local authorities or agencies.
20. Complying with all local, state and federal laws.

1600 Rutland Avenue

The following additional scope items are specific to 1600 Rutland Avenue. The successful Offeror shall be responsible for:

- a. Dewatering flooded basement. All dewatering shall be filtered through an approved sediment control device with filtered water to be discharged onto a non-erodible surface. Dewatering operations shall be coordinated with MSA to enable final hazardous material testing of the flooded areas.
- b. Demolition and removal of the concrete/asphalt lot along the rear of the property between N. Register Street and E. Lanvale Street. This includes the removal of the rectangular chain link fencing enclosure within the parking lot area (reference site map Attachment M).
- c. Protection of planted trees along the back side of the lot (reference site map Attachment M).
- d. Maintenance/protection of the existing retaining walls and fencing running along the retaining wall at N. Register Street and E. Lanvale Street. The existing fencing can be utilized as security fencing during demolition operations but will require a windscreen application.
- e. Ensuring the structural integrity of adjacent concrete retaining walls during demolition and debris removal operations. This includes the performance of a structural inspection (by certified engineer) prior to demolition operations and providing any required shoring/bracing as may be recommended.
- f. Performing complete sidewalk replacement along Rutland Ave. (new with 12') and Federal Street (new width 12') while protecting and maintaining existing trees. Sidewalks along N. Register Street and E. Lanvale Street shall remain open during demolition operation and will not be replaced.
- g. Protection of the existing transformer box located within the paved lot (reference site map Attachment M).
- h. Removal of enclosed playground equipment and rubber base material.

1511 Ashburton Street

The following additional scope items are specific to 1511 Ashburton Street. The successful Offeror shall be responsible for:

- a. Protection of playground equipment and grass on west side of property (reference site map Attachment M).
- b. Replacement of full sidewalk on west side of property.

ATTACHMENT F
PRICING FORM

ATTACHMENT F
Pricing Form REVISED
Deconstruction and Demolition & Abatement Services - Project C.O.R.E.
RFP DD-009

Base Services 1600 Rutland Ave					
	Base Service Description	Base Cost *			Total Base Cost
B1	Perform rodenticide services in accordance with the requirements of the RFP.			/LS	
B2	Furnish, install, maintain and remove site security fencing and sediment erosion control measures in accordance with the requirements of the RFP.			/LS	
B3	Complete domestic water and sanitary abandonment services in accordance with the requirements of the RFP.			/LS	
B4	Perform abatement / demolition and debris removal operations in accordance with the requirements of the RFP. Includes all identified structures, pads, fencing, sidewalks, etc.			/LS	
B5	Perform backfill, site stabilization (topsoil / seeding) operations in accordance with the requirements of the RFP.			/LS	
B6	Concrete Sidewalk replacement			/LS	
Subtotal Base Services (B1-B6)					0

Allowances					
	Allowance Description	Unit Cost *		Allow for	Total Allowance Cost
A1	Undercut of oversaturated soils below basement foundations. Unit Cost to include labor and equipment to excavate, discard saturated soils. Note that contractor is responsible for dewatering / protection of open excavation.		/CY	500	/Ea
A2	Excavate and dispose of contaminated soils adjacent to underground storage tank. Unit Cost to include labor and equipment to remove and dispose of contaminated soils in the event the underground storage tank is determined to have leached prior to demolition operations.		/CY	200	/Ea
A3	Additional imported backfill. Unit cost to include labor, equipment and materials associated with additional import materials that would result from removal of unsuitable base materials / contaminated soils adjacent to underground storage tank.		/CY	700	/Ea
A4	Unit cost for residual oil found to be present in the fuel storage tank. Unit cost includes required handling, disposal and documentation efforts.		/Gallon	2,500	/Ea
A5	Unit cost for dewatering of flooded basement filtering through an approved sediment control device with filtered water to be discharged onto a non-erodible surface		/Gallon	175,000	/Ea
Subtotal Allowances (A1-A5)					0

*Costs include required administration, permitting, documentation and reporting requirements.

**ATTACHMENT F
Pricing Form**

Project C.O.R.E RFP DD-009 - Abatement & Demolition Services

Base Services 1511 Ashburton Street					
	Base Service Description	Base Cost *			Total Base Cost
B1	Perform rodenticide services in accordance with the requirements of the RFP.			/LS	
B2	Furnish, install, maintain and remove site security fencing and sediment erosion control measures in accordance with the requirements of the RFP.			/LS	
B3	Complete domestic water and sanitary abandonment services in accordance with the requirements of the RFP.			/LS	
B4	Perform abatement / demolition and debris removal operations in accordance with the requirements of the RFP. Includes all identified structures, pads, fencing, sidewalks, etc.			/LS	
B5	Perform backfill, site stabilization (topsoil / seeding) operations in accordance with the requirements of the RFP.			/LS	
B6	Concrete Sidewalk replacement			/LS	
Subtotal Base Services (B1-B6)					0

Allowances					
	Allowance Description	Unit Cost *		Allow for	Total Allowance Cost
A1	Undercut of oversaturated soils below basement foundations. Unit Cost to include labor and equipment to excavate, discard saturated soils. Note that contractor is responsible for dewatering / protection of open excavation.		/CY	500	/Ea
A2	Excavate and dispose of contaminated soils adjacent to underground storage tank. Unit Cost to include labor and equipment to remove and dispose of contaminated soils in the event the underground storage tank is determined to have leached prior to demolition operations.		/CY	200	/Ea
A3	Additional imported backfill. Unit cost to include labor, equipment and materials associated with additional import materials that would result from removal of unsuitable base materials / contaminated soils adjacent to underground storage tank.		/CY	700	/Ea
A4	Unit cost for residual oil found to be present in the fuel storage tank. Unit cost includes required handling, disposal and documentation efforts.		/Gallon	2,500	/Ea
A5					
Subtotal Allowances (A1-A5)					0

*Costs include required administration, permitting, documentation and reporting requirements.

ATTACHMENT G
FORM CONTRACT

**Project C.O.R.E.
Abatement and Demolition Services**

AGREEMENT made as of ____ day of _____, 2021,

BETWEEN the Owner: Maryland Stadium Authority (MSA)
333 West Camden Street, Suite 300
Baltimore, MD 21201

And the Contractor: [Contractor Legal Firm Name]

The Project is: **Project C.O.R.E.
Abatement and Demolition Services**

The Consultant is: [Consultant Legal Firm Name]

The Owner and the Contractor hereby agree as follows:

ARTICLE 1 CONTRACT

1.1 **Contract Documents.** This Contract consists of the matters identified in this Section 1.1 (“**Contract Documents**”), all of which are part of this Contract as if fully set forth herein (all as amended from time to time):

- A. This Contract consists of pages 1 through ____ and all Exhibits thereto (the “**Standard Contract**”);
- B. Exhibit A: Request for Proposals dated _____, 2021, including all Attachments thereto (the “**RFP**”);
- C. Exhibit B: Contractor’s Technical Proposal and Price Proposal dated __, 2021 (together the “**Proposal**”);
- D. Exhibit C: Contract Affidavit (the “**Contract Affidavit**”).

If there are any inconsistencies between or among the Standard Contract or Exhibits A, B, or C, the Contract Documents shall control in the following order of priority: Standard Contract, then Exhibit A, then Exhibit B, then Exhibit C.

This Contract represents the entire and integrated agreement between the parties hereto and

supersedes all prior negotiations, representations, or agreements, either written or oral.

ARTICLE 2 THE WORK AND CONTRACTOR RESPONSIBILITIES

2.1 The Contractor shall fully execute the Work described in the Contract Documents in strict accordance with the requirements stated therein. The “**Work**” generally includes, but is not limited to, the safe and efficient demolition, abatement and site clearance of a property or properties, as identified in the Contract Documents. The Work requires sub-tasks to be conducted to support the demolition of any buildings located on the subject property (ies), such as: abatement and control of asbestos-containing materials from properties; the disposal of lead-based paint from properties; the removal and disposal of polychlorinated biphenyls (PCBs), mercury containing waste materials and other universal or regulated wastes, such as lead batteries, unused hazardous products and/or potential hazardous wastes from properties. The term Work includes all other labor, materials, equipment, and services provided, or to be provided, by the Contractor to fulfill the Contractor’s obligations.

2.2 The Contractor shall fully execute the Work as more particularly set forth in the RFP Section 3 and as provided in the RFP Attachment E.

2.3 The Contractor shall undertake, manage, perform, and complete the Work in strict compliance with the Contract Documents, including the specifications set forth in the Project Manual attached to the RFP as Attachment H.

2.4 By execution of this Contract the Contractor represents that he has visited the site and become familiar with local conditions under which the Work is to be performed, correlated personal observations with the Contract requirements; and identified the personnel, materials, equipment, and other items necessary to complete the Work.

2.5 Before commencing activities, the Contractor shall take all steps necessary in the ordinary course of preparing for the Work, such as taking field measurements and verifying conditions. The Contractor shall promptly notify Owner of any errors, inconsistencies or omissions discovered under § 2.4 above, and this § 2.5.

2.6 The Contractor shall also:

(i) Supervise, coordinate, manage, direct, and perform the Work, using Contractor’s best skill, including subcontracted work, and diligently perform all other acts and services necessary for completion of the Work in strict compliance with the requirements of the Contract Documents;

(ii) Provide all necessary personnel needed to meet its obligations under the Contract. Such personnel shall be qualified to perform in a first-class manner, and shall be knowledgeable in all applicable industry standards, practices, and laws;

(iii) Furnish directly or through subcontractors, all labor, materials, equipment, and tools. In the Contract Documents, the term “**subcontractors**” shall include all subcontractors, materialmen, middlemen, brokers, sales representatives, laborers, and suppliers of labor, any service or materials suppliers and suppliers of equipment and tools to accomplish the Work, and any engineers, surveyors or other professionals hired by subcontractors in connection with the Work;

(iv) Make and enforce agreements with subcontractors (“**Subcontracts**”), and schedule and coordinate the performance of said Subcontracts;

(v) Obtain all necessary licenses, permits and approvals for the Work;

(vi) Provide the Owner, in writing, the names of subcontractors or suppliers for each portion of

the Work. The Contractor shall not contract with any subcontractor about which the Owner has made an objection;

(v) Promptly review, approve in writing, and submit to the Owner any shop drawings, product data, samples and similar submittals required by the Contract Documents. Shop drawings, product data, samples and similar submittals are *not* Contract Documents; and

(vi) Have sole responsibility for and control over construction means, methods, techniques, sequences, and procedures for coordinating all portions of the Work.

ARTICLE 2A INFORMATION PROVIDED BY THE OWNER

2A.1 The Owner has provided the Contractor with its requirements for the Work. The Owner will furnish reports or documents, such as hazardous material reports it has in its possession at the time of Contract execution. Unless the Owner has specifically agreed in writing, the Owner will not obtain, or pay for others to obtain, reports, surveys, or other documents for or in connection with the Work.

ARTICLE 3 CONTRACT COMMENCEMENT DATE AND TERM

3.1 The “**Commencement Date**” of the Work shall be the date stated in a Notice to Proceed (“**NTP**”) or a Task Order issued by the Owner to the Contractor.

3.2 The term of the Contract will be for a period necessary to complete the scope of work as agreed upon by MSA and the Contractor.

3.3 The schedule, cost and MBE participation associated with this Contract shall have been provided and agreed upon by MSA and the Contractor prior to Commencement Date.

ARTICLE 4 PAYMENT AND RETAINAGE

4.1 Cost and Price Certification. The Contractor has submitted cost or price information and certifies that, to the best of its knowledge, the information submitted is or will be accurate, complete, and current as of the Commencement Date. The prices under the Contract or any Contract modification, including profit or fee, shall exclude price increases occurring because the Contractor furnished cost or price information that, as of the Commencement Date, was inaccurate, incomplete, or not current.

4.2 Based on Contractor’s Application for Payment certified by the Owner or Program Manager, the Owner shall pay the Contractor in accordance with Article 5 as follows:

(i) Payments to the Contractor shall be subject to retainage of an amount equal to five percent (5%) of the payable amount of the Work; provided however, that if Owner determines that the Work performed by the Contractor (including Work performed by the Contractor’s Subcontractors), is not on time, will not be completed within the Contract price proposal amount, or that there are outstanding material defects in the Work, retainage of ten percent (10%) shall be withheld from future payments until Owner determines that these conditions no longer exist. The final retainage shall be released to Contractor at the time of final payment as provided in Article 5.7.

(ii) Contractor will receive all funds paid to Contractor hereunder in trust for proper application to the Project as provided in the Contract Documents. Contractor shall fulfill its obligations under § 9-201 of the Real Property Article of the Annotated Code of Maryland.

(iii) See Articles 25.1 and 25.3 for Contractor’s obligation to pay subcontractors undisputed amounts and limitations and conditions of subcontractor retainage.

(iv) Electronic Funds Transfer. Contractor agrees to accept payments by electronic funds

transfer unless the State Comptroller's Office grants an exemption from this method of payment. Contractor shall register using the COT/GAD X-10 Vendor Electronic Funds Transfer (EFT) Registration Request Form. Any request for exemption must be submitted to the State Comptroller's Office for approval at the address specified on the COT-GAD X-10 form and must include the business identification information as stated on the form and reason for requesting an exemption.

4.3 If any payments that are due under the Contract Documents remain unpaid for more than forty-five (45) days following Owner's receipt of a properly documented Application for Payment, such amounts shall bear interest in accordance with §§ 15-104 and 15-105 of the State Finance and Procurement Article ("SFP") of the Annotated Code of Maryland. Charges for late payment of invoices, other than as prescribed by SFP Title 15, Subtitle 1 are prohibited.

ARTICLE 5 APPLICATION FOR PAYMENT AND COMPLETION

5.1 Contract Sum. The Contract Sum stated in the Contract, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work and includes all items and services necessary for the proper execution and completion of the Work.

The provisions of this section 5.1 are exclusive of any financial adjustment arising from either an approved change order or contract modification.

5.2 Applications for Payment. At least ten days before the date established for each progress payment, the Contractor shall submit to the Owner an itemized Application for Payment (a "**Payment Application**") for Work completed in accordance with the values stated in the applicable Contract, Contract modification, or Task Order. Such Payment Application shall be supported by evidence substantiating the Contractor's right to payment as the Owner or Program Manager may reasonably require. Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

5.3 The Contractor warrants that title to all Work covered by a payment from Owner will pass to the Owner no later than the time of such payment. The Contractor further warrants that upon submittal of a Payment Application, all Work for which payments have been previously approved by the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests.

5.4 Approval of Payment. The Owner or Program Manager will, within seven days after receipt of the Payment Application, either approve or deny payment. If payment is denied, Owner will notify Contractor in writing the reason for the denial.

5.5 Progress Payments

(i) After the Owner has approved payment, the Owner shall make payment in the manner provided in the Contract Documents.

(ii) Upon receipt of payment from the Owner, the Contractor shall promptly pay each subcontractor and supplier an amount determined in accordance with the terms of the applicable subcontracts and purchase orders, and in accordance with § 4.2(iii).

(iii) Neither the Owner nor the Program Manager shall have responsibility for payments to a subcontractor or supplier.

(iv) A progress payment, nor partial or entire use or occupancy of a property by the Owner or Baltimore City, shall constitute acceptance of Work which has not been executed in accordance with the

5.6 Substantial Completion

(i) Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents, so the Owner can occupy or utilize the property upon which the Work is executed for its intended use and purpose.

(ii) When the Work - or designated portion thereof - is substantially complete, the Baltimore City Department of Housing and Community Development (the “City”) will inspect the subject property to determine whether the Work is substantially complete. Upon determination by the City that the Work is substantially complete, the City provides notice of its determination in writing (the “City Notice”). The City Notice shall be in the form the City elects to use, including via email or other method of formal or informal communication. Generally, the City Notice sets forth the date of Substantial Completion, identifies the Work the Contractor must complete, and fixes the time within which the Contractor shall finish all Work listed in or attached to the City Notice. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work, or designated portion thereof, unless otherwise provided in the Substantial Completion Certificate.

5.7 Final Completion and Final Payment

(i) Upon receipt of a final Payment Application, Owner, Program Manager or designated representative on behalf of the City will inspect the Work. When the Work is determined acceptable and the Contract fully performed, the Owner will issue a final payment according to the payment terms herein.

(ii) The State will not be liable to the Contractor for any loss or additional cost suffered as a result of the inability of any subcontractor or supplier at any tier to continue work under the Contract as a result of debarment of the subcontractor or supplier under SFP Title 16 or Title 17, Subtitle 2, or regulations adopted thereunder.

5.8 Correction of Work. The Contractor shall promptly correct Work rejected by Owner, Program Manager, or the City as failing to conform to the requirements of the Contract Documents. The Contractor shall bear the cost of correction of such rejected Work, including the costs of uncovering, replacement and additional testing as the circumstances may require.

ARTICLE 6 CHANGE ORDERS

In accordance with SFP § 15-112:

6.1 If Owner determines that a change in Work is required:

A. Owner shall issue a written change order for work under the Contract that specifies whether the work is to proceed in compliance with the terms of the Contract on:

- (i) An agreed-to price or agreed upon source of pricing;
- (ii) A force account;
- (iii) A construction change directive; or
- (v) A time and materials basis.

B. Until a change order is issued as described in A above, the Contractor is not required to begin change order work, and the Contractor may not require any subcontractor to being work.

C. If the Program Manager and the Contractor do not agree that work is included within the

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original scope and terms of the Contract, nothing in this section:

(i) Prohibits the Program Manager from issuing an order to the Contractor to perform work or furnish labor or materials determined by the Program Manager to be required by the Contract;

(ii) Authorizes a refusal to perform work or to furnish labor or materials that the Procurement Officer has order Contractor to perform or to furnish which the Procurement Officer has determined are required by the Contract;

(iii) Prejudices or impairs the right of the Contractor to submit a claim or dispute to the Program Manager, in accordance with applicable law and the Contract, seeking additional compensation for complying with the change order.

D. If the Contract, or part of the Contract requires Owner to pay using a unit methodology, a change order may not be required for work to continue and be completed beyond the estimated quantities in the contract. Upon completion of the Work, Owner will determine the actual quantity used to complete the Contract; and if necessary, issue a final adjustment change order.

E. Payments under an agreed upon change order that do not exceed \$50,000 shall be paid within 30 days after receipt of the invoice by Owner. All other requirements for submission of invoices and payment provisions apply to payments under change orders.

F. Contractor shall provide effected subcontractors with copies of the change order, the amount to be paid to subcontractor(s) based on the change order within five days after Contractor's receipt of the written change order from Owner.

ARTICLE 7 TESTS AND INSPECTIONS

7.1 At the appropriate times, the Contractor shall arrange for tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, statues, ordinances, codes, rules and regulations, or other lawful orders of public authorities. The parties' responsibility for payment is set forth in the Contract Documents.

7.2 If the Owner requires additional testing, the Contractor shall perform those tests.

ARTICLE 8 INSURANCE

8.1 Contractor shall comply with the Insurance requirements set forth in the RFP.

8.2 Unless specifically precluded by the City's property insurance policy, the Owner and Contractor waive all rights against (1) each other and any of their subcontractors, suppliers, agents and employees, each of the other; and (2) the Consultant, Consultant's consultants and any of their agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance or other insurance applicable to the Work.

ARTICLE 9 GENERAL PROVISIONS

9.1 Consultant's Documents. Documents prepared by the Consultant are instruments of the Consultant's service for use solely with respect to Work under this Contract. The Consultant shall retain all common law, statutory and other reserved rights, including the copyright. The Contractor, subcontractors, sub-subcontractors, and material or equipment suppliers are authorized to use and reproduce the instruments of service solely and exclusively for execution of the Work. The instruments of service

may not be used for other projects or for additions to this Work under this Contract outside the scope of the Work without the specific written consent of the Consultant.

9.2 Contractor Warranties. The Contractor warrants to the Owner, the City, and the Maryland Department of Housing and Community Development (“**DHCD**”) that (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required or permitted by the Contract Documents; (2) the Work will be free from defects not inherent in the quality required or permitted; and (3) the Work will conform to the requirements of the Contract Documents.

9.3 Permitted Area. The Contractor shall confine operations at the site to areas permitted by law, ordinance, permits, the Contract Documents and the Owner.

9.4 Safety. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs, including all those required by law in connection with performance of the Contract. The Contractor shall take reasonable precautions to prevent damage, injury, or loss to employees on the Work, the Work and materials and equipment to be incorporated therein, and other property at the site or adjacent thereto. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, or by anyone for whose acts the Contractor may be liable.

9.5 Debris, Trash. During the course of any construction, deconstruction, demolition, or installation, the Contractor shall (a) cause the area to be kept reasonably clean and free of trash and building debris; (b) immediately upon the completion of such activity, cause all such trash and debris, and machinery and equipment to be removed from the property; and (c) refrain from discarding or depositing any dirt, trash or other debris upon the property.

9.6 Damages and Repairs. Contractor further agrees to repair or pay for any and all consequential damage including but not necessarily limited to: vehicles on adjoining properties, trees, lawns, fields, fences, shrubbery, plantings, beds, improvements, driveways and walkways arising from the its Work on a property under this Contract.

ARTICLE 10 MSA PROGRAM MANAGER

10.1 The Program Manager, who may either be an MSA employee or a third party engaged by MSA, will assist with administration of the Contract as described in the Contract Documents. The Program Manager will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

10.2 The Program Manager will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the Work.

10.3 The Program Manager will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work as these are solely the Contractor’s responsibility. The Program Manager will not be responsible for the Contractor’s failure to carry out the Work in accordance with the Contract Documents.

10.4 Based on the Program Manager’s observations and evaluations, the Owner and/or Program Manager will review the Contractor’s Application for Payment and approve the amounts due.

10.5 The Program Manager has authority to reject Work that does not conform to the Contract Documents.

10.6 The Owner independently, or with the assistance of the Program Manager will review, approve, or take other appropriate action with respect to the Contractor's submittals. Any action taken in accordance with this section is for the *limited* purpose of confirming the submittal conforms to the requirement(s) set forth in the Contract Documents.

10.7 The Program Manager will promptly interpret and decide matters concerning performance under and Contract Document requirements upon written request from either the Owner or Contractor.

10.8 Interpretations and decisions of the Program Manager will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings.

10.9 The Program Manager's duties, responsibilities and limits of authority as described in the Contract Documents shall not be changed without written consent of the Owner and Program Manager. Consent by either the Owner or Program Manager shall not be unreasonably withheld.

ARTICLE 11 SUBCONTRACT COMPLIANCE

All Subcontracts shall contain a provision requiring the Subcontractors to comply with the requirements of this Agreement and the Contract Documents. All Subcontracts shall contain a provision making each Subcontract assignable to the Owner, at the Owner's election, in the event the Contractor is terminated or fails to perform its obligations under the Contract Documents (including this Agreement).

ARTICLE 12 GENERAL STATE TERMS

12.1 AMENDMENT. This Contract may be amended by and only by an instrument executed and delivered by each party hereto.

12.2 ASSIGNMENT. This Contract may not be assigned by either Party, in whole or in part without the written consent of the other; provided however, that MSA may assign any or all of its rights under this Contract to the State of Maryland, or any agency or department thereof.

12.3 INCORPORATION BY REFERENCE. All terms and conditions and any changes thereto, are made a part of this Contract.

12.4 NON-HIRING OF EMPLOYEES. No official or employee of the State as defined in State Government Article § 15-102, Annotated Code of Maryland, whose duties as such official or employee include matters relating to or affecting the subject matter of this Contract shall, during the pendency or term of this Contract and while serving as an official or employee of the State, become or be an employee of the Contractor or any entity that is a subcontractor on this Contract.

12.5 APPLICABLE LAW. The provisions of this Contract shall be governed by the laws of the State of Maryland and the parties hereto expressly agree that the courts of the State of Maryland shall have jurisdiction to decide any question arising hereunder after all administrative remedies, if any, have been exhausted.

12.6 ARTICLES AND HEADINGS. The Article and Section headings contained in this Contract are solely for convenience of reference and shall not affect the meaning or interpretation of this Contract or provision thereof.

ARTICLE 13 NONDISCRIMINATION PROVISIONS

13.1 NONDISCRIMINATION IN EMPLOYMENT. Contractor agrees not to discriminate in any manner against an employee or applicant for employment because of race, color, religion, creed, age, sex, marital status, national origin, ancestry, or physical or mental handicap unrelated in nature and extent so as reasonably to preclude the performance of such employment and to post and to cause subcontractors to post in conspicuous places available to employees and applicants for employment, notices setting forth the substance of this clause.

13.2 COMMERCIAL NONDISCRIMINATION. As a condition of entering into this agreement, the company represents and warrants that it will comply with the State's Commercial Nondiscrimination Policy, as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland. As part of such compliance, the company may not discriminate on the basis of race, color, religion, ancestry or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or other unlawful forms of discrimination in the solicitation, selection, hiring, or commercial treatment of subcontractors, vendors, suppliers, or commercial customers, nor shall the company retaliate against any person for reporting instances of such discrimination. The company shall provide equal opportunity for subcontractors, vendors, and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities, provided that nothing contained in this clause shall prohibit or limit otherwise lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in the marketplace. The company understands and agrees that a material violation of this clause shall be considered a material breach of this agreement and may result in termination of this agreement, disqualification of the company from participating in State contracts, or other sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party.

As a condition of entering into this agreement, upon the request of the Commission on Civil Rights, and only after the filing of a complaint against the company under Title 19 of the State Finance and Procurement Article, as amended from time to time, the company agrees to: provide to the State within 60 days after the request a truthful and complete list of the names of all subcontractors, vendors, and suppliers that the company has used in the past 4 years on any of its contracts that were undertaken within the State of Maryland, including the total dollar amount paid by the contractor on each subcontract or supply contract. The company further agrees to cooperate in any investigation conducted by the State pursuant to the State's Commercial Nondiscrimination Policy as set forth under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland; and to provide any documents relevant to any investigation that is requested by the State. The company understands and agrees that violation of this clause shall be considered a material breach of this agreement and may result in contract termination, disqualification by the State from participating in State contracts, and other sanctions.

ARTICLE 14 DISCLOSURES AND ETHICS

14.1 FINANCIAL DISCLOSURE. Contractor shall comply with State Finance and Procurement Article, §13-221, Annotated Code of Maryland, which requires that every business that enters into contracts, leases or other agreements with the State and receives in the aggregate \$200,000 or more

during a calendar year shall, within 30 days of the time when the \$200,000 is reached, file with the Secretary of State certain specified information to include disclosure of beneficial ownership of the business.

14.2 STATEMENT OF POLITICAL CONTRIBUTIONS. Contractor shall comply with the Election Law Article, Title 14 Subtitle 1, Md. Code Ann., which requires that a person doing public business with the State, shall file a statement with the State Board of Elections as provided in section 14-104. Generally, this applies to every person that enters into contracts, leases, or other agreements with the State of Maryland or a political subdivision of the State, including its agencies, during a calendar year in which the person receives in the aggregate \$200,000 or more, shall file with the State Board of Election a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election.

14.3 ANTI-BRIBERY. Contractor warrants that neither it nor any of its officers, directors, or partners nor any of its employees who are directly involved in obtaining or performing contracts with any public body has been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or of the federal government or has engaged in conduct since July 1, 1977, which would constitute bribery, attempted bribery, or conspiracy to bribe under the laws of any state or the federal government.

14.4 CONTINGENT FEES. Contractor warrants that it has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee or agent working for the Contractor, to solicit or secure this agreement, and that it has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee or agent, any fee or any other consideration contingent on the making of this Contract.

ARTICLE 15 MULTI-YEAR CONTRACTS

15.1 SUBJECT TO APPROPRIATIONS. In General: If funds are not appropriated or otherwise made available to MSA to support continuation in any fiscal year succeeding the first fiscal year, this Contract shall terminate automatically as of the beginning of the fiscal year for which funds are not available. Contractor may not recover anticipatory profits or costs incurred after termination.

15.2 Specifically, funding for work under this Contract is provided through the Maryland Department of Housing and Community Development (“the Department”) which is responsible for administration of the Creating Opportunities for Renewal and Enterprise initiative, known as Project C.O.R.E. Funding appropriation, if any, shall be to the Department and not MSA.

ARTICLE 16 DRUG AND ALCOHOL FREE WORKPLACE

The Contractor warrants that the Contractor shall comply with COMAR 21.11.08 Drug and Alcohol Free Workplace, and that the Contractor shall remain in compliance throughout the term of this Contract.

ARTICLE 17 TERMINATION, DEFAULT AND DISPUTES

17.1 TERMINATION FOR CONVENIENCE. The performance of work under this Contract may be terminated by MSA in accordance with this clause in whole, or from time to time in part, whenever MSA shall determine that such termination is in the best interest of MSA or the State. MSA will pay all reasonable costs associated with this Contract that Contractor has incurred up to the date of termination which were approved by MSA. However, Contractor will not be reimbursed for any anticipatory profits that have not been earned up to the date of termination.

17.2 TERMINATION FOR DEFAULT

(1) MSA may, subject to the provisions of paragraph (3) of this regulation, by written notice of default to the Contractor, terminate the whole or any part of this contract in any one of the following circumstances: (a) If the Contractor fails to perform within the time specified herein or any extension thereof; or (b) If the Contractor fails to perform any of the other provisions of this contract, or so fails to make progress as to endanger performance of this contract in accordance with its terms, and in either of these two circumstances does not cure such failure within a period of 10 days (or such longer period as the procurement officer may authorize in writing) after receipt of notice from the procurement officer specifying such failure.

(2) In the event MSA terminates this contract in whole or in part as provided in paragraph (1) of this clause, the State may procure substitute performance upon terms and in whatever manner the procurement officer may deem appropriate, and the Contractor shall be liable to the State for any excess costs for substitute performance; provided, that the Contractor shall continue the performance of this contract to the extent not terminated under the provisions of this clause.

(3) Except with respect to defaults of subcontractors, the Contractor shall not be liable for any excess costs if the failure to perform the contract arises out of causes beyond the control and without the fault or negligence of the Contractor. Such causes may include, but are not restricted to, acts of God or of the public enemy, acts of the State in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform shall be beyond the control and without the fault or negligence of the Contractor. If the failure to perform is caused by the default of a subcontractor, and if the default arises out of causes beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either of them, the Contractor shall not be liable for any excess costs for failure to perform unless substitute performance for the subcontractor was obtainable from another source in sufficient time to permit the Contractor to meet the performance schedule.

(4) If, after notice of termination of this contract under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the default was excusable under the provisions of this clause, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience of the State, be the same as if the notice of termination had been issued pursuant to such clause. If, after notice of termination of this contract under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, and if this contract does not contain a clause providing for termination for convenience of the State, the contract shall be equitably adjusted to compensate for such termination and the contract modified accordingly; failure to agree to any such adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes."

(5) If this contract is terminated as provided in paragraph (1) of this clause, the State, in addition to any other rights provided in this clause, may require the Contractor to transfer title and deliver to the State, in the manner, at the times, and to the extent, if any, directed by the procurement officer, (a) the fabricated or un-fabricated parts, work in progress, completed work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination, and (b) the completed or partially completed plans, drawings, information, and other property which, if the contract had been completed, would have been required to be furnished to the State; and the Contractor shall, upon direction of the procurement officer, protect and preserve property in the possession of the Contractor in which the State has an interest. Payment for completed supplies delivered to and accepted by

the State shall be at the contract price. Payment for manufacturing materials delivered to and accepted by the State and for the protection and preservation of property shall be in an amount agreed upon by the Contractor and procurement officer; failure to agree to such amount shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes." The State may withhold from amounts otherwise due the Contractor hereunder such sum as the procurement officer determines to be necessary to protect the State against loss because of outstanding liens or claims of former lien holders.

(6) The rights and remedies of the State provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(7) As used in paragraph (3) of this clause, the terms, "subcontractor" and "subcontractors" mean subcontractor(s) at any tier."

17.3 DISPUTES

(1) Except as otherwise may be provided by law, all disputes arising under or as a result of a breach of this contract that are not disposed of by mutual agreement shall be resolved in accordance with this clause.

(2) As used herein, "claim" means a written demand or assertion by one of the parties seeking, as a legal right, the payment of money, adjustment or interpretation of contract terms, or other relief, arising under or relating to this contract. A voucher, invoice, or request for payment that is not in dispute when submitted is not a claim under this clause. However, if the submission subsequently is not acted upon in a reasonable time, or is disputed as to liability or amount, it may be converted to a claim for the purpose of this clause.

(3) A claim shall be made in writing and submitted to the procurement officer for decision within thirty days of when the basis of the claim was known or should have been known, whichever is earlier.

(4) When a claim cannot be resolved by mutual agreement, the contractor shall submit a written request for final decision to the procurement officer. The written request shall set forth all the facts surrounding the controversy.

(5) The contractor, at the discretion of the procurement officer, may be afforded an opportunity to be heard and to offer evidence in support of his claim.

(6) The procurement officer shall render a written decision on all claims within 90 days of receipt of the contractor's written claim, unless the procurement officer determines that a longer period is necessary to resolve the claim. If a decision is not issued within 90 days, the procurement officer shall notify the contractor of the time within which a decision shall be rendered and the reasons for such time extension. The decision shall be furnished to the contractor, by certified mail, return receipt requested, or by any other method that provides evidence of receipt. The procurement officer's decision shall be deemed the final action of the MSA.

(7) The procurement officer's decision shall be final and conclusive without prejudice to the rights of the Contractor to institute suit after completion of the Work in a court of competent jurisdiction for losses incurred by Contractor as a result of the procurement officer's decision. Contractor hereby waives any rights that he may have at any time to institute suit or file other claims or causes of action, at law or in equity, prior to completing all of the Work under the Contract Documents.

(8) Pending resolution of a claim, the contractor shall proceed diligently with the performance of the contract in accordance with the procurement officer's decision.

ARTICLE 18 INDEMNIFICATION

Contractor shall be responsible for, and shall defend, indemnify and hold harmless the State of Maryland, the Department, MSA and the Baltimore City Department of Housing and Community Development (the "City"), and their members, officers, agents, and employees against and from, any and all claims, demands, actions, suits, damages, liabilities, losses, settlements, judgments, costs, expenses, proceedings of any kind whatsoever, and costs of any kind or type (including but not limited to reasonable attorney's and expert's fees and costs), arising directly or indirectly from the Contractor's or its consultant's activities, or those of its subcontractors, sub-consultants, employees, and invitees, in connection with the work, except for any liability or responsibility arising from the intentional misconduct or gross negligence of MSA, the Department or the City. All amounts due thereunder shall be payable on demand;

MSA, the City, and the Department shall not assume any obligation to indemnify, hold harmless, or pay attorneys' fees that may arise from or in any way be associated with the performance of this Contractor.

ARTICLE 19 TAX EXEMPTION

MSA is generally exempt from federal excise taxes, Maryland sales and use taxes, District of Columbia sales taxes and transportation taxes. Where a Contractor is required to furnish and install material in the construction or improvement of real property in performance of a contract, the Contractor shall pay the Maryland Sales Tax and the exemption does not apply.

ARTICLE 20 COMPLIANCE WITH LAWS

The Contractor hereby represents and warrants that:

20.1 It is qualified to do business in the State of Maryland (whether a domestic business or a foreign corporation) pursuant to § 7-201 et seq. of the Corporations and Associations Article of the Annotated Code of Maryland, and that it will take such action as, from time to time hereafter may be necessary to remain so qualified;

20.2 It is not in arrears with respect to the payment of any moneys due and owing the State of Maryland, or any department or unit thereof, including but not limited to the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of this Contract;

20.3 EPA compliance. Materials, supplies, equipment and other services shall comply in all respects with the Federal Noise Control Act of 1972, where applicable.

20.4 Occupational Safety and Health (OSHA). All materials, equipment, supplies or services shall comply with the applicable U.S. and the Maryland Occupational Safety and Health Act Standards and related regulations; and

20.5 All materials, equipment, supplies or services shall conform to federal and State laws and regulations and to the specifications contained in this Contract; and

20.6 Contractor shall obtain and comply with, at no cost or expense to MSA, the City or DHCD, federal, State, and local permits, licenses, certifications, inspections, insurance, and governmental

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approvals, required in connection with the Work required under the Contract.

ARTICLE 21 NO DELEGATION OF AUTHORITY

Properties in and upon which the Contractor executes the Work are owned by, or under the control of Baltimore City or its housing authority. The Contractor shall not sign, approve, or execute any manifests, certificates, other documents required by the Environmental Protection Agency, or any state, for transport and deposit of materials deemed hazardous or certified non-hazardous.

ARTICLE 22 NON-LIABILITY

In no event shall MSA be liable to Contractor for any injury to persons, or damage to or theft of any property, unless and to the extent such injury, damage, or loss is proximately and is actually and solely caused by MSA's gross negligence or willful misconduct. Further, MSA shall not be liable to Contractor for any such damage caused by tenants, licensees, or persons in, upon, or about the premises; and neither MSA nor Contractor shall be liable to the other for any incidental, indirect, special punitive, or consequential damages arising out of, or as a result of the Work under the Contract Documents.

ARTICLE 23 GOVERNMENTAL IMMUNITIES

Nothing in the preceding provision, or in any other term or provision in this Agreement, shall waive, limit, or otherwise affect in any way the limitations, immunities or notice requirements applicable to claims against MSA as an agency of the State of Maryland.

ARTICLE 24 RETENTION OF RECORDS

The Contractor shall retain and maintain all records and documents relating to this contract for three years after final payment by the State hereunder or any applicable statute of limitations, whichever is longer, and shall make them available for inspection and audit by authorized representatives of the State, including the procurement officer or designee, at all reasonable times.

ARTICLE 25 SUBCONTRACTORS, RETAINAGE AND LIQUIDATED DAMAGES

25.1 PROMPT PAYMENT OF SUBCONTRACTORS. It is the policy of the State that a contractor shall promptly pay to a subcontractor any undisputed amount to which the subcontractor is entitled for work under a State procurement contract for construction.

a. This contract and all subcontracts issued under this contract are subject to the provisions of State Finance and Procurement Article, §15-226, Annotated Code of Maryland. References to "undisputed amount" "prime contractor" "contractor" and "subcontractor" have the meanings set forth in COMAR 21.10.08.01.

b. A contractor shall promptly pay its subcontractors an undisputed amount to which a subcontractor is entitled for work performed under this contract within 10 calendar days after the contractor receives a progress payment or final payment for work under this contract.

c. If a contractor fails to make payment within the period prescribed in b., a subcontractor may request a remedy in accordance with COMAR 21.10.08.

d. A contractor shall include in its subcontracts for work under the contract, wording that incorporates the provisions, duties, and obligations of a-d.

25.2 LIQUIDATED DAMAGES

The Contract requires the Contractor to comply in good faith with the Minority Business Enterprise (“MBE”) Program and contract provisions. MSA and the Contractor acknowledge and agree that MSA will incur damages, including but not limited to the loss of goodwill, detrimental impact on economic development, and diversion of internal staff resources, if the Contractor does not comply in good faith with the **requirements** of the MBE Program and MBE requirements. The parties further acknowledge and agree that the damages MSA might reasonably anticipate to accrue as a result of such lack of compliance are difficult ascertain with precision.

Therefore, upon issuance of a written determination by MSA that the Contractor failed to comply in good faith with one or more of the specified MBE Program requirements or contract provisions, the Contractor shall pay liquidated damages to MSA or the State on behalf of MSA, as directed, at the rates set forth below. The Contractor expressly agrees that MSA may withhold payment on any invoices as set-off against liquidated damages owed. The Contractor further agrees that for each specified violation, the agreed upon liquidated damages are reasonably proximate to the loss MSA is anticipated to incur as a result of such violation.

a. Failure to submit each monthly payment report in full compliance with COMAR 21.11.03.13B (3): \$120.00 per day until the monthly report is submitted as required.

b. Failure to include in its agreements with MBE subcontractors a provision requiring submission of payment reports in full compliance with COMAR 21.11.03.13B (4): \$60.00 per MBE subcontractor.

c. Failure to comply with COMAR 21.11.03.12 in terminating, canceling, or changing the scope of work/value of a contract with an MBE subcontractor and/or amendment of the MBE participation schedule: the difference between the dollar value of the MBE participation commitment on the MBE participation schedule for the specific MBE firm and the dollar value of the work performed by that MBE firm for the contract.

d. Failure to meet the Contractor’s total MBE participation goal and subgoal commitments: the difference between the dollar value of the total MBE participation commitment on the MBE participation schedule and the MBE participation actually achieved.

e. Notwithstanding the assessment or availability of liquidated damages, MSA reserves the right to terminate the Contract and to exercise any and all other rights or remedies which may be available under the Contract or which otherwise may be available at law or in equity.

25.3 RETAINAGE

a. Contractor may not retain from any payment due a subcontractor a percent of the payment greater than the five percent for retainage retained by MSA from Contractor.

b. A subcontractor may not retain from any payment due a lower tier subcontractor a percent of the payment greater than the percent of payments retained from the subcontractor.

c. Contractor and a subcontractor are not prohibited by §§ a and b from withholding an amount in addition to retainage if the Contractor or subcontractor determines that a subcontractor's performance under the subcontract provides reasonable grounds for withholding the additional amount.

ARTICLE 26 DELAYS AND EXTENSIONS OF TIME

The Contractor agrees to prosecute the work continuously and diligently and no charges or claims for damages shall be made by it for any delays or hindrances from any cause whatsoever during the progress of any portion of the work specified in this Contract.

Time extensions will be granted only for excusable delays that arise from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of the State in either its sovereign or contractual capacity, acts of another Contractor in the performance of a contract with the State, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of either the Contractor or the subcontractors or suppliers.

ARTICLE 27 SUSPENSION OF WORK

The procurement officer unilaterally may order the Contractor in writing to suspend, delay, or interrupt all or any part of the Work for a period of time as he may determine to be appropriate for the convenience of MSA.

ARTICLE 28 TORT CLAIMS ACTS

Contractor agrees for itself and for its insurers, that neither Contractor nor its insurers may raise or use any governmental immunity from or limitation of liability for torts (including under the Maryland Tort Claims Act and/or the Maryland Local Government Tort Claims Act) in the adjustment of claims or in the defense of suits against Owner or Client, unless requested by Owner.

ARTICLE 29 INDEPENDENT CONTRACTOR STATUS

The Contractor is an independent Contractor and neither the Contractor nor its employees, agents or representatives shall be considered employees, agents or representative of the State or of MSA. Nothing contained in this Contract is intended or should be construed as creating the relationship of co-partners, joint venturers or an association between the State or MSA and the Contractor.

ARTICLE 30 NOTICE

All notices required or permitted hereunder shall be in writing and delivered personally or by registered or certified mail (restricted delivery), return receipt requested, postage prepaid to the addresses set forth below:

If to the Owner: Maryland Stadium Authority
333 West Camden Street, Suite 500
Baltimore, MD 21201
Attn:

If to the Contractor [Contractor Legal Firm Name]
[Contractor Street Address]
[City, State Zipcode]
Attn: [Firm Representative]

Any party may designate another addressee or change its address by notice given to the other party pursuant to this Article 30. All notices shall be deemed given upon receipt thereof or at the time delivery is refused.

LIST OF EXHIBITS:

- EXHIBIT A Request for Proposals dated _____
- EXHIBIT B Contractor's Technical and Price Proposal
- EXHIBIT C Contract Affidavit

ARTICLE 31 NO PERSONAL LIABILITY

No member and/or partner, director, officer, employee or representative of the Owner shall have any personal liability, in its, his or her individual capacity, or otherwise, arising under or related to this Contract.

This Agreement is entered into as of the date first written above.

OWNER

Maryland Stadium Authority

By: _____
Michael J. Frenz, Executive Director

Approved for legal form and Sufficiency on
behalf of the Maryland Stadium Authority

Assistant Attorney General

CONTRACTOR

by: _____

ATTACHMENT H
PROJECT MANUAL

**PROJECT MANUAL & TECHNICAL DOCUMENT
Supplement (Wall Work and Utility Abandonment)**

for

Project C.O.R.E

Creating Opportunities for Renewal and Enterprise

April 9, 2018



A JOINT PROJECT BETWEEN



This document serves to provide clarity and direction for any demolition in which the structure to be demolished is abutting structure(s) that are to remain and is being issued to supplement the Project CORE Project Manual Dated June 22, 2018. Unless specifically noted, all other requirements remain the same.

I. GENERAL PROTOCOLS

A. Utility Abandonment

1. Contractors will be responsible for sanitary sewer lines abandonment and plugging. Whenever feasible, plugging of house sewer lines should be performed inside of property lines. In the event that work must be performed beyond the property line, the contractor is responsible for patching of any disturbed/damaged roadway, sidewalk or alley. All work is to be performed in accordance with Baltimore City Standards.
2. Contractors will be responsible for domestic water lines abandonment and capping. In the event that work must be performed beyond the property line, the contractor is responsible for patching of any disturbed/damaged roadway, sidewalk or alley. All work is to be performed in accordance with Baltimore City Standards.

B. Demolition

1. Contractors will be responsible for performing demolitions in a manner that minimized / suppresses the spread of dust. Pre-wetting of the properties should be performed, however, the Contractor needs to take precautions to ensure water does not penetrate or flood the abutting adjacent properties to remain. For this reason, the continuous use of firehoses for wetting during the demolition and debris removal process is not required in this case.

C. Wall Repairs

1. When a structure(s) is to be demolished where an abutting structure(s) is not to be demolished, the Contractor shall accomplish razing operations and the required repairing, strengthening and resurfacing of a party wall common to the two structures or the separate wall of the abutting structure, as the case may be, in accordance with applicable parts of the Baltimore City Building, Fire and Related Codes 2013 (or subsequent editions) and as specified below. Generally, only those portions of such walls exposed as a result of demolition shall be considered; however, unless so indicated, the entire wall of the structure to remain shall be involved. As is practicable, such work shall be accomplished while the structure to be razed is standing and offering support. During demolition and work on the walls, the structure to remain shall not be damaged and shall be maintained water tight and weatherproof. Generally, wall repairs shall be accomplished as follows; however, as the walls are exposed and the nature and scope of the work becomes apparent, the MSA will give the Contractor specific operational instructions accordingly should they become necessary.

2. Walls that are to remain and which extend more than twenty-four (24) inches above the roof of structures that are to remain shall be removed to ten (10) inches parapet height and flashed. Brick chimneys and like construction built into party walls shall not be removed. Top of such chimneys, etc. which serve the structure to be razed, shall be removed to parapet height, capped and flashed. Roof beams of the structures to remain, which extend beyond the party wall shall be cut off flush with the wall face and voids between the beams and masonry shall be mortar filled.
3. Where a party wall exists and front and rear walls are continuous, demolition shall be accomplished so that enough of the front and rear walls remain intact for tying into twelve (12) inch deep and sixteen (16) inch wide pilasters which are to be constructed and made a part of the party wall from footing to roof.
4. The work required to strengthen an unsound party wall well as the separate wall (not a party wall) of an abutting structure, which is to remain, shall be as specified below. As a result of this work, resurfacing (stuccoing) will not be required.
 - (a) Damages, voids, beam pockets, unsound portions, etc. shall be repaired and filled using sound used brick and masonry mortar. The entire wall shall be clean and relatively smooth before other work is placed against it.
 - (b) The entire wall shall be strengthened with a concrete block wall and tied to the wall as required by Baltimore City Building, Fire and Related Codes 2013 (or subsequent editions). It shall include twelve (12) inch deep by sixteen (16) inch wide pilasters at the front and rear, tied to and made a part of the wall including front and rear walls. The block masonry wall shall extend from pilaster to pilaster and shall be tied to them. A twelve (12) inch thick concrete footing shall be constructed to support the block wall and the pilasters. It shall extend out beyond the masonry wall and pilasters at least six (6) inches and shall be reinforced for its full length with three (3) #4 deformed reinforcing bars placed symmetrically three and one-half (3-1/2) inches on center and two (2) inches up from the bottom of the footing. The #4 bars shall be tied by #3 bars placed sixteen (16) inches on center. The footing shall be placed on undisturbed earth but not below the level of the existing wall footing voids, beam pockets, unsound portions, etc. shall be repaired and filled using sound used brick and masonry mortar.
 - (c) The block work for the lower portion shall be of twelve (12) inch concrete blocks extending up to one foot above finished grade level, at least, and to within thirty (30) feet of the top of the wall, at the most, depending on the height of the wall. The remaining upper portion shall be of eight (8) inch concrete blocks extending to the wall top. These blocks shall also be tied into the wall and pilasters as described above. All block work shall be plumb, solid, and true and shall be continuous around chimneys and other projections, which are to remain.
 - (d) Pilasters shall be constructed of sound used whole brick salvaged from demolition (or new bricks), concrete block and masonry mortar and shall be securely tied to the front and rear walls and party walls in accordance with the Baltimore City Building, Fire and Related Codes 2013 (or subsequent editions). That portion of brick work of the pilaster immediately adjacent to the front and/or rear walls shall match the existing brickwork with respect to size of brick, type of joint, etc. Remaining pilasters shall be constructed with concrete block. A mixing of new and salvaged bricks will not be accepted in the construction of the pilasters.

- (e) The four-inch ledge formed where the block wall reduces from twelve to eight inches shall be capped with a concrete wash to insure a watertight condition.
 - (f) The top of the existing wall and the block wall shall be capped and flashed together in accordance with accepted practice using no thinner than 26-gauge sheet metal, as ordered by the MSA.
 - (g) The block wall and the pilasters shall be pargetted no less than one (1) inch thick with waterproof cement mortar from the top of the footing to one foot below finished grade. The pargetting shall then be damp-proofed, in accordance with Section 03 15 13, of the Department of Public Works Specifications 2006.
5. The work required to repair and strengthen (basement portion), and resurface (upper portion) of a sound party wall as well as the separate wall (not a party wall) of an abutting structure which is to remain, shall be as follows:
- (i) Damages, voids, unsound portion, etc. shall be repaired, and filled using sound used brick and masonry mortar. The entire wall shall be clean, relatively smooth, and sound before other work is placed against it.
 - (ii) Damages, voids, unsound portion, etc. shall be repaired and filled using sound used brick and masonry mortar. The entire wall shall be clean, relatively smooth, and sound before other work is placed against it. The lower portion of both a party wall and a separate wall shall be strengthened for its entire length with an eight (8) inch concrete block wall up to one (1) foot above grade at least, or to within thirty (30) feet of the top of the wall, at the most. The upper portion, to the tops of these walls, shall be entirely resurfaced with stucco. An eight (8") inch thick by twelve (12) inch wide footing shall be constructed to support the block wall and shall be reinforced for its full length with three (3) #4 deformed reinforcing bars placed symmetrically three and one-half (3.5) on center and two (2) inches up from the bottom of the footing. The #4 bars shall be tied by #3 bars placed perpendicular, sixteen (16) inches on center. This reinforcing shall be continuous through pilaster footings. The footing shall be placed on undisturbed earth but not below the level of the footing of the existing wall. The block work shall be tied to the wall as required by the Baltimore City Building, Fire and Related Codes 2013 (or subsequent editions). Party walls, as well as separate walls, shall be further strengthened by constructing twelve (12) inch deep by sixteen (16) inch wide pilasters tied to and made a part of the party wall, the front and rear walls, and the concrete block work. The pilasters shall be supported by twelve (12) inch thick concrete footings poured monolithically with the block wall footing and extending beyond the pilasters on three sides, by six (6) inches.
 - (iii) Pilaster shall extend to the top of the party wall. Pilasters shall be constructed of sound used whole brick salvaged from demolition, concrete block and masonry mortar and shall be securely tied to the front and rear walls and the party walls in accordance with the Baltimore City Building, Fire and related Codes 2013 (or subsequent editions). That portion of brick work of the pilaster immediately adjacent to the front and/or rear walls shall match the existing brick work with respect to size of brick, type of joint, etc. Remaining pilasters shall be constructed with concrete block.

- (iv) Where separate walls are concerned, voids between the block work and the wall at the ends of the block work (front and rear) shall be filled with mortar to prevent water seepage. The top of the block work shall be capped with a concrete wash to insure a watertight condition. The block wall and the pilasters shall be pargetted no less than one (1) inch thick with waterproof cement mortar from the top of the footing to one foot below finished grade. The par getting shall then be damp-proofed, in accordance with Section 03 15 13 of the Department of Public Works Specifications 2006.
 - (v) Upon completion of the stucco work, the top of the wall shall be adequately flashed in accordance with accepted practice.
6. The ends of all cornices, mansard roofs and the like which have to be cut or are damaged as a result of operations required under this contract shall be repaired, made secure, painted, etc. using materials, construction methods, and workmanship as directed by the City.
 7. Repairs to rear additions, porches, etc. such as enclosing exposed sides, providing new supports, roof repairs and other like operations required in connection with wall repair operations shall be accomplished as to materials, construction methods, and workmanship as directed by the City on a situation-by-situation basis.
 8. All excavation and forming required for concrete footings and compacted backfilling shall be performed as directed by the City.
 9. Footings for block walls and pilasters shall be of "Mix #3" concrete as described in the Department of Public Works Specifications. Temperature restrictions, etc. and the placement of concrete shall be as set forth in the Baltimore City Building, Fire and Related Codes 2013 (or subsequent editions).
 10. Concrete masonry units shall conform to A.S.T.M. Specifications C-90, "Hollow Load-Bearing Masonry Units."
 11. Mortar shall comply with the following applicable specifications:
 - (a) Masonry Cement, Tentative A.S.T.M., C-91 Type II
 - (b) Portland Cement, A.S.T.M., C-150 (3)
 - (c) Hydrated Lime, A.S.T.M., C-207, Type S
 - (d) Sand, A.S.T.M., C-144
 - (e) Water shall be clean and portable
 - (f) Mortar proportions by volume shall be as follows:
 - (i) One part Masonry Cement and 2- 1/ 4 to 3 parts sand, or one part Portland Cement, 1-1/4 parts Hydrated Lime, and 4-1/2 to 6 parts sand.

12. The Contractor shall erect concrete block walls in a workmanlike manner to the satisfaction of the City. He shall not erect masonry in freezing weather unless suitable means are provided to protect the work from cold and frost. No antifreeze ingredient shall be used and no re-tempered mortar shall be used. All mortar joints shall be well filled and compacted by tooling. Tooling shall produce a concave joint.
13. Damp-proofing shall be applied in accordance with Section 03 15 13 of the Department of Public Works Specifications 2006 and to the City's satisfaction. It shall not be applied until the surface have been cleaned, or in wet, cold or damp weather, or before pargetting and masonry has cured and dried. Damp-proofing shall be applied in continuous applications and shall consist of two brushed-on prime coats and at least one (1) sprayed or brushed on sealcoat
14. All block work shall be reinforced with Dur-0-Wal truss reinforcing meeting A.S.T.M. A-82 requirements. The reinforcing shall be placed in the mortar joints at every other course within the blocks. All reinforcing shall be completely encased in mortar.
15. Stucco work shall be done in accordance with the Baltimore City Building, Fire and Related Codes 2013 (or subsequent editions) as follows:
 - (a) Portland Cement shall comply with A.S.T.M. Specifications C-150.
 - (b) Sand shall be hard, durable particles free from organic impurities and shall be graded in accordance with A.S.T.M. Specifications C-136.
 - (c) Metal reinforcement shall be in accordance with the Baltimore City Building, Fire and Related Codes 2013 (or subsequent editions).
 - (d) Water shall be clean and portable.
 - (e) Stucco proportions by volume shall be one part Portland Cement, not more than three (3) parts sand to which hydrated lime may be added, not to exceed ten per cent (10%) by volume of the cement, except that in the stucco for the finishing coat, this addition of lime shall not exceed thirty-three percent (33%).
 - (f) Prior to the attachment of the metal reinforcement, the Contractor shall prepare the areas to be stuccoed by removing all objectionable materials such as plaster, loose mortar, paint, etc., and other matter which might prevent a satisfactory bond. Brick joints shall be struck off flush, and the wall shall be given a texture rough enough too provide for a good bond. All voids and holes shall be filled, loose bricks shall be reset and other necessary repairs made to provide a proper surface for stuccoing. Masonry mortar required shall be as specified elsewhere herein. Bricks required may be whole, sound bricks salvaged from demolition.
 - (g) Stucco application shall be as follows:
 - (i) Prior to the application of Scratch (first) coat, the wall surface shall be thoroughly and evenly dampened, but with no free water on the surface.

(ii) The Scratch (first) coat shall be applied with sufficient materials and pressure so that it is forced through the metal reinforcement against the wall to form a good bond and to embed the reinforcement completely. The Scratch coat thickness shall be approximately 3/8 of an inch and before it hardens, it shall be evenly scratched to provide a good mechanical key for the Brown (second) coat. Prior to the application of the Brown coat, the Scratch coat shall be moist cured for not less than forty-eight (48) hours and evenly dampened. The final thickness of the stucco shall be one (1) inch.

16. After demolition, when the resulting exposed party wall is to receive stucco treatment, the related pilasters do not require stucco provided that the pilaster is constructed with concrete end blocks (and masonry mortar). The finished pilaster shall be constructed plumb and meet the complete satisfaction of the Contract Field Supervisor.

PROJECT MANUAL
for
Project C.O.R.E
Creating Opportunities for Renewal and Enterprise

June 22, 2016



A JOINT PROJECT BETWEEN



**Project Manual for Project C.O.R.E.
Creating Opportunities for Renewal and Enterprise**

Prepared for the Maryland Stadium Authority by:

Rummel, Klepper and Kahl, LLP.
81 Mosher Street
Baltimore, MD 21217

Project Manual

- I. Preamble
- II. Lead Roles, Responsibilities and Authority
- III. Requirements

Project C.O.R.E. Work Execution Protocols

Technical Document

Section 01013	Summary of Work (Hazmat)
Section 01043	Project Coordination (Hazmat)
Section 01091	Definitions and Standards (Hazmat)
Section 01092	Code and Regulations (Haazmat)
Section 01410	Air Monitoring
Section 01503	Temporary Facilities and Controls
Section 01513	Pressure Differential and Air Circulation System
Section 01526	Temporary Enclosures
Section 01560	Worker Protection (Hazmat)
Section 01562	Respiratory Protection (Hazmat)
Section 01563	Decontamination Units
Section 01711	Project Decontamination
Section 01714	Work Area Clearance (Hazmat)
Section 01732	Selective Demolition (Deconstruction)
Section 02081	Removal of Asbestos –Containing Materials
Section 02084	Disposal of Asbestos –Containing Materials
Section 02085	Removal and Disposal of Material Containing Lead
Section 02086	Hazardous Waste Management
Section 02221	Building Demolition
Section 02230	Site Clearing
Section 02300	Earthwork

I. PREAMBLE

The Maryland Stadium Authority entered into an MOU agreement for Demolition and Stabilization with the Baltimore City Department of Housing and Community Development and the Maryland Department of Housing and Community Development. As part of the agreement, the MSA will be responsible for the management of up to seventy-five million dollars (\$75,000,000) of demolition associated with the removal of blighted properties within Baltimore City.

This document was prepared for the Maryland Stadium Authority to serve as the technical basis for the execution of the abatement, deconstruction, demolition and site stabilization services.

II. LEAD ROLES, RESPONSIBILITIES AND AUTHORITY

The Maryland Stadium Authority

The Maryland Stadium Authority retains ultimate authority over the management of all Project CORE related tasks and will contract directly with both the Environmental Services / Testing and Inspection Consultant and the Deconstruction and Demolition Contractor.

The Environmental Services / Testing and Inspection Consultant

The Environmental Services/Testing and Inspection Consultant (Environmental Consultant) will be responsible for performing environmental site assessments to identify asbestos, lead and other hazardous materials, providing recommendations for the disposal of the identified hazardous materials, identifying materials that may be targeted for deconstruction/salvage/recycling and preparing and submitting a report highlighting the findings. The Consultant will then be responsible for the on-site oversight of the environmental remediation activities that are to be performed by the Contractor to ensure that proper protocols are followed and public safety is maintained.

The Environmental Consultant is responsible for conducting independent 3rd party testing and inspection services. This includes performance of air monitoring testing services associated with dust mitigation protocols, water testing, soil testing and concrete testing services.

The Environmental Consultant will also serve as the MSA's on-site "Environmental Compliance Officer". In this role, the Environmental Services Consultant will be responsible for monitoring and enforcing the project protocols and have authority to order the Contractor to stop work in the event that protocols are not adhered to or action levels are exceeded.

The Consultant is not responsible for employee safety environmental testing required by local and federal agencies. As noted below, the Contractor will still be responsible for performing testing services associated with employee/worker safety.

The Contractor

The Contractor will be the party responsible for the management and execution of the abatement, deconstruction and demolition of identified properties. The Contractor's Field Superintendent will serve as the on-site supervisor and is responsible for ensuring project protocols are adhered to and

work is completed in a safe manner. The Contractor will be responsible for providing its own independent Industrial Hygienist to monitor the safety of the employees completing the work. Additionally, the Contractor will be required to work cooperatively with the MSA’s Environmental Consultant.

See matrix of services which further clarifies the above outlined information:

Task	Environmental Consultant	Contractor / Contractor’s Industrial Hygienist
Conduct Site Assessment, Hazmat Surveys and generate corresponding report / documentation.	✓	
Conduct pre-abatement / pre-demolition meetings to review HASP and demolition operations.	✓	Participate in meetings
Responsible for all employee safety testing and monitoring services as required by local, state and federal agencies.		✓
Performance of hazardous / regulated materials abatement services inclusive of any waste removal, hauling and documentation.		✓
Performance of deconstruction, demolition and site stabilization services inclusive of debris / salvageable materials removal and documentation .		✓
Confirm abatement / remediation has been successfully completed in accordance with protocols.	✓	
Establish ambient background dust levels using dust fall monitoring.	✓	
Conduct dust monitoring via dust fall method at 50’ and 100’ from point of demolition.	✓	
Serve as the MSA’s onsite “Environmental Compliance Officer” during the abatement, deconstruction, demolition and debris removal process. Responsible for enforcement of the dust suppression protocols during demolition and debris removal operations.	✓	
Monitor and enforce weather related protocols inclusive of wind speed and cold weather restrictions.	✓	
Conduct independent onsite testing and inspection services inclusive of geotechnical, soils/compaction, water and concrete testing and inspection services.	✓	Coordinate with Environmental Consultant

III. REQUIREMENTS

A. For Abatement, Salvage, Deconstruction, and Demolition Contractors:

1. Contractor(s) will be required to participate in a one-half day training session on this community-focused demolition protocol.
2. Contractor(s) will be required to hold all necessary demolition, asbestos and lead hazard reduction certifications. All supervisors, including Field Superintendent and the Prime Contractor's Project Manager must attend a 4-day MDE certified project manager lead training, and all workers must attend a MDE certified 2-day lead training.
3. Contractor(s) will be required to remain in compliance with all HUD, Maryland Occupational Safety and Health Administration (hereafter, "MOSH"), MDE demolition or relevant lead safety standards at all times.

Project CORE

Work Execution Protocols

- A. The work to be performed under this contract shall include, but not be limited to, all labor, services, material, tools, parts, equipment, transportation, fuels, maintenance and repairs etc. necessary and incidental to properly perform the demolition of building structures, repairs to the existing structures and related work.
- B. The Contractor shall furnish all tools, labor, materials, machinery, equipment and incidental work to perform and complete the work required for this contract, all in accordance with these specifications and applicable sections of the "Baltimore City Building, Fire and Related Codes 2015" or the latest version thereof.

I. GENERAL PROTOCOLS

- A. MSA makes no representation and assumes no responsibility for the condition of any building or structure thereon and the contents thereof in the condition in which they may be when released to them for demolition.
 - 1. All damages or losses whatsoever (whether by reason of fire, theft, breakage or other happenings) shall be at the sole risk of the Contractor.
 - 2. No such damages or loss shall relieve the Contractor from any obligation under this contract, nor shall the Contractor have any claim against MSA for any damage or loss to any building or structure to the Contractor.
 - 3. MSA will take all reasonable steps necessary to release structures to the Contractor as soon as practicable after they are vacated but assumes no liability whatsoever for any loss or damage caused by any delay in the release of structures for demolition.
- B. Debris removal is to begin no later than 48 hours from the start of demolition operations and is to be completed no later than 14 days from completion of demolition operations.
 - 1. Subject to the approval of the MSA, the Contractor will be allowed to separate and store onsite materials that are to be salvaged, provided that all of such materials are arranged thereon in a neat and orderly manner and further provided that the storing of such materials will not create a nuisance or interfere with progress of the work under this contract, or the work of others, or affect in any way, the Contractor's responsibility in carrying out all of the terms and conditions under this contract.
 - 2. All waste, whether salvage or debris, must be removed from the site no later than 14-calendar days from demolition completion.
- C. MSA reserves the right to cause the same to be removed from the site at the expense of the Contractor.
- D. From the commencement of the Work until the final completion of the Work, the Contractor shall ensure that no building or structure is left in a precarious, dangerous, or compromised

condition at any time.

- E. Once the Contractor initiates demolition operations, on a single structure or on a group of structures, the Contractor shall complete the entire demolition of these structures without interruption. Hours of work are to be in accordance with "Baltimore City Building, Fire and Related Codes 2015" or the latest version thereof. Interruptions for any reason other than these shall first be approved in writing by MSA.
- F. The Contractor shall take all proper precautions at all times to protect vehicular and pedestrian traffic from any damage or injury which may be caused, either directly or indirectly, by the work under the contract.
 - 1. Such precautions shall include, but not be limited to, the erection and maintenance of fences, barricades, railings, guards, scaffolding, signs, coverings, lights, etc., or any other precaution reasonably required by MSA to satisfy its reasonable concerns for the safety of citizens.
 - 2. If at any time MSA determines that the Contractor has not taken proper precautions, the Contractor shall, at no additional costs to MSA, install and maintain any and all additional protections as may be directed by MSA.
- G. The Contractor shall not, under any circumstances, burn any materials or have fires on the site at any time.
- H. The Contractor is absolutely prohibited from using dynamite or any other explosives in any of the work or operations covered in these specifications.
- I. The Contractor shall conduct all of its operations so as to prevent the raising of excessive dust and dirt. During the demolition operations, the work shall be kept thoroughly wetted down. The Contractor shall, at its own cost and expense, provide water lines for this purpose and it shall furnish all connections that may be required.
 - 1. The Contractor shall advise MSA how it proposes to keep the work properly wetted down and the Contractor shall receive approval of its proposal in this regard from MSA before proceeding with demolition work. Upon completion of the work, all temporary water lines installed by the Contractor shall be removed by the Contractor at its own cost and expense.
 - 2. At a minimum, the Contractor is required to use two (2) fire hoses with a minimum diameter of two (2) inches for wetting during the demolition operations with one hose directed at the point of demolition and one directed below the point of demolition where the debris hits the ground.. The Contractor will be responsible for providing additional hoses as may be required to sufficiently mitigate dust emissions.
 - 3. The Contractor will be responsible for maintaining adequate wetting of the debris pile to control dust emissions.
 - 4. The Contractor is required to apply water during the debris loading and removal process. At a minimum the Contractor is responsible for wetting of the debris pile and point of load-out by directing a hose at bucket at debris removal. Wetting is to be achieved via the use of fire hosing with a minimum diameter of 2".

- J. The Contractor shall ensure that a competent Field Superintendent is present on the job at all times during the operations. The Contractor's Field Superintendent must be fluent in the English language and accessible via cell phone at all times. The Field Superintendent will be responsible for monitoring jobsite safety and compliance with the project protocols and will be required to work cooperatively with the MSA's Environmental Consultant.
- K. The Contractor shall take the necessary measures to protect and secure the premises of the demolition area at all times.
 - 1. At a minimum, Contractor is required to provide driven post with chain link fencing or other substantial safety barriers. Safety barriers are to have a minimum height of eight (8') feet and include a wind-screen cover.
 - (a) The security measures are to extend to the curb lines at the front and sides of the properties and to the property line at the rear of the structures being demolished.
- L. The Contractor shall comply with local noise ordinances and permissible work hours as identified the contract documents.
- M. No demolition operations that require wetting will be permitted when temperatures fall below 32 degrees Fahrenheit for a period of time that could create a public icing hazard.
- N. Demolition operations are to stop when sustained winds reach fifteen miles per hour (15 MPH).
- O. The Contractor and its employees are to include Project C.O.R.E. imaging on project signage and employee safety vests. Project C.O.R.E. imaging will be provided to the Contractor in electronic formatting.
- P. All work is subject to the field decision by the MSA or the Environmental Compliance Officer.

II. AIR, DUST AND SOIL MONITORING

- A. MSA will retain an independent, certified third party environmental services/testing and inspection consultant to monitor potential dust emissions through air, dust and soil sampling.
- B. As appropriate, air and dust monitoring samples will be collected:
 - (i) Prior to demolition activities;
 - (ii) During demolition;
 - (iii) During debris removal; and
 - (iv) Following final debris removal and final site cleaning.

III. CONDITIONS TO BE MET

- A. The Contractor shall procure all necessary permits, including the razing permit, without cost to

MSA unless noted otherwise.

1. The Contractor shall comply with all laws and ordinances of the City of Baltimore and the State of Maryland relating to the work.
 2. The Contractor shall confirm the abandonment of the utility services to the structures to be razed and MSA shall bear the costs thereof.
- B. The Contractor shall exercise all care to ascertain in the utility services for the structure or structures that he is to demolish are disconnected.
1. The City of Baltimore will secure abandonment of utilities and bear the cost thereof. Prior to commencing work, the Contractor will certify that utility services for properties have been disconnected.
 2. In the event any of the utility services are not cut off, capped, or disconnected, the Contractor shall not perform any work and disturb same and will report to MSA.
- C. The Contractor shall ensure that existing utility services such as drains, sewers, water lines, gas lines, electrical feeders, telephone wires, etc., or any of their adjuncts, are completely safeguarded, and the Contractor shall conduct its operations accordingly.
1. If Contractor damages any such utilities, the Contractor shall, at its sole cost and expense, carefully repair the utilities as required by the Department of Public Works and Utility Companies having jurisdiction.
 2. Any damages incurred by the City and/or the Utility Companies shall be paid for by the Contractor.
- D. The Contractor shall keep all sidewalks, streets, and alleys open at all times where specified except as otherwise directed by MSA and adequate means shall be employed to protect pedestrian and vehicular traffic.
1. Once the structures are released to the Contractor for razing, and continuing for the term of the contract, it shall be the responsibility of the Contractor to remove and clear from the foot pavements fronting the structures snow, ice, and debris.
 2. Snow shall be removed and cleared away as required by Baltimore City Ordinance.
 3. Debris shall be removed and cleared from the streets, alleys and sidewalks by the end of each working day.
 4. Rodenticide
 - (a) Prior to commencing abatement, deconstruction and demolition operations, the Contractor shall rodenticide all interior and exterior areas of the property or properties to be demolished.
 - (i) Rodenticiding shall be performed by a business certified and licensed by the Maryland State Department of Agriculture and approved by the MSA.

- (ii) Standard baiting procedures will be followed, including the filling and re-inspection of rat burrows.
- (iii) The business performing such service shall strictly adhere and comply with all requirements on the labels of chemicals used, in addition to other State and Federal regulations.
- (iv) Signs shall be posted on the property twenty-four (24) hours prior to the treatment, and the Contractor shall notify the MSA at the same time that the signs are posted.
- (v) A certificate indicating fulfillment of all these requirements shall be furnished to MSA at the time the razing permit application is received.

5. Erosion and Sediment Control

- (a) The Contractor shall adhere to the Standards and Specifications for Soil and Erosion Sediment Control as approved and adopted by the Maryland Department of the Environment, Sediment and Storm Water Administration, as well as the provisions of the Baltimore City.
- (b) Erosion and Sediment Control Manual and as required by the contract document for each Project-specific RFP.
 - (i) These documents are available for examination at the office of Baltimore City Environmental Services, 1002 Abel Wolman Municipal Building, 200 N. Holliday Street, Baltimore, Maryland 21202.

6. Deconstruction

- (a) Salvage of components known to or suspected of containing lead or any other hazardous materials is strictly forbidden.
- (b) The Contractor shall provide for and ensure that demolition debris is placed in dumpsters.
 - (i) Prior to the placement of debris in dumpsters, Contractor shall determine whether any debris is a controlled hazardous substance (as defined by the Maryland Department of Environment) or otherwise poses hazards that warrant segregating such debris for disposal at an appropriate facility as required by law.
 - (ii) The Contractor shall classify all demolition debris in accordance with the definition of "Demolition Debris" found in COMAR 26.04.07.13 as follows:
 - (1) "Acceptable Demolition Debris" means debris which does not contain lead, asbestos or any other hazardous materials associated with the razing of buildings, roads, bridges, and other structures including structural steel, concrete, bricks (excluding refractory type), lumber, plaster and plasterboard, insulation material, cement, shingles and roofing material, floor and wall tile, asphalt, pipes and wires, and other items physically attached to the structure, including appliances if they have been or will be compacted to their smallest practical volume.

- (2) "Unacceptable Demolition Debris" includes industrial waste or byproducts, any waste materials contained within a structure on the grounds of the structure being demolished that are not physically part of the structure, or which are comprised of or contain materials that pose an undue risk to public health or the environment.
- (iii) It is the intention of MSA to recycle as much of the Acceptable Demolition Debris as feasible. The Contractor, therefore, may be required to source separate certain materials that have recycling potential.
 - (1) These items include structural steel, concrete, bricks (excluding refractory type), lumber, plaster and plasterboard, insulation material, cement, shingles and roofing material, floor and wall tile, asphalt, pipes and wires, and other items physically attached to the structure, including appliances.
- (iv) Upon placement into the dumpster (or other storage unit), the Contractor shall be deemed the generator of, and shall take title to, such debris, including any controlled hazardous substances.
 - (1) The Contractor shall cover all dumpsters with impermeable plastic after placement of debris therein and shall ensure that all dumpsters remain covered when not in use.
 - (2) Full dumpsters shall be removed promptly from the site and transported to the selected disposal site. Prior to removal from the site, the Contractor shall wet debris in the dumpster and verify that the impermeable plastic cover is properly secured for over-the-road transportation.
- (c) The Contractor shall arrange truck routes to haul away debris using MSA approved routes to the MSA approved disposal site with due care given to minimize noise, traffic, and other adverse impacts on residential communities.
 - (i) Waste materials shall undergo proper classification prior to removal from the site.
 - (1) Disposal of all waste materials shall be at facilities approved by MSA and properly certified to handle the disposal of general construction waste and/or hazardous waste.
 - (2) The Contractor is responsible for the tracking and documentation of all waste materials using the forms provided herein.

- (d) The Contractor shall leave in place all windowsills, window stools, window frames, window casings, doors, door casings, doorframes, baseboards, chair railings, and banisters that are known to contain lead-based paint as defined under COMAR 26.16.02.B.(3) and all other applicable law.
- (e) The Contractor shall not remove floors or walls without appropriate structural safety measures in place to prevent building collapse.

IV. CONDITIONS

- A. All deconstruction work shall be performed by the Contractor strictly in accordance with all applicable HUD, EPA, MDE and Baltimore City lead hazard reduction standards as well as any applicable MOSH standards.
- B. The Contractor shall notify MDE of all deconstruction/hazard reduction work
- C. The Contractor shall post warning signs and contain the work area as necessary to reduce lead dust contamination prior to the start of lead hazard work, in keeping with MDE lead hazard reduction standards.
 - 1. The Contractor shall wet all surfaces on the property scheduled to be deconstructed prior to their removal.
 - 2. Contractor shall contain the property to reduce any exterior dust emissions -including the covering of the exterior windows and other affected components with 6-mil plastic.
- D. All of Contractor's supervisory personnel shall be trained and certified as Demolition Supervisor and Lead Abatement Supervisors as accredited by the Maryland Department of the Environment.
- E. All of Contractor's workers shall be trained and certified as Lead Hazard Reduction Workers as accredited by MDE, EPA and OSHA, and as otherwise required by applicable law.
- F. All of Contractor's workers using Lifts shall receive appropriate training on operation of the Lift.
 - 1. Asbestos Containing Materials
 - (a) Contractor, during the Deconstruction phase, shall be responsible for the removal and disposal of all asbestos containing materials within the limits of the project.
 - (i) Removal of asbestos containing materials must be completed by personnel appropriately trained and accredited in asbestos abatement and in accordance with all applicable federal, state and local regulations.

- (b) This shall be accomplished prior to the releasing the site to the Contractor for demolition. However, if asbestos containing materials are discovered by the Contractor before or during its razing operations, the Contractor shall immediately cease operations and inform MSA of its finding.
 - (i) MSA will arrange verification of the existence of asbestos containing material and if confirmed, have it properly removed and disposed of.
 - (ii) The Contractor will not be eligible for delay claims during this phase of the operation.

2. Hazardous Materials

- (a) Contractor, during the Deconstruction phase, will be responsible for the removal and disposal of all hazardous materials within the limits of the project.
 - (i) The handling, removal and disposal of hazardous materials must be completed by personnel properly certified according to all applicable federal, state and local regulations.
 - (ii) Contractor will use personnel with all required credentials to handle hazardous materials.
 - (1) The project site will be released to the Contractor for demolition. However, if suspected hazardous materials are discovered by the Contractor before or during its razing operations, the Contractor shall immediately cease operations and inform MSA of its finding.
 - (2) Contractor will then immediately notify Maryland Department of the Environment and any other applicable governmental entities.
 - (3) If required by law or by MSA's directive, made in its sole and absolute discretion, Contractor shall request an analysis of the substance in question.
 - (4) Contractor will timely deliver to MSA a report of the analysis. The associated costs of the analysis and report shall be reimbursed to the Contractor by MSA.
 - (5) The Contractor will not be eligible for delay claims during this phase of the operation.

3. Demolition

- (a) All buildings or structures shall be razed in strict accordance with applicable sections of the "Baltimore City Building, Fire and Related Codes 2015" or the latest revision thereof.
 - (i) As directed by MSA, buildings and structures included in this Contract shall be completely razed and disposed of (above and below existing grade - including foundation walls, footers, basement floors, all subsurface utilities, and sidewalks as indicated, etc.).

- (b) All ancillary structures on the property shall be removed, including without limitation, storage facilities, garages, shacks, pet facilities, fencing, and other such structures. Furnace pits, elevator pits, hydraulic lifts, machinery foundations and all like structures shall also be removed and the resulting voids shall be backfilled as described in Paragraph.
- (c) Finish grade shall be generally construed as uniform sloping planes meeting the surfaces of abutting streets, alleys, sidewalks, walls, open area and abutting properties, etc. properly graded to insure adequate surface drainage.
- (d) The Contractor shall not remove or damage any trees, shrubs, streets, or alley pavements, public walks or curbs outside of the work area unless they are identified for removal in the specifications.
 - (i) Likewise, the Contractor shall not remove or damage any property constituting a part of any utility system such as poles, light standards, conduits, gas mains, sewers, steam or water pipes, fire hydrants, fire alarm boxes, police call boxes, meters, transformers, etc., whether owned by City of Baltimore or by a private utility company.
 - (ii) In the event the Contractor damages any such utilities or paving, the Contractor shall, at its own cost and expense, restore such utility or paving to a condition equal to that which existed before the damage was done.
- (e) The Contractor shall clean out all basements, areas, yards, etc. by removing all debris and rubbish, together with all equipment such as boilers, furnaces, piping, fixtures, etc.
- (f) The Contractor shall also remove all driveways, walks, wells, curbs, gates, fences, clothes poles, framework of any description, pavement, steps, and other material embedded in and appearing on or projecting above the surface of the ground within the work area.
- (g) The Contractor shall not close or obstruct streets adjacent to demolition areas unless it shall first have obtained all necessary permits to do so. The Contractor shall exercise all due care during demolition operations to ensure that debris is not allowed to fall where it will or may endanger pedestrian and vehicular traffic.
- (h) The Contractor shall take special care and precaution not to disturb or damage private property. Should any private property be damaged as a result of the Contractor's operations, it shall, at its own cost and expense, restore such private property to a condition equivalent to the existed before the damage was done, all to the satisfaction of MSA.
- (i) The Contractor shall not operate equipment such as cranes, power shovels, bulldozers, etc., in streets and alleys abutting the limits of the demolition area.
 - (i) Any deviation or exception to this requirement requires the written approval of MSA and then only after the Contractor has obtained necessary permits.
 - (ii) All such equipment shall be operated from within the demolition area.

- (iii) All demolition is to be performed in a controlled manner via the use of bucket / loader claw.
 - (1) The use of heavy weights suspend by a cable from a boom or hoist is strictly forbidden.
 - (2) Mechanical equipment may be used to demolish structures provided that such equipment is operated within the property lines and special care is taken by the Contractor to ensure that debris is not allowed to fall on the streets, alleys and sidewalks which are used by the public.
- (j) The Contractor will, prior to submitting its proposal, familiarize itself with all of the details pertaining to the work.
 - (i) Contractor will have no claim for extra compensation or any other claim because of misunderstandings, misinterpretations, or lack of information relative to these matters.
 - (ii) Contractor will be allowed to conduct a pre-bid site investigation.
 - (iii) Contractor will have no claim for extra compensation or any other claim because of misunderstandings, misinterpretations, or lack of information relative to these matters.
- (k) The Contractor shall do all propping, bracing, etc., of walls, etc., for each property in the manner that is necessary to safeguard the public or others.
- (l) The Contractor will take every precaution to guard against any movement or settlement of adjacent buildings or structures and shall provide and place, at its own expense, any bracing or shoring necessary or proper in connection therewith; and will be solely responsible for the safety and support of such buildings damage or injury caused thereby or resulting there from.
 - (i) If at any time, the safety of any adjacent building or structure appears to be endangered, the Contractor will immediately cease operations, notify MSA and, at its own expense, take all proper means to support such building or structure.
 - (ii) The Contractor will not resume operations until permission has been secured in writing from MSA.
 - (iii) If MSA considers additional bracing or shoring is necessary to safeguard and prevent any such movement or settlement, the Contractor shall promptly provide and place, at its own expense, any such bracing or shoring upon the directive of MSA.
 - (iv) If the Contractor fails to comply promptly with MSA's order, such bracing and shoring may be placed by MSA and back charged to the Contractor.

- (m) The Contractor shall take every precaution to guard against the movement, settlement or collapse of any sidewalks, alleys, or passage adjoining the property. If the Contractor causes any such damage, it shall promptly repair such damage at its sole expense when directed to do so by MSA.
- (n) The Contractor shall perform the work of demolishing the buildings or structures in a manner that will ensure that adjacent buildings or properties will not sustain any damage from falling debris or other causes, and the work shall be done in a manner so as not to interfere with the use of adjacent buildings or structures or the free and safe passage to and from them.
- (o) Masonry walls shall be demolished in small sections.
- (p) The Contractor will remove all of its property from the demolished area before the completion of the project and before the project will be considered completed.
- (q) It is possible that there may be historical or antique items such as, but not limited to, papers, plaques, books, documents, records, coins, utensils, and so forth, in the structures being demolished.
 - (i) MSA shall be the judge as to whether or not such materials or items are of historical or antique value.
 - (ii) The Contractor shall be responsible for the delivery of any such material to MSA, and shall become the property of MSA.
 - (iii) In addition, prior to razing operations, MSA reserves the right to remove and salvage antique architectural features which are part of the structures being demolished such as, but not limited to, cornices, fireplace mantles and trim molding, stair balusters, banisters and handrails, stained-glass windows, doors and doorframes, etc.
- (r) The Contractor shall maintain the streets cleaned of any litter or debris resulting from its operations.
 - (i) At a minimum the Contractor is responsible for performing street sweeping on a weekly basis and upon completion of the demolition and debris removal process.
 - (ii) The Contractor is responsible for additional street sweepings as may be needed to maintain debris free roadways around the project.
- (s) Prior to commencement of demolition, the Contractor shall secure the perimeter of the demolition site for site containment and security, and to prevent entry and vandalism.

4. Work Area Control

- (a) This required work of the Contractor is intended to define the boundaries of the site and indicate that the interior is a work zone that is not open to the public, and includes taking each of the following mandatory steps:
 - (i) At a minimum, erect driven post with chain link fencing or other substantial

barriers with a minimum height of eight (8') feet around the perimeter of the demolition site to prevent access. Barriers are to be covered with wind screens.

- (ii) Ensure no squatters are in the structure prior to and throughout the demolition operations.
- (iii) Provide monitoring to control site access and ensure the safety of pedestrians and vehicles during active demolition process. -

V. DEMOLITION DEBRIS REMOVAL

- A. Debris removal is to begin no later than 48-hours from the start of demolition operations and is to be completed no later than 14-days from completion of demolition operations.
- B. At the approval of the MSA the Contractor may be allowed to separate and store onsite materials that are to be salvaged by the Contractor, provided that all of such materials are arranged thereon in a neat and orderly manner, as directed by MSA and subject to its approval and further provided that the storing of such materials will not create a nuisance or interfere with progress of the work under this contract, or the work of others, or affect in any way, the Contractor's responsibility in carrying out all of the terms and conditions under this contract.
- C. All waste, whether salvage or debris, must be removed from the site no later than 14-calendar days from demolition completion.
 - (a) Roll-off bins and dump trucks shall not be parked in front of occupied houses during debris removal. At the conclusion of the razing of the structure(s), the contractor will:
 - (i) Provide effective wetting during debris removal, i.e. while moving debris to dumpsters, truck or container, debris will be regularly wetted to reduce dust emissions.
 - (ii) At a minimum the Contractor is responsible for wetting of the debris pile and point of load-out by directing a hose at bucket during debris removal.
 - (iii) Wetting is to be achieved via the use of fire hosing with a minimum diameter of 2".
 - (iv) Dumpsters will also receive regular wetting to reduce dust emissions.
 - (v) During the wetting down phase of any demolition the contractor will ensure that adequate runoff procedures are implemented.

- (b) Provide removal and hauling of demolition debris utilizing tightly sealed, secure and non-permeable coverings on trucks and dumpsters.
- (c) Ensure disposal of demolition debris to MSA and EPA approved lined landfill.

VI. LANDSCAPING, GREENING AND MAINTENANCE OF LOTS

- A. The Contractor will be responsible for backfilling of all excavations with approved clean fill.
- B. The Contractor will be responsible for site grading and preparing of site to receive seeding / site stabilization.
- C. The Contractor will be responsible for seeding and associated watering/maintenance to ensure mature vegetative growth.

TECHNICAL DOCUMENT

for

Project C.O.R.E

Creating Opportunities for Renewal and Enterprise

June 22, 2016



A JOINT PROJECT BETWEEN



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SECTION 01013 - SUMMARY OF WORK (HAZMAT)

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The work of the Contract and related requirements and conditions that have an impact on the project include:

Section 01013 - Summary of the Work

Section 01043 - Project Coordination

Section 01091 - Definitions and Standards

Section 01092 - Codes and Regulations

Section 01410 - Air Monitoring

Section 01503 - Temporary Facilities and Controls

Section 01513 - Pressure Differential and Air Circulation System

Section 01526 - Temporary Enclosures

Section 01560 - Worker Protection (HAZMAT)

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Section 01732 - Selective Demolition (Deconstruction)

Section 02081 - Removal of Asbestos-Containing Materials

Section 02084 - Disposal of Asbestos-Containing Waste Material

Section 02085 - Removal and Disposal of Material Containing Lead

Section 02086 - Hazardous Waste Management

Section 02221 - Building Demolition

Section 02230 - Site Clearing

Section 02300 – Earthwork

B. The work in summary consists of:

1. The safe and efficient demolition and site clearance of blocks, or partial blocks, of properties located within the City of Baltimore, Maryland. As part of this contract, sub-tasks will include:
 - a. Asbestos-Containing Materials (ACM): Work included under this contract involves the abatement and control of asbestos-containing materials from properties. The work shall be conducted to support the demolition of the buildings located on the subject site.
 - i. Estimates of the quantity of materials to be removed are identified in the Site-Specific Asbestos Containing Material (ACM), Lead-Based Paint and Hazardous Material Survey included in the Project Specific RFP's; however, it shall be the responsibility of the Contractor to estimate quantities to his own satisfaction prior to submitting a bid. If the Contractor bids for this work, this shall indicate acceptance of the Scope of Work that includes removal of all described materials, regardless of quantity.
 - b. Lead-Based Paint: Work included under this contract involves the abatement, control and disposal of lead-based paint from properties. The work shall be conducted to support the demolition of the buildings located on the subject site.
 - i. Estimates of the quantity of materials to be removed are identified in the Site-Specific Asbestos Containing Material (ACM), Lead-Based Paint and Hazardous Material Survey included in the Project Specific RFP's; however, it shall be the responsibility of the Contractor to estimate quantities to his own satisfaction prior to submitting a bid. If the Contractor bids for this work, this shall indicate acceptance of the Scope of Work that includes removal of all described materials, regardless of quantity.
 - c. PCBs, Mercury-Containing Waste and other Universal Waste or potentially hazardous materials: Work included under this contract involves the removal and disposal of polychlorinated biphenyls (PCBs), mercury containing waste materials and other universal or regulated wastes, such as lead batteries, unused hazardous products and/or potential hazardous wastes from properties. The following waste products are designated by MSA as non-salvageable and require specialized handling and disposal:
 - i. Waste Type A: PCB waste.
 1. PCB-containing systems
 - ii. Waste Type B: Mercury-containing waste.
 1. Mercury-vapor lamps, mercury containing thermostats
 - iii. Waste Type C: Universal and hazardous waste.
 1. Nickel-cadmium batteries, lead-acid batteries
 2. Pesticides, herbicides and rodenticides
 3. Above-ground Storage Tanks (ASTs)
 4. Chlorofluorocarbon containing systems
 5. Fluorescent bulbs and light fixtures
 6. Unidentified chemical mixtures
 7. Any material that contains lead, asbestos, etc.

The work shall be conducted to support the demolition of the buildings located on the subject site.

Estimates of the quantity of materials to be removed are identified in the Site-Specific Asbestos Containing Material (ACM), Lead-Based Paint and Hazardous Material Survey included in the Project Specific RFP's; however, it shall be the responsibility of the Contractor to estimate quantities to his own satisfaction prior to submitting a bid. If the Contractor bids for this work, this shall indicate acceptance of the Scope of Work that includes removal of all described materials, regardless of quantity.

1.02 CONTRACTOR USE OF PREMISES

- A. The Contractor shall limit his use of the premises to the work indicated.
- B. Confine operations at the site to the areas permitted under the Contract.
- C. Portions of the site beyond areas in which work is indicated are not to be disturbed. Conform to site rules and regulations affecting work while engaged in project demolition.
- D. Do not unreasonably encumber the site with materials/equipment storage. Confine stockpiling of materials and location of trailers and dumpsters to the areas directed by MSA's representative or the Environmental Consultant.
 - 1. Contractor is solely responsible for site security for unsecured equipment or materials left on-site overnight.
 - 2. Contractor is responsible for securing the site and all waste material during the demolition process to prevent mobilization of asbestos containing material, lead-based paint dust or other potentially hazardous materials into the community or surrounding environment.
- E. Maintain existing building in a safe, secure, and weather-tight condition throughout the demolition period.
- F. Take all precautions necessary to protect the building, workers and visitors during the construction period.
- G. Smoking or open flames will not be permitted within the building enclosure or on the premises; comply with National Fire Protection Association (NFPA) 101.
- H. Contractor must furnish portable toilet facilities for personnel, and maintain such facilities in a clean, sanitary manner.
- I. The Contractor shall be responsible for temporary lines connected to a water source and the removal of the temporary lines at the conclusion of the job. All connections shall conform with applicable provisions of the plumbing code as well as trade practices. Contractor shall be responsible for obtaining any and all required permits.

Contractor shall furnish all necessary equipment for provision of hot water during the duration of the project.
- J. The Contractor shall provide all necessary temporary electrical service for completion of the project, including the installation of generators, electrical lines, and subpanel units using a licensed electrician. This work shall be coordinated with MSA's designated representative. The Contractor shall remove temporary electrical service at the end of the project. All electrical lines, devices, and work shall conform with applicable local electrical codes.
- K. Control of Access: Unauthorized personnel shall be prohibited from entering or remaining in the work area at all times during hazard abatement work. Authorized personnel include:
 - 1. MSA's representatives.

2. Environmental Consultant (s)
3. Contractor employees.
4. Regulatory authorities' designees.

1.03 OCCUPANCY

- A. The property will not be occupied during demolition.

1.04 SUBMITTALS

- A. Plan of Action, including a task-specific Health and Safety Plan.
- B. Pre-work inspection report, including video and photographs.
- C. All items on the Submittal Checklist provided below.

SUBMITTAL CHECKLIST - ABATEMENT

The submittals required from the Contractor include, but are not limited to the following (submittal does not apply if Section is not included in this Specification):

Section 01013 - Summary of Work

Before Start of Work:

Plan of Action

Pre-Construction Inspection

Section 01043 - Project Coordination

Before Start of Work:

Contingency Plans

Telephone Numbers

Notifications sent to other entities at the work site.

Notifications sent to emergency service agencies.

Resume of general superintendent.

Accreditation of general superintendent

Periodically During Work:

Daily Logs

Event Reports

Accident Reports

Discovered Condition Reports

Section 01092 - Codes, Regulations, and Standards

Before Start of Work:

State of Maryland and local regulations

Licenses

Notifications

Permits

Disposal regulations for out of state disposal

Section 01410 - Air Monitoring

Before Start of Work:

Asbestos and lead dust monitoring plans

Mitigation and containment plans, including Safety Data Sheets (SDSs) and MDE approval for any chemical dust suppressants

Notifications under EPA 40 CFR 50 - National Ambient Air Quality Standards (NAAQS) for Particulate Matter

Stop work action levels

Implementation schedule

After Commencement of Work:

Daily site perimeter and worker breathing zone air monitoring results

Dust monitoring summary reports

Section 01503 - Temporary Facilities

Before Start of Work:

Scaffolding

Hot water heater

Decontamination unit sub-panel

Ground fault circuit interrupters (GFCI)

Lamps and light fixtures

Temporary heating and cooling units

Self-contained toilet units - product data, sub-contractor

First aid supplies

Fire extinguishers - product data, location schedule

Section 01513 - Pressure Differential & Air Circulation System

Before Start of Work:

Pressure differential/air circulation system design

HEPA filtered fan units: Product data

Monitoring equipment: Product data

Auxiliary generator: Product data

Power switch: Product data

Auxiliary power system: Shop drawing

After Commencement of Work:

Pressure differential monitoring results summary

Section 01526 - Temporary Enclosures

Before Start of Work:

Strippable Coatings: Product data, Test report on ASTM E84 test, Manufacturer's installation instructions, safety data sheet(s)

Spray Cement: Product data, Manufacturer's installation instructions, safety data sheet(s)

Sheet Plastic: Test reports on NFPA 701 test

After Commencement of Work:

Initial and daily barrier inspections using smoke tubes and other appropriate procedures

Section 01560 - Worker Protection - HAZMAT

Before Start of Work:

AHERA Accredited Training Certificate: for each worker1000

Maryland Licensure for Abatement: firm and each worker

Maryland and EPA lead-based paint removal certification: for each worker

Documentation of Training for Other Hazards: for each worker.

Maryland and Local License: for each worker.

Historical Airborne Fiber Data.

Report from Medical Examination: for each worker.

Certificates of Worker's Acknowledgment: for each worker

Section 01562 - Respiratory Protection - HAZMAT

Before Start of Work:

Product Data

NIOSH Certifications

Type "C" System Diagram & Operating Instructions

Respiratory Protection Program

Historical Airborne Fiber Exposure Data

Fit Test Documentation: for each worker using respiratory protection

After Commencement of Work:

Weekly air monitoring data from personal sampling summary

Section 01563 - Decontamination Units

Before Start of Work:

Personnel Decontamination Unit: Shop drawing

Filters: Product data

Signs: Samples

Section 01711 - Project Decontamination

Submittal Items as listed in Section 01711

Section 01714 - Work Area Clearance (HAZMAT)

Before Start of Work:

Clearance testing and monitoring plan

Clearance action levels

After Commencement of Work:

Testing and monitoring data summary

Section 01732 - Selective Demolition (Deconstruction)

Before Start of Work:

Hazardous material containment and abatement plan for salvage material

Task specific health and safety plan for salvage workers

Documentation of Training for Other Hazards: for each worker

Maryland and Local License: for each worker

Report from Medical Examination: for each worker

Certificates of Worker's Acknowledgment: for each worker

Section 02081 - Removal of Asbestos-Containing Materials

Before Start of Work:

Asbestos removal and monitoring plan

Task specific health and safety plan

EPA, MDE and City of Baltimore project notifications

Certificates: Contractor certification for licensed asbestos abatement,

Contractor EPA certification and MDE accreditation for Asbestos Abatement Supervisor,

Contractor EPA certification and MDE accreditation for proposed abatement workers,

Laboratory accreditation certificates (National Voluntary Laboratory Accreditation Program (NVLAP) or equivalent),

Contractor certifications for training, medical surveillance and respiratory fit test, as appropriate, for on-site workers

Surfactant: Product data, safety data sheet and MDE approval for use

Removal Encapsulant: Product data, safety data sheet and MDE approval for use

Section 02084 - Disposal of Asbestos-Containing Waste Material

Before Start of Work:

Asbestos disposal and monitoring plan

Task specific health and safety plan
Waste Hauler State/State of MD License
MDE Certified Waste Hauler License
Permitting and licensure of designated hazardous waste landfill
Landfill Contact Person and Telephone Number
Chain of Custody Form
Waste Manifest Form
Disposal Bag: Samples
Labels: Samples

After Commencement of Work:

On a weekly basis: copies of manifests and disposal site receipts, weekly safety meeting minutes, etc.

SUBMITTAL CHECKLIST - LEAD

The submittals required from the Contractor include, but are not limited to the following (submittal does not apply if Section is not included in this Specification):

Section 02085 - Removal and Disposal of Material Containing Lead

Submittal items as listed in Section 02085

SUBMITTAL CHECKLIST – HAZARDOUS WASTE

The submittals required from the Contractor include, but are not limited to the following (submittal does not apply if Section is not included in this Specification):

Section 02086 - Hazardous Waste Management

Submittal items as listed in Section 02086 - Hazardous Waste Management and Section 02221 - Building Demolition

Before Start of Work:

Environmental Consultant Asbestos Containing Material (ACM), Lead-Based Paint and Hazardous Material Survey

Contractor fugitive dust and demolition debris containment and monitoring plan

Contractor task specific health and safety plan

After Commencement of Work:

Weekly compliance reports

Section 02230 - Site Clearing

Before Start of Work:

Site management and temporary control plan

Section 02300 - Earthwork

Before Start of Work:

Materials management plan

1.05 SPECIAL REQUIREMENTS

- A. All Contractor personnel involved in activities related to the abatement of hazardous waste materials during this project must possess valid training certificates and licensing according to the requirements of all appropriate federal, state and local regulations. Evidence of training must be made available to the Environmental Consultant upon request and copies must be maintained on the project site **at all times**.
- B. Each accredited person involved in asbestos, lead-based paint or other hazardous material abatement activities must possess a valid Maryland Photo Identification Card on the job site **at all times**.
- C. Proper respiratory protection must be used **at all times** by all Contractor personnel when there is any possibility of disturbance of asbestos-containing materials, lead-painted materials or any other hazardous material which may lead to dust levels above OSHA's permissible exposure limit for that material.
- D. The Contractor must provide the services of a Certified Industrial Hygienist (CIH). The Contractor will oversee all asbestos, lead-based paint or other hazardous material abatement activities throughout the duration of the project including, but not limited to, all pre and post abatement inspections, air sampling, and project monitoring activities.
- E. Any Addendum (a) to this Specification issued prior to the bid due date are incorporated by reference and carry the same force. Where an Addendum may conflict with the original requirements, the Addendum shall prevail.
- F. Phase Contrast Microscopy (PCM) analytical methods will be used to determine if the work area meets asbestos exposure levels set-forth in these specifications. Clearance levels will be established utilizing PCM sampling and analytical methods as set forth in the AHERA regulation 40 CFR Part 763 Appendix A. The sampling and analytical methods are further described in Sections 01410 and 01714. The work area shall also achieve clearance-using PCM via NIOSH 7400 Method. If clearance is not achieved, the area shall be re-cleaned and re-tested until such time that the area meets the clearance requirements of Section 01714.
- G. During non-working hours, the work area shall be secured by locking the entrance to the work areas.
- H. Friable asbestos work areas will be placed under negative pressure in accordance with Section 01513. A pressure differential equal to or greater than 0.02 inches of water relative to adjacent areas, or the equivalent of four air changes per hour will be maintained at all times. At least one negative air pressure device shall be installed as a back-up unit.

- I. Minimum respiratory protection for this project shall be half-face air purifying respirators approved in accordance with requirements of 29 CFR 1926.1101.
- J. All contaminated metal items specified for removal and disposal are to be double bagged and placed into fiber drums for disposal as asbestos-containing waste.
- K. The Contractor shall install a ground fault circuit interrupter (GFCI) sub-panel adjacent to the electrical panel or outside the work area. If the sub-panel is installed within the work area the sub-panel shall be installed in a manner such that electrical components are elevated a minimum of 12" above the floor. The Contractor shall construct a barrier made of 2' x 4' lumber and two (2) layers of polyethylene sheeting to prevent water contact with the sub-panel. Other temporary electrical power sources must be approved by MSA's representative.
- L. The Contractor shall assume full responsibility and liability for the compliance with all standards, licensing requirements and patented systems pertaining to asbestos abatement, work practices, hauling, disposal, protection of workers, protection of visitors to the work site, and persons occupying areas adjacent to the work site. The Contractor shall hold harmless and indemnify MSA and MSA's representatives of any liability as a result of patent infringements, failure to comply with applicable standards, and licensing requirements on the part of the Contractor and the Contractor's employees and subcontractors.
- M. The Contractor must provide the following temporary utilities for each floor per building for the duration of the project:
 - (3) ABC Fire Extinguishers
 - Electrical Sub-panel (as may be necessary to complete work)
 - Temporary Lighting in Work Area
 - Two (2) Battery Powered Fire Alarms/Detectors
- N. Plywood barriers are to be erected at all entranceways to the work areas that will not be used by the Contractor.
- O. The Contractor shall ensure that water service to the shower and other outlets within the work area are turned off while the Contractor is not performing work.
- P. A negative pressure differential of greater than -0.02 inches of H₂O relative to outside pressure is required for this project in accordance with OSHA's construction standard (29 CFR 1926.1101). A stop work will be issued if the pressure differential falls below -0.01 inches H₂O.
- Q. The Certified Industrial Hygienist shall perform a pre-abatement inspection prior to the initiation of work. The Contractor is responsible to correct deficiencies noted by the CIH prior to beginning work. After successful completion of the pre-abatement inspection, the CIH will provide the Contractor a signed and dated written "AUTHORIZATION TO COMMENCE".
- R. The following is the sequence of major events for the project. As this sequence of events is not complete, the Contractor is instructed to thoroughly read this specification for other requirements not listed below.
 - Conduct pre-abatement inspection
 - Installation of electrical sub-panel or other source of grounded temporary power source
 - Installation of critical barriers
 - Installation of floor & wall sheeting (2 layers of polyethylene sheet on each); installation of ceiling sheeting (1 layer of polyethylene sheet)

Installation of HEPA filtration devices
Installation of decontamination chamber
Installation of pressure differential monitor
Conduct abatement mitigation system inspection
Gross material removal
Fine cleaning
Final visual inspection
Clearance air testing
Tear down

1.06 QUALIFICATIONS

Submit the following before start of any asbestos, lead-based paint or other hazardous material abatement work.

- A. Licenses and Qualifications: MSA reserves the right to make and be the final determination of the Contractor's qualifications for work. Requirements for the qualified Contractor include the following;
1. Contractor shall submit the following documentation with an accompanying statement notarized and signed (by a principle of the company) verifying accuracy and truth of information.
 - a. General Qualifications of the Contractor shall include documentation of successful completion of at least three (3) abatement projects of similar size, dollar value, scope, and complexity. Include air monitoring data from an independent monitoring firm demonstrating compliance with OSHA airborne hazardous particulate concentrations during the work.
 - b. Reference names, telephone numbers, and addresses of MSA representatives for the above referenced three (3) abatement projects.
 - c. Names of Contractor's Qualified Representatives who shall be qualified officials of the company, and shall have complete authority to speak for and make commitments for the Contractor including name, title, length of service, verified training records, specific experience (including size and dollar value) of individual projects previously supervised.
 2. Submit evidence of full compliance with medical surveillance and respiratory protection provisions of existing regulations; this shall include copies of written respiratory protection and medical surveillance programs.
 3. Contractor shall submit the following statement notarized and signed (by a principle of the company) verifying accuracy and truth of the following information;
 - a. Description of any asbestos abatement, or other environmental remediation projects which have been prematurely terminated, including the circumstances surrounding such termination.
 - b. List of any contractual penalties which the Contractor has incurred for breach or non-compliance with Contract Specifications on previous projects, such as overruns of completion time leading to liquidated damages.

- c. List of any citations levied against the Contractor by any governmental entity for violations related to lead-based paint abatement, asbestos abatement, or other environmental remediation work including the name and location of the project, date(s) of violation(s), and allegation resolution.
 - d. Description of all legal proceeding, lawsuits or claims which have been filed or levied against the Contractor or any of his past or present employees for lead-based paint abatement, asbestos abatement, or other environmental remediation related activities.
4. Acknowledgment of any of the above circumstances will not necessarily result in automatic disqualification.

1.07 PRODUCT DATA

- A. Collect Product Data into a single submittal. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard wiring diagrams and performance curves.
- B. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information.
- C. Submit 2 copies of each required submittal. MSA will retain one, and will return the second marked with action taken and corrections or modifications required.

1.08 MISCELLANEOUS SUBMITTALS

- A. Process safety data sheets as "product data".
- B. Classify each inspection and test report as being either "shop drawings" or "product data" depending on whether the report is specially prepared for the project, or a standard publication of workmanship control testing at the point of production. Process inspection and test reports accordingly.
- C. Where submittal of a copy of standards is indicated, and except where copies of standards are specified as an integral part of a "Product Data" submittal, submit a single copy of standards for use by MSA's representative.

1.09 MSA'S REPRESENTATIVE'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, MSA's representative will review each submittal, mark to indicate action taken, and return promptly.
- B. Compliance with specified characteristics is the Contractor's responsibility.
- C. MSA's representative will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked to indicate the action taken.

1.10 PRODUCT MATERIALS, EQUIPMENT – DELIVERY, STORAGE & HANDLING

- A. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.

- B. Schedule delivery to minimize long-term storage at the site and overcrowding of construction spaces.
- C. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
- D. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
- E. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.
- F. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
- G. Store heavy materials away from the project structure in a manner that will not endanger the supporting construction.
- H. Store products subject to damage by the elements above ground, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

1.11 QUALITY ASSURANCE

- A. To the fullest extent possible, provide products of the same generic kind, from a single source, for each unit of work.
- B. Compatibility of products is a basic requirement of product selection.
- C. When the Contractor is given the option of selecting between two or more products for use on the project, the product selected must be compatible with other products previously selected, even if the products previously selected were also Contractor options.

PART 2 - PRODUCTS

2.01 GENERAL PRODUCT COMPLIANCE

- A. Requirements for individual products are indicated in the contract documents; compliance with these requirements is in itself a contract requirement.
- B. Where some particular product or device is specified by brand name or manufacturer it is to be considered a standard.
- C. Fire resistant materials including polyethylene and plywood shall be used unless MSA's representative approves other materials. Specific approval is required for spray poly.
- D. The use of tear-off disposal bags is not allowed.
- E. If approved equal, items of other manufacturer than those mentioned may be used, unless specifically noted otherwise for purposes of standardization.
- F. Any method or material substitution must receive the written approval of the MSA's representative.

2.02 SUBSTITUTIONS

- A. The Contractor's request for a substitution will be received and considered when extensive revisions to the contract documents are not required, and one or more of the following conditions are met.
- B. Request is directly related to an "or equal" clause or similar language in the contract documents.
- C. Specified product or method cannot be provided within the Contract time. However, the request will not be considered if the product or method cannot be provided as a result of the Contractor's failure to pursue the work promptly or to coordinate the various activities properly.
- D. Specified product or method cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
- E. Substantial advantage is considered by MSA to offer cost, time, energy conservation or other considerations of merit, after deducting of offsetting responsibilities MSA may be required to bear.
- F. Specified product or method cannot be provided in a manner which is compatible with other materials of the work, and where the Contractor certifies that the substitution will overcome the incompatibility.
- G. Specified product or method cannot be properly coordinated with other materials in the work, and where the Contractor certifies that the proposed substitution can be properly coordinated.
- H. Specified product or method cannot receive a warranty as required by the contract documents and where the Contractor certifies that the proposed substitution includes the required warranty.
- I. Requests for changes in the products, materials, equipment and methods of construction required by the contract documents are considered requests for "substitutions", and are subject to the requirements specified herein. Following are not considered as substitutions:
 - 1. Revisions to the contract documents, where requested by MSA's representative are considered as "changes" not substitutions.
 - 2. Specified Contractor options on products and construction methods included in the contract documents are not subject to the requirements for substitutions as herein specified.
 - 3. Except as otherwise provided in the contract documents, the Contractor's determination of and compliance with governing regulations and orders as issued by governing authorities do not constitute "substitutions" and do not constitute a basis for change orders.
 - 4. Submit 3 copies of each request for substitution. In each request identify the product or fabrication or installation method to be replaced by the substitution; include related specification section and complete documentation showing compliance with the requirements for substitutions.
 - 5. Within one week of receipt of the Contractor's request for substitution, MSA's representative will request additional information or documentation as may be needed for evaluation of the request.
 - 6. Within 2 weeks of receipt of the request, or within one week of receipt of the requested additional information or documentation, whichever is later, MSA's representative will notify the Contractor of either the acceptance or rejection of the proposed substitution.

2.03 GENERAL PRODUCT REQUIREMENTS

- A. Provide products that comply with the requirements of the contract documents that are undamaged and, unless otherwise indicated, unused at the time of installation.

- B. Provide products that are complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
- C. Where they are available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01013

SECTION 01043 - PROJECT COORDINATION (HAZMAT)

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Minimum administrative and supervisory requirements necessary for coordination of work on the project include but are not necessarily limited to the following.

1.02 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. Provide a full-time General Superintendent who is experienced in administration and supervision of asbestos, lead-based paint or other hazardous material abatement projects. This person is the Competent Person as required by OSHA in 29 CFR 1926 for the Contractor and the State of Maryland requirements. The Contractor's representative responsible for compliance with all applicable federal, state and local regulations.
- B. The General Superintendent must have completed and passed the exam for an Asbestos Hazard Emergency Response Act (AHERA) accredited Supervisor level course, have had a minimum of two (2) years demolition supervisory experience and meet all additional requirements set forth in 29 CFR 1926.1101 for a Competent Person.
- C. The General Superintendent must be acceptable to MSA's representative, based on submitted resume information and ongoing interaction with all parties involved in or affected by the project. The resume must include information regarding at least three similar projects for which the proposed General Superintendent has personally been the supervisor, including names and phone numbers for contact persons for MSA's representative on these projects. MSA reserves the right to reject any person proposed as the General Superintendent, who, in his sole judgment, does not serve the best interest of the State of Maryland.
- D. The General Superintendent must be on-site at all times this project has any activities on-site, including sub-contracting, regardless of whether asbestos work is taking place or not. A written request, including resume, for any substitute for this person for any period during the project must be submitted to the Contract Manager or his designee in writing, in advance of such an assignment.
- E. The General Superintendent, and any requested substitute, must have the full authority of the Contractor to commit resources, advise of Contractor's status and future plans and otherwise advise MSA's representative or the Environmental Consultant of issues that affect project quality and timeliness.
- F. Both the full-time on-site General Superintendent and the primary supervisor inside the containment area during abatement activities must be fully conversant in the English language and shall act as interpreters between the CIH or MSA's representative or the Environmental Consultant and any employees who are not English speaking, when so requested.

1.03 SPECIAL REPORTS

- A. Except as otherwise indicated, submit special reports directly to MSA within one day of occurrence requiring special report, with a copy sent to the MSA's representative and others affected by occurrence.

- B. When an event of unusual and significant nature occurs at the site (examples: failure of negative pressure system, rupture of temporary enclosures), prepare and submit a special report listing chain of events, persons participating, response by Contract's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise MSA in advance at earliest possible date.
- C. Prepare and submit reports of significant accidents at the site and anywhere else work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

1.04 CONTINGENCY PLAN

- A. Prepare **and submit** a contingency plan for emergencies including fire, accident, power failure, negative air system failure, supplied air system failure, or any other event that may require modification or abridgment of decontamination or work area isolation procedures. Include in plan, specific procedures for decontamination or work area isolation.
- B. Describe site-specific emergency egress procedures and how the work area will be marked to denote emergency egress paths and exits. Also describe lighting plan for emergency egress, should there be a power failure while work is in progress, specifically addressing use of daylight (if hours of work are compatible), building lighting not in the work area, temporary fixed emergency lighting and flashlights. Ensure the procedures for emergency egress lighting are as fail-safe as feasible and will adequately allow workers or visitors to safely escape from all portions of the work area in case of a power failure. Plan must incorporate prominent marking of pathways and exits.
- C. Note that nothing in this specification should impede safe exiting in accordance with NFPA 101 or providing of adequate medical attention in the event of an emergency.
- D. Post all portions of contingency plan in a prominent location, available to all employees and visitors (e.g. clean room). Post separately, in an immediately visible location, egress diagram and telephone numbers and location of emergency services including but not limited to fire, ambulance, doctor, hospital, police, power company, telephone company.

1.05 NOTIFICATIONS

- A. Notify other entities at the job site of the nature of the asbestos abatement activities, location of asbestos-containing materials, requirements relative to asbestos set forth in these specifications, and applicable regulations.
- B. Notify local emergency agencies such as fire, police, ambulance and hospital services of nature of work.
- C. Notifications of Emergency: Any employee at the job site may notify emergency service agencies if necessary without effect on this Contract or the Contract Sum.

1.06 PRE-CONSTRUCTION CONFERENCE

- A. Meet at project site, with General Superintendent, MSA's representative or the Environmental Consultant and other entities concerned with the asbestos, lead-based paint or other hazardous material abatement work.

- B. This is an organizational meeting to review responsibilities and personnel assignments and to locate the containment and decontamination areas and temporary facilities including power, light, water, etc.

1.07 DAILY LOG

- A. Maintain a daily log documenting the dates and time of but not limited to, the following items:
 - 1. Meetings; purpose, attendees, brief discussion
 - 2. Visitations; authorized and unauthorized
 - 3. Personnel, by name, entering and leaving the work area
 - 4. Special or unusual events, i.e., barrier breeching, equipment failures, accidents
 - 5. Air monitoring tests and test results
 - 6. Inspection of work area preparation prior to start of removal and daily thereafter.
 - 7. Removal of any sheet plastic barriers
 - 8. Contractor's inspections prior to spray back, lock back, encapsulation, enclosure or any other operation that will conceal the condition of asbestos-containing materials or the substrate from which such materials have been removed.
 - 9. Removal of waste materials from work area
 - 10. Work accomplished that day, including % completion for phase and project.
 - 11. Decontamination of equipment (list items)
 - 12. Contractor's final inspection
 - 13. Other pertinent events that impact on health and safety, project schedule, or quality of work.
- B. Submit copies of this log at final closeout of project as a project closeout submittal.

1.08 PROGRESS MEETINGS

- A. In addition to specific coordination and pre-installation meetings for each element of work, and other regular project meetings held for other purposes, MSA's representative or the Environmental Consultant will hold general progress meetings as required.
- B. Require each entity then involved in planning, coordination or performance of work to be properly represented at each meeting. Specifically, the Contractor's General Superintendent must attend all Meetings.

1.09 SUB-CONTRACTORS

- A. Unless approved by MSA, sub-contractors may not be used for any asbestos, lead-based paint or other hazardous material removal or handling task, except waste handling for disposal, provided that the waste hauler and its employees are fully licensed and trained to perform such handling.
- B. All proposed Sub-Contractors must be submitted to MSA's Field Representative or his designee for approval in a timely fashion, such that if any Sub-Contractor is disapproved, another can be retained without delay to the project. Specifically, information of the following Sub-Contractors must be submitted, or evidence shown that the Contractor and his employees have the capabilities

and licenses (as needed) to perform such tasks: electrician, plumber (if other than hose connections required), waste hauling, landfilling and training. The Contractor's CIH will perform sampling and analysis for OSHA compliance monitoring for asbestos particles, lead-paint dust and other potential hazardous exposures.

- C. Sub-Contractors are required to diligently follow all safety and administrative provisions of the specification. Sub-Contractors shall particularly take great care to not cause asbestos fiber release, if performing work prior to abatement.

1.10 SUBMITTALS

- A. Submit the following to the MSA for review within 5-days of Notice to Proceed. No work shall begin until these submittals are returned with MSA's action stamp indicating that the submittal is returned for unrestricted use or final-but-restricted use.
- B. List of Contractor's principal staff assignments, including the Superintendent, mechanics, apprentices, and other personnel in attendance at the Site. Identify individuals, their duties and responsibilities. MSA reserves the right to require persons proposed for this position to interview with MSA, prior to acceptance for the position, if, in his sole judgment, there is any question regarding the qualifications of the proposed individual. Also provide, at a minimum, the cell phone numbers of the proposed General Superintendent and at least one alternate contact for the Contractor, with authority to respond to emergency situations.
- C. Post copies of submittals as required by Section 01043 in project meeting room, temporary field offices, and each temporary phone.
- D. Contingency Plans: for emergency actions.
- E. Notifications: to be sent to other entities at the work site through the MSA's Field Representative or his designee.
- F. Sub-Contractors: name, address, phone number, applicable licenses, etc. for any proposed sub-contractors.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Non-Applicable)

END OF SECTION 01043

SECTION 01091 - DEFINITIONS AND STANDARDS (HAZMAT)

PART 1 - GENERAL

1.01 DEFINITIONS

- A. Abatement: Procedures to control fiber release from asbestos-containing building materials. Includes encapsulation, enclosure and removal.
- B. Acceptable Demolition Debris: means debris which does not contain lead, asbestos or any other hazardous materials associated with the razing of buildings, roads, bridges, and other structures including structural steel, concrete, bricks (excluding refractory type), lumber, plaster and plasterboard, insulation material, cement, shingles and roofing material, floor and wall tile, asphalt, pipes and wires, and other items physically attached to the structure, including appliances if they have been or will be compacted to their smallest practical volume.
- C. Adequately Wetted: Sufficiently mixed or coated with water or other aqueous solution to prevent dust emissions.
- D. Aerosol: A system consisting of particles, solid or liquid, suspended in air.
- E. Air Cell: Insulation normally used on pipes and ductwork that is comprised of corrugated cardboard which is frequently comprised of asbestos combined with cellulose or refractory binders.
- F. Air Monitoring: The process of measuring the fiber content of a specific volume of air.
- G. Airlock: A system for permitting restricted ingress or egress while allowing air movement from an uncontaminated area to a contaminated area during negative air pressure conditions; typically includes two (2) curtained doorways at least six (6) feet apart.
- H. Amended Water: Water containing a wetting agent or surfactant.
- I. Asbestos: The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, and actinolite-tremolite. For purposes of determining respiratory and worker protection both the asbestiform and non-asbestiform varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.
- J. Asbestos-Containing Material (ACM): Any material containing more than 1% asbestos as determined using the methods specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.
- K. Asbestos-Containing Waste Material: Any material that is or is suspected of being, or any material contaminated with an asbestos-containing material which is to be removed from a work area for disposal.
- L. Authorized Visitor: MSA representative or designee, the Environmental Consultant, testing lab personnel or a representative of any federal and local agency with regulatory authority over the project.
- M. Barrier: Sheet plastic barrier installed after critical barrier, which protects building components and non-movable objects from water damage and asbestos contamination. The primary barrier is normally two independently attached plastic sheets. Further defined in Section 01526.

- N. Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.
- O. Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.
- P. Certified Asbestos Workers: Workers who have received training through an MDE accredited training center.
- Q. Certified Industrial Hygienist (CIH): An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.
- R. Clean Room: An uncontaminated area or room that is part of the decontamination enclosure system that contains facilities for the storage of employees' street clothing and uncontaminated materials and equipment.
- S. Clearance Air Sample: Air monitoring sample taken after abatement is completed and prior to deregulation of work areas.
- T. Construction Debris: Material emplaced by humans to include, but not limited to, bricks, trash, garbage, debris, concrete or any other material excluding asbestos or other hazardous material requiring specialized, handling, transport and disposal.
- U. Containment: An enclosure with filtered air and restricted access.
- V. Critical Barrier: Airtight barrier, usually of sheet plastic, which separates the contaminated work area from any other air space. Installed first, this barrier covers items such as, but not limited to: windows, doors, HVAC components, floor drains and containment walls, which are not at existing building walls. Further defined in Section 01526.
- W. Curtained Doorway: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms.
- X. Decontamination Enclosure System: Designated part of the work area, for workers, materials and equipment, adjacent and connected to the regulated area. Includes an equipment room, shower room and clean room formed by connecting a series of rooms with curtained doorways forming airlocks between adjacent rooms.
- Y. Decontamination Area: An enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area and clean room used for the decontamination of workers, materials and equipment contaminated with asbestos.
- Z. Demolition: The wrecking or taking out of any building component, system, finish or assembly of a facility together with any related handling operations.
- AA. Disposal Bag: A properly labeled 6-mil thick leak-tight plastic bag used for transporting asbestos waste from work and to disposal site.
- BB. Disturbance: Activities that disrupt the matrix of ACM or presumed ACM (PACM), crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount that can be contained in one standard sized glove bag or waste bag in order to access a building component. Prevent disturbance ACM or PACM in exceedance of levels that can be contained in one glove bag or waste bag measuring no more than sixty (60) inches in length and width.
- CC. Encapsulant: A material that surrounds or embeds asbestos fibers in an adhesive matrix, to prevent release of fibers.

- DD. Bridging encapsulant: an encapsulant that forms a discrete layer on the surface of an in situ asbestos matrix. Also referred to as a sealant when used to seal residual fibers left on a surface from which asbestos has been removed.
- EE. Penetrating encapsulant: an encapsulant that is absorbed by the in situ asbestos matrix without leaving a discrete surface layer.
- FF. Encapsulation: The application of an encapsulant.
- GG. Enclosure: The construction of an airtight, impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air.
- HH. Equipment Room (change room): Contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.
- II. Excursion Limit (EL): The maximum personal exposure concentration of asbestos fibers for a thirty (30)-minute period (one (1.0) fiber per cubic centimeter (f/cc) of air).
- JJ. Fiber: A particulate form of asbestos, five (5) micrometers or longer, with a length-to-diameter ratio of at least three (3) to one (1).
- KK. Filter: A media component used in respirators and mechanical equipment to remove solid or liquid particles from the inspired air.
- LL. Fitting: Within any piping system, any valve, tee, elbow, flange, union, reducer, or other piping connector, which may be insulated with asbestos.
- MM. Friable: Any asbestos-containing material that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.
- NN. Glovebag: Not more than a sixty (60) by sixty (60) inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.
- OO. High-Efficiency Particulate Air Filter (HEPA): A filter which removes from air 99.97% or more of monodisperse dioctyl phthalate (DOP) particles having a mean particle diameter of 0.3 micrometer.
- PP. HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be 99.97% efficient for retaining fibers of 0.3 microns or larger.
- QQ. Intact: ACM has not crumbled, been pulverized, or otherwise deteriorated so the asbestos is no longer likely to be bound with its matrix.
- RR. Lock-out: Installation of a locking device to prevent activation of an electrical circuit, which has been deactivated for safety reasons. Always utilized in conjunction with tag-out procedures to advise who has deactivated the circuit and in compliance with OSHA 1910.147, "Control of Hazardous Energy Source."
- SS. Mini Enclosure Method: An abatement method that establishes an isolation zone as a sub-area of the total area. Air exchange requirements are a minimum of four (4) per hour. Decontamination facilities include two (2) air chamber airlock, double suiting and HEPA vacuuming.
- TT. Negative Initial Exposure Assessment: Demonstration by the employer that employee exposure during an operation is expected to be consistently below the permissible exposure limit (PEL).
- UU. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside

atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.

- VV. Negative Pressure Ventilation System: Equipment that ensures the static pressure in an enclosed work area is lower than the environment outside the containment barriers.
- WW. Non-Friable Asbestos Material: Material that contains asbestos fibers locked in by a bonding agent, coating, binder or other material. Non-friable asbestos is well bound and will not release fibers in excess of the asbestos control limit during appropriate use, handling, demolition, storage, transportation, processing or disposal.
- XX. Particulate Asbestos Material: Finely divided particles of asbestos material.
- YY. Personal Monitoring: Sampling of the asbestos fiber concentrations within the breathing zone of an employee.
- ZZ. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.
- AAA. Regulated Area: Area where airborne concentrations of asbestos exceed, or there is a reasonable possibility the concentrations may exceed, the asbestos PELs.
- BBB. Removal: Specified procedures necessary to strip ACMs from the designated areas and dispose of them in a permitted facility.
- CCC. Repair: returning damaged ACM to an undamaged condition to prevent fiber release.
- DDD. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres. Must be approved by NIOSH and used in accordance with the employer's respiratory protection program and all manufacturer's procedures.
- EEE. Secondary Barrier: Sheet plastic "drop cloth" installed on floors and/or walls of containment during removal activities to protect primary layers. Further defined in Section 02081.
- FFF. Shower Room: A room between the clean room and the equipment room in the worker decontamination enclosure system, with hot and cold or warm running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.
- GGG. Standard Isolation: An asbestos removal process that encloses the entire area prior to, and during, removal.
- HHH. Stripping: Removal of friable asbestos materials from a pipe, duct, boiler, tank, turbine, furnace or structural member or a building, structure, facility or installation.
- III. Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.
- JJJ. Surgical Removal: A process by which small amounts of asbestos are removed with extreme care from substrates to which critical barriers or other seals are to be applied. This process usually involves scraping with small hand tools directly into the inlet of a HEPA vacuum.
- KKK. Thermal System Insulation: ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.
- LLL. Time Weighted Average (TWA): An eight (8)-hour weighted average airborne concentration of fibers longer than five (5) micrometers per cubic centimeter of air.

MMM. Unacceptable Demolition Debris: includes industrial waste or byproducts, any waste materials contained within a structure on the grounds of the structure being demolished that are not physically part of the structure, or which are comprised of or contain materials that pose an undue risk to public health or the environment.

NNN. Visible Emissions: Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

OOO. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

PPP. Work Area: The area where asbestos related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by 29 CFR 1926.

1.02 GENERAL APPLICABILITY OF STANDARDS

- A. Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, applicable standards of the construction industry have the same force and effect (and are made a part of contract documents by reference) as if copied directly into contract documents, or as if published copies were bound herewith.
- B. Refer to the other contract documents for resolution of overlapping and conflicting requirements which result from the application of several different industry standards to the same unit of work.
- C. Refer to individual unit of work sections for indications of which specialized codes and standards the Contractor must keep at the project site available for reference.
- D. Referenced Standards (referenced directly in contract documents or by governing regulations) have precedence over non-referenced standards, which are recognized in industry for applicability to work.
- E. Except as otherwise indicated, where compliance with an industry standard is required, comply with standard in effect as of date of contract documents.

1.03 COPIES OF STANDARDS

- A. The contract documents require that each entity performing work be experienced in that part of the work being performed.
- B. Each entity is also required to be familiar with recognized industry standards applicable to that part of the work.
- C. Where copies of standards are needed for proper performance of the work, the Contractor is required to obtain such copies directly from the publication source.
- D. Although certain copies of standards needed for enforcement of the requirements may be required submittals, MSA's Field Representative or his designee reserves the right to require the Contractor to submit additional copies of these standards as necessary for enforcement of the requirements.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01091

SECTION 01092 - CODES AND REGULATIONS (HAZMAT)

PART 1 - GENERAL

- A. Governmental regulations and industry standards, which are included and incorporated herein by reference and made a part of the specification.
- B. Notices and permits which are known to MSA and which either must be applied for and received, or which must be given to governmental agencies before start of work.

1.01 CODES AND REGULATIONS

- A. Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the contract documents, or as if published copies are bound herewith.
- B. The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site.
- C. Neither the Contractor, nor any sub-contractor for any part of the contract work, shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions, which are unsanitary, hazardous or dangerous to his health or safety.
- D. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State, and local regulations.
- E. The Contractor shall hold MSA, Environmental Consultant, Project Manager, and Certified Industrial Hygienist harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of himself, his employees, or his subcontractors.

1.02 FEDERAL REQUIREMENTS

- A. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), including but not limited to:
 - 1. Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules
 - 29 CFR 1926.95 - Personal Protective Equipment (PPE)
 - 29 CFR 1926.1101 - Asbestos in Construction
 - 29 CFR 1926.417 - Lockout and Tagging of Circuits
 - 29 CFR 1926 - Construction Industry - Entire Standard
 - 29 CFR 1910.134 - Respiratory Protection
 - 29 CFR 1910.20 - Access to Employee Exposure and Medical Records
 - 29 CFR 1910.145 - Specifications for Accident Prevention Signs and Tags

29 CFR 1910.1200 - Hazard Communication

29 CFR 1926.62 - Interim Final Lead Regulation

B. U.S. Department of Transportation

49 CFR 171 through 177 - Hazardous Substances

C. U.S. Environmental Protection Agency (EPA) including but not limited to:

Federal Resource Conservation and Recovery Act (RCRA), Subtitle C

40 CFR 261 - Identification and Listing of Hazardous Waste

40 CFR 763, Sub-part E - Asbestos Hazard Emergency Response Act (AHERA) Regulation

40 CFR 763, Sub-part E, Appendix C - Training Requirements of (AHERA) Regulation Asbestos Containing Materials in Schools Final Rule & Notice

National Emission Standard for Hazardous Air Pollutants (NESHAP)

40 CFR 61, Sub-part A, and Sub-part M (Revised Sub-part B) - National Emission Standard for Asbestos

1.03 STATE REQUIREMENTS

A. MARYLAND (as published in the Code of Maryland Regulations - COMAR), including, but not limited to:

COMAR Title 09 - Department of Licensing and Regulation

Subtitle 12 - Division of Labor and Industry

Chapter 31 - Maryland Occupational Safety and Health Act (MOSHA)

Chapter 33 - MOSH Regulations for Access to Information about Hazardous and Toxic Substances

COMAR Title 26 - Department of the Environment

Subtitle 02 Lead-Based Paint and Lead Abatement

Subtitle 04 - Regulation of Water Supply, Sewage Disposal and Solid Waste

Chapter 07 - Solid Waste Management

Subtitle 11 - Air Quality

Chapter 21 - Control of Asbestos

Chapter 23 - School Asbestos Accreditation of Individuals, and Approval of Training Courses

Subtitle 13 - Disposal of Controlled Hazardous Substances

1.04 LOCAL REQUIREMENTS

- A. Abide by all local requirements, which govern asbestos abatement work; hauling and disposal of asbestos waste materials; fire protection; electrical work and plumbing work, and building construction/demolition.

1.05 FEDERAL NOTIFICATION

- A. U.S. Environmental Protection Agency

Send written notification as required by U.S. EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) Asbestos Regulations (40 CFR 61, Subpart M) to the regional Asbestos NESHAP Contact at least 10 working days prior to beginning any work on asbestos-containing materials. Send notification to the following address; send copies to Project Manager and Industrial Hygiene Services Contractor.

REGION III:

Asbestos NESHAP Contact

Air & Waste Management Division

USEPA

Region III

1650 Arch Street

Philadelphia, PA 19103-2029

(215) 814- 6552

Include the following information in the notification sent to the NESHAP Contact:

Name and address of MSA or operator.

Description of the facility being demolished or renovated, including the size, age, and prior use of the facility.

Estimate of the approximate amount of friable asbestos material present in the facility in terms of linear feet of pipe, and surface area on other facility components.

Location of the facility being demolished or renovated.

Scheduled starting and completion dates of demolition or renovation. Nature of planned demolition or renovation and method(s) to be used. Procedures to be used to comply with the requirements of USEPA

National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61 Subpart M).

Name and location of the waste disposal site where the friable asbestos and other identified hazardous waste material will be deposited.

For facilities being demolished under an order of a State or local governmental agency, issued because the facility is structurally unsound and in danger of imminent collapse, the name, title, and authority of the State or local governmental representative who has ordered the demolition.

1.06 STATE AND LOCAL AGENCIES

- A. Send written Notification as required by state and local agencies prior to beginning any work on asbestos-containing materials. Send notification to the following address, as well as any local regulatory authority requiring such; send copies to Project Manager and Environmental Consultant.

Air & Radiation Management Administration

Maryland Department of the Environment

- B. Post Project Notification sign at least 5 days but no more than 10 days before beginning removal project at entrances and exits from the work site to inform the public in the immediate vicinity, in accordance with COMAR 26.11.21.06.A(2) & (4). Keep such signs posted until the Maryland Air & Radiation Management Administration receives the written notice of final air monitoring results required under COMAR 26.11.21.06.B(3)(f).
- C. Within 24 hours after receiving final written monitoring results, submit to the Maryland Air & Radiation Management Administration a record of Work Area Clearance results required in Section 01714, as required under COMAR 26.11.21.06.B(3)(f).
- D. is the Contractor's responsibility to obtain any variance(s) to the provisions of COMAR 26.11.21 from the Maryland Air & Radiation Management Administration, if any proposed means and methods would require such. The Contractor's failure to receive any anticipated variance does not relieve him from the obligation to perform the project as bid, nor shall such failure obligate the State to the Contractor for any additional cost or project completion time. In addition to receiving a variance from the Maryland Air Management Administration, written approval must be obtained from the Project Manger prior to implementing any such proposed alternate procedure. If, in the judgment of the Project Manager, the request for implementation of a variance is not deemed in the best interest of MSA, the Contract Manager will not approve it and the Contractor shall not implement it.

1.07 PERMITS

- A. Notify, obtain and maintain demolition permitting from state and local regulators.
- B. Ensure landfill which will dispose of waste from this project has permit conditions which allow acceptance of asbestos waste, if in the State of Maryland. If proposed disposal site is not in the State of Maryland, submit State and Local regulations from the jurisdiction covering the landfill and hauler, and demonstrate compliance with permit requirements for the landfill and hauler, if such apply.

1.08 LICENSES

- A. Contractor must maintain a current license or accreditation to remove asbestos or lead-based paint from the Maryland Department of the Environment, and any other licenses as may be required by applicable state or local jurisdictions for the removal, transport, disposal or other regulated activity relative to the work of this contract. If hauler will handle asbestos waste, demonstrate that firm has a current asbestos license from the State of Maryland Air & Radiation Management Administration.
- B. All workers involved with the removal, handling, transportation and disposal of asbestos-containing materials, or other asbestos regulated activity related to the work of this contract shall possess a valid Asbestos Worker license as approved by the State of Maryland, Air & Radiation Management Administration. For further information regarding proper licensing and training requirements for asbestos abatement workers reference Worker Training under Section 01560.
- C. Accredited personnel of the Contractor involved with the supervision of asbestos, lead-based paint or other hazardous material abatement activities related to this contract shall maintain a valid Supervisor license as approved by the State of Maryland. At least one Supervisor shall be on the premises of the work site to supervise abatement activities at all times.
- D. Each accredited person involved in asbestos abatement activities must possess a valid Maryland Photo Identification Card on the job site at all times.
- E. The Contractor must maintain a copy of each accredited person's valid asbestos, lead-based paint or hazardous material handler license and training certificate in the Contractor's office at all times.
- F. Maintain two (2) copies of applicable federal, state and local regulations above. Post one copy of each at the job site. Keep on file in Contractor's office one copy of each.

1.09 SUBMITTALS

- A. Before Start of Work submit the following to the MSA for review and approval.
 - 1. Notices required by federal, state and local regulations together with proof of timely transmittal to agency requiring the notice.
 - 2. Copies of current valid permits required by state and local regulations.
 - 3. Copies of all State and Local licenses and permits necessary to carry out the work of this contract.
 - 4. Copies of notices required by federal, state, and local agencies together with proof of timely transmittal to the agency.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01092

SECTION 01410 - AIR MONITORING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Pre-demolition background monitoring conducted by the Environmental Consultant to establish action levels for dust for use in the Contractor site-specific HASP during demolition activities.
- B. Air monitoring carried out by the Contractor's Certified Industrial Hygienist (CIH) to verify asbestos, lead-based paint or other hazardous airborne concentrations are maintained in the work zone and at the work site perimeter remain below site-specific HASP action levels.
- C. Contractor CIH establishment of airborne asbestos fiber, lead dust or other hazardous airborne action levels both inside and outside the work area.
- D. Mitigation steps required by the Contractor if an action level is met or exceeded.
- E. Additional air monitoring carried out by MSA's Environmental Consultant to verify control and containment of dust resulting from demolition/building razing operations. MSA additional air monitoring activities do not absolve the Contractor's responsibility to maintain safe working conditions.

1.02 DEFINITIONS

- A. Accepted Engineering Practice: Requirements compatible with standards of practice required by a registered Professional Engineer in the State of Maryland.
- B. Ambient Air Sample: An outdoor measurement of the gaseous mixture surrounding a home or building representative of the naturally occurring conditions upgradient of the construction site.
- C. Background Air Sample: A measurement of the gaseous mixture within the work zone representative of the naturally occurring conditions prior to the initiation of construction activities.
- D. Breathing Zone: Area three (3) to five (5) feet above the ground surface representative of typical human adult air intake.
- E. Chemical Dust Suppressants: Non-toxic chemical soil binders used to reduce dust on disturbed surfaces.
- F. Clearance Air Sample: A measurement of the gaseous mixture within the work zone taken after abatement activities are completed and prior to reentry.
- G. Disturbed Surface Area: Any portion of the earth's surface (or material placed thereupon) that has been physically moved, uncovered, destabilized or otherwise modified from its undisturbed native condition (including vehicular disturbances), thereby increasing the potential for the emission of fugitive dust. This definition does not include land that has been restored to a native condition, such that the vegetative ground cover and soil characteristics are equal to surrounding native conditions.
- H. Excavation: Subsurface construction activity conducted below grade in the earth's surface. Any manmade cut, cavity, trench or depression in an earth surface, formed by earth removal.
- I. Fugitive Dust: Any solid particulate matter (PM) that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of human activities.

- J. Oil-Contaminated Soil: Soil with a TPH concentration of ten (10) parts per million (ppm) or greater.
- K. PM10: Particles with an aerodynamic diameter less than or equal to ten (10) micrometers (μm).
- L. Professional Engineer: An engineer duly registered by the State of Maryland to practice engineering in accordance with the provisions of Business Occupations and Professions Article, Title 14, Annotated Code of Maryland.
- M. Silt: Any bulk material with a particle size less than seventy-five (75) μm in diameter that passes through a Number 200 sieve as determined by ASTM Test Method C 136 or any other test method approved by the EPA.
- N. Treatment: Any process that changes the physical, chemical or biological characteristics of a waste to minimize its threat to the environment.
- O. Work Zone: Any space temporarily occupied by workers during the course of construction activities.

1.03 WORK BY OTHERS

- A. Air monitoring required by OSHA is the Contractor's responsibility and is not covered in this section.

1.04 RELATED SECTIONS

- A. Section 01714 - Work Area Clearance: air monitoring required.

1.05 AIR MONITORING

- A. The purpose of the air monitoring by the Contractor's CIH will be to detect faults in the work area isolation such as:
 1. Contamination of the building outside of the work area with airborne asbestos fibers, lead dust or other hazardous materials resulting from demolition activities,
 2. Failure of filtration or rupture in the negative pressure system,
 3. Contamination of the exterior of the building with airborne asbestos fibers, lead dust or other contaminants generated by demolition activity.
- B. Should any of the above occur the, Contractor will immediately cease abatement activities until the fault is corrected. Work will not recommence until authorized by the Project Manager.
- C. The Contractor's CIH will monitor airborne fiber counts in the work area to detect airborne fiber counts which may significantly challenge the ability of the work area isolation procedures.
- D. Work area clearance will be determined by reaching a pre-defined airborne fiber count or dust levels in the work area following the completion of abatement operations. The Contractor's CIH will sample and analyze airborne hazard concentrations, per Section 01714 and MSA's Environmental Consultant will verify clearance of the work area.
- E. **See Section 3.03 – Dust Monitoring for details regarding the roles, responsibilities and tasks required for execution of the air monitoring program.**

1.06 STOP WORK ACTION LEVELS

- A. Maintain an average airborne count in the work area of less than 0.1 fibers per cubic centimeter. If the fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. Airborne lead concentrations must remain below $50 \mu\text{g}/\text{m}^3$ averaged over an 8-hour period, with an action level of $30 \mu\text{g}/\text{m}^3$. Other hazardous airborne contaminant action levels will be established on an as needed basis.
- B. If the Time Weighted Average (TWA) fiber count for any work shift or 8-hour period exceeds 0.5 fibers per cubic centimeter, stop all work, leave negative air system in operation and notify the Project Manager then initiate corrective action. Do not recommence work until subsequent testing indicates acceptable fiber counts.
- C. If airborne fiber counts exceed 1.0 fibers per cubic centimeter for any 30-minute period, cease all work, except for corrective actions, until fiber counts fall below 0.1 fibers per cubic centimeter and notify the Project Manager. Do not recommence work until subsequent testing indicates acceptable fiber counts.
- D. If any air sample taken outside of the work area exceeds the base line established below or 0.01 f/cc, whichever is greater, the Contractor's CIH shall immediately make a determination if it appears the cause of the elevated sample is associated with the Contractor's disturbance of asbestos. If the CIH determines the elevation is caused by the Contractor's disturbance of asbestos, or if any air sample taken outside the work area exceeds 0.05 f/cc, immediately and automatically stop all work. If this reading was taken inside the building but outside the critical barriers immediately erect new critical barriers to isolate the affected area from the balance of the building. Decontaminate the affected area in accordance with Section 01712 Cleaning & Decontamination Procedures. Follow all protective measures as outlined in other sections of this Specification.
- E. The Contractor shall be responsible for costs for all additional air monitoring and clearance testing required due to the contamination.

1.07 FIBERS COUNTED

- A. The following procedure will be used to resolve any disputes regarding fiber types when a project has been stopped due to excessive airborne fiber counts. "Airborne Fibers" referred to above include all fibers regardless of composition as counted in the NIOSH 7400 Procedures.
- B. If work has stopped due to high airborne fiber counts and if the need for such is agreed upon by the Project Manager, MSA may request that air samples be secured by the Contractor's CIH for analysis by Phase Contrast Microscopy (PCM). "Airborne Fibers" counted in samples analyzed by PCM will only asbestos fibers, but of any diameter and length.
- C. If Phase Contrast Microscopy (PCM) is used to arrive at the basis for determining "Airborne Fiber" counts in accordance with the above paragraph, and if the average of airborne asbestos fibers in all samples taken exceeds 70 structures per squared millimeter, or if any one sample exceeds 70 structures per squared millimeter, then the cost of such analysis will be borne by the Contractor, at no additional cost to MSA.
- D. PCM utilized for this purpose will be performed using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Appendix A.

1.08 AIR SAMPLE

A. The number and volume of air samples taken by the Contractor's CIH will be in accordance with the following schedule or by alternate rationale determined by the CIH. Sample volumes given may vary depending upon the analytical method used.

B. Samples will be collected on 25 mm cassettes with 50 mm extension cowls.

PCM: 0.8 micrometer mixed cellulose ester.

TEM: 0.45 micrometer mixed cellulose ester.

1.09 BACKGROUND SAMPLES

A. The Contractor's CIH will secure air samples to establish a base line before start of work.

Location Sampled	Number of Samples	Analytical Method	Sampling Sensitivity (fibers/cc)	<u>Minimum</u> Volume (liters)	Rate (LPM)
Each Work Area	2	PCM	0.005	1,200	1 -- 10
Outside Each Work Area	2	PCM	0.005	1,200	1 --10

1.10 DAILY SAMPLES

A. From start of work of Section 01526 Temporary Enclosures through the work of Section 01711 Project Decontamination, the Contractor's CIH may be taking the following samples on a **daily basis as a minimum.**

Location Sampled	Number of Samples	Analytical Method	Sampling Sensitivity (fibers/cc)	Minimum Volume (liters)	Rate (LPM)
Each Work Area OR AS REQUIRED BY CONDITIONS	2	PCM	0.05	100	1 - 4
Outside Work Area at Each Critical Barrier	1	PCM	0.005	1000	1 - 10
Clean Room	1	PCM	0.005	1000	1 - 10
Breathing Zone Excursion Sample	1	PCM	0.01	60	1-4
Breathing Zone Sample	1	PCM	0.01	100	1-4
HEPA Filtered Fan Unit Exhaust if Exhausted Inside the Building	1	PCM	0.005	1000	1 - 10

- B. Additional samples may be taken at the discretion of the Project Manager. If airborne fiber counts exceed allowed limits additional samples will be taken as necessary to monitor fiber levels.
- C. Sample results shall be available onsite for inspectors' review.

PART 2 - PRODUCTS

2.01 CONTROLS

- A. Use one or more of the following controls, as necessary, under OSHA 29 CFR 1926.1101 – Toxic and Hazardous Substances, Asbestos, to achieve compliance with the PELs:
 - 1. Local exhaust ventilation equipped with HEPA filter dust collection systems.
 - 2. Enclosure or isolation of processes producing asbestos dust.
 - 3. Ventilation of the regulated area to move contaminated air away from the breathing zone to a filtration or collection device equipped with a HEPA filter.
 - 4. Supplement the controls with respiratory protection if insufficient to achieve compliance with the PELs.

2.02 ASBESTOS ENCLOSURE SYSTEMS

- A. If an enclosure system is used, build suitable enclosure framing and line with polyethylene sheeting, or equivalent, sealed with tape at lap joints in the plastic for asbestos enclosures and decontamination areas.
- B. For access between contaminated and uncontaminated areas, install an airlock system including a curtained doorway for access between two (2) areas within the decontamination enclosure systems. Provide a minimum distance between two (2) curtained doorways of six (6) feet. Modifications to the enclosure system due to work space constraints require approval by the Environmental Consultant.
- C. The decontamination enclosure installation requirements include:
- D. A three (3)-stage decontamination station for the removal of equipment and materials from the work area, allowing movement from the work area into a wash down room and finally a clean room while preventing cross-contamination outside the work area.
- E. The wash down room should contain two (2) curtained doorways. Filter shower water through a five (5) micrometer-filter system, or equivalent, prior to disposal.
- F. A clean area with one (1) curtained doorway into the rinsate area and one (1) entrance or exit to non-contaminated areas of the work area. Provide sufficient space for non-contaminated items.
- G. Provide and post decontamination and work procedures to be followed by workers.
- H. Ensure work site security and implementation of PPE requirements within the work area.
- I. Decontaminate workers and authorized visitors prior to exiting the work area. Maintain respirators until the completion of decontamination procedures. Store contaminated PPE in the equipment room when not in use. Upon completion of asbestos abatement, dispose of PPE as contaminated waste. Dispose of contaminated protective clothing in receptacles for disposal with other ACM.

- J. Ensure workers removing waste containers from the decontamination enclosure enter the rinsate area wearing a respirator and dressed in clean coveralls.
- K. Do not allow workers to eat, drink, smoke, or chew gum or tobacco at the project site except in designated areas.
- L. Ensure workers are fully protected with appropriate respirators and protective clothing prior to commencing actual asbestos abatement until completion of final clean-up.
 - 1. Establish methods for safe tie-ins of temporary and replacement lines to ACM insulated pipes.
- M. Visually inspect enclosures at the beginning of each work period. Dispersive smoke methods may be used to test effectiveness of barriers. Repair damage immediately at no additional cost to MSA.

PART 3 - EXECUTION

3.01 ADDITIONAL TESTING

- A. The Contractor may conduct his own air monitoring and laboratory testing. If it elects to do this the cost of such air monitoring and laboratory testing shall be at the Contractor's expense.

3.02 PERSONAL EXPOSURE AIR MONITORING

- A. Collect daily air samples as required under OSHA 29 CFR 1926.1101 – Toxic and Hazardous Substances, Asbestos unless 1) a negative exposure assessment confirms exposure consistently below the PELs or 2) site workers are equipped with supplied-air respirators operated in the pressure demand mode (or other positive pressure mode respirator). These may include pre-abatement, area and perimeter, personal, STEL and clearance samples.
- B. Ensure control methods listed in the standard are in place.
 - 1. Perform assessment and monitoring using a competent individual as specified in the regulations.
 - 2. The Environmental Consultant may elect to conduct additional air sampling for Quality Assurance/Quality Control (QA/QC) purposes for work within confined spaces.
- C. Collect air samples in accordance with current best practices (NIOSH Method 7400 or equivalent). Collect samples within the breathing zone, at an approximate height of sixty (60) inches. Maintain and regularly calibrate sample pumps.
- D. Analyze the samples by the phase contrast microscopy (PCM) method, or equivalent. Provide test results to the Environmental Consultant for review prior to initiation of the next work day.
- E. Ensure fiber concentrations inside the enclosure do not exceed one (1.0) f/cc. If such a concentration is detected, stop work immediately, evaluate work procedures and take corrective actions to resolve problems. Clean the work area with a HEPA vacuum and wet cleaning, or equivalent. Collect additional samples until the fiber count is below one one-hundredth (0.01) f/cc. The work may resume after cleaning and in accordance with procedural revisions agreed upon with the Engineer. Resolve filtration system problems at no additional cost to MTA.
- F. Take personal and short term exposure limit (STEL) samples as required by applicable regulations. Provide personal air sample test results to the Environmental Consultant within twenty-four (24) hours of collection.

- G. Limit the maximum flow rate for air sample collection to two and a half (2.5) liters per minute for personal samples and ten and a half (10.5) liters per minute for inside and outside work area air samples.

3.03 DUST MONITORING

- A. The Contractor will be responsible for controlling dust levels at the demolition site and ensuring worker exposure to airborne asbestos particles, lead paint dust and other airborne hazards are maintained below regulatory TWA threshold limits.
- B. The Environmental Consultant will be responsible for verifying that hazardous airborne particles and dusts are controlled and maintained below measurable action levels identified in the site-specific HASP.
- C. Prior to the initiation of demolition activities, the Environmental Consultant will collect background air and worksite perimeter monitoring data to establish background concentrations of PM₁₀. Background monitoring will be conducted at the same frequency as monitoring during demolition.
 - 1. Sample ambient air at the perimeter of the Site, both upwind and downwind, for approval by the Environmental Consultant. Two (2) air monitoring stations will be established at a distance of no more than 50-feet from the point of active demolition.
 - 2. Calibrate sampler airflow before and after sampling, or as recommended by the manufacturer.
 - 3. A second set of air monitoring stations will be established at a distance of 100-feet from the point of demolition.
 - 4. Background dust levels will be factored into the calculation of increased dust levels produced by demolition activities.
- D. The Contractor will be responsible for personal air monitoring and worker safety while the Environmental Consultant will conduct sufficient area monitoring and sampling to ensure the safety of the surrounding population. Both monitoring programs will comply with applicable federal, state and local requirements to ensure worker protection and the safety of the surrounding community and environment throughout demolition.
 - 1. A dust fall level goal of no more than 1-3µg/ft²/hour is established for this project. The sampling goal is considered an action level for the implementation of dust mitigation strategies, in conjunction with ongoing visual inspections.
 - 2. The Contractor will perform continuous air monitoring during demolition activities and report exceedances using 15-minute average monitoring for each workday.
 - 3. The Contractor will Apply dust suppression techniques if NAAQS or action levels are exceeded and suspend work until corrective measures are approved by the Environmental Consultant and applied.
 - 4. The Environmental Consultant will collect daily meteorological data concurrently with air monitoring and sampling data.
 - 5. The testing laboratory will hold a National Environmental Laboratory Accreditation Program (NELAP) certification and participate in the EPA National Lead Accreditation Program. The testing laboratory will provide MSA with Quality Assurance data and certifications confirming compliance with project requirements.

6. The analytical results will be delivered in electronic format and the Contractor will provide the data to the Environmental Consultant upon request.
7. The Environmental Consultant will conduct dust monitoring concurrent with demolition and debris removal and will cease monitoring activities following the cessation of dust generating activities at the site.

E. DUST MITIGATION

1. Prevent dust from demolition activities from creating a hazard and/or nuisance within the work zone or migrating off-site.
2. Control measures:
 - a. Use the best available technology to minimize fugitive dust emissions.
 - b. Use water or approved chemicals for control of dust during demolition and/or construction activities, as applicable:
 - i. Use appropriate application technology to uniformly spread liquid across the dust-generating surface at a rate that does not produce runoff.
 - ii. Install a shut-off valve to permit onsite operator control.
 - iii. Provide effective wetting during demolition and debris removal, i.e. while moving debris to dumpsters, truck or container, debris will be regularly wetted to reduce dust emissions.
 1. At a minimum the Contractor is responsible for wetting of the debris pile and point of load-out by directing a hose at bucket during debris removal.
 2. Wetting is to be achieved via the use of fire hosing with a minimum diameter of two inches (2").
 - iv. During the wetting down phase of any demolition the contractor will ensure that adequate runoff procedures are followed.
 - c. Cover and/or enclose material stockpiles or material stockpile areas to minimize dust generation.
 - i. Dumpsters and stockpiles will also receive regular wetting to reduce dust emissions.
 - d. Use paved roads, where possible, for vehicle movement of raw materials or products, and include the following dust prevention measures:
 - i. Keep maintenance areas clean.
 - ii. Repair damage immediately.
 - iii. Limit speed to ten (10) miles per hour within the work zone.
 - iv. Vacuum sweep and/or water flush surface.
 - e. Apply coverings, water or suitable chemicals on dirt roads, material stockpiles and other surfaces that are sources of airborne dusts.
 - f. Provide removal and hauling of demolition debris utilizing tightly sealed, secure and non-permeable coverings on trucks and dumpsters to prevent remobilization of impacted dust.
 - g. The Contractor is required to apply water during the debris loading and removal process. At a minimum the Contractor is responsible for wetting of the debris pile and point of load-out by directing a hose at bucket at debris removal. Wetting is to be achieved via the use of fire hosing with a minimum diameter of two inches (2").

END OF SECTION 01410

SECTION 01503 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Provide temporary connection to existing building utilities or provide temporary facilities as required herein or as necessary to carry out the work.
- B. Coordinate all temporary connections with MSA.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Provide new or used materials and equipment that are undamaged and in serviceable condition.
- B. Provide only materials and equipment that are recognized as being suitable for the intended use in compliance with appropriate standards.

2.02 SCAFFOLDING

- A. Provide all scaffolding, ladders and/or staging, etc. as necessary to accomplish the work of this contract.
- B. The type, erection and use of all scaffolding shall comply with all applicable OSHA provisions.
 - 1. Only fiberglass ladders will be permitted on site. The use of metal ladders is not permitted.
- C. Provide a nonskid surface on all scaffold surfaces subject to foot traffic.

2.03 WATER SERVICE

- A. All connections to on-site hydrants shall include back flow protection and be in accordance with all applicable local plumbing codes. All connections shall be coordinated with MSA.
- B. No water valves may be shut, or other effect caused to the water system, which affect the ongoing building operations without specific written permission of the MSA.
- C. Valves shall be temperature and pressure rated for operation at the temperatures and pressures encountered.
- D. After completion of use, connections and fittings shall be removed without damage or alteration to existing hydrants, water piping and equipment.
- E. Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water into each work area and to each Decontamination Unit. Provide fittings as required to allow for connection to existing hydrants or spouts.
- F. Contractor shall provide UL rated electric hot water heater of sufficient capacity that hot water is available for all needed use of the Decontamination Unit shower.

2.04 ELECTRICAL SERVICE

- A. Comply with applicable OSHA, NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electric service.
- B. Provide service to a temporary sub-panel exterior to the work area. Sub-panel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion of the work.
- C. Provide identification warning signs at power outlets that are other than 110-120-volt power. Provide polarized outlets for plug-in type outlets.
- D. Dry type transformers shall be provided where required to provide voltages necessary for work operations.
- E. Provide all circuit breakers in the sub-panel equipped with ground fault circuit interrupters, reset button and pilot light.
- F. Use only hard-service grounded extension cords. Use single lengths or use waterproof connectors to connect separate lengths of electric cords.
- G. Provide general service exterior incandescent lamps of wattage required for adequate illumination. Protect lamps with guard cages or tempered glass enclosures, where fixtures are exposed to breakage by construction operations.
- H. Do not use any electrical equipment which is not properly equipped with fully operational, undamaged ground pin.

2.05 TEMPORARY HEAT

- A. Provide temporary heating units, if necessary that have been tested and labeled by UL, FM or another recognized trade association related to the fuel being consumed.
- B. Use steam or hot water radiant heat where available, and where not available use electric resistant fin radiation supplied from a branch circuit with ground fault circuit interrupter.
- C. Ensure devices utilized for temporary heating are in full compliance with all applicable codes and regulations and do not present a fire hazard, especially in relation to use in the vicinity of plastic sheeting and other flammable materials. Ensure temporary heating devices do not present hazards to workers or building occupants, such as, but not limited to: exposure to carbon monoxide or other toxic gases or vapors or burn from contact with device.
- D. MSA's Representative or his designee may require the Contractor to remove any device which does not meet these requirements and replace it (them) with a system that meets the above requirements.

2.06 SELF-CONTAINED TOILET UNITS

- A. Submit method to be used for servicing, including frequency.
- B. Submit number and type of units to be deployed.

2.07 FIRST AID

- A. Comply with governing regulations and recognized recommendations within the construction industry.

2.08 FIRE EXTINGUISHERS

- A. Provide Type "A" fire extinguishers for temporary offices and similar spaces where there is minimal danger of electrical or grease-oil- flammable liquid fires.
- B. In other locations provide type "ABC" dry chemical extinguishers, or a combination of several extinguishers of NFPA recommended types for the exposures in each case.
- C. Ensure fire extinguishers are provided in numbers sufficient for the work and materials utilized in each specific area. The minimum number of extinguishers for projects of any size are:

Each office -	one Type "A"
Each materials storage area -	one 10 LB ABC
Each decontamination unit -	one 10 LB ABC
Each contained work area/regulated area -	one 10 LB ABC

- D. Provide product data and submit schedule indicating location at job site.

PART 3 - EXECUTION

3.01 SCAFFOLDING

- A. During the erection and/or moving of scaffolding, care must be exercised so that any polyethylene floor covering is not damaged.
- B. Clean, as necessary, debris from non-slip surfaces.
- C. At the completion of abatement work clean all construction aids within the work area, wrap in one layer of 6 mil polyethylene sheet and seal before removal from the work area.

3.02 INSTALLATION OF TEMPORARY SERVICES & FACILITIES

- A. Use qualified tradesmen, licensed as required by regulation or code, for installation of temporary services and facilities.
- B. Locate temporary services and facilities where they will serve the entire project adequately and result in minimum interference with the performance of the Work.
- C. Relocate, modify and extend services and facilities as required during the course of work so as to accommodate the entire work of the project.

3.03 WATER SERVICE

- A. Water connection (without charge) shall be maintained at a maximum flow of ten gallons per minute (10 gpm) each to hot and cold water supply.
- B. Supply hot and cold running water to the Decontamination Unit.
- C. Maintain hose connections, outlet valves and any other water service connections in leak proof condition.

3.04 ELECTRICAL SERVICE

- A. Provide a weatherproof, grounded temporary electric power service and distribution system of sufficient size, capacity, and power characteristics to accommodate performance of work during the construction period.
- B. Utilize only licensed electrician for constructing sub-panel, hooking up sub-panel to source and de-energizing circuits in the work area. All other electrical tasks performed herein must be either performed directly by the licensed electrician or under his direct supervision and by persons and in a manner approved by him.
- C. Provide circuits of adequate size and proper characteristics for each use.
- D. Temporary wiring in the work area shall be type UF non-metallic sheathed cable located overhead and exposed for surveillance.
- E. Provide liquid tight enclosures or boxes for wiring devices.
- F. Provide overload-protected disconnect switch for each temporary circuit located at the power distribution center.
- G. Distribution center should be located outside of work area.
- H. Lockout all existing power to or through the work area as described below. Unless specifically noted otherwise, existing power and lighting circuit to the Work Area are not to be used. All power and lighting to the Work Area and Decontamination facilities are to be provided by the temporary electrical panel as described above.
 - 1. Lockout power to the Work Area by switching off all breakers serving power or lighting circuit in the Work Area. Label breakers with tape over breakers with the notation "DANGER circuit being worked on". Sign and date label. Lock panel and have key under the control of Contract's Superintendent or MSA's designated representative.
 - 2. Lockout power through the Work Area whenever possible by switching off breakers serving these circuits. Label breakers with tape over breakers with the notation "DANGER circuit being worked on". Sign and date label. Lock panel and have key under the control of Contractor's Superintendent or MSA's designated representative. If circuits cannot be shut down for any reason, label at intervals not exceeding 4' with tags reading "DANGER live electrical circuit. Electrocutation Hazard."
- I. Provide sufficient branch circuits as required by the work. All branch circuits are to originate at the temporary electrical panel. At minimum provide the following:
 - 1. One circuit for each HEPA filtered fan unit.
 - 2. For power tools and task lighting, provide one temporary 4-gang outlet with separate 110-120 volt, 20-amp circuit (4 outlets per circuit) in the following locations:
 - a. One outlet per 2500 square feet of work area.
 - b. One outlet at each decontamination unit, located in the equipment room.
 - c. 110-120 volt 20-amp branch circuits with 4-gang outlet for the MSA's exclusive use for conducting air sampling during the work as follows:
 - i. One in each work area.
 - ii. One at the clean side of the decontamination unit.
 - iii. One at the exhaust location of the HEPA filtered fan units.

- d. 110-120 volt 20-amp branch circuits with 4-gang outlet for MSA's exclusive use for conducting final air sampling as set forth in Section 01714 Work Area Clearance as follows:
 - i. Five inside work area.
 - ii. Two outside work area in location designated by MSA's Field Representative.

3.05 TEMPORARY LIGHTING

- A. In all areas under Contractor's control, provide sufficient temporary lighting to ensure proper workmanship and safety of movement and egress; by combined use of daylight, general lighting, and portable plug-in task lighting.
 - 1. Do not use existing building lighting.
 - 2. All lighting is to be provided from the temporary electrical panel or other approved power source described above.
 - 3. Provide lighting as required to supply a 100-foot candle minimum light level at all areas where abatement or inspection occurs.
 - 4. MSA's Representative or designee or the Contractor's CIH may at any time require the Contractor to provide 100-foot candle level at any point in the Contractor's control for any inspection purpose deemed necessary by MSA.

3.06 SANITARY FACILITIES

- A. Provide on self-contained chemical toilet unit at the site for each 30 workers.
 - 1. Facilities shall be maintained throughout the Work.
 - 2. At the end of the job, facilities shall be decontaminated in accordance with these specifications.

3.07 FIRE EXTINGUISHERS

- A. Comply with the applicable recommendations of NFPA Standard 10 "Standard for Portable Fire Extinguishers" and requirements of 29 CFR 1926, Subpart F, OSHA Construction Industry Fire Protection and Prevention regulations.
- B. Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher in each Work Area in Equipment Room and one outside Work Area in Clean Room.

3.08 TEMPORARY HEAT

- A. Provide temporary radiant heat where needed for performance of the work, with the following minimum requirements:
 - 1. In Decontamination Chamber/Shower: 70°F
 - 2. In All Active Work Areas: 60°F
 - 3. In All Areas of Building under Contractor's Control: 40°F

- B. Ensure temporary heating devices are used in a manner consistent with manufacturer's recommendations and safety concerns discussed in paragraph 2.05.

END OF SECTION 01503

SECTION 01513 - PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Establishing, operating and maintaining a differential pressure ventilation system capable of ensuring the static pressure in an enclosed work area is lower than the environment outside of the containment barriers.

1.02 SUBMITTALS

- A. Number of HEPA filtered fan units required and the calculations necessary to determine the number of machines. Include schematic diagram of power and auxiliary power supply to HEPA filtered fan units.
- B. Description of projected air flow within work area and methods required to provide adequate air flow in all portions of the work area.
- C. Description of the methods of testing for correct air flow and pressure differentials, and anticipated pressure differential across Work Area enclosures.
- D. Manufacturer's product data on the HEPA filtered fan units, equipment used to monitor pressure differential between inside and outside work area, main and auxiliary generators, and power switches.
- E. Location of the machines in the work space.
- F. Method of supplying adequate power to the machines and designation of building electrical panel(s) which will be supplying the power.
- G. Description of work practices to insure that airborne fibers travel downstream from workers.

1.03 QUALITY ASSURANCE

- A. Monitor pressure differential across Decontamination Unit, or other location with a differential pressure meter equipped with a strip chart recorder or data-logger/printer assembly.
 - 1. Meter shall be equipped with a warning buzzer which will sound if the negative pressure differential drops below -0.02" of water, relative to outside pressure.
- B. Provide HEPA filtered fan units which pass visual inspection by the Environmental Consultant for all parameters defined in this section and which pass a quantitative challenge test at the work site.
 - 1. The challenge test will be as recommended by the supervising CIH and approved by MSA's Representative or designee, by a method such as a Portacount or other instrument capable of providing at least a thousand-fold range.
 - a. Any unit showing more than 0.3% of the intake reading at the exhaust side shall be considered defective and shall not be approved for use until the problem is corrected.
 - b. The Environmental Consultant shall mark approved units with a label with indelible ink with a unique number and date.

- c. The challenge test shall not substitute for the requirement that the manufacturer to meet specified criteria certify each filter.

PART 2 - PRODUCTS

2.01 HEPA FILTERED FAN UNITS

- A. Cabinet shall be factory sealed to prevent asbestos, lead or other hazard-containing dust from being released during use, transport, or maintenance. Access to and replacement of all air filters shall be from intake end.
- B. Rate capacity of fan according to usable air-moving capacity under actual operating conditions.
- C. The final filter shall be the HEPA type. The filter media (folded into closely pleated panels) must be completely sealed on all edges with a structurally rigid frame.
- D. A continuous fully intact gasket, as provided by the manufacturer, shall be located between the filter and the filter housing to form a tight seal.
- E. Performance of every HEPA filter shall be in accordance with Federal Standard Number 209G and ASHRAE Standard 52-87.
- F. Each filter shall be marked with the name of the manufacturer, serial number, air flow rating, efficiency and resistance, and the direction of test air flow.
- G. Two stages of pre-filters, which protect the final filter by removing the larger particles, are required to prolong the operating life of the HEPA filter.
- H. Each unit shall be equipped with a Magnehelic gauge or manometer to measure the pressure drop across filters and indicate when filters have become loaded and need to be changed.
 - 1. A table indicating the usable air-handling capacity for various static pressure readings on the Magnehelic gauge shall be available at the job site at all times, indicating at what point the filters should be changed, noting Cubic Feet per Minute (CFM) air delivery at that point.
- I. A warning light is required to indicate excessive pressure drop across the filters (i.e., filter overloading).
- J. Electrical components shall be approved by the National Electrical Manufacturers Association (NEMA) and Underwriter's Laboratories (UL).
- K. Each unit shall be equipped with overload protection sized for the equipment. The motor, fan, fan housing, and cabinet shall be grounded.

2.02 PRESSURE DIFFERENTIAL METER

- A. Pressure differential meter shall be recommended by its manufacturer for the intended purpose and shall have sufficient accuracy and resolution (minimum-0.02 0.005" H₂O) to perform as specified herein.
- B. Meter shall have an integral chart recording device (or be attached to one which is compatible with manufacturer's specification) which has equal accuracy and resolution to the meter.
- C. Meter shall have initial and periodic calibrations in accordance with the manufacturer's recommendations. Record of such shall be with the meter at all times.
- D. Meter shall be equipped with zero adjustment for both the meter and chart recorder.

PART 3 - EXECUTION

3.01 PRESSURE DIFFERENTIAL

- A. Provide a fully operational differential pressure and air circulation system within the work area, maintaining continuously a pressure differential between work area enclosure and adjacent area of building of at least -0.02" H₂O or greater, relative to outside pressure.
- B. Before disturbance of any ACM, demonstrate to the MSA's Consultant the adequacy of pressure differential and air flow by use of a pressure differential meter(s) and smoke tubes or bombs. Perform these at location(s) directed by the MSA's Consultant, upon commencement of the project and daily thereafter.
- C. Provide continuous monitoring and recording of the pressure differential between the work area and the building outside of the work area with the meter as defined in paragraph 2.02. Ensure chart recorder pen or other marking device and chart advance are fully operational, such that chart can be easily read.
- D. At a minimum of once per day, remove chart, mark start and stop time, initial by Project Superintendent, mount on 8 1/2" x 11" paper in a manner that is easily readable and submit to MSA's Consultant within 24 hours.
- E. Check zero of meter and recorder each time chart is restarted by removing tubing to work area from the back of the instrument. Ensure low pressure alarm is functional at this check. Do not perform abatement without meter and recorder in compliance with all provisions herein, unless specifically authorized by the MSA's Field Representative or his designee.
- F. Any apparent tampering with the meter, zero setting, or recorder will be grounds for removing the Project Superintendent from the job for its duration, at the discretion of the MSA's Field Representative or his designee.

3.02 PREPARATION OF THE WORK AREA

- A. Provide fully operational HEPA filtered fan units supplying a minimum of one air change every 15 minutes.
- B. Add one (1) additional HEPA filtered fan unit as a backup in case of equipment failure or machine shutdown for filter changing.
- C. Locate exhaust unit(s) so that makeup air enters work area primarily through decontamination facilities and traverses the work area as much as possible.
- D. Place end of unit or its exhaust duct through an opening in the plastic barrier or wall covering. The plastic around the unit or duct shall then be securely sealed with tape or other approved method.
- E. Vent to outside of building, unless authorized in writing by the MSA's Representative or his designee.
- F. Locate auxiliary makeup air inlets as far as possible from the exhaust unit(s), off the floor (preferably near the ceiling), and away from barriers that separate the work area from occupied clean areas.

- G. Cover with flaps to reseal automatically if the negative pressure system should shut down for any reason. Spray flap and area around opening with spray adhesive so that flap seals if it closes.

3.03 START UP OF THE PRESSURE DIFFERENTIAL AND AIR CIRCULATING SYSTEM

- A. Each unit shall be serviced by a dedicated circuit in the Contractor's electrical subpanel of capacity recommended by the manufacturer.
- B. Before any asbestos or lead based paint-containing material is wetted or removed, and after the work area has been prepared, the decontamination facility set up, and the HEPA filtered fan unit(s) installed, start the unit(s) (one at a time) to demonstrate the system.
- C. Proper operation of the system will exhibit, the following:
 - 1. Plastic barriers and sheeting move lightly in toward work area,
 - 2. Curtain of decontamination units move lightly in toward work area,
 - 3. There is a noticeable movement of air through the decontamination unit.
 - 4. Use smoke tubes to demonstrate a positive motion of air.
 - 5. Use a differential pressure meter to demonstrate a pressure difference of at least $-0.02''$ H₂O relative to outside pressure across every barrier separating the Work Area from the balance of the building or outside.
- D. Modify the system as necessary to successfully demonstrate the above.

3.04 USE OF SYSTEM DURING ABATEMENT OPERATIONS

- A. Start HEPA filtered fan units before beginning work.
- B. Do not begin abatement work or any work deemed contaminated work; such as, but not limited to opening a wall or ceiling space which is contaminated with asbestos fibers; until the operation of the Pressure Differential and Air Circulation System is inspected and approved in writing by the MSA's Consultant.
- C. After abatement work has begun, run units continuously to maintain a constant negative pressure until decontamination of the work area is complete.
- D. Do not turn off units at the end of the work shift or when abatement operations temporarily stop.
- E. Do not shut down system during encapsulating procedures, unless authorized by the MSA's Representative or his designee in writing.
- F. Start abatement work at a location farthest from the exhaust units and proceed toward them.
- G. If an electric power failure occurs, immediately stop all abatement work and do not resume until power is restored and exhaust units are operating again.
- H. At completion of abatement work, allow exhaust units to run as specified under Section 01711, to remove airborne fibers that may have been generated during abatement work and cleanup and to purge the work area with clean makeup air.

3.05 DISMANTLING THE SYSTEM

- A. When a final inspection and the results of final air tests indicate that the area has met the work area clearance criteria of Section 01714, the exhaust units may be removed from the work area.
- B. Before removal from the work area, remove and properly dispose of pre-filter, and seal intake to the machine with 6 mil polyethylene to prevent environmental contamination from the filters. The machine shall be cleaned and wrapped with 6 mil polyethylene prior to removing from the work area.

END OF SECTION 01513

SECTION 01526 - TEMPORARY ENCLOSURES

PART 1 - GENERAL

1.01 SUBMITTALS

- A. Contingency Plans
- B. Strippable Coatings: Product data, safety data sheets
- C. Spray Cement: Product data, safety data sheets
- D. Sheet Plastic: Product data, safety data sheets
- E. Signs: Samples

PART 2 - PRODUCTS

2.01 POLYETHYLENE SHEET

- A. A single polyethylene film in the largest sheet size possible to minimize seams, "true" 6.0 mils thick (not nominal), clear, frosted, or black.
- B. Provide flame resistant polyethylene film for all work to be done where hot pipes or equipment are present or where there is a potential for fire that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame- resistant Textiles and Films.

2.02 SPRAY PLASTIC

- A. Spray plastic which is formulated to adhere to surfaces and peel off cleanly at the completion of the work may be used if approved by the MSA's Field Representative and Consultant.
- B. Damages to finish caused by application or removal of the spray plastic must be repaired and refinished to the satisfaction of the MSA's Field Representative or his designee at no additional cost to the MSA.

2.03 DUCT TAPE

- A. Provide duct tape in 2" to 4" widths as appropriate, with an adhesive which is formulated to aggressively stick to sheet polyethylene and the surface to which it is attached.
- B. Damages to finish caused by application or removal of the duct tape must be repaired and refinished to the satisfaction of the MSA's Field Representative or his designee at no additional cost to the MSA.

2.04 SPRAY ADHESIVE

- A. Provide spray adhesive which is specifically formulated to stick tenaciously to sheet polyethylene.

- B. Damages to finish caused by application or removal of the spray cement must be repaired and refinished to the satisfaction of the MSA's Field Representative or his designee at no additional cost to the MSA.

PART 3 - EXECUTION

3.01 GENERAL

- A. A "work area" is considered contaminated during the work, and must be isolated from the balance of the building, and decontaminated at the completion of the asbestos-control work.
- B. The Contractor will be responsible for deactivation and lock-out of ventilating systems or any other system bringing air into or out of the work area.
- C. Completely Isolate the work area from the outside and other parts of the building by installing critical barriers to prevent asbestos-containing dust or debris from passing beyond the isolated area. If requested by the MSA's Field Representative or his designee, furnish plastic sheeting in black as a visual barrier.
- D. Should the area beyond the work area(s) become contaminated with asbestos-containing dust or debris as a consequence of the work, those areas shall be isolated and cleaned in accordance with the procedures indicated in a contingency plan submitted by the Contractor to the satisfaction of the MSA's Representative or his designee, at no additional cost to MSA.
- E. Place all tools, scaffolding, staging, etc. necessary for the work in the area to be isolated prior to erection of plastic sheeting temporary enclosure.
- F. The Contractor will remove all removable furniture, equipment and supplies that are designated as non-contaminated.
- G. Pre-clean all surfaces in the work area, including, but not limited to floors, walls and immovable or attached furniture, equipment and fixtures and completely cover with two (2) layers of polyethylene sheeting, securely taped in place with duct tape. One layer of polyethylene sheeting shall be secured in place using the above techniques.
- H. Lockout power to Work Area by switching off all breakers serving power or lighting circuits in work area.

3.02 EMERGENCY EXITS

- A. Arrange exit door so that it is secure from outside the Work area but permits exiting from the Work Area.
- B. Mark outline of door on Primary and Critical Barriers with luminescent paint at least 1" wide. Hang a razor knife on a string beside outline. Paint words "EMERGENCY EXIT" inside outline with luminescent paint in letters at least one foot high and 2" thick.
- C. Utilize existing emergency lighting signs, if this can be accomplished in keeping with OSHA lock-out requirements and is approved by the Contractor's licensed electrician.

3.03 CONTROL ACCESS

- A. Isolate the Work Area to prevent entry by unauthorized personnel into Work Area or surrounding controlled areas.

- B. Submit to MSA's Representative or his designee a list of doors and other openings that must be secured to isolate Work Area. Include on list notation if door or opening is in an indicated exit route.
- C. Lock all doors into Work Area, or if doors cannot be locked, chain shut when work is not in progress. Cover any signs that direct emergency exiting to locked doors either outside or inside of Work Area. Provide MSA's Representative or his designee with a minimum of two keys to any locks installed.
- D. Do not obstruct doors required for emergency exits from Work Area or from building.
- E. Construct partitions or closures across any opening into Work Area.
- F. Replace passage sets on doors required for exiting from Work Area with temporary lock sets for duration of the project. Use entry type lock sets that are key lockable from one side and always operable from inside. After meeting release criteria set forth in Section 01714 Work Area Clearance reinstall original passage sets and adjust for proper operation.
- G. Arrange Work Area so that the only access into Work Area is through lockable doors for personnel and equipment decontamination units. If necessary, install temporary doors with entrance type lock sets that are key lockable from the outside and always unlocked and operable from the inside. Do not use dead bolts or padlocks. Provide a minimum of two keys to the MSA's Representative or his designee.
- H. Provide Warning Signs at each locked door leading to Work Area reading as follows:

KEEP OUT

CONSTRUCTION

WORK AREA

PROTECTIVE CLOTHING REQUIRED

BEYOND THIS POINT

- I. Immediately inside door and outside critical barriers post an approximately 20 inch by 14-inch manufactured caution sign displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926:

DANGER

ASBESTOS

CANCER AND LUNG DISEASE HAZARD

RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED

IN THIS AREA

WARNING

HAZARD

NO SMOKING, EATING, OR DRINKING

- J. Provide spacing between respective lines at least equal to the height of the respective upper line.

3.04 RESPIRATORY AND WORKER PROTECTION

- A. Before proceeding beyond this point in providing Temporary Enclosures:
 - 1. Provide Worker Protection per Section 01560
 - 2. Provide Respiratory Protection per Section 01562
 - 3. Provide Personnel Decontamination Unit per Section 01563

3.05 CRITICAL BARRIERS

- A. Completely separate the Work Area from other portions of the building, and the outside by sealing all openings with two securely attached sheet plastic barriers. The closure assembly and materials shall comply with applicable local building and fire codes.
- B. Ventilation openings (supply, return and exhaust grilles; ducts and any other potential leakage points to HVAC systems) and floor drains must be sealed with two (2) independently attached layers for the critical barrier(s).
- C. Seal cracks leading out of Work Area with appropriate temporarily installed material which does not mar any building finish or permanent material, if approved in writing by the MSA's Field Representative or his designee.
- D. Individually seal all lighting fixtures, clocks, speakers, alarm system components (unless otherwise specified), thermostats and other fixed mechanical components with polyethylene sheeting, taped securely in place with duct tape. Ensure lighting circuits are deactivated prior to installation of critical barrier(s) to avoid melting or burning of sheeting.
- E. Maintain seal until all work including Project Decontamination is completed.
- F. Where a sheet plastic wall of a containment is a critical barrier, two independently attached layers of sheet plastic may serve as both the critical barrier and Primary Barrier, if approved by the Consultant.
- G. Where a critical barrier acts as a wall of a containment area, mechanically support sheet plastic independently of duct tape or spray cement so that seals do not support the weight of the plastic, such as with furring strips nailed into masonry joints. If the tape/glue comes loose on any other critical barrier, reinforce with furring strips, if so directed by the Consultant.
- H. Provide pressure differential and air circulation system per Section 01513.

- I. Thoroughly pre-clean all surfaces to which critical barriers or other seals are applied. Where required to properly isolate the work area or if specified in Section 01013, perform surgical removal of asbestos from any surface covered with ACM to which a barrier is to be applied.

3.06 PREPARE AREA

- A. If fixed scaffolding is to be used to provide access, HEPA vacuum and wet clean area prior to scaffolding installation.
- B. Remove or temporarily relocate all electrical and mechanical items, such as lighting fixtures, unit ventilators, clocks, diffusers, registers, escutcheon plates, etc. which cover any part of the surface to be worked on with the work.
- C. Clean, decontaminate and reinstall all such materials, upon completion of all removal work with materials, finishes, and workmanship to match existing installations before start of work.
- D. Clean all surfaces in Work Area with a HEPA filtered vacuum or by wet wiping prior to the installation of primary barrier.

3.07 PRIMARY BARRIER

- A. After Critical Barriers are installed and approved by the consultant, protect building and other surfaces in the Work Area from water damage and asbestos contamination by covering with a primary barrier of polyethylene sheeting. The Primary Barrier is normally **two layers** of independently attached sheet plastic, except as may be otherwise specified in this section.
- B. Cover floors, ceilings, and walls of Work Area, including critical barriers, in a manner which prevents leakage of air or water. Take great care particularly at floor/wall connection areas, turning floor plastic up walls at least 12 inches (forming a sharp right angle bend so the wall attachment will not be pulled loose), or as otherwise approved by the Consultant. Use both spray-glue and duct tape all seams in floor covering. Locate seams in top layer six feet from, or at right angles, to seams in bottom layer. Install sheeting so that top layer can be removed independently of bottom layer. In addition, attach one layer of poly to all ceilings in the work areas.
- C. Cover sheet plastic in areas where movable scaffolding is to be used with a single layer of minimum 1/2" CDX plywood or 1/4" masonite. Wrap edges and corners of each sheet with duct tape or take alternate steps to ensure the floor plastic is not torn. At completion of abatement work, thoroughly decontaminate or dispose of as an asbestos-contaminated waste material. Plywood must have been painted with two coats of paint prior to use to be decontaminated.
- D. Remove and replace plastic sheeting which has been damaged by removal operations or where seal has failed allowing water to seep between layers. Remove affected sheeting and wipe down entire area. Install new sheet plastic only when area is completely dry.

3.08 STOP WORK

- A. If the critical or primary barrier falls or is breached in any manner stop work immediately. Do not recommence work until authorized in writing by the MSA's designated representative.

3.09 EXTENSION OF WORK AREA

- A. If the Critical Barrier is breached in any manner that could allow the passage of asbestos debris or airborne fibers, add affected area to the Work Area, enclose it as required by this Section of the specification, and decontaminate it as described in Section 01711 Project Decontamination.

3.10 SECONDARY BARRIER

- A. Install a secondary layer of plastic as a drop cloth to protect the primary layers from debris generated by the asbestos abatement work as specified in the appropriate work sections.

3.11 EXTERIOR ENCLOSURES

- A. Construct exterior enclosures as necessary to completely enclose the work.
 1. Fabricate from reinforced polyethylene sheeting and wood framework of minimum 2" x 4" dimension.
 2. Attach to existing building components or brace as necessary for stability.
 3. Construct walls to meet all local regulations for construction of temporary buildings.
 4. Construct to resist wind and slope ceiling to permit drainage of rain water.
 5. Exterior enclosures shall be completely separate from other required barriers or protective layers.

3.12 CONTAINMENT APPROVAL

- A. Do not begin abatement work or any work deemed contaminated work; such as, but not limited to opening a wall or ceiling space which is contaminated with asbestos fibers; until the Temporary Enclosure is inspected and approved in writing by MSA's Environmental Consultant.

END OF SECTION 01526

SECTION 01560 - WORKER PROTECTION (HAZMAT)

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Equipment and procedures required for protecting workers against asbestos, lead-based paint and other hazardous exposure.

1.02 RELATED SECTIONS

- A. Section 01562 - Respiratory Protection

1.03 WORKER TRAINING

- A. Train all workers in accordance with 29 CFR 1926 regarding the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures.
- B. All workers and supervisors must be AHERA accredited as described in the AHERA regulation 40 CFR 763 Appendix C to Subpart E, January, 1994. In addition, all supervisors shall have passed a written test given by the AHERA-accredited training facility. In addition, all workers must be licensed in accordance with State of Maryland regulatory requirements.
- C. Provide documentation of State of Maryland approved training and licensing, as required by State asbestos regulations.
- D. Train all workers and supervisors in potential job hazards and safety requirements other than asbestos, including, but not limited to: electrical; heat stress; slips, trips & falls; ladders, scaffolding & working surfaces; fire; power tools; noise; chemical exposures; sanitation; material handling; demolition; housekeeping; first aid; personal protective equipment; signs; etc.
- E. Ensure all training is provided in a language in which each employee is fully fluent. The training provider must teach in this language of fluency; translation by other students is not acceptable.

1.04 MEDICAL EXAMINATIONS

- A. Provide medical examinations for all workers who may encounter an airborne fiber level of 0.1 f/cc or greater for an 8-hour time weighted average.
- B. In the absence of specific airborne fiber exposure data, provide medical examination for all workers who will enter the work area for any reason.
- C. Examination shall at a minimum meet OSHA requirements set forth in 29 CFR 1926.
- D. In addition, provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.

1.05 SUBMITTALS

- A. Submit a valid training certificate for each worker who will work on the project which fully complies with all applicable state and federal regulations.
- B. Submit evidence of training for each worker for other potential job hazards and safety requirements, as outlined in this section.
- C. Submit a completed Certificate of Worker's Acknowledgment for each worker, on the form provided at the back of this section. If any worker is not fluent in English, provide a written translation of this form in that worker's language of fluency and submit the signed, translated copy attached to the English version for any such workers.
- D. Report from Medical Examination conducted within last 12 months as part of compliance with OSHA medical surveillance requirements for each worker who is to enter the work area.
- E. Submit notarized certification signed by an officer of the abatement contracting firm and notarized that exposure measurements, medical surveillance, and worker training records are being kept in conformance with 29 CFR 1926.

PART 2 - EQUIPMENT

2.01 PROTECTIVE CLOTHING

- A. Ensure compliance with 29 CFR 1926.95 – Personal Protective and Life Saving Equipment.
 - 1. Provide disposable total body coveralls with attached hood or separate head covers, impenetrable by asbestos fibers (Tyvek® or equivalent) and in sizes appropriate for all members of the work crew and authorized visitors, and require that all persons in the work area wear them.
 - 2. Provide works boots with non-skid soles, and where required by OSHA, foot protection for all workers. Dispose of boots as asbestos contaminated waste at the end of the work. Disposable foot covers may be provided in lieu of disposing of work shoes where permitted by site conditions.
 - 3. Provide head protection (hard hats) as required by OSHA for all workers, and provide spares for use by others. Thoroughly clean and decontaminate hats before removing them from work area at the end of the work or dispose of them as contaminated waste.
 - 4. Provide eye protection (e.g. safety glasses, goggles, face shield), as required by OSHA, for all workers involved in scraping, spraying, or any other activity which may potentially cause eye injury.
 - 5. Provide work gloves, as required by OSHA, for all workers of various sizes and types, depending on task. Do not remove gloves from work area until disposed of as asbestos contaminated waste.

2.02 ADDITIONAL PROTECTIVE EQUIPMENT

- A. Respirators, disposable coveralls, head covers, and footwear covers shall be provided by the Contractor for site visitors, including the Environmental Consultant, and other authorized representatives who may inspect the job site.
- B. Provide these items in sufficient quantity, such that these persons can properly and safely perform their duties within the contained asbestos work area.

PART 3 - EXECUTION

3.01 GENERAL

- A. Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work.
- B. The following procedures are minimums to be adhered to regardless of fiber count in the work area.
- C. Each time work area is entered remove all street clothes in the Changing Room of the Personnel Decontamination Unit and put on new disposable coverall, new head cover, and a clean respirator.
- D. Proceed through shower room to equipment room and put on work boots.

3.02 DECONTAMINATION PROCEDURES

- A. Require all workers to adhere to the following applicable personal decontamination procedures whenever they leave the work area as a minimum:

3.03 TYPE C SUPPLIED AIR RESPIRATORS:

- A. When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the equipment room, and dispose of as contaminated waste.
- B. Still wearing respirators, proceed to showers. Showering is mandatory, unless noted otherwise.
- C. Thoroughly wet body including hair and face.
- D. With respirator still in place thoroughly wash body, hair, respirator face piece, and all parts of the respirator except the blower unit and battery pack on a PAPR.
- E. Pay particular attention to seal between face and respirator and under straps.
- F. Take a deep breath, hold it and/or exhale slowly, completely wet hair, face, and respirator. While still holding breath, remove respirator and hold it away from face before starting to breathe.
- G. Carefully wash face piece of respirator inside and out.
- H. If using PAPR; shut down in the following sequence, first cap inlets to filter cartridges, then turn off blower unit. Thoroughly wash blower unit and hoses. Carefully wash battery pack with wet rag. Shower as above.
- I. Rinse shower room walls and floor prior to exit.
- J. Proceed from shower to Changing Room and change into street clothes or into new disposable work items.

3.04 AIR PURIFYING-NEGATIVE PRESSURE RESPIRATORS (FULL OR HALF FACE):

- A. When exiting area, remove disposable coveralls, disposable headcovers, and disposable footwear covers or boots in the equipment room, and dispose of as contaminated waste.
- B. Still wearing respirators, proceed to showers. Showering is mandatory, unless noted otherwise.
- C. Thoroughly wet body from neck down.

- D. Wet hair as thoroughly as possible without wetting the respirator filter if using an air purifying type respirator.
- E. Take a deep breath, hold it and/or exhale slowly, complete wetting of hair, thoroughly wetting face, respiratory and filter (air purifying respirator). While still holding breath, remove respirator and hold it away from face before starting to breath.
- F. Dispose of wet filters from air purifying respirator.
- G. Carefully wash facepiece of respirator inside and out. Shower completely with soap and water.
- H. Rinse thoroughly.
- I. Rinse shower room walls and floor prior to exit.
- J. Proceed from shower to Changing Room and change into street clothes or into new disposable work items.

3.05 WITHIN WORK AREA

- A. Require that workers NOT eat, drink, smoke, chew gum, chew tobacco, or apply cosmetics in the work area. To eat, chew, drink or smoke, workers shall follow the decontamination procedure described above and dress in street clothes before entering the non-work areas of the building.

END OF SECTION 01560

SECTION 01562 - RESPIRATORY PROTECTION (HAZMAT)

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Use of respiratory protection appropriate for the fiber level or lead concentration encountered in the work place or as required for other demolition hazards encountered.

1.02 STANDARDS

- A. Where there is a conflict in requirements set forth in these regulations and standards, meet the more stringent requirement.
- B. OSHA - U.S. Department of Labor Occupational Safety and Health Administration, Safety and Health Standards 29 CFR 1910, Section 1001 and Section 134, and 29 CFR 1926 section 1101.
- C. CGA - Compressed Gas Association, Inc., New York, Pamphlet G-7, "Compressed Air for Human Respiration", and Specification G-7.1 "Commodity Specification for Air".
- D. CSA - Canadian Standard Association, Rexdal, Ontario, Standard Z180.1-1978, "Compressed Breathing Air".
- E. ANSI - American National Standard Practices for Respiratory Protection, ANSI Z88.2-1992.
- F. NIOSH - National Institute for Occupational Safety and Health
- G. MSHA - Mine Safety and Health Administration

1.03 TRAINING

- A. Comply with OSHA 29 CFR 1910.134 – Respiratory Protection.
- B. Instruct and train each worker involved in ACM abatement in proper respirator use. Each worker must wear a respirator, properly fitted, from the start of an operation potentially containing ACM. Use respiratory protection appropriate for the fiber level encountered in the work place or as required for other toxic or oxygen-deficient situations.

1.04 SUBMITTALS

- A. Manufacturer's product information for each component used, including NIOSH Certifications for each component in an assembly and/or for entire assembly.
- B. When a Type "C" supplied air respiratory system is required by the work, submit drawing showing assembly of components into a complete supplied air respiratory system. Include diagram showing location of compressor, filter banks, backup air supply tanks, hose line connections in work area(s), routing of airlines to work area(s) from compressor.
- C. Level of respiratory protection intended for each operation required by the project.
- D. Airborne asbestos fiber count data to substantiate selection of respiratory protection proposed, both historical and as performed for this particular project.

- E. Respiratory Protection Program (RPP) manual including written approval from an industrial hygienist in accordance with 29 CFR 1910.134.
- F. Daily OSHA monitoring results
- G. Worker Fit Testing Documentation for each individual required to don a respirator.

1.05 AIR QUALITY FOR SUPPLIED AIR RESPIRATORY SYSTEMS

- A. Provide air used for breathing in Type "C" supplied air respiratory systems that meets or exceeds standards set for C.G.A. type 1 (Gaseous Air) Grade D.

PART 2 - EQUIPMENT

Provide workers with fit tested respirators equipped with HEPA filters approved by NIOSH to be worn in the designated work area and/or whenever a potential exposure to ACM exists. Provide sufficient filters for replacement as required by the workers or applicable regulations. Do not use disposable respirators.

2.01 AIR PURIFYING RESPIRATORS

- A. Half face or full face type respirators.
- B. Equip full-face respirators with a nose cup or other anti-fogging device.
- C. P100 type filters labeled with NIOSH Certification for "Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos-Containing Dusts and Mists" and color coded in accordance with ANSI Z228.2 (1992).
- D. A chemical cartridge section may be added, if required, for solvents, etc., in use. In this case, provide cartridges that have each section of the combination canister labeled with the appropriate color code and NIOSH Certification.
- E. Utilize Powered Air Purifying Respirators (PAPR), where indicated by exposure levels (or supplied air system) or requested by any employee.

2.02 SUPPLIED AIR RESPIRATOR SYSTEMS

- A. Provide equipment capable of producing air of the quality and volume required by the above referenced standards applied to the job site conditions and crew size.
- B. Full face piece and hose by same manufacturer that has been certified by NIOSH/MSHA as an approved Type "C" respirator assembly providing Grade D air and operating in pressure demand mode with an auxiliary back-up system.
- C. In atmospheres which contain sufficient oxygen (greater than or equal to 19.5% oxygen) provide a pressure-demand full-face piece supplied air respirator equipped with an emergency back up P100 filter.
- D. In atmospheres which are oxygen deficient (less than 19.5% oxygen) provide a pressure-demand full face piece self-contained breathing apparatus (SCBA).

NOTE: DO NOT ALLOW ANYONE TO ENTER OXYGEN DEFICIENT ATMOSPHERES WITHOUT SPECIFIC WRITTEN PERMISSION OF THE MSA'S REPRESENTATIVE OR HIS DESIGNEE, EXCEPT FOR EMERGENCIES. }

- E. Provide a reservoir of compressed air located outside the work area which will automatically maintain a continuous uninterrupted source of air automatically available to each connected face piece and hose assembly in the event of compressor shutdown, contamination of air delivered by compressor, power loss or other failure. Provide sufficient capacity in the back-up air supply to allow a minimum escape time of one-half hour times the number of connections available to the work area.
- F. Provide a warning device that will operate independently of the main power supply. Locate so that alarm is clearly audible above the noise level produced by equipment and work procedures in use, in all parts of the work area and at the compressor. Perform field test with all equipment running, prior to beginning abatement, to ensure audibility. Connect alarm to warn of:
 - 1. Compressor shut down or other fault requiring use of backup air supply,
 - 2. Carbon Monoxide (CO) levels in excess of 5 PPM/V.
- G. Interconnect monitors, alarms and compressor so that compressor is automatically shut down and the alarms sounded if any of the following occur:
 - 1. Carbon Monoxide (CO) concentrations exceed 5 PPM/v in the air line between the filter bank and backup air supply.
 - 2. Compressor temperature exceeds normal operating range.
- H. Provide a compressor driven by an electric motor. Insure that electrical supply available at the work site is adequate to energize motor.
- I. Locate compressor outside of building in location that will not impede access to the building, and that will not cause a nuisance by virtue of noise or fumes.
- J. Locate air intake remotely from any source of automobile or other engine exhaust or any other source of toxic or irritating gases, vapors, fumes, dust, etc.
- K. Provide an after cooler at entry to filter system which is capable of reducing temperatures to outside ambient air temperatures.
- L. Configure system to permit the recharging of 1/2 hour 2260 PSI SCBA cylinders, if utilized.

PART 3 - EXECUTION

3.01 GENERAL

- A. Comply with ANSI Z88.2 -1992 (or more current edition, if published) "Practices for Respiratory Protection" and OSHA 29 CFR 1910 and 1926.
- B. Require that respiratory protection is used at all times when there is any possibility of disturbance of asbestos-containing materials or when there is any possibility of the disturbance of asbestos in excess of OSHA's exposure limits.
- C. At a minimum, an air purifying respirator with a tight-fitting "rubber" face-piece and P100 cartridges shall be used whenever friable asbestos containing materials are present, but work activities will not disturb the asbestos.
- D. At a minimum, a half-face, negative-pressure air purifying respirator with a tight fitting face-piece and P100 cartridges or higher level respirator devices, shall be used whenever asbestos containing materials will be disturbed. Half-face, negative-pressure air purifying respirators shall be used from the time asbestos containing materials are disturbed until clearance has been achieved.

- E. Require that a respirator be worn by anyone in a work area at all times, regardless of activity.

3.02 FIT TESTING

- A. Provide initial fitting of respiratory protection during a respiratory protection course of training set up and administered by a qualified Industrial Hygienist.
- B. Fit types of respirator to be actually worn by each individual.
- C. Allow an individual to use only those respirators for which he has been trained and fit.
- D. On at least a monthly basis, check the fit of each worker's respirator by having irritant smoke blown onto the respirator from a smoke tube according to the Protocol in CFR 1926.1101, or preferably, with a quantitative fit testing device.
- E. Each time an air-purifying respirator is put on, it must be checked for fit with a positive and negative pressure fit test in accordance with the manufacturer's instructions or ANSI Z88.2 (1992).
- F. All fit testing shall be done in accordance with 29 CFR 1910.134.

3.03 TYPE OF RESPIRATORY PROTECTION REQUIRED

- A. Type "C" Supplied air respirators will be required during abatement or work conducted in oxygen deficient environments as provided in this section.
- B. Respiratory protection which supplies an airborne fiber level inside the respirator, at the breathing zone of the wearer, at or below 0.01 f/cc is the minimum level of protection allowed. The minimum respiratory protection required shall be a half face air-purifying respirator as defined in this Section.

3.04 PERMISSIBLE EXPOSURE LIMIT (PEL)

- A. Asbestos
 1. 8-Hour Time Weighted Average (TWA) of asbestos fibers to which any worker may be exposed shall not exceed the current OSHA PEL or the Contractor's internal standard, whichever is more stringent.
 2. For the purpose of determining respirator type, protection factors shall be applied to a maximum concentration of 0.01 f/cc inside the mask, so that the maximum use concentration for a half-face negative pressure respirator shall be 0.1 f/cc and for a PAPR shall be 0.5 f/cc, for example.
 3. Fibers are defined as all fibers regardless of composition as counted in the NIOSH 7400 procedure, or asbestos fibers of any size as counted using either a scanning or phase contrast microscope.
- B. Perform sufficient personal air monitoring on employees during this project to accurately determine both TWA and short-term exposures to asbestos and other contaminants which might be encountered so that OSHA compliance can be demonstrated and so that employees can be adequately protected from harmful exposures.

3.05 RESPIRATORY PROTECTION FACTOR

<u>Respiratory Type</u>	<u>Protection Factor</u>
Air purifying: Negative pressure respirator High efficiency filter Half facepiece	10
Air purifying: Negative pressure respirator High efficiency filter Full facepiece	50
Powered-air purifying (PAPR): Positive pressure respirator High efficiency filter Full facepiece	100
Supplied air: Positive pressure respirator Continuous-flow Half or full facepiece	100
Type C supplied air: Positive pressure respirator Pressure demand mode Full facepiece	1,000
Type C supplied air: Positive pressure respirator Pressure demand mode Full facepiece Equipped with an auxiliary pressure demand Self-contained breathing apparatus (SCBA)	10,000
Self-contained breathing apparatus (SCBA): Pressure demand mode Full-face piece	10,000

3.06 NEGATIVE PRESSURE RESPIRATORS - HALF OR FULL FACE MASK:

- A. Supply a sufficient quantity of respirator filters approved for asbestos, so that workers can change filters during the workday.
- B. Require that respirators be wet-rinsed, and filters discarded, each time a worker leaves the work area.
- C. Store respirators and filters at the job site in a clean environment and protect totally from exposure to asbestos when not in use.
- D. Ensure that if any chemical cartridge or combination cartridge is utilized, air monitoring has been performed to ensure the adequacy of protection factors. Utilize only full-facepiece respirators for chemical exposures, which can cause eye irritation.

3.07 POWERED AIR PURIFYING - HALF OR FULL FACE MASK:

- A. Supply a sufficient quantity of high efficiency respirator filters approved for asbestos so that workers can change filters any time that flow through the face piece decreases to the level at which the manufacturer recommends filter replacement. Ensure each employee with a PAPR has readily available and uses a flow-measuring device, as supplied by the manufacturer, to assist in determining adequacy of flow, if such a device is recommended by the manufacturer.
- B. Require that HEPA elements in filter cartridges be protected from wetting during showering.
- C. Require entire exterior housing of respirator including blower unit, filter cartridges, hoses, battery pack, facemask, belt, and cords to be washed each time a worker leaves the work area.
- D. Caution should be used to avoid shorting battery pack during washing. Provide an extra battery pack for each respirator so that one can be charging while one is in use. Require employees to properly exit the work area immediately, if PAPR flow decreases due to low battery or any other purpose, and not to re-enter until the cause of decreased flow is determined and remedied.

3.08 TYPE "C" RESPIRATOR

- A. Continuously monitor the air system operation including compressor operation, filter system operation, backup air capacity and all warning and monitoring devices at all times that system is in operation.
- B. Assign an individual, trained by manufacturer of the equipment in use or by a Certified Industrial Hygienist, in the operation and maintenance of the system to provide this monitoring.

3.09 RESPIRATORY PROTECTION PROGRAM

- A. If requested by the MSA's Field Representative or his designee, submit a Respiratory Protection Program, indicating type of respiratory protection proposed for each portion of the work.
- B. Demonstrate to the MSA's Consultant compliance with the program and/or any requirements herein, at any time requested.

END OF SECTION 01562

SECTION 01563 - DECONTAMINATION UNITS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Personnel and equipment decontamination facilities.
- B. Personnel Decontamination Unit as the only means of ingress and egress for the work area.
- C. Materials exit the work area through the Equipment Decontamination Unit.

PART 2 - PRODUCTS

2.01 PLASTIC SHEET AND ACCESSORIES

- A. Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, 6.0 mils thick, as indicated, clear, frosted, or black as indicated.
- B. Where plastic sheet is the only separation between the work area and building exterior, provide translucent, nylon reinforced, laminated, flame resistant, polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6.0 mils thick as indicated, frosted or black as indicated.
- C. Duct tape in 2" or 3" widths as appropriate, with an adhesive, which is formulated to aggressively stick to sheet polyethylene.
- D. Spray adhesive, which is specifically formulated to stick tenaciously to sheet polyethylene.

2.02 SHOWER

- A. One-piece waterproof shower pan, with rigid, impervious, waterproof walls. Structurally support as necessary for stability.
- B. Factory made showerhead producing a spray of water, which can be adjusted for spray size and intensity. Arrange so that control of water temperature, flow rate, and shut off is from inside shower.
- C. Cascaded filter units on drain lines from showers with disposable filter elements as indicated below.
 - 1. Primary Filter - Pass no particles larger than 20 microns
 - 2. Secondary Filter - Pass no particles larger than 1 micron
- D. Heavy bronze angle type hose bib with wheel handle, vacuum breaker, and 3/4" National Standard male hose outlet.

2.03 SUMP PUMP

- A. Provide totally submersible waterproof sump pump with integral float switch and proper size for application. Provide unit capable of pumping debris, sand, plaster or other materials washed off during decontamination procedures without damage to mechanism of pump.

PART 3 - EXECUTION

3.01 PERSONNEL DECONTAMINATION UNIT

- A. A serial arrangement of connected rooms or spaces, Changing Room, Drying Room, Shower Room, Equipment Room, that all persons pass through for entry into and exiting from the work area for any purpose.
- B. Provide temporary lighting within decontamination units as necessary to reach a lighting level of 100-foot candles.

3.02 CHANGING ROOM (CLEAN ROOM)

- A. Physically and visually separated from the rest of the building for the purpose of changing into protective clothing.
- B. Construct using polyethylene sheeting, at least 6-mil in thickness, to provide an airtight seal between the Changing Room and the rest of the building.
- C. Locate so that access to Work Area from Changing Room is through Shower Room.
- D. Separate Changing room from the building by a two-sheet polyethylene flapped doorway.
- E. Do not allow asbestos contaminated items to enter this room. Require Workers to enter this room either from outside the area dressed in street clothes, or naked from the showers.
- F. An existing room may be utilized as the Changing Room if it is suitably located and approved by the MSA's Field Representative or his designee. Protect all surfaces of room with sheet plastic.
- G. Maintain changing room dry and clean at all times. Do not allow overflow water from shower to wet floor in changing room.
- H. Damp wipe all surfaces twice after each shift change, or more often if indicated or requested by the MSA's Representative, with a disinfectant solution.
- I. Provide a continuously adequate supply of disposable bath towels.
- J. Post information for all emergency phone numbers and procedures.
- K. Provide 1 storage locker per employee.

3.03 DRYING ROOM

- A. A place for workers to dry after showering.
- B. Arrange so floor drains to shower room.
- C. Separate from the rest of the building with airtight walls of 6-mil polyethylene.
- D. Separate from change room with a sheet plastic flapped doorway.

3.04 SHOWER ROOM

- A. A completely water tight operational shower to be used for transit by cleanly dressed workers heading for the Work Area from the Changing Room, or for showering by workers headed out of the Work Area after undressing in the Equipment Room.

- B. Separate this room from the rest of the building with airtight walls fabricated of 6-mil polyethylene.
- C. Separate this room from the Changing and Equipment Rooms with airtight walls fabricated of 6-mil polyethylene.
- D. Provide splash proof entrances to Changing and Equipment Rooms with 2 doors.
- E. Arrange so that water from showering does not splash into the Changing or Equipment Rooms.
- F. Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance.
- G. Pump waste water to drain or to storage for use in amended water. If pumped to drain, provide 20-micron and 1-micron wastewater filters in line to drain. Change filters daily or more often if necessary. Ensure water never accumulates to the level where employees showering are standing in water, which has not been pumped from the sump.

3.05 EQUIPMENT ROOM

- A. Work equipment, footwear and additional contaminated work clothing to be left here. This is a change and transit area for workers.
- B. Separate this room from the work area by a 6-mil polyethylene flap doorway.
- C. Separate this room from the rest of the building with airtight walls fabricated of two separate layers 6 mil polyethylene.
- D. Separate this room from the Shower Room with airtight walls fabricated of two separate layers 6 mil polyethylene.

3.06 WORK AREA

- A. Separate work area from the Equipment Room by polyethylene barriers.
- B. If the airborne asbestos level in the work area is expected to be high, add an intermediate cleaning space between the Equipment room and the Work area.
- C. Damp wipe clean all surfaces after each shift change.
- D. Repair and replace damaged floor sections as required.

3.07 CONSTRUCTION OF DECONTAMINATION UNIT

- A. Air tight walls and ceiling using polyethylene sheeting, at least 6-mil in thickness. Attach to existing building components or a temporary framework.
- B. Use 2 layers (minimum) of 6-mil, polyethylene sheeting to cover floors in the Equipment, Shower (underneath shower pan), and Changing Rooms.
- C. Provide an additional layer in the Equipment Room for every shift change expected.
- D. Roll one layer of plastic from Equipment Room into Work Area after each shift change. Provide a minimum of two (2) layers of plastic at all times. Use only clear plastic to cover floors.
- E. Fabricate doors from overlapping sheets with openings a minimum of three feet (3') wide. Configure so that sheeting overlaps adjacent surfaces. Weight sheets at bottoms as required so

that they quickly close after being released. Put arrows on sheets to indicate direction of overlap and/or travel.

- F. If the decontamination area is located within an area containing friable asbestos on overhead ceilings, ducts, piping, etc., provide the area with a minimum 1/2-inch plywood "ceiling" with polyethylene sheeting, at least 4-mil in thickness covering the top of the "ceiling".
- G. Visual barriers of opaque polyethylene sheeting at least 4-mil in thickness so that work privacy is maintained and work procedures are not visible.
- H. Where the area adjacent to the decontamination area is accessible to the public, construct a solid barrier on the public side of the sheeting to protect the sheeting. Construct barrier with wood or metal studs covered with minimum 1/2-inch plywood. Where the solid barrier is provided, sheeting need not be opaque.
- I. Provide sub-panel at Changing Room to accommodate all removal equipment. Power sub-panel directly from a building electrical panel. Connect all electrical branch circuits in decontamination unit and particularly any pumps in shower room to a ground-fault circuit protection device.

3.08 DECONTAMINATION SEQUENCE

- A. Before leaving the work area, remove all gross contamination and debris from overalls and feet.
- B. Proceed to the Equipment Room and remove all clothing except respiratory protection equipment. Disposable coveralls are placed in a bag for disposal with other material.
- C. Decontamination procedures found in Section 01560 shall be followed by all individuals leaving the work area.
- D. After showering, the worker moves to the Changing Room and dresses in either new coveralls for another entry or street clothes if leaving.

3.09 EQUIPMENT DECONTAMINATION UNITS

- A. A serial arrangement of rooms, Clean Room, Holding Room, Wash Room constructed with 6-mil polyethylene sheeting, supported as necessary for removal of equipment and material from work area, not personnel.
- B. Provide a wash down station located in the washroom as an equipment, bag and container cleaning station. Utilize hose or sprayer with a catch basin or enclosed shower such that wash water does not leak onto the plastic sheeting on the floor. Pump all wash water through a serial arrangement of 20 and 1-micron filters.
- C. Provide washroom for cleaning of bagged or containerized asbestos-containing waste materials passed from the work area after being wiped clean can be passed to the Holding Room. Separate this room from the work area by a single flap of 6-mil polyethylene sheeting.
- D. Provide Holding Room as a drop location for bagged asbestos-containing materials passed from the Wash Room located so that bagged materials cannot be passed from the Wash Room through the Holding Room to the Clean Room. Separate this room from the adjacent rooms by double flaps fabricated from 6-mil polyethylene.
- E. Provide Clean Room to isolate the Holding room from the building exterior. Separate this room from the exterior by a single flap of 6-mil polyethylene sheeting.

3.10 EQUIPMENT DECONTAMINATION SEQUENCE

- A. At wash down station, thoroughly wet-clean contaminated equipment or sealed polyethylene bags and pass into Wash Room.
- B. When passing equipment or containers into the Wash Room, close all doorways of the Equipment Decontamination Unit, other than the doorway between the Wash Down Station and the Wash Room.
- C. Wet-clean the bags and/or equipment.
- D. Pass items into Holding Room. Close all doorways except the doorway between the Holding Room and the Clean Room.
- E. Workers from the building exterior enter Holding Area and remove decontaminated equipment and/or containers for disposal.
- F. Require these workers to wear full protective clothing and appropriate respiratory protection.
- G. At no time is a worker from an uncontaminated area to enter the enclosure when a removal worker is inside.

3.11 CLEANING OF DECONTAMINATION UNITS

- A. Clean debris and residue from inside of Decontamination Units on a daily basis.
- B. Damp wipe all surfaces after each shift change.
- C. If the Changing Room of the Personnel Decontamination Unit becomes contaminated with asbestos-containing debris, abandon the entire decontamination unit and erect a new decontamination unit. Use the former Changing Room as an inner section of the new Equipment Room.

3.12 SIGNS

- A. Post an approximately 20-inch by 14-inch manufactured caution sign at each entrance to the work area as required by 29 CFR 1926.
- B. Post an approximately 10-inch by 14-inch manufactured sign at each entrance to each work area displaying the following legend:

LEGEND

No Food, Beverages or Tobacco Permitted

All Persons Shall Don Protective

Clothing (Coverings) Before

Entering the Work Area

All Persons Shall Shower Immediately

After Leaving Work Area and Before
Entering the Changing Area
Asbestos Work Area

END OF SECTION 01563

SECTION 01711 - PROJECT DECONTAMINATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Cleaning of the primary barrier plastic prior to its removal.
- B. Cleaning of the room surfaces to remove any new or existing contamination.
- C. Operation of the pressure differential and air circulation system to remove airborne fibers.
- D. Project closeout procedures.

1.02 RELATED SECTIONS

- A. Section 02081 Removal of Asbestos Containing Materials
- B. Section 01714 Work Area Clearance

1.03 SUBMITTALS

- A. Evidence of suitability and compatibility of encapsulants with proposed finish materials.
- B. Certification of Visual Inspection (form follows this section).

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 GENERAL

- A. Work of this section includes the decontamination of air in the Work Area, which has been, or may have been contaminated by the elevated airborne asbestos fiber levels generated during abatement activities.
- B. Cleaning, decontamination, and removal of temporary facilities installed prior to abatement work.
- C. Cleaning, and decontamination of all surfaces (ceiling, walls, floor) of the Work Area, and all furniture or equipment in the Work Area.

3.02 PRIMARY BARRIER CLEANING

- A. Carry out a first cleaning of all surfaces of the work area including items of remaining sheeting, tools, scaffolding and/or staging by use of damp-cleaning and mopping, and a High Efficiency Particulate Air (HEPA) filtered vacuum. (Note: A HEPA vacuum will fail if used with wet material.)
- B. Do not perform dry dusting or dry sweeping.
- C. Use each surface of a cleaning cloth one time only and then dispose of as contaminated waste.
- D. Continue this cleaning until there is no visible debris from removed materials or residue on plastic sheeting or other surfaces.

- E. Utilize leaf blower in all portions of the work area, in the same manner as if performing aggressive air sampling, to dislodge any asbestos particles, which may not have yet been cleaned.
- F. Perform cleaning by methods described above to clean any asbestos, which has been dislodged by leaf blower.
- G. Wait two hours to allow the HEPA filtered fan units to clean air and remove airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of work areas during this period.
- H. Maintain pressure differential and air circulation system in operation for the entire two-hour period.
- I. Have the MSA's Consultant visually inspect the work area to approve initial cleaning efforts.
- J. Remove outer layer of primary barrier sheet plastic and clean inner layer as needed, until no visible residue remains and cleaning is approved by the MSA's Consultant.
- K. As soon as the MSA's Consultant approves cleaning of the inner layer of primary barrier sheet plastic, spray with lockdown encapsulant. Take care spraying encapsulant to ensure it does not leak behind barriers or otherwise mar surfaces. Allow sufficient time for encapsulant to fully dry and then remove all remaining primary barrier sheeting, leaving only the critical barriers, decontamination units and fully operational pressure differential and air circulation system.
- L. Removal all filters in air handling system(s) and dispose of as asbestos-containing waste in accordance with requirements of Section 02084.

3.03 FINAL CLEANING

- A. Carry out a final cleaning of all surfaces in the work area in the same manner as the first cleaning immediately after removal of primary barrier layers. This cleaning is being applied to existing room surfaces and critical barriers. Critical barriers shall remain intact and shall be repaired as necessary or at the direction of the MSA's Representative.
- B. At the completion of cleaning of all surfaces except carpeting, HEPA vacuum carpeting designated to remain in work areas. Use a passive (non-power brush type) floor attachment with rubber floor seals and adjustable above-floor height.
- C. Wait two hours to allow HEPA filtered fan units to clean air and remove airborne asbestos fibers. Use oscillating fans as necessary to assure circulation of air in all parts of work areas during this period. Maintain pressure differential and air circulation system in operation for the entire two-hour period.

3.04 VISUAL INSPECTION

- A. After two hours the MSA's Consultant will Perform a Complete Visual Inspection of the entire work area including: decontamination unit, all plastic sheeting, seals over ventilation openings, doorways, windows, and other openings; look for debris from any sources, residue on surfaces, dust or other matter. If deemed necessary by the MSA's Consultant, utilize a leaf blower (provided by the Contractor) during this inspection process to see if any dust is dislodged.
- B. If any such debris, residue, dust or other matter is found repeat final cleaning and continue decontamination procedure from that point, until visual inspection is approved by the MSA's Consultant.

- C. When the visual inspection is approved by the MSA's Consultant MSA's Consultant, the Asbestos Abatement Contractor shall complete the "Asbestos Abatement Contractor Certification" at the top of the Certification of Visual Inspection, the form for which follows this section.

3.05 FINAL AIR SAMPLING

- A. After the work area is found to be visually clean, air samples will be taken and analyzed in accordance with Phase Contrast Microscopy (PCM) or set forth in Section 01714.
- B. If Release Criteria is not met, repeat Final Cleaning and continue decontamination procedure from that point.
- C. If Release Criteria is met, proceed with completion of the Work.

3.06 COMPLETION OF ABATEMENT WORK

- A. Shutdown and remove the Pressure Differential and Air Circulation System. Seal HEPA filtered fan units with 6-mil polyethylene sheet and duct tape to form a tight seal at intake end before being moved from work area.
- B. Remove all critical barriers and critical barrier sheeting.
- C. Remove decontamination units.
- D. Remove all equipment, materials, and debris from the work site.
- E. Dispose of all asbestos containing waste material as specified in Section 02084 and provide receipts and chain of custody forms documenting proper disposal.
- F. Re-inspect all surfaces and finishes and re-clean as needed to remove all signs of stains, water marks, duct tape residue, smudges, smears and other visible marks. All interior finishes and surfaces shall be left in a condition suitable for application of wax or polish by the MSA. Glass surfaces shall be left sparkling clean.

3.07 PROJECT CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected and that Work is completed in accordance with the Contract Documents and ready for inspection by the MSA's Representative or his designee.
- B. Remove all temporary facilities, tools and accessories installed for the project and restore to original condition all permanent facilities used as temporary facilities.
- C. Obtain and submit releases enabling MSA's full unrestricted use of the site and access to services and utilities.
- D. Submit specific warranties, bonds and guarantees.
- E. Complete final cleaning requirements.
- F. Conduct a final inspection with the MSA's Consultant, MSA's Representative or his designee and Contractor's Representatives to examine condition of remaining surfaces.

3.08 FINAL CLEANING

- A. Provide final cleaning of the Work at the time indicated.
- B. Complete all cleaning operations before requesting inspection by the MSA's representative or his designee for certification of substantial completion.
- C. Remove exposed labels in finished spaces which are not required as permanent labels on materials supplied as part of the work, except for "Asbestos", "Asbestos Free", or Thermal Insulation Labels specified elsewhere.
- D. Clean exposed hard-surfaced finishes affected by the work, to a dirt-free condition, free of dust, stains, films and similar distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
- E. Clean project site (yard and grounds), including landscaped areas, of litter and foreign substances left during the course of the work. Sweep paved areas, which have been affected by the work to a broom-clean condition; remove stains, petrochemical spills and other foreign deposits left by the work. Rake grounds, which are neither planted nor paved, to a smooth, even-textured surface where they have been disturbed by the work.
- F. Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at the site. Do not bury debris or excess materials on the MSA's property. Do not discharge volatile or other harmful or dangerous materials into drainage systems, onto ground or otherwise release at or onto MSA's property.

CERTIFICATION OF VISUAL INSPECTION

Asbestos Abatement Contractor Certification

In accordance with Section 01711 - Project Decontamination, the undersigned employee of the Asbestos Abatement Contractor hereby certifies that he has visually inspected the Work Area (all surfaces including pipes, beams, ledges, walls, ceiling and floor, Decontamination Unit, sheet plastic, etc.) and has found no dust, debris or residue.

By: (Signature)_____ Date_____

(Print Name)_____

(Print Title)_____

(Print Company Name)_____

Consultant's Certification

The undersigned employee of the Environmental Consultant hereby certifies that he has accompanied the Asbestos Abatement Contractor on his visual inspection and verifies that this inspection has been thorough and to the best of his knowledge and belief, the Asbestos Abatement Contractor's Certification above is a true and honest one.

By: (Signature)_____ Date_____

(Print Name)_____

(Print Title)_____

(Print Company Name)_____

END OF SECTION 01711

SECTION 01714 - WORK AREA CLEARANCE (HAZMAT)

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section describes work performed by MSA's Environmental Consultant to measure post-abatement fiber levels.

1.02 CONTRACTOR RELEASE CRITERIA

- A. The Work is Complete when the work area has passed Visual Inspection and airborne fiber levels have been reduced to the level specified in this Section.

1.03 AIR MONITORING

- A. To determine if the elevated airborne fiber counts encountered during abatement operations have been reduced to the specified level, the MSA's Industrial Hygiene Services Contractor will secure samples and analyze them according to the following procedures.
- B. Fibers Counted: "Fibers" referred to in this section shall be either all fibers regardless of composition as counted in the NIOSH 7400, or asbestos fibers of any size as counted using a Phase Contrast Microscope.

1.04 AGGRESSIVE SAMPLING (IF NEEDED)

- A. Before sampling pumps are started the exhaust from forced air equipment (such as a leaf blower with at least 1 horsepower electric motor) will be swept against all walls, ceilings, floors, ledges and other surfaces in the room. This procedure will be continued for 5 minutes per 10,000 cubic feet of work area volume.
- B. One 20-inch diameter fan per 10,000 cubic feet of room volume will be mounted in a central location, directed toward ceiling and operated at low speed for the entire period of sample collection.
- C. Air samples will be collected in areas subject to normal air circulation away from room corners, obstructed locations, and sites near windows, doors or vents.
- D. After air-sampling pumps have been shut off, fans will be shut off.

1.05 SCHEDULE OF AIR SAMPLES

- A. The number and volume of air samples taken and analytical methods used by the MSA's Industrial Hygiene Services Contractor will be in accordance with one of the following schedules in compliance with State and Federal regulations. Sample volumes given may vary depending upon the analytical instruments used.

1.06 PHASE CONTRAST MICROSCOPY (PCM)

- A. In each homogenous work area to be cleared by PCM, after completion of all cleaning work, a minimum of 7 samples will be taken and analyzed as follows:

Location Sampled	Number of Samples	Filter Media	Acceptable Levels (fibers/cc)	Rate (LPM)	Minimum Air Volume
Each work area	5 ¹	0.8 MCE	<0.01	2 - 10	1,200
Field blank	2 or 10%	0.8 MCE	3 fibers/100 fields ²	N/A	N/A

¹ Or 1 sample per room, or 1 sample per 5,000 ft² of floor area, or 1 sample for every 50,000 cubic feet, whichever will result in the most number of samples.

² If this is exceeded, the analysis will cease and new samples will be collected.

- B. Fibers on each filter will be counted and measured using the NIOSH Method 7400 procedures. If counted in the field, the microscopist as well as the Contractor's CIH shall be rated board "Approved" and "Acceptable" in the Asbestos Analysts Registry (AAR) program, administered by the American Industrial Hygiene Association (AIHA). If counted in a laboratory, the laboratory shall be "Approved" and the analyst shall also be AAR "Acceptable" and the laboratory shall be accredited for asbestos by AIHA. The microscopist may also participate in Proficiency Analytical Testing (PAT) rounds through the Industrial Hygiene Services Contractor's company.
- C. One work area sample will be split and both halves analyzed separately for duplicate analysis.
- D. Decontamination of the work site is complete when every work area sample is below the applicable Acceptance Level. If any sample is above the Acceptance Level, then the decontamination is incomplete and recleaning is required.

1.07 PHASE CONTRAST MICROSCOPY (PCM)

- A. In each homogenous work area to be cleared by PCM (as shown in Section 01013), after completion of all cleaning work, a minimum of 13 samples will be taken and analyzed as follows:

Location Sampled	Number of Samples	Filter Media (Structures/cc)	Acceptable Level	Rate (LPM)	Minimum Air Volume
Each Work Area	5 ¹	0.45 MCE	<0.01	2 -10	2,000
Outside Each Work Area	5 ²	0.45 MCE	Z - Test	2 -10	2,000
Work Area Blank	1	0.45 MCE			
Outside Blank	1	0.45 MCE			
Laboratory Blank	1	0.45 MCE			

¹ or 1 sample per 1,000 ft² of contained floor area (except 1 per 2,000 ft² in rooms > 5,000 ft²), whichever requires more samples.

² outside work area samples shall be taken as follows: 1) two at the entrance to the decontamination chamber, representing make-up air, 2) two outside the building, and 3) one at another location inside the building, determined by the MSA's Industrial Hygiene services contractor. Prior to taking these samples, the I. H. services contractor shall inspect the vicinity to ensure that neither the activities of the abatement contractor, nor other ACM in the building, are expected to create ambient fiber levels, which would be detected on these samples.

- B. Analysis will be performed using the method set forth in the AHERA Regulation 40 CFR Part 763 Appendix A. The laboratory performing the analyses shall have current Accreditation for Airborne Asbestos Fiber Analysis through the National Voluntary Laboratory Accreditation Program (NVLAP), administered by the National Institute of Standards and Technology (NIST).
- C. Asbestos structures referred to in this Section include asbestos fibers, bundles, clusters or matrices, as defined by method of analysis.
- D. Release Criteria: Decontamination of the work site is complete when one of the following two sets of conditions are met. Utilization of condition 2 (Z-test) will be only if, in the written judgments of the CIH of the Industrial Hygiene Services Contractor, it is necessary due to knowledge or reasonable suspicion that ambient air entering the work area through the decontamination chamber is > 0.01 s/cc for reasons unrelated to the actions of the abatement Contractor.
 - 1. Work Area Samples meet acceptance criteria

- a. All Work Area sample volumes are greater than 2,000 liters for a 25 mm sampling cassette.
 - b. The average concentration of asbestos on the Work Area Samples does not exceed the acceptance criteria of 70 structures per squared millimeter of air sampled.
2. Work Area Samples are not statistically different from outside samples
- a. All sample volumes except for blanks are greater than 2,000 liters for a 25 mm sampling cassette.
 - b. The average asbestos concentration of the three blanks is below the filter background level of 70 structures per square millimeter of filter area.
 - c. The Industrial Hygiene Services Contractor has determined that neither abatement contractor activities nor remaining ACM in other portions of the building are expected to be detected on the outside work area samples and average asbestos concentrations in Work Area Samples are not statistically different from Outside samples, as determined by the Z-test calculation found in 40 CFR Part 763, Subpart E, Appendix A (Z is less than or equal to 1.65)
 - d. If these conditions are not met, then the decontamination is incomplete and the cleaning procedures of Section 01711 shall be repeated.
- E. If the arithmetic mean (average) asbestos concentration on the blank filters exceeds 70 structures per square millimeter of filter area the analysis will cease and new samples will be collected.

1.08 FAILED CLEARANCE TESTS

- A. If the release criteria is not met and the area must be recleaned and retested the Contractor will be responsible for cost of retesting.

1.09 PHASE CONTRAST MICROSCOPY

- A. The services of a testing laboratory will be employed by the Contractor to perform laboratory analysis of the air samples.
- B. A technician will be at the job site with a microscope so that verbal reports on air samples can be obtained within two (2) hours.
- C. A complete record, certified by the testing laboratory, of all air monitoring tests and results will be furnished to the Contractor and a copy delivered to the Environmental Consultant.

1.10 PHASE CONTRAST MICROSCOPY

- A. The services of a testing laboratory will be employed by the Contractor to perform laboratory analysis of the air samples.
- B. Verbal results will be available within 24 hours after taking the sample.
- C. A complete record, certified by the testing laboratory, of all Phase Contrast Microscopy (PCM) results will be furnished to the Contractor, who will forward a copy to MSA for compliance with COMAR 26.11.21.06 B.(3)(e)

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01714

SECTION 01732 - SELECTIVE DEMOLITION (DECONSTRUCTION)

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
- B. Project C.O.R.E. Work Execution Protocols

1.02 SUMMARY

- A. The purpose of this Section is to describe general procedures required for the abatement of lead containing materials within buildings to be removed. Specific requirements for lead removal are identified elsewhere in the Contract Documents. In addition, specific requirements for other hazardous material abatement that may be required (i.e., asbestos, mercury, PCBs, etc.) are identified elsewhere in the Contract Documents. This Section includes the following:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Demolition and removal of selected site elements.
 - 3. Salvage of existing items to be reused or recycled.
- B. Related Sections include the following:
 - 1. Division 2 Section "Building Demolition" for demolition of entire buildings, structures, and site improvements.
 - 2. Division 2 Section "Site Clearing" for site clearing and removal of above- and below-grade improvements.

1.03 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

Salvage in first paragraph below may add cost to Project; verify with MSA.

- B. Remove and Salvage: Detach items from existing construction and deliver them to the approved place of transfer.
- C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.04 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to MSA that may be encountered during selective demolition remain MSA's property. Carefully

remove and salvage each item or object in a manner to prevent damage and deliver promptly to MSA.

1. Coordinate with MSA's historical adviser, who will establish special procedures for removal and salvage.

1.05 SUBMITTALS

- A. Qualification Data: For demolition firm, professional engineer, and refrigerant recovery technician.

Schedule below may be used to track Contractor's progress; it may also be used to determine that selective demolition will not interfere with MSA's operations. Delete schedule submittal if not required or if selective demolition will not interfere with MSA's operations.

- B. Schedule of Selective Demolition Activities: Indicate the following:
 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Locations of proposed dust- and noise-control temporary partitions and means of egress.
 2. Means of protection for items to remain and items in path of waste removal from building.
- C. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged. Responsible for documentation of all removed / salvaged materials using the form provided herein.
- D. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.06 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.
- C. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- D. Standards: Comply with ANSI A10.6 and NFPA 241.
- E. Predemolition Conference: Conduct conference at Project site. Review methods and procedures related to selective demolition including, but not limited to, the following:
 1. Inspect and discuss condition of construction to be selectively demolished.
 2. Review structural load limitations of existing structures.
 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

- F. Contractor will be required to hold all certifications and comply with all training requirements as identified in the Operations Protocol.

1.07 PROJECT CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by MSA as far as practical.
- B. Notify MSA of discrepancies between existing conditions and Drawings before proceeding with selective demolition and information provided herein
- C. Hazardous Materials: Hazardous materials are present in construction to be selectively demolished. The Contractor will be required to confirm information provided prior to bid to assess hazardous materials prior to demolition.
 - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
- D. Storage or sale of removed items or materials on-site is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Engage a professional engineer to survey condition of buildings to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations. Submit documentation of survey to the MSA for review and approval prior to commencing deconstruction and demolition operations.
- D. Survey of Existing Conditions: Record existing conditions by use of measured drawings, preconstruction photographs, preconstruction videotapes and templates.
- E. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.02 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Confirm utility services have been disconnected, sealed or capped prior to commencing deconstruction or demolition operations. If active utilities are identified, notify the MSA. and await direction prior to proceeding with work.

3.03 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area.
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

3.04 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction as indicated. Use methods required to complete the work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 3. Maintain adequate ventilation when using cutting torches.
 - 4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 5. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - 6. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 7. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until removal from the site.
 - 4. Transport items to approved location.
 - 5. Protect items from damage during transport and storage.

3.05 HAZARDOUS MATERIAL ABATEMENT

- A. Lead containing material removal: See related specifications in the Contract Documents.

3.06 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be salvaged, or otherwise indicated to remain the MSA's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill. When recyclable debris from a site exceeds 5 tons, at least 30% of that recyclable debris must be immediately transported to a licensed recycling facility per the "Baltimore City Building, Fire, and Related Codes" dated 2015 or the latest version thereof.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off MSA's property and legally dispose of them.

3.07 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 01732

SECTION 02081 - REMOVAL OF ASBESTOS-CONTAINING MATERIALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. General requirements for the safe removal and handling of asbestos containing material (ACM).
- B. Requirements for maintaining safe working conditions with hazardous and contaminated materials that may be encountered during the Work.

1.02 RELATED DOCUMENTS

- A. A Site-Specific Asbestos Containing Material (ACM), Lead-Based Paint and Hazardous Material Survey will be provided by MSA at the time the Contractor is authorized to initiate work on the site. The survey will summarize the type, location, quantity and condition of materials identified by the Environmental Consultant in each building included for demolition.
 - 1. The asbestos portions of the survey will comply with EPA's National Emissions Standards for Hazardous Air Pollutants (NESHAP), Subpart M, Section 61.145 for the identification of Category I and Category II ACM.
 - 2. The survey will include recommendations for proper handling and disposal of the identified ACM, if applicable.
- B. RELATED SECTIONS
 - 1. Section 01513 - Pressure Differential and Air Circulation System
 - 2. Section 01526 - Temporary Enclosures
 - 3. Section 01560 - Worker Protection
 - 4. Section 01562 - Respiratory Protection
 - 5. Section 01563 - Decontamination Units
 - 6. Section 01711 - Project Decontamination / Asbestos
 - 7. Section 01714 - Work Area Clearance
 - 8. Section 02084 - Disposal of Asbestos-Containing Materials

1.03 REMOVAL OF ACM

- A. Following review of the Site-Specific ACM, Lead-Based Paint and Hazardous Material Survey, the Contractor will conduct an inspection of the site and confirm existing conditions and requirements for the safe and proper removal ACM material from the site.
- B. Prior to initiation of onsite demolition work, the Contractor will submit to MSA an asbestos removal work plan and health and safety plan (HASp) for the safe removal and protection of onsite workers and the surrounding community. All plans will include sufficient detail of temporary control measures for the evaluation of proposed site-specific working conditions and

compliance with Federal, state and local regulations governing the removal and disposal of asbestos.

- C. Remove all friable or Category II non-friable ACM prior to the conclusion of asbestos abatement activities and commencement of building demolition.
- D. It is the responsibility of the Contractor to monitor and mitigate all asbestos present on the site to within acceptable OSHA PEL levels of one-tenth (0.1) f/cc of air as an eight (8)-hour TWA.
- E. The Environmental Consultant will determine the condition of potential asbestos containing material and the potential for friability which may occur during demolition.
- F. It will be the final decision of the Environmental Consultant to determine what Category I non-friable ACM could become friable during demolition activities and will require removal prior to building demolition.
- G. The Contractor must adhere to the requirements of the Environmental Consultant and view the determinations as final.
- H. Remove, handle, store and dispose of all friable ACM according to all applicable federal, state and local regulations.

1.04 SUBMITTALS

- A. Submit product data, use instructions, recommendations from manufacturer of surfactant or removal encapsulant intended for use and MDE approval for intended use. Include data substantiating that material complies with requirements.
- B. Submit certification from manufacturer of surfactant or removal encapsulant that, the material, if used in accordance with manufacturer's instructions, will wet asbestos containing materials to which it is applied as required by the National Emission Standard for Hazardous Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M).
- C. Asbestos Removal and Monitoring Plan that includes, at a minimum:
 - 1. Detailed planning for the procedures proposed for compliance with the requirements and regulations included in this specification, including:
 - a. Schedule of activities and sequencing of asbestos removal and monitoring work.
 - b. Chain of command and project responsibilities, including the communication program for each trade involved in the work.
 - c. Monitoring plan to ensure compliance with applicable permits and regulations and ensure the safety of abatement workers, contractors, surrounding community and visitors to the site.
 - d. Methods, equipment and procedures for the identification, removal and cleanup of ACM or other hazardous materials.
 - i. Encapsulation procedures.
 - ii. Location and layout of decontamination areas, in accordance with Section 01563 - Decontamination Units.
 - iii. Pressure differential system including calculation used to arrive at the number of machines necessary to achieve four (4) air changes per hour or a negative pressure of two one-hundredths (-0.02) inches of water column, relative to outside pressure.

- e. Prepare a written respiratory protection program, as defined by OSHA 29 CFR 1910.134 – Personal Protective Equipment, Respiratory Protection and retain a permanent copy on-site during work activities.
 - f. Identification of National Voluntary Laboratory Accreditation Program (NVLAP)-certified laboratory, or equivalent, for analytical testing of ACM using phase contrast microscopy (PCM).
 - g. Methods of ACM removal and containment:
 - i. Identification and location of ACM and hazardous waste.
 - ii. Proposed ventilation system (HEPA or equivalent).
 - iii. ACM monitoring and abatement methods within the work area.
 - h. Contingency Plans:
 - i. Methods, equipment and procedures for preventing and handling accidental exposure and releases.
 - ii. Methods, equipment and procedures for the safe characterization of unidentified asbestos containing materials and structures.
- D. Task-specific Health and Safety Plan (HASP) that includes, at a minimum:
1. Worker Protection Compliance Program as required for disturbances of ACM and other hazardous wastes. Ensure compliance measures in accordance with 29 CFR 1926.1101 – Safety and Health Regulations for Construction, Asbestos and applicable OSHA worker protection requirements.
 2. Roles, responsibilities and notification procedures for documenting and reporting to the MSA and applicable regulatory agencies the identification and/or release of ACM.
 3. Safety, health and security requirements and procedures for the protection of workers and the public during ACM removal and containment activities.
 4. Work site monitoring equipment, methods and procedures for identifying and mitigating the presence of ACM and associated hazardous wastes.
 5. Equipment and personnel decontamination procedures, in accordance with Section 01563.
 6. Medical surveillance for personnel working within the control area in accordance with the regulations, as well as workers’ post-contract medical surveillance results.
 7. Copies of applicable permits and notifications required for asbestos removal work.
- E. Quality Control Submittals:
1. Include quality control procedures in the action/informational submittals documenting the methods for ensuring the implementation of policies and procedures identified in the submittal documents.
 2. Copies of personal air monitoring readings within seventy-two (72) hours of collection. Distribute results to the Environmental Inspector and on-site workers within twenty-four (24) hours of receipt from the laboratory.
 3. If negative pressure containment is implemented, copies of pressure differential strip charts for each work area.
- F. Certificates:
1. Copies of EPA and MDE project notifications.

2. Submit Contractor certification for licensed asbestos abatement.
3. Submit EPA certification and MDE accreditation for Asbestos Abatement Supervisor.
4. Submit EPA certification and MDE accreditation for proposed abatement workers showing compliance with COMAR 26.11.23 – Asbestos Accreditation of Individuals.
5. Submit laboratory accreditation certificates, such as NVLAP, for analytical testing of ACM and other hazardous waste.
6. Submit copies of current certifications for training, medical surveillance and respiratory fit test, as appropriate for on-site workers.
7. Submit a current, valid asbestos certification issued by the State of Maryland.

G. Quality Control Submittals:

1. Include quality control procedures in the action/informational submittals documenting the methods for ensuring the implementation of policies and procedures identified in the submittal documents.
2. Copies of personal air monitoring readings within seventy-two (72) hours of collection. Distribute results to the Environmental Consultant and on-site workers within twenty-four (24) hours of receipt from the laboratory.
3. If negative pressure containment is implemented, copies of pressure differential strip charts for each work area.

PART 2 - PRODUCTS

2.01 AMENDED WATER

- A. Provide water to which a surfactant has been added.
- B. For surfactant, use ENVIRO-WET, ASBESTO-WET, NANCOL or equivalent, as approved by the Environmental Consultant and in accordance with manufacturer's directions.
- C. Use a mixture of surfactant and water which results in wetting of the asbestos containing material and retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of one ounce of a surfactant consisting of 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five gallons of water.

2.02 ENCAPSULANTS

- A. Encapsulants (sealants) will meet the EPA requirements and possess the following characteristics:
 1. Adherence: The sealant eliminates fiber dispersal by adhering to the fibrous substrate with sufficient penetration to prevent separation of the sealant from the sprayed asbestos material.
 2. Impact Penetration: The sealant withstands impact and penetration, protects the enclosed sprayed asbestos material, while not causing separation of the sprayed asbestos material from its original substrate.
 3. Flexibility: The sealant possesses enough flexibility to accommodate atmospheric changes and settling of the structure over time.
 4. Resistance to Smoke and Flame: The sealant shall have high flame retardant characteristics and a low toxic fume and smoke emission rating.

5. Ease of Application: The sealant must be easily applied with relative insensitivity to errors in preparation or application. Ease of repair by routine maintenance personnel is desirable.
6. Toxicity: The sealant must be neither noxious nor toxic to application workers and structure users thereafter.
7. Permeability: The sealant will have suitable stability to weathering and aging.

2.03 POLYETHYLENE SHEET

- A. Use polyethylene film in the largest sheet size possible to minimize seams, 6.0 mils thick, clear, frosted, or black.
- B. Use flame resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films.

2.04 MISCELLANEOUS MATERIALS

- A. Provide duct tape in 2" or 3" widths, with an adhesive which is formulated to aggressively stick to sheet polyethylene.
- B. Provide spray adhesive, which is specifically formulated to stick tenaciously to sheet polyethylene.
- C. Provide 6 mil thick leak-tight polyethylene disposal bags labeled as indicated in Section 02084 - Disposal of Asbestos Containing Material.

2.05 ASBESTOS ENCLOSURE SYSTEMS

- A. If an enclosure system is used, build suitable enclosure framing and line with polyethylene sheeting, or equivalent, sealed with tape at lap joints in the plastic for asbestos enclosures and decontamination areas.
- B. For access between contaminated and uncontaminated areas, install an airlock system including a curtained doorway for access between two (2) areas within the decontamination enclosure systems. Provide a minimum distance between two (2) curtained doorways of six (6) feet. Modifications to the enclosure system due to work space constraints require approval by the Consultant.
- C. The decontamination enclosure installation requirements include:
 1. A three (3)-stage decontamination station for the removal of equipment and materials from work area, allowing movement from the work area into a wash down room and finally a clean room while preventing cross-contamination outside the work area.
 2. The wash down room will contain two (2) curtained doorways. Filter shower water through a five (5) micrometer-filter system, or equivalent, prior to disposal.
 3. A clean area with one (1) curtained doorway into the rinsate area and one (1) entrance or exit to non-contaminated areas of the work area. Provide sufficient space for non-contaminated items.
- D. Provide and post decontamination and work procedures to be followed by workers.
- E. Ensure work site security and implementation of PPE requirements within the work area.

- F. Decontaminate workers and authorized visitors prior to exiting the work area. Maintain respirators until the completion of decontamination procedures. Store contaminated PPE in the equipment room when not in use. Upon completion of asbestos abatement, dispose of PPE as contaminated waste. Dispose of contaminated protective clothing in receptacles for disposal with other ACM.
- G. Ensure workers removing waste containers from the decontamination enclosure enter the rinsate area wearing a respirator and dressed in clean coveralls.
- H. Do not allow workers to eat, drink, smoke, or chew gum or tobacco at the project site except in designated areas.
- I. Ensure workers are fully protected with appropriate respirators and protective clothing prior to commencing actual asbestos abatement until completion of final clean-up. Establish methods for safe tie-ins of temporary and replacement lines to ACM insulated pipes.
- J. Visually inspect enclosures at the beginning of each work period. Dispersive smoke methods may be used to test effectiveness of barriers. Repair damage immediately.

PART 3 - EXECUTION

3.01 REMOVAL OF ASBESTOS

- A. Spray ACM with sealant amended water, using equipment capable of providing appropriate application to reduce the release of fibers. Saturate the material sufficiently. Spray the asbestos material repeatedly during work process to maintain wet condition and minimize asbestos fiber dispersion.
- B. Wire brush and/or wet sponge to clean surfaces that contained asbestos or clean by an equivalent method to remove visible material. Keep surfaces wet during cleaning.
- C. Use encapsulant to ensure asbestos containing material is not remobilized after removal.
- D. Place ACM in labeled disposal bags immediately upon removal. Thoroughly clean the external surfaces of bags by wet sponging within the designated work area. Place the waste bags in a second, clean bag at the waste load out for disposal.
 - 1. Do not drop or drag the waste bags.
 - 2. Ensure removal of containers from the regulated area by workers entering from uncontaminated areas dressed in clean coveralls. Ensure workers do not enter from contaminated areas into the clean area during excavation and removal.
- E. Bag and secure ACM in a locked drum at the end of each workday. Do not leave debris, unsecured equipment or tools on the project site past the end of each workday.
- F. Conduct work in a manner that prevents the spread of ACM. Cleanup ACM migration outside the work areas.
- G. Use of mini enclosures and glove bags requires prior approved by the Consultant and MDE.
- H. Keep water out of the trench/pit; collect accumulated water and treat or dispose of in accordance with regulatory requirements.

3.02 SECONDARY BARRIER

- A. A drop cloth of clear 6 mil sheet plastic in all areas where asbestos removal work is to be carried out. Completely cover floor with sheet plastic.
- B. Where the work is within 10'-0" of a wall, extend the Secondary Barrier up wall to ceiling. The ceiling shall then be additionally covered with one layer of poly.
- C. Support sheet plastic on wall with duct tape, seal top of Secondary plastic to Primary Barrier with duct tape so that debris is unable to get behind it.
- D. Provide cross strips of duct tape at wall support as necessary to support sheet plastic and prevent its falling during removal operations.
- E. Install Secondary Barrier at the beginning of each work shift.
- F. Remove Secondary Barrier at end of each work shift or as work in an area is completed. Fold plastic toward center of sheet and pack in disposal bags. Keep material on sheet continuously wet until bagged. The ceiling layer shall be kept in place until completion of the work.
- G. Install Walkways of black 6-mil plastic between active removal areas and decontamination units to protect Primary layer from tracked material. Install walkways at the beginning of, and remove at the end of each work shift.

3.03 WET REMOVAL

- A. Thoroughly wet asbestos-containing materials to be removed prior to stripping and/or tooling to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal encapsulant. Utilize wet removal methods of asbestos-containing materials at all times during the abatement project.
- B. Dry removal methods of asbestos-containing materials for this project are prohibited.
- C. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for water or removal encapsulant to penetrate material thoroughly.
- D. If amended water is used, spray material repeatedly during the work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer's written instructions.
- E. Perforate outer covering of any installation which has been painted and/or jacketed in order to allow penetration of amended water or removal encapsulant, or where necessary, carefully strip away while simultaneously spraying amended water or removal encapsulant on the installation to minimize dispersal of asbestos fibers into the air.
- F. Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels.
- G. Remove saturated asbestos-containing material in small sections from all areas. As it is removed, pack material while still wet into disposal bags.
- H. Remove any residue with stiff bristle nylon hand brush.
- I. Evacuate air from disposal bags with a HEPA filtered vacuum cleaner. Twist neck of bags, bend over and seal with minimum three wraps of duct tape. Clean outside and move to wash down station adjacent to material decontamination unit.

3.04 LOCK-DOWN ENCAPSULATION

- A. Upon completion of removal and cleaning of surfaces, have surfaces visually inspected by the Environmental Consultant. When surfaces have passed the visual inspection, they shall be sprayed with an approved lock-down.

3.05 AIR FILTRATION SYSTEM

- A. If necessary in order to meet work area fiber level specified in Section 01410, provide HEPA filtered fan units, one for each scraping activity, in addition to those required by Section 01513, in the vicinity of the work. Arrange so that exhaust is into the work area oriented in a direction away from the work. Extend a 12" diameter flexible non-collapsing duct from the intake end to a point no more than 4'-0" from any scraping or wire brushing activity.
- B. Utilize pressure differential equipment continuously from first disturbance of ACM until completion of successful removal and final inspection.
- C. Do not discharge unfiltered air outside the work area via air movement system or air filtering equipment.
- D. Maintain the exchange rate at no less than four (4) air changes per hour.
- E. Continuously monitor and record the pressure differential across isolated barriers using a pressure differential monitoring device. Maintain the pressure differential at a minimum of negative two-hundredths (-0.02) of an inch of water at four (4) degrees Celsius.
- F. Provide a continuous-read strip chart manometer, or equivalent, for ensuring negative air pressure differential within the workspace.
- G. Provide HEPA filter vacuums with disposable collection bags and filters that are ninety-nine point nine seven (99.97) percent efficient for retaining fibers of three-tenths (0.3) of a micron or larger.

3.06 AIRBORNE FIBER COUNTS

- A. Use work procedures that result in an 8-hour Time Weighted Average (TWA) airborne fiber count less than PEL of one-tenth (0.1) f/cc of air as an eight (8)-hour TWA or one (1.0) f/cc as averaged over a thirty (30)-minute period.
- B. If airborne fiber counts exceed these levels, immediately mist the area with amended water to lower fiber counts and revise work procedures to maintain airborne fiber levels within the required limit.

END OF SECTION 02081

SECTION 02084 - DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Asbestos Disposal
- B. Packaging of asbestos-containing waste materials.
- C. Execution

1.02 SUBMITTALS

- A. Removal and Disposal of Asbestos Pipe Insulation Work Plan that includes, at a minimum:
 - 1. Detailed planning for the procedures proposed for compliance with the requirements and regulations included in this specification, including:
 - a. Schedule of activities and sequencing of asbestos disposal work.
 - b. Chain of command and project responsibilities, including the communication program for each trade involved in asbestos disposal.
 - c. Monitoring plan to ensure compliance with applicable permits and regulations and ensure the safety of abatement workers, contractors, surrounding community during asbestos disposal activities.
 - d. Methods, equipment and procedures for the packaging, disposal and cleanup of ACM or other hazardous materials.
 - i. Encapsulation procedures.
 - ii. Location and layout of decontamination areas.
 - iii. Pressure differential system including calculation used to arrive at the number of machines necessary to achieve four (4) air changes per hour or a negative pressure of two one-hundredths (-0.02) inches of water column.
 - 2. Prepare a written respiratory protection program, as defined by OSHA 29 CFR 1910.134 – Personal Protective Equipment, Respiratory Protection and retain a permanent copy on-site during work activities.
 - 3. Methods of ACM containment, packaging, transport and disposal:
 - a. Packaging of removed asbestos debris.
 - b. Identification of licensed transporter and submission of contact information.
 - c. Name, location and contact information for a disposal facility meeting the requirements of COMAR 26.11.21.08 – Waste Disposal.
 - 4. Contingency Plans:
 - a. Methods, equipment and procedures for preventing and handling accidental exposure and releases.
- B. Task-specific Health and Safety Plan (HASP) that includes, at a minimum:

1. Worker Protection Compliance Program as required for disturbances of ACM and other hazardous wastes. Ensure compliance measures in accordance with 29 CFR 1926.1101 – Safety and Health Regulations for Construction, Asbestos and applicable OSHA worker protection requirements.
2. Roles, responsibilities and notification procedures for documenting and reporting to the Environmental Consultant and applicable regulatory agencies the release of ACM.
3. Safety, health and security requirements and procedures for the protection of workers and the public during ACM packaging, transport and disposal activities.
4. Equipment and personnel decontamination procedures.
5. Medical surveillance for personnel packaging, transporting and disposing of asbestos and other hazardous material in accordance with applicable regulations, as well as workers' post-contract medical surveillance results.
6. Copies of applicable permits and notifications required for transport and disposal.

C. Certificates:

1. Copies of EPA and MDE project notifications.
2. Submit MDE Certified Waste Hauler documentation identifying the use of a state-licensed ACM transporter.
3. Submit permitting and licensure identifying a designated hazardous or contaminated material disposal facility capable of accepting ACM and associated hazardous wastes.
4. Submit copies of current certifications for training, medical surveillance and respiratory fit test, as appropriate for on-site workers.
5. Submit a current, valid asbestos certification issued by the State of Maryland.

D. Quality Control Submittals:

1. Include quality control procedures in the action/informational submittals documenting the methods for ensuring the implementation of policies and procedures identified in the submittal documents.
2. Copies of personal air monitoring readings within seventy-two (72) hours of collection. Distribute results to the Environmental Consultant and on-site workers within twenty-four (24) hours of receipt from the laboratory.
3. If negative pressure containment is implemented, copies of pressure differential strip charts for each work area.

E. Chain of Custody form and form of waste manifest proposed.

F. Asbestos Cleaning

1. For friable and non-friable material, remove visible accumulations of ACM and debris using procedures approved in the work plan.
2. Include sealed drums and equipment for the clean-up and removal from work areas, via the decontamination enclosure system.
3. Conduct final inspections for each work area. The Consultant may conduct additional verification inspections, as needed. When final inspection and testing determine the area is free of visible accumulation of dust and ambient air measurements are less than one one-

hundredth (0.01) f/cc, breakdown decontamination enclosure systems and dispose of materials as contaminated waste.

PART 2 - PRODUCTS

2.01 PACKAGING OF ASBESTOS-CONTAINING WASTE MATERIALS.

- A. Provide and affix labels to ACM, scrap, waste, debris and other products contaminated with asbestos in accordance with 29 CFR 1910.145(d)(4) – Caution Signs.

First Label:

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID OPENING OR BREAKING CONTAINER
BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH

Second Label: Provide in accordance with 29 CFR 1910.1200 (f) of OSHA's

Hazard Communication standard:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING AIRBORNE ASBESTOS, TREMOLITE, ANTHOPHYLLITE, OR
ACTINOLITE FIBERS IS HAZARDOUS TO YOUR HEALTH

Third Label: Provide in accordance with U.S. Department of Transportation regulation on hazardous waste marking, 49 CFR Parts 171 and 172:

ASBESTOS
NA 2212
RQ
CLASS 9 MISCELLANEOUS SOLID HAZARDOUS WASTE PLACARD

CONSIGNEE OR CONSIGNOR NAME & ADDRESS

Fourth Label:

NAME OF GENERATOR

NAME OF CONTRACTOR

CONTRACTOR'S REMOVAL LICENSE NUMBER

DATE BAG WAS SEALED

2.02 EQUIPMENT

- A. Furnish tools, equipment, devices, appurtenances, facilities and services for the containment, packaging, transportation and disposal of ACM.
- B. Use metal or fiberboard drums with locking ring tops; label in accordance with EPA 40 CFR 61.150(a)(1)(iv) and (v) – Standard for Waste Disposal for Manufacturing, Fabricating, Demolition, Renovation and Spraying Operations.
 - 1. The use of tear-off bags is not allowed.
- C. Any non-suitable excavated material, including construction debris and man-made waste material, will be handled and disposed of by the Contractor.

PART 3 - EXECUTION

3.01 GENERAL PROCEDURES

- A. All waste shall be maintained in an adequately wet condition until sealed in air and leak tight containers.
- B. Prior to removing waste from the work area, each bag of waste shall be sealed and placed entirely within a second bag, which shall also be sealed in manner to prevent leakage.
- C. All waste is to be hauled by a waste hauler with all required licenses from all state and local authorities with jurisdiction.
- D. Load all asbestos-containing waste material in disposal bags or leak-tight drums.
- E. Protect interior of truck or dumpster with Critical and Primary Barriers.
- F. Carefully load containerized waste in fully enclosed dumpsters, trucks or other appropriate vehicles for transport. Exercise care before and during transport, to insure that no unauthorized persons have access to the material.
- G. Advise the landfill operator, MSA and Environmental Consultant, at least ten days in advance of transport, of the quantity of material to be delivered.
- H. Ensure asbestos waste storage and disposal complies with all aspects of Federal, State and local asbestos regulation, particularly regarding time periods for removing waste from project site and interim storage. Ensure compliance with all aspects of COMAR 26.11.21.08, particularly regarding time periods for removing waste from project site and interim storage.

- I. Dispose of ACM waste as the work progresses to prevent exceeding available storage capacity on-site.

3.02 UNANTICIPATED HAZARDS

- A. Should the Contractor suspect, encounter or have knowledge of any hazards not listed or described in the contract documents, the Contractor is responsible for informing the Environmental Consultant immediately and prior to disturbing or causing any action that could result in a release of any suspected or confirmed hazardous material to the work area or surrounding environment.
- B. If other hazardous materials are discovered during ACM removal activities, notify the Environmental Consultant immediately. Cordon off area to prevent contamination of clean areas. Collect a representative sample of the material for identification. Estimate quantities of additional suspect hazardous materials and submit documentation to the Environmental Consultant.

3.03 PRECAUTIONS

- A. Post "Danger" signs at entrances of ACM removal area.
- B. Remove friable asbestos before demolition.
- C. Wet asbestos, except asbestos to be encapsulated.
- D. Isolate and contain asbestos that is removed or encapsulated.
- E. Use appropriate work practices to minimize dispersal of particulate ACM.
- F. Leave no visible residue of ACM after completing the project.

3.04 DISPOSAL

- A. All asbestos waste shall be disposed of at an approved landfill within the State of Maryland.
- B. For hauling and disposal, comply with EPA 40 CFR 61 – National Emission Standards for Hazardous Air Pollutants, Subpart M, and state and local standards. Ensure workers unloading material wear appropriate PPE when handling asbestos materials at the disposal site.
- C. Sealed plastic bags may be carefully unloaded from the truck. If bags are broken or damaged, return to work site for re-bagging. Clean entire truck and contents using procedures set forth in Section 01711 Project Decontamination.
- D. Retain receipts from landfill or processor for all materials disposed of.
- E. No later than 10 days after disposal of each load submit copy of waste manifest, chain of custody form, and landfill receipt to the Consultant or his designee. Complete a waste disposal record at the time of shipment.

END OF SECTION 02084

SECTION 02085 - REMOVAL AND DISPOSAL OF MATERIAL CONTAINING LEAD

PART 1 - GENERAL

1.01 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2 (1979; R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems
ANSI Z88.2 (1992) Respiratory Protection

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1926.21	Safety Training and Education
29 CFR 1926.33	Access to Employee Exposure and Medical Records
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts, and Mists
29 CFR 1926.59	Hazard Communication
29 CFR 1926.62	Lead Exposure in Construction
29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1926.103	Respiratory Protection
40 CFR 260	Hazardous Waste Management Systems: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	MSAs and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standard for MSAs and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 745	Lead; Requirements for Lead-Based Paint Activities

49 CFR 172	Hazardous Materials, Tables, and Hazardous Materials Communications Regulations
49 CFR 178	Shipping Container Specification

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

HUD Guidelines (June 1995) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing

UNDERWRITERS LABORATORIES INC. (UL) UL 586

(1990; R1995) High-Efficiency,

Particulate, Air Filter Units

STATE OF MARYLAND REGULATIONS

Annotated Code of Maryland (COMAR) –

Title 26 Department of the Environment

Subtitle 16 Lead (26.16.01 through 26.16.04)

1.02 DEFINITIONS

- A. Action Level: Employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8-hour period.
- B. Area Sampling: Sampling of lead concentrations within the lead control area and inside the physical boundaries which is representative of the airborne lead concentrations but is not collected in the breathing zone of personnel (approximately 5 to 6 feet above the floor).
- C. Competent Person (CP): As used in this section, refers to a person employed by the Contractor who is trained in the recognition and control of lead hazards in accordance with current Federal and State of Maryland regulations, is a State of Maryland Lead Supervisor, and has the authority to take prompt corrective actions to control the lead hazard. An Industrial Hygienist certified by the American Board of Industrial Hygiene or a safety professional certified by the Board of Certified Safety Professionals is preferred.
- D. Contaminated Room: Room for removal of contaminated personal protective equipment (PPE).
- E. Decontamination Shower Facility: That facility that encompasses a clean clothing storage room, and a contaminated clothing storage and disposal rooms, with a shower facility in between.
- F. Eight-Hour Time Weighted Average (TWA): Airborne concentration of lead to which an employee is exposed, averaged over an 8-hour workday as indicated in 29 CFR 1926.62.
- G. High Efficiency Particulate Air (HEPA) Filter Equipment: HEPA filtered vacuuming equipment with a UL 586 filter system capable of collecting and retaining lead-contaminated particulate. A high efficiency particulate filter demonstrates at least 99.97 percent efficiency against 0.3-micron diameter or larger size particles.

- H. Lead: Metallic lead, inorganic lead compounds, and organic lead soaps. Excludes other forms of organic lead compounds.
- I. Material Containing Lead (MCL): Any material which contains lead as determined by the testing laboratory using a valid test method. The requirements of this section do not apply if no detectable levels of lead are found using a valid detection method.
- J. Lead-Based Paint (LBP): The definition for lead-based paint is based upon the Maryland Department of the Environment (MDE) and defined as any paint, or other surface coating, containing lead or lead in its compounds, in any quantity at or above the MDE standard of 0.7 mg/cm² by XRF, or 0.5% by dry weight, on one or more of the components or in any quantity sufficient to constitute a health or environmental hazard.
- K. Note that lead may still be present and hazardous leaded dust may be generated during modernization, renovation, remodeling, maintenance or other disturbances of painted surfaces.
- L. Lead Control Area: A temporary area or structure or containment, sometimes equipped with HEPA filtered local exhaust that prevents the spread of lead dust or debris. Usually critical barriers and physical boundaries are employed to isolate the lead control area and to prevent migration of lead contamination and unauthorized entry of personnel.
- M. Lead Permissible Exposure Limit (PEL): Fifty micrograms per cubic meter (50 µg/m³) of air as an 8-hour time weighted average as determined by 29 CFR 1926.62.
- N. Personal Sampling: Sampling of airborne lead concentrations within the breathing zone of an employee to determine the 8-hour time weighted average concentration in accordance with 29 CFR 1926.62. Samples shall be representative of the employees' work tasks. Breathing zone shall be considered an area within a hemisphere, forward of the shoulders, with a radius of six to nine inches and centered at the nose or mouth of an employee.
- O. Physical Boundary: Area physically roped or partitioned off around lead control area to limit unauthorized entry of personnel.

1.03 DESCRIPTION OF WORK

- A. It is the intent of this specification to perform demolition of structures, which include materials that contain lead. The contractor shall adhere to all applicable regulations and the requirements contained or referenced by this specification in order to protect employees and the public from exposure to lead and other hazardous contaminants.

1.04 SUBMITTALS

- A. Submit the following in accordance with Section entitled "Submittal Procedures."
 - 1. Manufacturer's Catalog Data
 - a. Vacuum filters
 - b. Respirators
 - 2. Instructions
 - a. Chemicals and equipment
 - b. Safety data sheets for all chemicals
 - 3. Statements

- a. Qualifications of Competent Person (CP), including State of Maryland Lead Supervisor Certification
 - b. Testing laboratory qualifications
 - c. Third party consultant qualifications
 - d. Material Containing Lead Removal Plan including CP approval (signature, date, and certification number)
 - e. Rental equipment notification
 - f. Respiratory protection program
 - g. Hazard communication program
 - h. EPA approved hazardous waste treatment or disposal facility for lead disposal
 - i. EPA approved hazardous waste transporter name, address, phone number and EPA identification number
 - j. Hazardous waste management plan
 - k. Assessment data report
 - l. State of Maryland Contractor Lead License as applicable
 - m. State of Maryland Lead "Abatement Worker Certification" as applicable
4. Qualifications of Competent Person: Submit name, address, and telephone number of the Component Person selected to perform responsibilities specified in paragraph entitled "Competent Person (CP) Responsibilities." Provide previous experience of the CP. Submit proper documentation that the CP is trained, licensed and certified in accordance with all applicable Federal and State of Maryland laws.
 5. Contractor Testing Laboratory: Submit the name, address, and telephone number of the testing laboratory selected to perform the air sampling, testing, and reporting of airborne concentrations of lead. Use a laboratory participating in the EPA National Lead Laboratory Accreditation Program (NLLAP) by being accredited by either the American Association for Laboratory Accreditation (A2LA) or the American Industrial Hygiene Association (AIHA) and that is successfully participating in the Environmental Lead Proficiency Analytical Testing (ELPAT) program to perform sample analysis.
 6. Material Containing Lead Removal Plan (MCLRP): Submit a detailed job-specific plan of the work procedures to be used in the removal of MCL. The plan shall include sketches showing the location, size, and details of lead control areas, critical barriers, physical boundaries, location and details of decontamination facilities, viewing ports, and mechanical ventilation system. Include in the plan, eating, drinking, smoking and sanitary procedures, interface of trades, sequencing of lead related work, collected waste water and dust containing lead and debris, air sampling, respirators, personal protective equipment, and a detailed description of the method of containment of the operation to ensure that airborne lead concentrations of 30 micrograms per cubic meter of air are not reached or exceeded outside of the lead control area. Include occupational and environmental sampling, training and strategy, sampling and analysis strategy and methodology, frequency of sampling, duration of sampling, and qualifications of sampling personnel in the air-sampling portion of the plan.
 7. Contractor's Third Party Consultant Qualifications: Submit the name, address and telephone number of the third party consultant selected to perform the wipe sampling for determining

concentrations of lead in dust. Submit proper documentation that the consultant is trained and certified as an inspector technician or inspector/risk assessor authorized by the USEPA, State of Maryland certification and accreditation programs.

B. Field Test Reports

1. Sampling results
2. Assessment Data Report
3. Occupational and Environmental Sampling Results: Submit occupational and environmental sampling results to the MSA/MSA's Authorized Representative within three working days of collection, signed by the testing laboratory employee performing the analysis, the employee that performed the sampling, and the CP.
 - a. The sampling results shall represent each job classification, or if working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures per 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead.
 - b. Submit worker exposure data conducted during the task-based trigger operations of 29 CFR 1926.62.
 - c. The initial monitoring shall determine the requirements for further monitoring and the need to fully implement the control and protective requirements including the compliance program (MCLRP) per 29 CFR 1926.62.
4. Occupational and Environmental Assessment Data Report: Some MCL removal work may not require full implementation of the requirements of 29 CFR 1926.62. Based on the experience of the Contractor and/or the use of a specific process or method for performing the work, the Contractor may be able to provide historic data (previous 12 months) to demonstrate that airborne exposures are controlled below the action level. Such methods or controls shall be fully presented in the MCLRP. In order to reduce the full implementation of 29 CFR 1926.62, the Contractor shall provide documentation in an Assessment Data Report. Submit occupational and environmental assessment report to the MSA/MSA's Authorized Representative prior to start of work, signed by the testing laboratory employee performing the analysis, and the CP.
 - a. Submit a report that supports the determination regarding the reduction of the need to fully implement the requirements of 29 CFR 1926.62 and supporting the MCLRP. The exposure assessment shall represent each job classification, or if working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures per 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead for stated work.
 - b. Submit worker exposure data conducted during the task based trigger operations of 29 CFR 1926.62 with a complete process description in supporting a negative assessment.
 - c. The initial assessment shall determine the requirement for further monitoring and the need to fully implement the control and protective requirements including the compliance program (MCLRP) per 29 CFR 1926.62.

C. Certificates

1. Vacuum filters

D. Records

1. Completed and signed hazardous waste manifest from treatment or disposal facility
2. Certification of medical examinations
3. Employee training certification

1.05 QUALITY ASSURANCE

A. Medical Examinations: Initial medical surveillance as required by 29 CFR 1926.62 shall be made available to all employees exposed to lead at any time (1 day) above the action level. Full medical surveillance shall be made available to all employees on an annual basis who are or may be exposed to lead in excess of the action level for more than 30 days a year or as required by 29 CFR 1926.62. Adequate records shall show that employees meet the medical surveillance requirements of 29 CFR 1926.33, 29 CFR 1926.62 and 29 CFR 1926.103.

1. Medical Records: Maintain complete and accurate medical records of employees for the duration of employment plus 30 years.
2. Medical Surveillance: Provide medical surveillance to all personnel exposed to lead as indicated in 29 CFR 1926.62.

B. Competent Person (CP) Responsibilities: Certify training as meeting all Federal and State of Maryland requirements.

1. Review and approve Material Containing Lead Removal Plan (MCLRP) for conformance to the applicable referenced standards.
2. Continuously inspect MCL removal work for conformance with the approved plan.
3. Perform air and non-clearance type wipe sampling.
4. Ensure work is performed in strict accordance with specifications and all applicable regulations at all times.
5. Control work to prevent hazardous exposure to human beings and to the environment at all times.
6. Certify the conditions of the work as called for elsewhere in this specification.

C. Training: Train each employee performing lead removal work, MCL disposal, and air sampling operations prior to the time of initial job assignment and annually thereafter, in accordance with 29 CFR 1926.21, 29 CFR 1926.62, and the State of Maryland regulations where appropriate.

1. Training Certification: Submit State of Maryland certificate of accreditation for each employee, stating that the employee has received the required lead training.

D. Respiratory Protection Program: Furnish each employee required to wear a respirator with a respirator fit test at the time of initial fitting and at least annually thereafter as required by 29 CFR 1926.62.

1. Establish and implement a respiratory protection program as required by ANSI Z88.2, 29 CFR 1926.103, 29 CFR 1926.62, and 29 CFR 1926.55.

- E. Hazard Communication Program: Establish and implement a Hazard Communication Program as required by 29 CFR 1926.59.
- F. Hazardous Waste Management: The Hazardous Waste Management Plan shall comply with applicable requirements of Federal and State of Maryland hazardous waste regulations and address:
 - 1. Identification and classification of hazardous wastes associated with the work.
 - 2. Estimated quantities of wastes to be generated and disposed.
 - 3. Names and qualifications of each Contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location and operator and a 24-hour point of contact. Furnish two copies of USEPA and State of Maryland hazardous waste manifests and USEPA Identification numbers.
 - 4. Names and qualifications (experience and training) of personnel who will be working on-site with hazardous wastes.
 - 5. List of waste handling equipment to be used in performing the work, to include cleaning, and transport equipment.
 - 6. Spill prevention, containment, and cleanup contingency measures including a health and safety plan to be implemented in accordance with 29 CFR 1926.65.
 - 7. Work plan and schedule for waste containment, removal and disposal. Wastes will be cleaned up and containerized daily.
- G. Environmental, Safety and Health Compliance: In addition to the detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of Federal and State of Maryland authorities regarding lead. Comply with the applicable requirements of the current issue of 29 CFR 1926.62. Submit matters regarding interpretation of standards to the MSA/MSA's Authorized Representative for resolution before starting work. Where specification requirements and the referenced documents vary, the most stringent requirement shall apply. All State of Maryland laws, ordinances, criteria, rules and regulations regarding removing, handling, storing, transporting, and disposing of lead-contaminated materials apply. Licensing and certification in the State of Maryland is required.
- H. Pre-Construction Conference: Along with the CP, meet with the MSA/MSA's Authorized Representative to discuss in detail the Hazardous Waste Management Plan and the Material Containing Lead Removal Plan, including work procedures and precautions for the removal plan.

1.06 EQUIPMENT

- A. Respirators: Furnish appropriate respirators approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, for use in atmospheres containing lead dust, fume and mist. Respirators and cartridges shall comply with the requirements of 29 CFR 1926.62 and 42 CFR.
- B. Special Protective Clothing: Furnish personnel who will be exposed to lead-contaminated dust with proper disposable protective whole body clothing, head covering, gloves, eye, and foot coverings as required by 29 CFR 1926.62. Furnish proper disposable plastic or rubber gloves to protect hands. The level of protection may be reduced only after obtaining approval from the CP.

- C. Rental Equipment Notification: If rental equipment is to be used during MCL handling and disposal, notify the rental agency in writing concerning the intended use of the equipment. Furnish a copy of the written notification to the MSA/MSA's Authorized Representative.
- D. Vacuum Filters: UL 586 labeled HEPA filters.

PART 2 - PRODUCTS

2.01 CHEMICALS

- A. Submit applicable Safety Data Sheets (SDSs), compliant with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), for all chemicals used in lead removal work. Use the least toxic product approved by the MSA/MSA's Authorized Representative.

PART 3 - EXECUTION

3.01 PROTECTION

- A. Notification: Notify the MSA/MSA's Authorized Representative 10 days prior to the start of any lead work.
- B. Lead Control Area Requirements: Establish a lead control area by completely establishing critical barriers and physical boundaries around the area or structure where MCL removal operations will be performed.
- C. Protection of Existing Work to Remain: Perform work without damage or contamination of adjacent areas. Where existing work is damaged or contaminated, restore work to its original condition or better as determined by the MSA/MSA's Authorized Representative.
- D. Boundary Requirements:
 - 1. Physical Boundary: Provide physical boundaries around the lead control area by roping off the area designated in the work plan or providing curtains, portable partitions or other enclosures to ensure that airborne concentrations of lead will not reach 30 micrograms per cubic meter of air outside of the lead control area.
 - 2. Warning Signs: Provide warning signs at approaches to lead control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Signs shall comply with the requirements of 29 CFR 1926.62.
- E. Heating, Ventilating and Air Conditioning (HVAC) Systems: Shut down, lock out, and isolate HVAC systems that supply, exhaust, or pass through the lead control areas. Seal intake and exhaust vents in the lead control area with 6 mil plastic sheet and tape. Seal seams in HVAC components that pass through the lead control area.
- F. Decontamination Shower Facility: Provide clean and contaminated change rooms and shower facilities in accordance with this specification and 29 CFR 1926.62.
- G. Eye Wash Station: Where eyes may be exposed to injurious corrosive materials and chemicals, suitable facilities for quick drenching or flushing of the eyes shall be provided within the work area.
- H. Mechanical Ventilation System: Use adequate ventilation to control personnel exposure to lead in accordance with 29 CFR 1926.62.

1. To the extent feasible, use fixed local exhaust ventilation connected to HEPA filters or other collection systems, approved by the CP. Local exhaust ventilation systems shall be designed, constructed, installed, and maintained in accordance with ANSI Z9.2.
 2. Vent local exhaust outside the building only and away from building ventilation intakes.
 3. Use locally exhausted, power actuated tools or manual hand tools.
- I. Personnel Protection: Personnel shall wear and use protective clothing and equipment as specified herein. Eating, smoking, or drinking or application of cosmetics is not permitted in the lead control area. No one will be permitted in the lead control area unless they have been appropriately trained and provided with protective equipment.
- J. Mass demolition will follow the wet / wet protocols described herein to protect the public from exposure to dust that may contain lead or other hazards.

3.02 WORK PROCEDURES

- A. Perform lead work in accordance with approved MCLRP. Use procedures and equipment required to limit occupational exposure and environmental contamination with lead when lead hazard abatement is performed in accordance with 29 CFR 1926.62 40 CFR 745, and as specified herein. Handle and dispose of all MCL and associated waste in compliance with Federal and State of Maryland requirements.
1. Personnel Exiting Procedures: Whenever personnel exit the lead-controlled area, they shall perform the following procedures and shall not leave the work place wearing any clothing or equipment worn in the control area:
 - a. HEPA vacuum themselves off.
 - b. Remove protective clothing in the contaminated change room, and place them in an approved impermeable disposal bag.
 - c. Wash hands and face at the site, don appropriate disposable or uncontaminated reusable clothing, move to an appropriate shower facility, and shower.
 - d. Change to clean clothes prior to leaving the clean clothes storage area.
 2. Air and Wipe Sampling: Air sample for lead in accordance with 29 CFR 1926.62 and as specified herein. Air and non-clearance wipe sampling shall be directed or performed by the CP.
 - a. The CP shall be on the job site directing the air and non-clearance wipe sampling and inspecting the MCL removal work to ensure that the requirements of the contract have been satisfied during the entire MCL operation.
 - b. Collect personal air samples on employees who are anticipated to have the greatest risk of exposure as determined by the CP. In addition, collect air samples on at least twenty-five percent of the work crew or a minimum of two employees, whichever is greater, during each work shift.
 - c. Submit results of air samples, signed by the CP, within 72 hours after the air samples are taken. Notify the MSA/MSA's Authorized Representative immediately of exposure to lead at or in excess of the action level of 30 micrograms per cubic meter of air outside of the lead control area.
 - i. Air Sampling During Material Containing Lead Removal Work: Conduct area air sampling at least daily in areas immediately adjacent to the lead control area on each

shift in which lead hazard abatement operations are performed. Sufficient area monitoring shall be conducted to ensure unprotected personnel outside of the control area are not exposed at or above 30 micrograms per cubic meter of air. If 30 micrograms per cubic meter of air is reached or exceeded, stop work, correct the condition(s) causing the increased levels. Notify the MSA/MSA's Authorized Representative immediately. Determine if condition(s) require any further change in work methods. Removal work shall resume only after approval is given by the CP and the MSA/MSA's Authorized Representative. For outdoor operations, at least one sample on each work shift shall be taken on the downwind side of the lead control area at a site selected by the CP and approved in advance by the MSA/MSA's Authorized Representative.

- B. Material Containing Lead Removal: Manual or power sanding or grinding of MCL is not permitted. Provide methodology for removing MCL in the MCLRP. Select MCL removal processes to minimize contamination of work areas outside the control area with lead-contaminated dust or other lead-contaminated debris/waste and to ensure that unprotected personnel are not exposed to hazardous concentrations of lead. Describe this MCL removal process in the MCLRP.
1. Material Containing Lead - Indoor Removal: Perform removal in the lead control areas using enclosures, barriers or containments. This includes the construction of a durable critical partition between the portion of the structure to be demolished and the portion to remain. Collect debris for disposal in accordance with Federal and State of Maryland requirements.
 2. Material Containing Lead - Outdoor Removal: Perform outdoor removal as indicated in Federal and State of Maryland regulations and in the MCLRP. The work site preparation (barriers or containments) shall be job dependent and presented in the MCLRP.
 3. Sampling After MCL Removal: After the visual inspection, collect air samples inside and outside the lead control area. Collect wipe samples as required by all applicable Federal, State and local regulations.
- C. Cleanup and Disposal
1. Cleanup: Maintain surfaces of the lead control area free of accumulations of dust and debris. Restrict the spread of dust and debris; keep waste from being distributed over the work area. Do not dry sweep or use pressurized air to clean up the area. At the end of each shift and when the lead operation has been completed, clean the controlled area of visible contamination by vacuuming with a HEPA filtered vacuum cleaner, wet mopping the area and wet wiping the area as indicated by the MCLRP. Reclean areas showing dust or debris. After visible dust and debris is removed, wet wipe and HEPA vacuum all surfaces in the controlled area. If adjacent areas become contaminated at any time during the work, clean, visually inspect, and then wipe sample all contaminated areas. The CP shall then certify in writing that the area has been cleaned of lead contamination before clearance testing.
 2. Clearance Certification: The CP shall certify in writing that the final air and wipe samples collected inside and outside the lead control area are less than 30 micrograms per cubic meter of air or less than established wipe sample clearance criteria; the respiratory protection used for the employees was adequate; the work procedures were performed in accordance with 29 CFR 1926.62 and 40 CFR 745; and that there were no visible accumulations of material and dust containing lead left in the work site. Do not remove the lead control area or roped off boundary and warning signs prior to the MSA/MSA's Authorized Representative's acknowledgment of receipt of the CP certification. The durable critical barrier will remain until its removal is warranted by the renovation of the remaining structure.

3. Testing of Material Containing Lead Residue: Test MCL residue in accordance with 40 CFR 261 for hazardous waste.
4. Disposal: All material, whether hazardous or non-hazardous shall be disposed in accordance with all laws and provisions and all Federal and State of Maryland regulations. Ensure all waste is properly characterized. The result of each waste characterization (TCLP for RCRA materials) will dictate disposal requirements.
 - a. Contractor is responsible for segregation of waste. Collect lead-contaminated waste, scrap, debris, bags, containers, equipment, and lead-contaminated clothing, which may produce airborne concentrations of lead particles. Label the containers in accordance with 29 CFR 1926.62 and 40 CFR 261. Dispose of lead-contaminated waste material at an approved hazardous waste treatment, storage, or disposal facility.
 - b. Store waste materials in U.S. Department of Transportation (49 CFR 178) approved 55-gallon drums. Properly label each drum to identify the type of waste (49 CFR 172) and the date the drum was filled. The MSA/MSA's Authorized Representative or an authorized representative will assign an area for interim storage of waste-containing drums. Do not store hazardous waste drums in interim storage longer than 90 calendar days from the date affixed to each drum.
 - c. Handle, store, transport, and dispose lead or lead-contaminated waste in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, and State of Maryland Regulations. Comply with land disposal restriction notification requirements as required by 40 CFR 268 and State of Maryland Regulations.
- D. Disposal Documentation: Submit written evidence that the hazardous waste treatment, storage, or disposal facility (TSD) is approved for lead disposal by the EPA and State or local regulatory agencies. Submit one copy of the completed manifest, signed and dated by the initial transporter in accordance with 40 CFR 262.
- E. Final Payment: Final payment will not be made until signed copies of all manifests from the treatment or disposal facility certifying the amount of lead-containing materials delivered is returned and a copy is furnished.

END OF SECTION 02085

SECTION 02086 - HAZARDOUS WASTE MANAGEMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to work of this section.

1.02 RELATED SECTIONS

- A. Section 01092 Codes and Regulations
- B. Section 02081 Removal of Asbestos-Containing Materials
- C. Section 02084 Disposal of Asbestos-Containing Materials
- D. Section 02085 Removal and Disposal of Materials Containing Lead

1.03 DESCRIPTION OF THE WORK

- A. This section describes the segregation, packaging, labeling, transport, and disposal of waste materials generated by demolition activities and the subsequent shipment of properly packaged and labeled waste materials to an approved disposal site.

1.04 CODES AND REGULATIONS

- A. General Applicability of Codes and Regulations: Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, all applicable codes and regulations have the same force and effect (and are made a part of the contract documents by reference) as if copied directly into the Contract Documents, or as if published copies are bound herewith.
- B. Contractor Responsibility: The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations pertaining to hazardous waste management and disposal. Hold the MSA and Designer harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of the Contractor, the Contractor's employees, or Subcontractors.
- C. Federal Requirements: which govern the management, hauling and disposal of hazardous waste include but are not limited to the following:
 - 1. DOT: U. S. Department of Transportation, including but not limited to:
 - a. Hazardous Substances:
 - i. Title 49, Part 171 and 172 of the Code of Federal Regulations
 - b. Hazardous Material Regulations:
 - i. General Awareness and Training Requirements for Handlers, Loaders and Drivers
 - ii. Title 49, Parts 171-180 of the Code of Federal Regulations

- c. Hazardous Material Regulations
 - i. Editorial and Technical Revisions
 - ii. Title 49, Parts 171-180 of the Code of Federal Regulations
- 2. EPA: U. S. Environmental Protection Agency (EPA), including but not limited to:
 - a. Management of Hazardous Wastes Resource Conservation and Recovery Act (RCRA)
 - i. Title 40, Parts 260- 268 of the Code of Federal Regulations
- D. State Requirements: which govern the management, hauling and disposal of hazardous waste include but are not limited to the following:
 - 1. MDE: Maryland Department of the Environment, including but not limited to:
 - a. Title 26, Subtitle 13, of the Code of Maryland Regulations Disposal of Controlled Hazardous Substances.
- E. Local Requirements: Abide by all local requirements which govern the management, hauling and disposal of hazardous waste.

1.05 DEFINITIONS

- A. Toxicity Characteristic Leaching Procedure (TCLP): A laboratory test method to determine the mobility of both organic and inorganic analyses present in liquid, solid, and multiphasic wastes performed in accordance with test methods required under 40 CFR Part 268.

1.06 SUBMITTALS

- A. Before Start of Work: Submit the following to the MSA for review. Do not start work until these submittals are returned with MSA's action stamp indicating that the submittal is returned for unrestricted use.
 - 1. Copy of state and local licenses for waste hauler.
 - 2. U.S. EPA Identification Number of waste hauler.
 - 3. Name and address of waste disposal facility where hazardous waste materials are to be disposed including:
 - a. Contact person and telephone number.
 - b. Copy of state license and permit
 - c. Disposal facility permits
 - 4. Specimen copy of Uniform Hazardous Waste Manifest form.
 - 5. Copy of EPA "Notice of Hazardous Waste activity" form
 - 6. Copy of forms requires by state and local agencies
 - 7. Sample of disposal label to be used.
 - 8. Submit copies of a valid training certificate for all employees involved in work related to hazardous materials as defined by OSHA under 29 CFR 1910.120.
- B. During Work: Submit the following as required by the work.

1. TCLP test results, as required to characterize waste for segregation and packaging purposes.
2. Submit copies of all executed manifests and disposal site receipts to the MSA.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Disposal Bags: Provide 6 mil (0.15 mm) thick leak-tight polyethylene bags.
- B. DOT Hazardous Waste Disposal Drums: Provide DOT 17-H or equivalent Open -Top Drums (55 gallon) in accordance with DOT regulations title 49 CFR Parts 173, 178, and 179.
- C. DOT Hazardous Waste Labels: in accordance with DOT regulations Title 49 CFR parts 173, 178, and 179.

PART 3 - EXECUTION

3.01 GENERAL

- A. Do not mix potentially hazardous waste streams. Where feasible, separate each type of hazardous waste from other types of hazardous wastes, from asbestos waste and from construction waste.
- B. Segregate, package, label, transport and dispose of Hazardous Waste in accordance with DOT, EPA, State and Local regulations.
- C. Training Certification – Train each employee performing work related to the removal, handling, transportation, treatment, storage and/or disposal of hazardous materials prior to the time of the initial job assignment and annually thereafter, in accordance with 29 CFR 1910.120 and the State of Maryland regulations where appropriate. Submit proper valid documentation for each employee which illustrates that he has successfully completed an accredited training course as defined by applicable federal, state and local regulations.

3.02 HAZARDOUS WASTE DESIGNATION

- A. Where not otherwise designated by the MSA as Hazardous waste, characterize all suspect waste products by conducting representative TCLP testing.
- B. Representative sampling of waste products will be in accordance with EPA Document SW 846.
- C. TCLP test analysis will be performed in accordance with EPA Method 1311.

3.03 HAZARDOUS WASTE

- A. The following waste products are designated by the MSA as non-salvageable and as Hazardous Waste Types:
 1. Waste Type A: PCB waste.
 - a. PCB-containing ballasts from fluorescent light fixtures.
 2. Waste Type B: Mercury-containing waste.

- a. Thermostats with mercury switches.

3.04 SCOPE OF WORK

- A. Work included under this contract involves the removal and disposal of PCB and mercury containing waste materials from designated structures at the site. The work shall be conducted to support the demolition of the buildings located on the subject site. Quantities of materials to be removed are not provided. It shall be the responsibility of the Contractor to estimate quantities to his own satisfaction prior to submitting a bid.
 1. If the Contractor bids for this work, this shall indicate acceptance of the Scope of Work that includes removal of all described materials, regardless of quantity.

3.05 HAZARDOUS WASTE PACKAGING AND LABELING

- A. Package each segregated Hazardous Waste Type A and B, in specified containers as follows. **IMPORTANT: Do Not Mix Waste Streams:**
 1. Waste Type A
 - a. Package in DOT 17-H or equivalent Open-Top Drums
 - b. Fill to capacity only with Waste Type A (Do Not Mix Waste Stream types).
 - c. Install gasket on lid, apply lock ring, and seal.
 - d. Apply Hazardous Waste Label to drum side.
 - e. Enter DOT Shipping Data as follows: RQ Waste Polychlorinated Biphenyls, 9, UN-2315, PG-II, (M001).
 - f. Adjacent to each label, enter the date indicating when waste was first placed in each drum.
- B. Waste Type B
 1. Package in DOT 17-H or equivalent Open-Top Drums with Polyethylene disposal bag liners
 2. Fill liner bags only with Waste Type B (Do Not Mix Waste Stream types); then neck liner bags down into DOT 17-H or equivalent Open-Top Drum and seal with duct tape.
 3. Install gasket on lid, apply lock ring, and seal.
 4. Apply Hazardous Waste Label to drum side.
 5. Enter DOT Shipping Data as follows: RQ Hazardous Waste Solid, NOS 9, NA3077, PG-III, (D009).
 6. Adjacent to each label, enter the date indicating when waste was first placed in each drum.
- C. Sealed and Labeled Containers: maintain all containers in a continuously sealed condition after they have been sealed.
 1. Do not reopen sealed containers.
 2. Do not place additional waste in sealed containers.

3.06 TEMPORARY STORAGE

- A. Partially filled containers of hazardous waste may be stored at the work site for intermittent packaging provided that:
 - 1. Each container is properly labeled when it is first placed in service;
 - 2. Each container remains closed at all times except when compatible waste types are added; and
 - 3. When moved from site to site, each container remains within the geographic boundaries of the facility without moving nor crossing public access highways.

3.07 REMOVAL OF HAZARDOUS WASTES:

- A. Immediately seal containers of hazardous waste as each the container is filled. Remove containers of hazardous waste from the work site within seventy-two (72) hours of being filled.
- B. Transporting filled containers from the work site to an approved disposal site or recycling center.
- C. Continuously maintain custody of all hazardous material generated at the work site including security, short-term storage, transportation and disposition until custody is transferred to an approved disposal site or recycling center. Document continuous chain of custody.
- D. Do not remove, or cause to be removed, hazardous waste from MSA's property without a legally executed Uniform Hazardous Waste manifest.
- E. At completion of hauling and disposal of each load submit copy of waste manifest, chain of custody form, and landfill receipt to Designer.

3.08 RECYCLING AND RECOVERY

- A. Turn over waste which contains materials for which recovery and/or recycling is possible to an approved recycling center. Materials subject to recycling include:
 - 1. Fluorescent light tubes.
 - 2. Thermostats with mercury switches.
 - 3. Lead acid batteries
 - 4. Combustible lead-based painted building components and lead-based paint chips.

3.09 BACK CHARGES

- A. Where Contractor fails to fulfill packaging, handling, transport or disposal requirements as outlined herein, MSA will charge back to the Contractor all costs associated with ensuring that hazardous wastes are segregated, packaged, transported and disposed of in accordance with all applicable Federal and State regulations.
 - 1. Environmental pollution of MSA's property or areas surrounding the project area resulting from Contractor's hazardous waste management activities will be promptly remediated to the MSA's sole satisfaction, and at the Contractor's sole expense.
 - 2. Contractor agrees to either reimburse the MSA, or reduce the Contract amount by change order to cover all costs associated with waste re-packaging, waste re-segregation, or pollution remediation efforts.

3.10 REMOVAL OF NON-HAZARDOUS WASTE MATERIALS

- A. Transport and legally dispose of non-hazardous waste products, materials, residues and refuse at a location in compliance with all Federal, state and local regulations.
- B. Non-hazardous waste products, materials, residues and refuse include, but are not necessarily limited to:
 - 1. Materials which are determined to be non-hazardous wastes through objective sampling in accordance with EPA Document SW-846 and laboratory analysis in accordance with EPA Method 1311.
 - 2. Emptied hazardous material containers: containers holding a material with constituents listed on the Safety Data Sheet (SDS) as hazardous.
 - a. When a container is emptied of its hazardous contents by pouring or scraping so that less than one inch of material remains in the bottom of the container, the container is considered “empty” and is not in itself a hazardous waste.
 - b. Emptied hazardous material containers may be disposed of as construction debris waste (i.e. non-hazardous).
 - 3. Personnel protective clothing and safety equipment with *de minimus* or trace contamination, as determined by visual inspection by MSA’s Representative.
- C. Keep premises in a clean and orderly condition during performance of abatement work.
- D. Place non-hazardous construction debris wastes on a daily basis in secure containers for local landfill disposal.

END OF SECTION 02086

SECTION 02221 - BUILDING DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Project CORE Work Execution Protocols.
- C. Environmental Consultant Project Specific Inspection Report.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Pre-demolition activities
 - 2. Demolition and removal of buildings and site improvements.
 - 3. Abandoning in place and removing below-grade construction.
 - 4. Salvaging items for reuse.
- B. Related Sections include the following:
 - 1. Section 01732 - Selective Demolition (Deconstruction) for the partial demolition of buildings, structures, and site improvements associated with salvage operations.
 - 2. Section 02230 - Site Clearing for site clearing and removal of above- and below-grade site improvements not included under building demolition.

1.03 DEFINITIONS

- A. Demolish: Completely remove and legally dispose of off-site.
- B. Recycle: Recovery of demolition waste for subsequent processing in preparation for reuse.
- C. Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to approved transfer location. Include fasteners or brackets needed for reattachment elsewhere.

1.04 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste removed from the site is the property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to MSA that may be uncovered during demolition remain the property of MSA.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to MSA.

1.05 SUBMITTALS

- A. Asbestos Containing Material (ACM), Lead-Based Paint and Hazardous Material Survey: Prior to the initiation of demolition activities, the Environmental Consultant will complete a Hazardous Material Survey. The survey will detail the locations, quantities, condition, and containment/removal procedures required for the safe and proper disposal of the material. MSA will provide the demolition Contractor with the Hazardous Material Survey as part of the contracting process.
 - 1. As identified in the Hazardous Material Survey, hazardous/regulated materials including, but not limited to: petroleum products, solvents, aerosol cans, above- and underground storage tanks, polychlorinated biphenyl (PCB) containing materials, chlorofluorocarbon (CFC) containing material, batteries, cathode ray tube (CRT) devices, exit signs, leaded glass, paints, fluorescent lighting, mercury containing equipment and unidentified chemical mixtures, will be removed and disposed of by a Contractor designated licensed hazardous waste handler.
 - 2. If an unidentified hazardous item is encountered during the work, the Contractor will immediately notify MSA and the Environmental Consultant for direction and implementation of proper handling procedures.
- B. Pre-Demolition Survey: No later than 5 days prior to start of demolition activities, the Contractor will complete and submit a report to MSA documenting the structural condition of all buildings to be removed and buildings to remain within and adjacent to the contract limits. The report will identify for each structure, areas suitable for deconstruction activities included in Section 01732 - Selective Demolition (Deconstruction); pre-demolition hazardous material abatement and removal; and other required pre-demolition activities. The report must be signed and sealed by a professional engineer licensed in the State of Maryland.
 - 1. Report will also include details describing the Contractor's proposed methods for any necessary temporary supports for building demolition.
- C. Qualification Data:
 - 1. All personnel working within the site perimeter will be properly trained to complete the required demolition task, familiarized with the site-specific health and safety plan prior to admittance onto the site.
 - 2. Hazardous material handling and disposal will only be performed by a licensed professional in accordance with the Site-Specific work plan and under applicable Maryland Occupational Safety and Health (MOSH) conditions.
 - a. Workplace air lead concentrations must be maintained below the Permissible Exposure Limit (PEL) of 50 $\mu\text{g}/\text{m}^3$ of air, averaged over an 8-hour workday. Workplace air lead concentrations at or above the 30 $\mu\text{g}/\text{m}^3$ action level requires periodic monitoring of worker blood lead levels.
- D. Proposed Protection Measures: Submit informational report, including drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- E. Schedule of Building Demolition Activities: Indicate the following:
 - 1. Detailed sequence of demolition work, with starting and ending dates for each activity.
- F. Building Demolition Plans: Drawings indicating the following:
 - 1. Locations of temporary protection and means of egress for adjacent occupied buildings.

- G. Inventory: Submit a list of items to be removed and salvaged and deliver to MSA prior to start of demolition.
- H. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
- I. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- J. The City of Baltimore will prepare demolition permit application. Contractor shall complete all predemolition activities as required by the permit including rodenticide and hazardous material abatement. The Contractor will be responsible for obtaining the demolition permit from the City of Baltimore prior to commencing demolition

1.06 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Pre-demolition Conference: Review methods and procedures related to building demolition including, but not limited to, the following:
 1. Inspect and discuss condition of construction to be demolished.
 2. Review structural load limitations of existing structures.
 3. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Review and finalize protection requirements.
 5. Review procedures for noise control and dust control.
 6. Review procedures for protection of adjacent buildings.
 7. Review items to be salvaged.

1.07 PROJECT CONDITIONS

- A. Buildings to be demolished will be vacated and their use discontinued before start of the Work.
- B. Buildings immediately adjacent to demolition area may be occupied. Conduct building demolition so operations of occupied buildings will not be disrupted.
 1. Provide ten (10) day Public Notice of Demolition .
 2. Maintain access to existing walkways, exits, and other facilities used by occupants of adjacent buildings.

- a. Do not close or obstruct walkways, exits, or other facilities used by occupants of adjacent buildings without written permission from authorities having jurisdiction.
- C. MSA assumes no responsibility for buildings and structures to be demolished.
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Baltimore City as far as practical.
- D. Hazardous Materials: Hazardous materials are present in buildings and structures to be demolished. The Contractor will be required to confirm information provided prior to bid to assess hazardous materials prior to demolition
 - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
- E. On-site storage or sale of removed items or materials is not permitted.
- F. It is the intention of MSA to recycle as much of the acceptable demolition debris as feasible, with a minimum of 30% recycled per City of Baltimore requirement. The Contractor, therefore, may be required to source separate certain materials that have recycling potential. These items include structural steel, concrete, bricks (excluding refractory type), lumber, plaster and plasterboard, insulation material, cement, shingles and roofing material, floor and wall tile, asphalt, pipes and wires, and other items physically attached to the structure, including appliances if they have been or will be compacted to their smallest practical volume.

1.08 SCHEDULING

- A. Construction Scheduling – Within seven (7) calendar days of notice to proceed the Contractors shall submit a schedule conforming to Section 110 of the MSHA Standard Specifications for Construction and Materials (2001). All requirements for the initial activities chart, revisions, updates, meetings and time extensions will apply to these contracts.
- B. Two Week Coordination Schedule – The Contractor will submit two-week coordination schedules to MSA on a bi-weekly basis describing the planned work activities for each period. These schedules will be used for agency coordination, utility coordination, testing, and coordination with other parties.
- C. Special Work Hours – City regulations and noise ordinances apply. All work must be performed during permissible work hours. Special permission may be requested from the MSA for any necessary night work required on emergency basis only. Absolutely, no impact demolition equipment of any kind may be operated after 9 pm.

1.09 COORDINATION

- A. Reference is made to the Protocol Document included in the Contract. Each Demolition Contractor will coordinate with other parties that will have full access to the site (contract limits), as well as adjacent areas. Specifically:
 - 1. Each Demolition Contractor will provide full and unrestricted access for representatives, consultants, testing agencies, inspection agencies and agents of MSA to the sites. Testing, monitoring and inspection will be on-going activities throughout the durations of the contract.

2. Each Demolition Contractor will provide full and unrestricted access when requested by MSA for surveys, geotechnical sampling and investigation, engineering studies, evaluations, inspections, etc. that may be necessary for future construction in the work areas.
3. 6. Each Demolition Contractor will coordinate with MSA, City agencies, government agencies, and utilities (including but not limited to BGE, Verizon, Comcast, City Water & Sewer, and City Street Lighting & Electric). Access will be coordinated and provided to each agency or utility when required.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. Satisfactory Soils: Comply with requirements in Division 2 Section "Earthwork."

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting demolition operations.
- B. Review Project Record Documents of existing construction provided by the MSA. The MSA does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Inventory and record the condition of items to be removed and salvaged.
- D. Engage a professional engineer to perform an engineering survey of condition of buildings to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during building demolition operations.
 1. Submit report (no later than 5 days prior to start of demolition activities) certified by a Maryland Professional Engineer to MSA for review and acceptance.
 2. Steel Tendons: Locate tensioned steel tendons and include recommendations for de-tensioning.
 3. Existing buildings that are structurally unsound shall be identified in the report. These building will not incorporate deconstruction operations prior to demolition.
- E. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

3.02 PREPARATION

- A. Refrigerant: Remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction before starting demolition.
- B. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
 1. Strengthen or add new supports when required during progress of demolition.
- C. Salvaged Items: Comply with the following:

1. Clean salvaged items of dirt and demolition debris.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until removed from the project site
4. Transport items to approved transfer location.
5. Protect items from damage during transport and storage.

3.03 PROTECTION

- A. Existing Facilities: Protect adjacent walkways, building entries, and other building facilities during demolition operations. Maintain exits from existing buildings.
- B. Existing Utilities: Maintain utility services to remain and protect from damage during demolition operations.
 1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by MSA and authorities having jurisdiction.
 2. Provide temporary services during interruptions to existing utilities, as acceptable to MSA and authorities having jurisdiction.
 - a. Provide at least 72 hours' notice to occupants of affected buildings if shutdown of service is required during changeover.
- C. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated.
 1. Protect adjacent buildings and facilities from damage due to demolition activities.
 2. Protect existing site improvements, appurtenances, and landscaping to remain.
 3. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
 4. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 5. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
 6. Protect walls, windows, roofs, and other adjacent exterior construction that are to remain and that are exposed to building demolition operations.
 7. Erect and maintain dustproof partitions and temporary enclosures to limit dust, noise, and dirt migration to occupied portions of adjacent buildings.
- D. Remove temporary barriers and protections where hazards no longer exist unless otherwise directed by MSA. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

3.04 DEMOLITION, GENERAL

- A. Demolition will be executed in a safe and coordinated manner, preventing or mitigating any additional risks for the general public or workers.

- B. All demolition contractors and sub-contractors must wear all appropriate Personal Protective Equipment (PPE) while onsite. The Contractor will enforce strict PPE use during demolition activities and the Environmental Consultant will monitor for implementation of the site-specific Health and Safety Plan (HASP). Monitoring activities do not relieve the Contractor of responsibility for implementation of health and safety on the demolition site.
- C. Demolish indicated existing buildings and site improvements completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
 - 2. Maintain fire watch during and for at least 4-hours after flame cutting operations.
 - 3. Maintain adequate ventilation when using cutting torches.
 - 4. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 5. Avoid or minimize impediment of public roads, streets, walkways or neighboring properties.
 - 6. Ensure a safe route for the continued passage of pedestrians and vehicles around the demolition site.
- D. Engineering Surveys: During demolition, perform surveys to detect hazards that may result from building demolition activities.
- E. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from MSA and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
 - 2. Use water in accordance with the Project Execution Protocols outlined herein to limit spread of dust and dirt. Comply with governing environmental-protection regulations.
- F. Explosives: Use of explosives is not permitted.

3.05 DEMOLITION BY MECHANICAL MEANS

- A. Proceed with demolition of structural framing members systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.
- B. Remove debris from elevated portions of the building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 1. Remove structural framing members and lower to ground by method suitable to minimize ground impact and dust generation.
- C. Below-Grade Construction: Demolish foundation walls and other below-grade construction.
 - 1. Remove below-grade construction, including basements, foundation walls, and footings, completely.
- D. Existing Utilities: Unless otherwise noted, demolish existing utilities and below-grade utility structures that are within the limits shown. Abandon utilities outside this area.

1. Remove existing utilities within 4' of finished grade.
2. Fill abandoned utility structures with satisfactory soil materials.
3. Piping: Disconnect piping at unions, flanges, valves, or fittings.
4. Wiring Ducts: Disassemble into unit lengths and remove plug-in and disconnecting devices.

3.06 SITE RESTORATION

- A. Below-Grade Areas: Completely fill below-grade areas and voids resulting from building demolition operations with satisfactory soil materials according to backfill requirements in Division 2 Section "Earthwork."
- B. Site Grading:
 1. Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.
 2. Soil removal and backfill will not occur until whole block demolition (contiguous site) has occurred to avoid recontamination of backfill. Soil should be lightly wetted prior to removal.

3.07 REPAIRS

- A. Promptly repair damage to adjacent buildings caused by demolition operations.

3.08 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and legally dispose of them in an EPA-approved landfill acceptable to authorities having jurisdiction.
 1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 3. Removal of demolition debris should begin within 48 hours of commencing demolition operations and is to be completed no later than 14 days from the completion of demolition.
 4. Debris piles must not exceed height of temporary fencing installed around perimeter of the site.
 5. Roll off bins and dump trucks shall not be parked in front of occupied houses during debris removal.
 6. Provide effective wetting during debris removal to reduce dust emissions. Dumpsters will also receive regular wetting to reduce dust.
 7. Provide removal and handling of demolition debris utilizing tightly sealed secure and non-permeable coverings on trucks and dumpsters.
- B. Do not burn demolished materials.

3.09 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.

END OF SECTION 02221

SECTION 02230 - SITE CLEARING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Project C.O.R.E. Work Execution Protocols

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Protecting existing trees to remain.
 - 2. Removing existing trees, shrubs, groundcovers, plants, and grass.
 - 3. Clearing and grubbing.
 - 4. Stripping and stockpiling topsoil.
 - 5. Removing above- and below-grade site improvements.
 - 6. Temporary erosion and sedimentation control measures.
- B. Related Sections include the following:
 - 1. Division 1 Section "Selective Demolition" for partial demolition of buildings or structures undergoing alterations.
 - 2. Division 2 Section "Building Demolition" for demolition of buildings, structures, and site improvements.
 - 3. Division 2 Section "Earthwork" for soil materials, excavating, backfilling, and site grading.

1.03 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.

1.04 MATERIAL OWNERSHIP

- A. Except for stripped topsoil or other materials indicated to remain Baltimore City owned property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.05 SUBMITTALS

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

1.06 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from MSA and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 2 Section "Earthwork."
 - 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to MSA.

3.02 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction and sediment and erosion control Drawings.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.03 UTILITIES

- A. Contractor will confirm that utilities have been disconnected, and sealed or capped off by others, as necessary, within Limit of Work.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by existing occupants or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify MDS not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without MSA's written permission.
- C. Excavate for and remove underground utilities indicated to be removed as necessary within Limit of Work.

3.04 CLEARING AND GRUBBING

- A. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
- B. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
- C. Grind stumps and remove roots, obstructions, and debris extending to a depth of 18 inches below exposed subgrade.
- D. Use only hand methods for grubbing within tree protection zone.
- E. Chip removed tree branches and dispose of off-site.
- F. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of eight inches (8"), and compact each layer to a density equal to adjacent original ground.

3.05 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Dispose of excess topsoil as specified for waste material disposal.

3.06 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated.
- B. Remove slabs, paving, curbs, gutters, sidewalks and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

3.07 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off of Baltimore City property.

END OF SECTION 02230

SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Project C.O.R.E. Work Execution Protocols

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Preparing subgrades for future slabs-on-grade, pavements and foundations.
 - 2. Excavating and backfilling for buildings and structures.
- B. Related Sections include the following:
 - 1. Division 2 Section "Site Clearing" for temporary erosion and sedimentation control measures, site stripping, grubbing, stripping topsoil, and removal of above- and below-grade improvements and utilities.

1.03 DEFINITIONS

- A. Backfill: Satisfactory soil material or controlled low-strength material used to fill an excavation.
- B. Base Course: Course placed between the subbase course and hot-mix asphalt paving.
- C. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- D. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
- E. Fill: Soil materials used to raise existing grades.
- F. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- G. Subbase Course: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- I. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.04 SUBMITTALS

- A. Product Data: For the following:
 - 1. Geotextile.
 - 2. Controlled low-strength material, including design mixture.
- B. Samples: 12-by-12-inch sample of geotextile.
- C. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
 - 1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed for fill and backfill.
 - 2. Laboratory compaction curve according to ASTM D 698 for each on-site and borrow soil material proposed for fill and backfill.
- D. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earthwork operations. Submit before earthwork begins.

1.05 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by MSA or others unless permitted in writing by MSA and then only after arranging to provide temporary utility services according to requirements indicated.
 - 1. Notify MSA not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without MSA's written permission.
 - 3. Contact utility-locator service for area where Project is located before excavating.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Confirm utility services shut-off prior to proceeding.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM or a combination of these groups; free of rock or gravel larger than 6-inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

- E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.
- F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
- G. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.

2.02 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
 - 1. Survivability: Class 2; AASHTO M 288.
 - 2. Grab Tensile Strength: 157 lbf; ASTM D 4632.
 - 3. Sewn Seam Strength: 142 lbf ASTM D 4632.
 - 4. Tear Strength: 56 lbf; ASTM D 4533.
 - 5. Puncture Strength: 56 lbf; ASTM D 4833.
 - 6. Apparent Opening Size: No. 40 sieve, maximum; ASTM D 4751.
 - 7. Permittivity: 0.5 per second, minimum; ASTM D 4491.
 - 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.
- B. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
 - 1. Survivability: Class 2; AASHTO M 288.
 - 2. Grab Tensile Strength: 247 lbf; ASTM D 4632.
 - 3. Sewn Seam Strength: 222 lbf; ASTM D 4632.
 - 4. Tear Strength: 90 lbf; ASTM D 4533.
 - 5. Puncture Strength: 90 lbf; ASTM D 4833.
 - 6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
 - 7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
 - 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.03 CONTROLLED LOW-STRENGTH MATERIAL

- A. Produce conventional-weight, controlled low-strength material with 140-psi compressive strength when tested according to ASTM C 495.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 2 Section "Site Clearing."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Division 2 Section "Site Clearing," during earthwork operations.
- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.02 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.03 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.04 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
- B. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - 1. 1. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.

3.05 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.06 SUBGRADE INSPECTION

- A. Notify MSA when excavations have reached required subgrade.
- B. If MSA determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
 - 2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
 - a. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by MSA, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by MSA, without additional compensation.

3.07 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation with engineered fill as directed by MSA.

3.08 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials: Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.09 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Testing and inspecting underground utilities.
 - 2. Removing trash and debris.
 - 3. Removing temporary shoring and bracing, and sheeting.
 - 4. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.10 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact engineered fill material in layers to required elevations.

- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.11 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:
 - 1. Scarify and recompact top twelve inches (12”) of existing subgrade and each layer of backfill or fill soil material at 95 percent.

3.13 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks: Plus or minus 1 inch.
 - 3. Pavements: Plus or minus 1/2 inch.

3.14 SUBBASE AND BASE COURSES

- A. Place subbase and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase and base course under pavements and walks as follows:
 - 1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
 - 2. Place base course material over subbase course under hot-mix asphalt pavement.
 - 3. Shape subbase and base course to required crown elevations and cross-slope grades.

4. Place subbase and base course 6 inches or less in compacted thickness in a single layer.
5. Place subbase and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
6. Compact subbase and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.15 SEEDING

A. The disturbed areas shall be vegetated with permanent seeding as follows:

1. Seedbed preparation: Area to be seeded shall receive 4 inches of topsoil. Also, the areas to be seeded shall be amended with the addition of 2 inches of fully composted organic material. The compost shall be incorporated into the top 6 inches of soil through discing or roto-tilling.
2. Seeding Application (Hydrosee/Hydo-Mulch acceptable)
 - a. Spring Seeding Season (March 1 to May 31). Apply 3 lbs. per 1,000 square feet (130 lbs. per acre) Zoysiagrass (as per recommended cultivars, University of Maryland Turfgrass Technical Updated TT-77), plus 1 lb. per 3,000 square feet (13 lbs. per acre) White Clover.
 - b. Summer Seeding Season (Jun 1 to August 31). Apply the same as Spring Season. Reseed in the Fall season with Hard Fescue and White Clover
 - c. Fall Season (September 1 to October 31). Apply 3 lbs. per 1,000 square feet (130 lbs. per acre) Hard Fescue (as per recommended cultivars, University of Maryland Turfgrass Technical Updated TT-77), plus 1 lb. per 3,000 square feet (13 lbs. per acre) White Clover.
 - d. Winter Season (November 1 to February 28). Apply the same as Fall Season plus 22 lbs. per acre of Rye Grain.
3. When requested, the following alternative seed mix may be applied during any of the above seasons: Maryland State Highway Administration (SHA) Turfgrass Mixture (Pure Seed): 50% Houndog 5 Tall Fescue, 45% Bingo Tall Fescue & 5% Raven Kentucky Bluegrass (all 90% germination).
4. Seed shall be applied uniformly with a cyclone seeded frill, cultipacker seeder or hydroseeder (slurry includes seeds and fertilizer, recommended on steep slopes only) on a moist, firm seedbed. Maximum seed depth should be ½" in clayey soils and ½" in sandy soil when using other than the hydroseeder method. If soil moisture is deficient to support adequate growth, irrigation should be employed until vegetation is firmly established.
5. Hydroseeding
 - a. Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogenous slurry suitable for hydraulic application.
 - b. Mix slurry with non-asphaltic or asphalt-emulsion or fiber mulch manufacturer's recommended, as directed, tackifier.
 - c. Apply slurry uniformly to all areas to be seed in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1,500 lb/acre (15.6 kg / 92.9sq. m) dry weight, and seed component is deposited at not less than the specified

seed sowing rate. Or apply slurry uniformly to all areas to be seeded in a two step process. Apply first slurry coat at a rate so that mulch component is deposited at not less than 500-lb/acre (5.2-kg/92.5 sq. m) dry weight, and seed component is deposited at not less than the specified seed-sowing rate. Apply slurry cover coat of fiber mulch (hydro mulching) at a rate of 1,000 lb/acre (10.4 kg /92.9 sq. m)

6. Topsoil

- a. ASTM D5268 topsoil, with PH range of 5.5 to 7, a minimum of 2 percent organic material content.

7. Mulching: Mulch shall be approved small grain straw or approved hydro-mulch. Mulch shall be un-chopped, un-rotted, small grain straw applied at a rate of 70 to 90 lbs. per 1,000 square feet. Mulch materials shall be relatively free of all kinds of weeds and shall be free of prohibited noxious weeds which are Canada Thistle, Johnson-grass and Quack-grass. Spread mulch mechanically or uniformly by hand; mulch anchoring shall be accomplished immediately after mulch placement to minimize loss by wind or water. This may be done by one of the following methods: Mulch anchoring tool, tracking, mulch netting, liquid mulch binders, wood cellulose fiber or peg and twine. Proper execution of these provisions, resulting in a full healthy growth of grass shall be a criterion for accepting the site as completed. The Contractor shall not be relieved of this responsibility in the event the site is accepted prior to a full healthy growth of grass being established.

8. Compost:

- a. Compost (observed characteristics)

Color – Brown

Particle Size – Less than ½ inch

Particle Composition – Free of sub-soil, large stones, earth clods, sticks, stumps, clay lumps, roots or other objectionable material

Odor – “earthy” (like the woods or a forest)

Weeds – Free of noxious weeds (including Quack-grass rhizomes, Elytrigia repens, and the nut-like tuber of nutsedge, Cyperus esculentus); Weeds may not be growing at the production site

- b. Compost (Laboratory test characteristics)

Moisture Content – 30- 50%

Organic Content - Greater than 30%

Ash Content – Less than 70%

Carbon to Nitrogen ratio – Below or equal to 30:1

Nitrogen – 0.5 – 3.0%

Phosphorus – Greater than 0.2%

pH – 6/0 to 7.5

3.16 FIELD QUALITY CONTROL

- A. Testing Agency: The MSA will engage a qualified independent geotechnical engineering licensed to practice in the State of Maryland testing agency to perform field quality-control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. At subgrade and at each compacted fill and backfill layer, at least 1 test for every 2000 sq. ft.
- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.
- E. Testing reports will be distributed to the MSA within 24-hours after completion of test.

3.17 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off of Baltimore City property.

END OF SECTION 02300

ATTACHMENT I
SAMPLE PROJECT SIGN

*Larry Hogan, Governor
Boyd K. Rutherford, Lt Governor*



PROJECT C.O.R.E.

CREATING OPPORTUNITIES for RENEWAL and ENTERPRISE

dhcd.maryland.gov/ProjectCORE



CONTRACTOR Name Goes Here

THE MARYLAND GENERAL ASSEMBLY: Adrienne A. Jones, Speaker of the House | Bill Ferguson, President of the Senate

BOARD OF PUBLIC WORKS: Larry Hogan, Governor | Peter Franchot, Comptroller | Nancy K. Kopp, Treasurer

ATTACHMENT J
SAMPLE PREVAILING WAGE DETERMINATION



STATE OF MARYLAND

Maryland Stadium Authority
Capital Projects Development Group
351 W. Camden Street, Suite 300
Baltimore, MD 21201
(410) 223-4150
cpdgprocurement@mdstad.com

The wage rates to be paid laborers and mechanics for the locality described below is announced by order of Commissioner of Labor and Industry.

It is mandatory upon the successful bidder and any subcontractor under him, to pay not less than the specific rates to all workers employed by them in executing contracts in this locality. Reference: Annotated Code of Maryland State Finance and Procurement, Section 17-201 thru 17-226.

These wage rates were taken from the locality survey of 2020 for Baltimore City, issued pursuant to the Commissioner's authority under State Finance and Procurement Article Section 17-209, Annotated Code of Maryland or subsequent modification.

**Note: For additional Prevailing Wage Rates needed for this project beyond those listed below or for any prevailing wage inquiries or complaints, contact the Maryland Stadium Authority, Capital Projects Development Group, Phone: 410-223-4150, email: cpdgprocurement@mdstad.com.

Department, Agency or Bureau:

Maryland Stadium Authority
351 W. Camden Street, Suite 300
Baltimore, MD 21201

Project Number
Project CORE DD-009

Location and Description of work:

1600 Rutland Ave & 1511 Ashburton Street

Abatement and demolition of dilapidated and vacant large structures in Baltimore City. Work includes abatement of regulated asbestos containing materials, demolition, haul off of material to appropriate landfills, backfill of excavation, topsoil, seeding, and grass growth.

Date of Issue: Jul 28, 2021

BUILDING CONSTRUCTION

Table with 5 columns: CLASSIFICATION, MODIFICATION REASON, BASIC HOURLY RATE, BORROWED FROM, FRINGE BENEFIT PAYMENT. Rows include BALANCING TECHNICIAN, BOILERMAKER, BRICKLAYER, CARPENTER, CARPENTER - SHORING SCAFFOLD BUILDER, CARPET LAYER, CEMENT MASON, COMMUNICATION INSTALLER TECHNICIAN, DRYWALL - SPACKLING, TAPING, & FINISHING, ELECTRICIAN, ELEVATOR MECHANIC.

FIRESTOPPER	AD	\$29.41		\$8.43
GLAZIER	AD	\$36.40		\$6.35
INSULATION WORKER	AD	\$38.01		\$17.62
IRONWORKER - FENCE ERECTOR	AD	\$43.99		\$3.88
IRONWORKER - ORNAMENTAL	AD	\$30.77		\$23.18
IRONWORKER - REINFORCING	AD	\$26.10		\$22.35
IRONWORKER - STRUCTURAL	AD	\$35.24		\$30.17
MILLWRIGHT	AD	\$33.06	005	\$11.32
PAINTER	AD	\$25.10		\$11.32
PILEDRIVER	AD	\$32.63		\$15.65
PLUMBER	AD	\$40.97		\$21.24
POWER EQUIPMENT OPERATOR - BACKHOE	AD	\$31.03		\$13.17
POWER EQUIPMENT OPERATOR - BROOM / SWEEPER	AD	\$28.95		\$12.10
POWER EQUIPMENT OPERATOR - BULLDOZER	AD	\$31.03	005	\$13.17
POWER EQUIPMENT OPERATOR - CRANE	AD	\$35.70		\$15.90
POWER EQUIPMENT OPERATOR - DRILL - RIG	AD	\$31.03		\$13.17
POWER EQUIPMENT OPERATOR - EXCAVATOR	AD	\$31.03		\$13.17
POWER EQUIPMENT OPERATOR - FORKLIFT	AD	\$31.03		\$13.17
POWER EQUIPMENT OPERATOR - GRADALL	AD	\$29.25	025	\$6.54
POWER EQUIPMENT OPERATOR - GRADER	AD	\$31.03	005	\$13.17
POWER EQUIPMENT OPERATOR - LOADER	AD	\$22.77		\$12.41
POWER EQUIPMENT OPERATOR - MECHANIC	AD	\$31.03		\$13.17
POWER EQUIPMENT OPERATOR - MILLING MACHINE	AD	\$29.85		\$12.10
POWER EQUIPMENT OPERATOR - PAVER	AD	\$28.95		\$12.10
POWER EQUIPMENT OPERATOR - ROLLER - ASPHALT	AD	\$28.95		\$12.10
POWER EQUIPMENT OPERATOR - ROLLER - EARTH	AD	\$25.45	005	\$13.17
POWER EQUIPMENT OPERATOR - SCREED	AD	\$30.00		\$11.80
POWER EQUIPMENT OPERATOR - SKID STEER (BOBCAT)	AD	\$27.99		\$12.64
RESILIENT FLOOR	AD	\$30.18		\$13.40
ROOFER/WATERPROOFER	AD	\$32.38		\$13.82
SHEETMETAL WORKER (INCLUDING METAL ROOFING)	AD	\$40.77		\$22.63
SPRINKLERFITTER	AD	\$35.39		\$22.22
STEAMFITTER/PIPEFITTER	AD	\$40.97		\$21.24
STONE MASON	AD	\$39.76		\$19.04
TILE & TERRAZZO FINISHER	AD	\$24.94		\$11.53
TILE & TERRAZZO MECHANIC	AD	\$30.12		\$12.60
TRUCK DRIVER - DUMP - ARTICULATING	AD	\$27.97	003	\$0.79
TRUCK DRIVER - LOWBOY	AD	\$25.75	025	\$11.96
TRUCK DRIVER - TACK/TAR TRUCK	AD	\$23.20	025	\$5.64
LABORER GROUP II				
LABORER - ASPHALT RAKER	AD	\$20.55		\$6.14
LABORER - COMMON	AD	\$20.55		\$6.14
LABORER - CONCRETE PUDDLER	AD	\$20.55		\$6.14
LABORER - CONCRETE TENDER	AD	\$20.55		\$6.14
LABORER - CONCRETE VIBRATOR	AD	\$20.55		\$6.14
LABORER - DENSITY GAUGE	AD	\$20.55		\$6.14

LABORER - FIREPROOFER - MIXER	AD	\$20.55	\$6.14
LABORER - FLAGGER	AD	\$20.55	\$6.14
LABORER - GRADE CHECKER	AD	\$20.55	\$6.14
LABORER - HAND ROLLER	AD	\$20.55	\$6.14
LABORER - JACKHAMMER	AD	\$20.55	\$6.14
LABORER - LANDSCAPING	AD	\$20.55	\$6.14
LABORER - LAYOUT	AD	\$20.55	\$6.14
LABORER - LUTEMAN	AD	\$20.55	\$6.14
LABORER - MORTAR MIXER	AD	\$20.55	\$6.14
LABORER - PLASTERER - HANDLER	AD	\$20.55	\$6.14
LABORER - TAMPER	AD	\$20.55	\$6.14

LABORERS GROUP I

LABORER - AIR TOOL OPERATOR	AD	\$24.46	\$7.84
LABORER - ASPHALT PAVER	AD	\$24.46	\$7.84
LABORER - BLASTER - DYNAMITE	AD	\$24.46	\$7.84
LABORER - BURNER	AD	\$24.46	\$7.84
LABORER - CONCRETE SURFACER	AD	\$24.46	\$7.84
LABORER - HAZARDOUS MATERIAL HANDLER	AD	\$24.46	\$7.84
LABORER - MASON TENDER	AD	\$24.46	\$7.84
LABORER - PIPELAYER	AD	\$24.46	\$7.84
LABORER - SCAFFOLD BUILDER	AD	\$24.46	\$7.84

Incidental Craft Data: Caulker, Man Lift Operator, Rigger, Scaffold Builder, and Welder receive the wage and fringe rates prescribed for the craft performing the operation to which welding, scaffold building, rigging, operating a Man Lift, or caulking is incidental.

These **Informational Prevailing Wage Rates** may not be substituted for the requirements of pre-advertisement or onsite job posting for a public work contract that exceeds \$500,000 in value and either of the following criteria are met: (1) the contracting body is a unit of State government or an instrumentality of the State and there is any State funding for the project; or (2) the contracting body is a political subdivision, agency, person or entity (such as a county) and the State funds 50% or more of the project.

Modification Codes:

- (AD) 17-209 Annual Determination from Survey Wage Data Received
- (CH) 17-211 Commissioners' Hearing
- (CR) 17-208 Commissioners' Review
- (SR) 17-208 Survey Review by Staff

Each "Borrowed From" county is identified with the FIPS 3-digit county code unique for the specific jurisdiction in Maryland.

For additional information on the FIPS (Federal Information Processing Standard) code, see <http://www.census.gov/datamap/fipslist/AllSt.txt>

The Prevailing Wage rates appearing on this form were originally derived from Maryland's annual Wage Survey. The Commissioner of Labor & Industry encourages all contractors and interested groups to participate in the voluntary Wage Survey, detailing wage rates paid to workers on various types of construction throughout Maryland.

A mail list of both street and email addresses is maintained by the Prevailing Wage Unit to enable up-to-date prevailing wage information, including Wage Survey notices to be sent to contractors and other interested parties. If you would like to be included in the mailing list, please forward (1) your Name, (2) the name of your company (if applicable), (3) your complete postal mailing address, (4) your email address and (5) your telephone number to PWMAILINGLIST@dllr.state.md.us. Requests for inclusion can also be mailed to: Prevailing Wage, 1100 N. Eutaw Street - Room 607, Baltimore MD 21201-2201.

PREVAILING WAGE INSTRUCTIONS FOR THE CONTRACTOR & SUBCONTRACTOR

The contractor shall electronically submit completed copies of certified payroll records to the www.lcptracker.net and following the instructions for submitting payroll information (NOTE: A contractor must register prior to submitting on-line certified payroll information).

All certified payroll records shall have an accurate week beginning and ending date. The contractor shall be responsible for certifying and submitting to the Maryland Stadium Authority, payroll records covering work performed directly at the work site. By certifying the payroll records, the contractor is attesting to the fact that the wage rates contained in the payroll records are not less than those established by the Commissioner as set forth in the contract, the classification set forth for each worker or apprentice conforms with the work performed, and the contractor or subcontractor has complied with the provisions of the law.

A contractor or subcontractor may make deductions that are (1) required by law; (2) required by a collective bargaining agreement between a bona fide labor organization and the contractor or subcontractor; or (3) contained in a written agreement between an employee and an employer undertaken at the beginning of employment, if the agreement is submitted by the employer to the public body awarding the public work and is approved by the public body as fair and reasonable.

A contractor or subcontractor is required to submit information on-line on their fringe benefit packages including a list of fringe benefits for each craft employed by the contractor or subcontractor, by benefit and hourly amount. Where fringe benefits are paid in cash to the employee or to an approved plan, fund, or program, the contribution is required to be indicated.

Payroll records must be electronically submitted and received within 14 calendar days after the end of each payroll period.

Only apprentices registered with the Maryland Apprenticeship and Training Council shall be employed on prevailing wage projects. Apprentices shall be paid a percentage of the determined journey person 's wage for the specific craft.

Overtime rates shall be paid by the contractor and any subcontractors under its contracts and agreements with their employees which in no event shall be less than time and one-half the prevailing hourly rate of wages for all hours worked in excess of ten (10) hours in any one calendar day; in excess of forty (40) hours per workweek; and work performed on Sundays and legal holidays.

Contractors and subcontractors employing a classification of worker for which a wage rate was not issued SHALL notify the Maryland Stadium Authority for the purpose of obtaining the wage rate for said classification PRIOR TO BEING EMPLOYED on the project. To obtain a prevailing wage rate which was NOT listed on the Wage Determination.

Contractors and subcontractors shall maintain a valid copy of proper State and county licenses that permit the contractor and a subcontractor to perform construction work in the State of Maryland. These licenses must be retained at the worksite.

1. Post a clearly legible statement of each prevailing wage rate to be paid under the project; and
 2. Keep the statement posted during the full time that any employee is employed on the project.
 3. The statement of prevailing wage rates shall be posted in a prominent and easily accessible place at the site of the project.
-

**The Maryland Stadium Authority does not require contribution to the Maryland Apprenticeship and Training Council for their Guaranteed Maximum Price (GMP) construction contracts.

Laborers may NOT assist mechanics in the performance of the mechanic's work, NOR USE TOOLS peculiar to established trades.

ALL contractors and subcontractors shall employ only competent workers and apprentices and may NOT employ any individual classified as a HELPER or TRAINEE on a prevailing wage project.

ATTACHMENT K
PRE-PROPOSAL INSTRUCTIONS
(Not applicable)

ATTACHMENT L
HAZARDOUS MATERIALS INSPECTION REPORTS

PRE-DEMOLITION HAZARDOUS MATERIAL SURVEY

ONSITE DATE: June 16, 2021

1511 ASHBURTON STREET
BALTIMORE, MD

Prepared by:



Mayoka
SERVICES LLC

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Introduction

Project Description

Mayoka Services, LLC was retained by the Maryland Stadium Authority to perform a Hazardous Materials survey of the former Dr. Lillie M. Jackson Elementary School located at 1511 Ashburton Street, Baltimore, MD 20755.

1511 Ashburton is a single-story concrete block (CMU) and steel framed structure with a brick exterior built on a slab on grade foundation with an asphalt and black tar roof. Interior finishes include CMU partition walls, acoustical ceiling tile (ACT) ceilings and a combination of vinyl composite tile (VCT) and ceramic tile flooring. The building was previously used as pre-school with classrooms, offices, and activity spaces including an indoor pool. The roof is a multi-layer rolled asphalt and tar over foam insulation on a plywood roof deck. Windows and doors are metal with brown caulking.

Scope of Work

The purpose of this survey was to identify and categorize suspect asbestos-containing materials, lead-based paint, and universal wastes which could be affected by future demolition activities. All areas of the building were accessed and inspected including destructive techniques where necessary. The survey took place on June 16, 2021, and was completed by accredited inspectors, Mr. Brett Purinton and Mrs. Brittney Grap. The survey was completed using visual inspection techniques and bulk sample collection. A total of sixty-three (63) representative bulk samples were collected for PLM analysis.

Asbestos

Asbestos Sampling and Analytical Methods

Bulk Sample Collection

Sampling was performed using invasive investigative techniques and available building penetrations since the building was unoccupied and slated for demolition. Materials were collected using gloves, respirator, and a multitude of easy-to-clean tools. Tools were cleaned after the collection of each sample in order to minimize cross-contamination between samples. Collected samples were placed into sealable plastic containers for transport to the analytical laboratory. For the purpose of sample locating, we designated the front wall as Side-A and progressed clockwise around the building through Side-D.

Sample Analysis

The bulk samples were analyzed by AMA Analytical Services, Inc. in Lanham, Maryland using the approved Polarized Light Microscopy (PLM) method, EPA/600/R-93/116 dated July 1993. The technique includes the use of polarized light microscopy with confirmation techniques using dispersion staining. This method is designed to identify asbestos minerals and determine their estimated concentrations as a percent by area. If a material contains greater than 1% asbestos, it is considered to be an asbestos-containing material.

AMA Analytical Services, Inc. is an accredited laboratory by the National Voluntary Laboratory Accreditation Program (NVLAP). The PLM analytical method is modeled after 40 CFR Part 763, Subpart F, Appendix A: "Interim Method for the Determination of Asbestos in Bulk Insulation Samples".

Analysis Limitations

There are some limitations associated with PLM analysis that must be considered when interpreting a "positive" sample result. Heterogeneous samples may be determined "negative" or containing TR or <1% due to other material types interfering with the analysis. Also, some materials are made up of very fine asbestos fibers. These fibers can become invisible to light microscopy techniques. Materials like floor tile and vinyl, trap fibers in a matrix that must be dissolved by a solvent, making it difficult to assign an accurate asbestos content percentage.

In any of the above-mentioned situations, retesting or analysis of a sample using different techniques could yield a higher asbestos content percentage. Due to this, samples that are found to contain TR amounts will be considered positive unless additional testing is performed.

Results

A total of sixty-three (63) representative bulk samples of suspect building materials were identified and collected from the designated areas. Laboratory analytical results identified nine (9) samples with qualifying amounts of asbestos, including the black flashing cement, black tar, black tar paper, black mastic, canvas pipe wrap, white end cap mastic, and the grey exterior ceiling caulking.

TABLE I contains the summary of the sampling, including location, material description, and analytical result for the samples collected.

TABLE I—Asbestos Bulk Sample Results			
Sample Number	Material Description	Sample Location	Analytical Result
1511 Ashburton PLM-1	Metal door caulk, grey	D side exterior metal door	NAD
1511 Ashburton PLM-2	Door caulk, grey	C side back main door at loading dock	NAD
1511 Ashburton PLM-3	Caulking, grey	Exterior entry ceiling	NAD
1511 Ashburton PLM-4	Cementitious ceiling, white	Front entryway	NAD
1511 Ashburton PLM-5	Window caulk, brown	Exterior window, side B	NAD
1511 Ashburton PLM-6	Window caulk, brown	Interior window	NAD
1511 Ashburton PLM-7	Carpet glue, yellow	Side B entrance, near door	NAD
1511 Ashburton PLM-8	Roofing tar, black	Roof, side A	NAD
1511 Ashburton PLM-9	Roof flashing cement, black	A side, roof edge above canopy	10%
1511 Ashburton PLM-10	Black tar	Exhaust fan 4, roof	3%
1511 Ashburton PLM-11	Silver roof coat	Exhaust fan 4, roof	NAD
1511 Ashburton PLM-12	Layered system of asphalt roofing, tar paper, felt paper, and foam. Tar paper (sample 12) is positive for asbestos	Multiple layer roof core, side A, near roof vent	2%
1511 Ashburton PLM-12A			NAD
1511 Ashburton PLM-12B			NAD
1511 Ashburton PLM-12C			NAD
1511 Ashburton PLM-12D			NAD
1511 Ashburton PLM-12E			NAD
1511 Ashburton PLM-13	Layered system of asphalt roofing, tar paper, felt paper, and foam. Tar paper (sample 12) is positive for asbestos	Multiple layer roof core, corner of sides B & C, near HVAC compressors	NAD
1511 Ashburton PLM-13A			NAD
1511 Ashburton PLM-13B			NAD
1511 Ashburton PLM-13C			NAD
1511 Ashburton PLM-13D			NAD
1511 Ashburton PLM-13E			NAD
1511 Ashburton PLM-13F			NAD
1511 Ashburton PLM-13G			NAD
1511 Ashburton PLM-13H			NAD
1511 Ashburton PLM-14	Black tar	Roof pitch pocket	NAD
1511 Ashburton PLM-15	2x4 ACT, white	Classroom	NAD
1511 Ashburton PLM-16	12" VCT, white with tan fleck	Central hallway	NAD
1511 Ashburton PLM-17	Mastic, black	Central hallway, beneath PLM 16	5%
1511 Ashburton PLM-18	Tan glue dot	Behind cork board in room 112	NAD

1511 Ashburton PLM-19	White cementitious base	Possible Kiln, room 112	NAD
1511 Ashburton PLM-20	12" VCT, White with tan fleck	Room 116	NAD
1511 Ashburton PLM-21	Mastic, black	Room 116, Beneath PLM 20	5%
1511 Ashburton PLM-22	Canvas pipe wrap	Boiler room, TSI	NAD
1511 Ashburton PLM-23	End cap mastic, white	Boiler room, TSI (paper pipe wrap)	NAD
1511 Ashburton PLM-24	Insulation, white	Boiler door	NAD
1511 Ashburton PLM-25	Insulation, white	Boiler door	NAD
1511 Ashburton PLM-26	Canvas pipe wrap	Boiler room, TSI	5%
1511 Ashburton PLM-27	End cap mastic, white	Boiler room, TSI (paper pipe wrap)	10%
1511 Ashburton PLM-28	Caulking, grey	Exterior ceiling, at front door, where entry meets building	2%
1511 Ashburton PLM-29	Cementitious exterior ceiling, white	Exterior ceiling, at front door, where entry meets the building	NAD
1511 Ashburton PLM-30	Plaster, tan base coat	Ceiling	NAD
1511 Ashburton PLM-31	Plaster, tan top coat	Ceiling	NAD
1511 Ashburton PLM-32	Plaster, tan base coat	Ceiling	NAD
1511 Ashburton PLM-33	Plaster, tan top coat	Ceiling	NAD
1511 Ashburton PLM-34	2x4 ACT	Kitchen office	NAD
1511 Ashburton PLM-35	VCT, white with tan fleck 12"	Cafeteria	NAD
1511 Ashburton PLM-36	Mastic, black	Cafeteria, below PLM 35	5%
1511 Ashburton PLM-37	Tile grout, white	Pool Room	NAD
1511 Ashburton PLM-37A	Ceramic tile, tan	Pool Room	NAD
1511 Ashburton PLM-37B	Tile mud base	Pool Room	NAD
1511 Ashburton PLM-38	Tile grout, white	Pool Room	NAD
1511 Ashburton PLM-38A	Ceramic tile, tan	Pool Room	NAD
1511 Ashburton PLM-38B	Tile mud base	Pool Room	NAD
1511 Ashburton PLM-39	Joint compound, white	Library partition wall	NAD
1511 Ashburton PLM-40	Joint compound, white	Library partition wall	NAD
1511 Ashburton PLM-41	Drywall, white	Library partition wall	NAD
1511 Ashburton PLM-42	Drywall, white	Library partition wall	NAD
1511 Ashburton PLM-43	Mastic, dark brown cove bast	Library partition wall	NAD
1511 Ashburton PLM-44	Mastic, dark brown cove bast	Library partition wall	NAD
1511 Ashburton PLM-45	Glue dot, brown	Hallway cork board	NAD
1511 Ashburton PLM-46	Carpet glue, brown	D side entry door	NAD

Recommendations

Seven (7) types of materials containing asbestos were found in association with the property, including the black flashing cement, black tar, black tar paper, black mastic, canvas pipe wrap, white end cap mastic, and the grey exterior ceiling caulking.

TABLE II contains the findings of the sample analysis including location, material description, and analytical result for the positive samples collected.

TABLE II – Chrysotile Asbestos			
Material Description	Sample Location	Friable/Non-Friable	Estimated Quantity
Roofing (flashing cement, tar, tar paper)	Roof system	Non-friable	~21,000 sqft
Black Mastic	Sporadic throughout	Non-friable	~12,000 sqft
Thermal Systems Insulation	Throughout	Non-friable when intact	~1,000LF
Grey Exterior Caulking	Front & rear building entrances	Non-friable	~200 LF

Roofing (flashing cement, tar, tar paper):

These materials are non-friable if removed by hand methods but may become friable if mechanical means are used or if the material is left in place during demolition. All impact and removal activities must be performed by a Maryland licensed abatement contractor following all federal and state removal and disposal regulations.

Areas of Impact: Samples 12 and 13 are roof core samples comprised of multiple layers of roofing materials. The laboratory attempts to separate each layer in the core sample to analyze individually, although this is not always possible due to age and condition of the materials. Samples 12 and 13 contain a different number of layers, at least one of which was identified as containing greater than 1% asbestos, along with the black tar and flashing cement. As such, the entire roof and metal flashing should be considered positive for asbestos. There is no way to differentiate one section or layer of the roof from another during demolition. Total impacted area is ~21,000 sqft.

Black Mastic (flooring):

Black mastics are considered non-friable if removed by hand methods. If demolition or mechanical means are used, these materials can be made friable and should be handled accordingly. All impact and removal activities must be performed by a Maryland licensed abatement contractor following all Federal and State removal and disposal regulations.

Areas of Impact: Mastic was identified under the 12" VCT floor tile throughout the building. Not all areas of the building have floor tile, and some areas are bare concrete. All cement that has mastic contamination will need to be abated or disposed of as contaminated waste during demolition. Total impacted area is ~12,000 sqft.

Non-Friable Thermal Systems Insulation: (Canvas Pipe Wrap, End Cap Mastic)

Thermal systems insulation is considered Class 1 work and should be removed prior to building demolition. All pipe insulation throughout the building is fiberglass, however there is a combination of canvas wrapped insulation (older) and paper wrapped (newer), both materials have been contaminated with white end cap mastic. These two types of insulation were run throughout the building providing insulation for hot water and heating pipes. TSI should be removed by a Maryland licensed contractor following all state and federal regulations prior to demolition.

Areas of Impact: These two materials were found throughout the building on all pipe insulation. While the insulation itself is fiberglass, the combination of canvas wrap and end cap mastic makes all materials contaminated. Total estimate of material is ~1,000LF.

Grey Exterior Caulking (Brick to plaster joints):

This material is non-friable if removed by hand methods. A Maryland licensed asbestos abatement contractor should perform removal of all associated materials prior to demolition activities or a plan should be in place to ensure safe demolition of the building while leaving the non-friable materials in place.

Areas of Impact: Grey caulking is found at seams between the exterior ceilings at both the front and rear entrances to the building. Total estimate of material is ~200 LF.

Lead

Analytical Methods

Visual Inspection

Mayoka performed a visual inspection of the interior and exterior of the property. The property was unoccupied, therefore destructive investigative techniques were used where necessary. Flooring was pulled up, and ceilings were opened and exposed. The presence and condition of paint throughout the property was recorded.

Results

Due to the build date of the building (1977), all paint on the property is assumed to be lead-based paint. This building is slated for complete demolition and as such, an XRF survey was not conducted. A visual inspection identified multiple painted surfaces including interior CMU and drywall walls, doors, and all steel framing and installed mechanical systems. Many surfaces showed signs of paint deterioration including entry doors, CMU painted walls, and painted steel structures.

Recommendations

There is no acceptable concentration for lead under the OSHA lead standard that eliminates the requirement for contractors to comply with this regulation. The Occupational Safety and Health Administration (OSHA) Lead in Construction Regulation, 29 CFR 1926.62, applies to all construction work where an employee may be occupationally exposed to lead. This standard does not indicate a specific percentage or mass per area (mg/cm²) of lead in paint that is permissible during construction and demolition activities.

Prior to disposal of debris that contains materials that have been found to contain lead-based paint, Toxicity Characteristic Leaching Procedures (TCLP) should be conducted on representative solid wastes in accordance with the Resource Conservation and Recovery Act (RCRA), to determine disposal options. The hazardous waste criteria for lead waste are established under RCRA, Subtitle C, as 5.0 milligrams per liter (mg/L) measured with the TCLP as listed in CFR 40 Part 261. The lead-containing and lead-based paint debris generated during demolition should be handled in accordance with all applicable Federal and State regulations.

Universal Wastes

Analytical Methods

Visual Inspection

Mayoka performed a visual inspection of the interior and exterior of the property. The property was unoccupied, therefore destructive investigative techniques were used where necessary. Flooring was pulled up, and ceilings were opened and exposed. The type and amount of all identified universal wastes and other potentially hazardous materials were recorded.

Limitations

While care has been taken to locate and identify all hazardous materials throughout the building, there is the possibility of uncovering additional hazardous materials during the demolition process. If additional hazardous materials are identified, they should be removed according to the proper protocols for that material.

Results

Table III contains the findings of the survey, including location, material description, material quantity, and hazard type for the property.

TABLE III – Universal Waste

Material Description	Location	Material Quantity	Hazard Types
Electrical ballasts	Throughout the building	~120	PCBs
Fluorescent bulbs	Throughout the building	~240	Mercury vapor
Exit Signs	Throughout the building	~6 (many damaged or missing)	Radiation (tritium)
Emergency Lights	Throughout the building	~6	Sealed lead acid batteries/Lithium-Ion batteries
Calcium Hypochlorite	Pool room	1x100lbs container	Danger Strong oxidizer
Scrap Tires	Building exterior, side A & side B	2	Environmental hazard Public health hazard
Underground Tanks	Rear parking lot	1 x 10,000 gallon confirmed, 2 nd possible	Petroleum
Biological Waste/Body Fluid	Building Exterior & throughout the interior	All flooring	Human Feces, Used Condoms, Possible Drug Paraphernalia

Recommendations

Overall findings include the discovery of fluorescent light bulbs, potential PCB ballasts, Calcium Hypochlorite, scrap tires, underground tanks, exit signs, emergency lights, and biological waste and items containing human body fluids.

PCB Ballasts and Fluorescent Lights:

This building contains multiple sizes and types of fluorescent lights. These bulbs can contain mercury vapor and the ballasts that power them may contain PCB. These materials should be removed intact and disposed of with a Maryland certified hazardous material transporter and disposal company.

Calcium Hypochlorite:

Calcium Hypochlorite is a white powder, granule, or pellet with a strong Chlorine-like odor. This chemical is a strong oxidizing agent and extremely corrosive. Contact with this chemical may causes severe and irreversible burns to eye and skin, is harmful if inhaled, is harmful or fatal if swallowed, and may cause irritation and inflammation to the respiratory tract. The plastic container of this chemical should be left closed and should be disposed of following all state and federal regulations.

Scrap Tires:

Scrap tires pose a public health hazard by providing good breeding conditions for mosquitos that may spread diseases and can provide good homes for rats, ticks, and other animals that may act as disease vectors. Scrap tires also pose a fire hazard which may result in the emission of dangerous oils and soot into the air and water. Tires should be recycled by a Maryland licensed scrap tire hauler.

Underground Fuel Tanks:

Heating oil is a petroleum-based material that must be properly handled and recycled by a certified and licensed contractor. If underground storage tanks have leaked, the resulting contamination of soils and ground water can have far reaching environmental impacts. These tanks need to be inspected, all remaining contents and the tank needs to be properly removed properly infilled in order for them to be deemed safe. If the tanks are removed, testing of the soils around the tanks is recommended to confirm that no leaking occurred prior to their removal. If contamination is found, all affected soils should be removed and disposed of following all state and federal regulations.

Exit Signs:

Exit signs can contain a radioactive element (tritium) that if not properly disposed of can be harmful to humans. All exit signs should be removed intact, placed in a temporary storage container, and be disposed of by a certified recycler.

Emergency Lights:

Emergency exit lights contain either sealed lead acid batteries or sealed lithium-Ion batteries. All emergency lights should be removed intact, placed in a temporary storage container, and be disposed of by a certified recycler.

Biological Waste:

Human feces, used condoms, and possible drug paraphernalia were found on the floor throughout the entire building. These items pose a biological hazard and may act as a vector for infectious diseases. All contractors performing work in the building should be made aware of the hazard and take appropriate precautions. If work will be performed in the building prior to demolition, it is recommended that all areas to be impacted be cleaned by a certified biohazard and hazmat cleanup company prior to the start of work.

Limitations

Please note that this survey was limited only to those materials identified within the report. All other asbestos containing building materials uncovered during demolition activities, not identified within this report, should be assumed to be asbestos containing, unless future

sampling determines otherwise. All other universal wastes uncovered during demolition activities, not identified within this report, should be recycled or disposed of in accordance with local, state, and federal regulations.

If you have any questions, please contact our office at (410) 647-1354.

Sincerely,

Mayoka Services, LLC



Brett Purinton
Director of Operations
Senior Industrial Hygienist
Certified Asbestos Inspector



Stacey Cayetano
President
Senior Industrial Hygienist
Certified Asbestos Inspector

Appendix A – AMA Lab Report



CERTIFICATE OF ANALYSIS

Chain of Custody: 627727
Client: Mayoka Services LLC
Address: 3437 9th Street
Building A
Baltimore, MD 21225
Attention: Stacey Cayetano

Job Name: 1511 Ashburton Street
Job Location: 1511 Ashburton Street
Job Number: Not Provided
P.O. Number: Not Provided

Date Submitted: 06/16/2021
Date Analyzed: 06/23/2021
Report Date: 06/23/2021
Date Sampled: 06/16/2021
Person Submitting: N/A

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample Number	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
627727-1	1511 Ashburton PLM-1	NAD	--	--	--	--	TR	--	--	--	--	100	CK	Multi	Homogeneous	SW	
627727-2	1511 Ashburton PLM-2	NAD	--	--	--	--	--	--	--	--	--	100	CK	Multi	Homogeneous	SW	
627727-3	1511 Ashburton PLM-3	NAD	--	--	--	--	--	--	--	--	--	100	CK	Gray	Homogeneous	SW	
627727-4	1511 Ashburton PLM-4	NAD	--	--	--	--	--	--	TR	--	--	100	TC	White	Homogeneous	SW	
627727-5	1511 Ashburton PLM-5	NAD	--	--	--	--	--	--	--	--	--	100	CK	Brown	Homogeneous	SW	
627727-6	1511 Ashburton PLM-6	NAD	--	--	--	--	--	--	--	--	--	100	CK	Brown	Homogeneous	SW	
627727-7	1511 Ashburton PLM-7	NAD	--	--	--	--	--	--	--	--	--	100	Glue	Yellow	Homogeneous	SW	
627727-8	1511 Ashburton PLM-8	NAD	--	--	--	--	--	--	--	--	--	100	Tar	Black	Homogeneous	SW	
627727-9	1511 Ashburton PLM-9	10	10	--	--	--	--	--	--	--	--	90	FLS	Black	Homogeneous	SW	
627727-10	1511 Ashburton PLM-10	3	3	--	--	--	--	--	--	--	--	97	Tar	Multi	Homogeneous	SW	
627727-11	1511 Ashburton PLM-11	NAD	--	--	--	--	--	--	--	--	--	100	RCO	Silver	Homogeneous	SW	
627727-12	1511 Ashburton PLM-12	2	2	--	--	--	--	18	--	--	--	80	Tar P.	Black	Homogeneous	SW	
627727-12A	1511 Ashburton PLM-12	NAD	--	--	--	--	--	TR	TR	--	--	100	Tar	Black	Homogeneous	SW	
627727-12B	1511 Ashburton PLM-12	NAD	--	--	--	--	--	10	--	--	--	90	RDB	Multi	Homogeneous	SW	
627727-12C	1511 Ashburton PLM-12	NAD	--	--	--	--	--	--	10	--	--	90	Felt	Black	Homogeneous	SW	
627727-12D	1511 Ashburton PLM-12	NAD	--	--	--	--	--	20	TR	--	--	80	Felt	Black	Homogeneous	SW	
627727-12E	1511 Ashburton PLM-12	NAD	--	--	--	--	--	--	--	--	--	100	Roof	Black	Homogeneous	SW	



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627727-13	1511 Ashburton PLM-13	NAD	--	--	--	--	--	--	--	--	--	100	Paint	Silver	Homogeneous	SW	
627727-13A	1511 Ashburton PLM-13	NAD	--	--	--	--	--	--	--	TR	--	100	BUR	Black	Homogeneous	SW	
627727-13B	1511 Ashburton PLM-13	NAD	--	--	--	--	--	30	--	--	--	70	Tar P.	Black	Homogeneous	SW	
627727-13C	1511 Ashburton PLM-13	NAD	--	--	--	--	--	20	--	--	--	80	Tar P.	Black	Homogeneous	SW	
627727-13D	1511 Ashburton PLM-13	NAD	--	--	--	--	--	20	--	--	--	80	Tar P.	Black	Homogeneous	SW	
627727-13E	1511 Ashburton PLM-13	NAD	--	--	--	--	--	20	--	--	--	80	Tar P.	Black	Homogeneous	SW	
627727-13F	1511 Ashburton PLM-13	NAD	--	--	--	--	--	--	30	--	--	70	Felt	Black	Homogeneous	SW	
627727-13G	1511 Ashburton PLM-13	NAD	--	--	--	--	--	--	10	--	--	90	FLS	Black	Homogeneous	SW	
627727-13H	1511 Ashburton PLM-13	NAD	--	--	--	--	--	--	--	--	--	100	Foam	Black	Homogeneous	SW	
627727-14	1511 Ashburton PLM-14	NAD	--	--	--	--	--	--	--	--	--	100	Tar	Black	Homogeneous	SW	
627727-15	1511 Ashburton PLM-15	NAD	--	--	--	--	30	--	30	--	--	40	CT	Gray	Homogeneous	SW	
627727-16	1511 Ashburton PLM-16	NAD	--	--	--	--	--	--	--	--	--	100	VFT	Off-White	Homogeneous	SW	
627727-17	1511 Ashburton PLM-17	5	5	--	--	--	--	--	--	--	--	95	MS	Black	Homogeneous	SW	
627727-18	1511 Ashburton PLM-18	NAD	--	--	--	--	--	--	--	--	--	100	Glue	Tan	Homogeneous	SW	



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627727-19	1511 Ashburton PLM-19	NAD	--	--	--	--	--	--	--	--	--	100	NP	White	Homogeneous	SW	
627727-20	1511 Ashburton PLM-20	NAD	--	--	--	--	--	--	--	--	--	100	FT	Tan	Homogeneous	SW	
627727-21	1511 Ashburton PLM-21	5	5	--	--	--	--	--	--	--	--	95	MS	Black	Homogeneous	SW	
627727-22	1511 Ashburton PLM-22	NAD	--	--	--	--	--	--	60	--	--	40	PW	White	Homogeneous	SW	
627727-23	1511 Ashburton PLM-23	NAD	--	--	--	--	--	--	TR	--	--	100	MS	White	Homogeneous	SW	
627727-24	1511 Ashburton PLM-24	NAD	--	--	--	--	100	--	--	--	--	--	IN	White	Homogeneous	SW	
627727-25	1511 Ashburton PLM-25	NAD	--	--	--	--	100	--	--	--	--	--	IN	White	Homogeneous	SW	
627727-26	1511 Ashburton PLM-26	5	5	--	--	--	--	--	35	--	--	60	PW	Off-White	Homogeneous	SW	
627727-27	1511 Ashburton PLM-27	10	10	--	--	--	--	TR	--	--	--	90	MS	White	Homogeneous	SW	
627727-28	1511 Ashburton PLM-28	2	2	--	--	--	--	--	--	--	--	98	CK	Gray	Homogeneous	SW	
627727-29	1511 Ashburton PLM-29	NAD	--	--	--	--	--	--	--	--	--	100	TC	White	Homogeneous	SW	
627727-30	1511 Ashburton PLM-30	NAD	--	--	--	--	--	--	--	--	--	100	BC	Tan	Homogeneous	SW	
627727-31	1511 Ashburton PLM-31	NAD	--	--	--	--	--	--	--	--	--	100	PL	White	Homogeneous	SW	
627727-32	1511 Ashburton PLM-32	NAD	--	--	--	--	--	--	--	--	--	100	BC	Tan	Homogeneous	SW	



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627727-33	1511 Ashburton PLM-33	NAD	--	--	--	--	--	--	--	--	--	100	PL	White	Homogeneous	SW	
627727-34	1511 Ashburton PLM-34	NAD	--	--	--	--	20	--	40	--	--	40	CT	Gray	Homogeneous	SW	
627727-35	1511 Ashburton PLM-35	NAD	--	--	--	--	--	--	--	--	--	100	VFT	Multi	Homogeneous	SW	
627727-36	1511 Ashburton PLM-36	5	5	--	--	--	--	--	--	--	--	95	MS	Black	Homogeneous	SW	
627727-37	1511 Ashburton PLM-37	NAD	--	--	--	--	--	--	--	--	--	100	Grout	Gray	Homogeneous	SW	
627727-37A	1511 Ashburton PLM-37	NAD	--	--	--	--	--	--	--	--	--	100	CMT	Gray	Homogeneous	SW	
627727-37B	1511 Ashburton PLM-37	NAD	--	--	--	--	--	--	--	--	--	100	MF	Gray	Homogeneous	SW	
627727-38	1511 Ashburton PLM-38	NAD	--	--	--	--	--	--	--	--	--	100	Grout	Gray	Homogeneous	SW	
627727-38A	1511 Ashburton PLM-38	NAD	--	--	--	--	--	--	--	--	--	100	CMT	Gray	Homogeneous	SW	
627727-38B	1511 Ashburton PLM-38	NAD	--	--	--	--	--	--	--	--	--	100	MF	Gray	Homogeneous	SW	
627727-39	1511 Ashburton PLM-39	NAD	--	--	--	--	--	--	--	--	--	100	JC	White	Homogeneous	SW	
627727-40	1511 Ashburton PLM-40	NAD	--	--	--	--	--	--	--	--	--	100	JC	White	Homogeneous	SW	
627727-41	1511 Ashburton PLM-41	NAD	--	--	--	--	--	--	10	--	--	90	DW	Multi	Layered	SW	
627727-42	1511 Ashburton PLM-42	NAD	--	--	--	--	--	TR	TR	--	--	100	DW	White	Homogeneous	SW	



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AMA Sample Number	Client Sample Number	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
627727-43	1511 Ashburton PLM-43	NAD	--	--	--	--	--	--	--	--	--	100	MS	Brown	Homogeneous	SW	
627727-44	1511 Ashburton PLM-44	NAD	--	--	--	--	--	--	--	--	--	100	MS	Brown	Homogeneous	SW	
627727-45	1511 Ashburton PLM-45	NAD	--	--	--	--	--	--	TR	--	--	100	Glue	Brown	Homogeneous	SW	
627727-46	1511 Ashburton PLM-46	NAD	--	--	--	--	--	--	--	--	--	100	Glue	Brown	Homogeneous	SW	



CERTIFICATE OF ANALYSIS

Chain of Custody: 627727
Client: Mayoka Services LLC
Address: 3437 9th Street
Building A
Baltimore, MD 21225
Attention: Stacey Cayetano

Job Name: 1511 Ashburton Street
Job Location: 1511 Ashburton Street
Job Number: Not Provided
P.O. Number: Not Provided

Date Submitted: 06/16/2021
Date Analyzed: 06/23/2021
Report Date: 06/23/2021
Date Sampled: 06/16/2021
Person Submitting: N/A

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample Number	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
-------------------	----------------------	----------------	--------------------	-----------------	---------------------	------------------------	----------------------	--------------------	-----------------	-------------------	---------------	---------------------	-------------	--------------	-------------	------------	----------

The following footnotes only apply to those samples which the total asbestos result is flagged with a note number.

¹ TEM RECOMMENDATION - Please note, due to resolution limitations with optical microscopy and/or interference from matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos. It is recommended that the additional analytical technique of TEM be used to check for asbestos fibers below the resolution limits of optical microscopy.

² MATRIX REDUCTION RECOMMENDATION - Please note, due to interference from the matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos which is obscured from view. It is recommended that the additional preparation technique of gravimetric reduction be performed on this sample to minimize the obscuring effects of matrix components, followed by reanalysis by PLM and/or TEM.

Analysis Method - EPA/600/R-93/116 dated July 1993
NAD = "No Asbestos Detected" TR = "Trace equals less than 1% of this component"

Uncertainty: For samples containing asbestos in range of 1-10% the CV is 0.43, 11-35% CV=0.55, >35 CV=0.23. All results are to be considered preliminary and subject to change unless signed by the Technical Director or Deputy.

Analyst(s): Surat Watson

Technical Director Michael Greenberg

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NVLAP or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.












Project Name: 1511 Ashburton St
 Location: 1511 Ashburton St
 Baltimore, MD
 Project Number: _____
 Client: MSA





Sample ID	Sample Type/ Description	Location
1	1511 Ashburton PLM-1	metal door caulked, grey
2	1511 Ashburton PLM-2	door caulk, grey
3	1511 Ashburton PLM-3	caulking, grey
4	1511 Ashburton PLM-4	cementious ceiling, white
5	1511 Ashburton PLM-5	window caulk, brown
6	1511 Ashburton PLM-6	window caulk, brown
7	1511 Ashburton PLM-7	carpet glue, yellow
8	1511 Ashburton PLM-8	roofing tar, black
9	1511 Ashburton PLM-9	flashing cement, black
10	1511 Ashburton PLM-10	black tar
11	1511 Ashburton PLM-11	silver roof coat
12	1511 Ashburton PLM-12	A- multiple layers
13	1511 Ashburton PLM-13	A- multiple layers
14	1511 Ashburton PLM-14	black tar
15	1511 Ashburton PLM-15	2x4 ACT, white
16	1511 Ashburton PLM-16	12" VCT, white with tan fleck
17	1511 Ashburton PLM-17	Mastic, black
18	1511 Ashburton PLM-18	tan glue dot
19	1511 Ashburton PLM-19	white chalk base
20	1511 Ashburton PLM-20	12" VCT
21	1511 Ashburton PLM-21	Mastic, black
22	1511 Ashburton PLM-22	Canvas pipe wrap
23	1511 Ashburton PLM-23	Mastic, white
24	1511 Ashburton PLM-24	Insulation, white
25	1511 Ashburton PLM-25	Insulation, white
26	1511 Ashburton PLM-26	Canvas pipe wrap
27	1511 Ashburton PLM-27	End cap mastic, white
28	1511 Ashburton PLM-28	Caulking, grey
29	1511 Ashburton PLM-29	Cementious ceiling, white
30	1511 Ashburton PLM-30	Plaster tan base coat
31	1511 Ashburton PLM-31	Plaster tan top coat
32	1511 Ashburton PLM-32	Plaster tan base coat
33	1511 Ashburton PLM-33	Plaster tan top coat
34	1511 Ashburton PLM-34	2x4 ACT
35	1511 Ashburton PLM-35	VCT, white with tan fleck 12"
36	1511 Ashburton PLM-36	Mastic, black
37	1511 Ashburton PLM-37	Grout, ceramic tile with mud base
38	1511 Ashburton PLM-38	Grout, ceramic tile with mud base
39	1511 Ashburton PLM-39	JC, white
40	1511 Ashburton PLM-40	JC, white
41	1511 Ashburton PLM-41	drywall, white
42	1511 Ashburton PLM-42	drywall, white
43	1511 Ashburton PLM-43	mastic, dark brown cove bast
44	1511 Ashburton PLM-44	mastic, dark brown cove bast
45	1511 Ashburton PLM-45	glue dot, brown
46	1511 Ashburton PLM-46	carpet glue, brown

Appendix B – Photographic Documentation

PHOTOGRAPHIC DOCUMENTATION

		
<p>Corner stone and building construction date</p>	<p>Side A, front doors and lot</p>	<p>Side B entry door, scrap tire</p>
		
<p>Rear parking lot, UST to the right side of lot, second tank possible at patch on left side</p>	<p>Rear loading dock, grey caulking at loading dock ceiling is positive for asbestos</p>	<p>Fuel oil lines from underground storage tank (10,000 gallon)</p>
		
<p>Side D</p>	<p>Side D entry doors, scrap tire</p>	<p>Existing opening on Side B: Building construction includes CMU structural walls, covered in blue foam insulation and exterior brick facade</p>

PHOTOGRAPHIC DOCUMENTATION

		
<p>Front lot lighting</p>	<p>Front lot lighting, damaged and bulbs missing</p>	<p>Side play ground with rubber matting</p>
		
<p>10,000-gallon underground storage tank identified in back lot, right side of lot at loading dock</p>	<p>10,000-gallon underground storage tank identified in back lot, right side of lot at loading dock</p>	<p>One of two monitoring wells present on both sides of UST</p>

PHOTOGRAPHIC DOCUMENTATION



Lot patch left side of rear lot. Unclear what cause for patch was, possible old UST



Rooftop equipment (AC compressors/air handlers), previously removed



Rooftop equipment (AC compressors/air handlers), previously removed



Rooftop equipment (AC compressors/air handlers), previously removed



Multi-layer asphalt roofing including asbestos containing roofing felt, black tar and black flashing cement



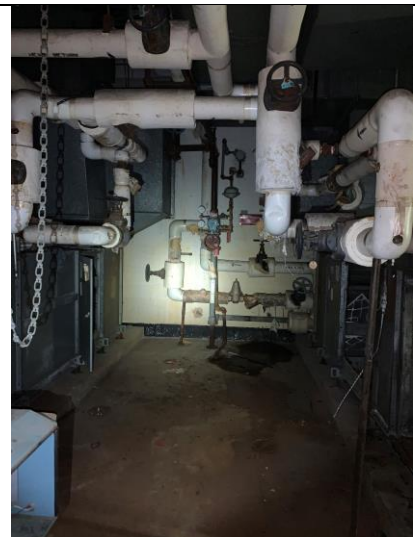
Roofing caulk tested negative for asbestos at metal awning



Grey caulking at entryway ceilings, positive for asbestos



Entry door to boiler room, previously posted for asbestos



Boiler room with fiberglass insulated piping. Canvas wrapping and white end cap mastic are positive for asbestos

PHOTOGRAPHIC DOCUMENTATION



Boiler system is fiberglass jacketed, canvas pipe wrap and white end cap mastic are positive



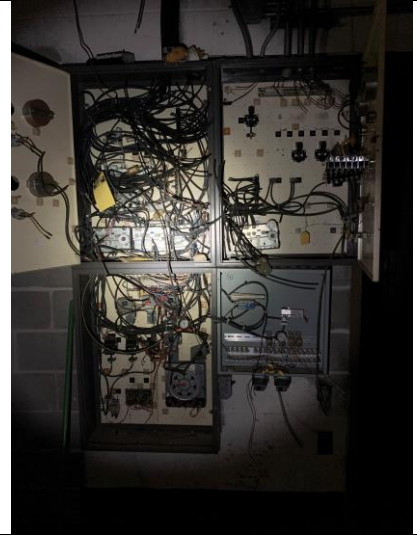
White end cap mastic and canvas wrap are present throughout the boiler room, and run throughout the building above the ceilings and in chase walls



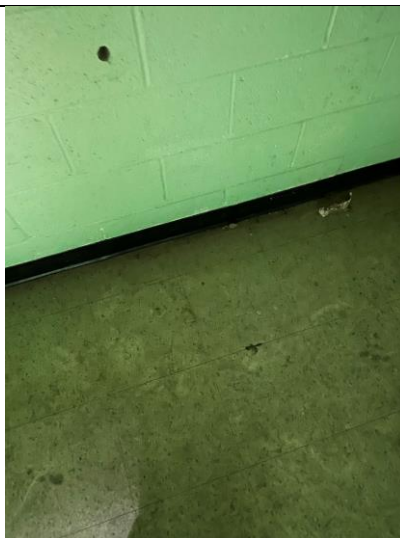
Canvas wrapped fiberglass pipe insulation with white end cap mastic on top











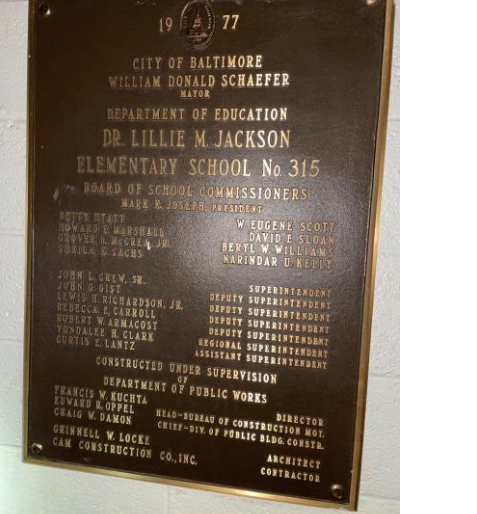
Air handler at back of boiler room, no suspect materials present



Scavenged electrical system



PHOTOGRAPHIC DOCUMENTATION

<p>VCT tile flooring on concrete slab, with black mastic. Mastic is positive for asbestos.</p>	<p>VCT tile flooring on concrete slab, with black mastic. Mastic is positive for asbestos.</p>	<p>Brown glue dots present in classrooms, tested negative for asbestos</p>
		
<p>Florescent lighting present throughout building. Kitchen has hard plaster ceiling, negative for asbestos</p>	<p>PCB containing ballast observed in fluorescent lights</p>	<p>Example of classroom space, carpeted flooring</p>
		
<p>Example of classroom space with 12" VCT and black mastic present</p>	<p>Hallway from front door with quarry tile</p>	<p>Pool area with ceramic tile and mud base. All materials tested negative fro asbestos</p>
		
<p>White cementitious platform, tested negative for asbestos</p>	<p>Hazardous chemical found in pool service closet, proper handling and disposal required</p>	

Appendix C – Site Diagram

Appendix D – Inspector Credentials

Sam Bragan

From: Devona Addison -MDE- <devona.addison@maryland.gov>
Sent: Wednesday, December 2, 2020 3:33 PM
To: Sam Bragan
Cc: Stacey Cayetano; Laura Insley; Carol Robinson -MDE-; Becky Singleton -MDE-; Michelle Armiger -MDE-
Subject: Re: Pending/Denial Maryland Lead Paint Abatement Services Applications for: A1 Environmental and Safety Training, LLC

Follow Up Flag: Follow up
Flag Status: Flagged

Stacy Cayetano,

Your accreditations for A1 Environmental and Safety Training LLC as well as Brittney L. Grap have been approved. Please allow 10-14 business days to receive your accreditation certificates in the mail at the address(es) listed on your application(s).

Your accreditation information is as follows:
A1 Environmental and Safety Training LLC (Inspector Contractor) #16076 Expires 10/19/2022
Brittney L. Grap (Inspector Technician) #18025 expires 10/19/2022

If you have any further questions regarding your accreditations you may contact via replying to this email.

Results

Maryland Asbestos Accreditation Exam

Certificate Number: VAIR09012020-8

First Name: Brett

Last Name: Purinton

Address: 3437 9th St, Building A

City: Baltimore

State: MD

Zip: 21225



According to our records this test was completed on: **10/13/2020**

We administered the following asbestos certification exam: **Inspector**

Your Results

Score: **96%**

Congratulations you have passed your Maryland asbestos accreditation exam. This document and your training certificate will serve as a temporary license until you receive your official license in the mail. Prior to issuing a license, MDE will verify all necessary information and submitted documents.
necessary information and submitted documents.

Thank you for taking the Maryland asbestos accreditation exam. If you have any concerns or questions about the exam, including how to collect your photo ID, please direct them to the Maryland Department of the environment at (410) 537-3200.

Issued By _____

Date **10/13/2020**

Appendix E – Laboratory Accreditations

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101143-0

AMA Analytical Services, Inc.
Lanham, MD

*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 17025:2017.
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).*

2020-07-01 through 2021-06-30

Effective Dates



A handwritten signature in blue ink, which appears to read "Dana S. Gorman".

For the National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

AMA Analytical Services, Inc.
4475 Forbes Blvd.
Lanham, MD 20706
Mr. Andreas Saldivar
Phone: 301-459-2640 Fax: 301-459-2643
Email: andreas@amalab.com
<http://www.amalab.com>

ASBESTOS FIBER ANALYSIS

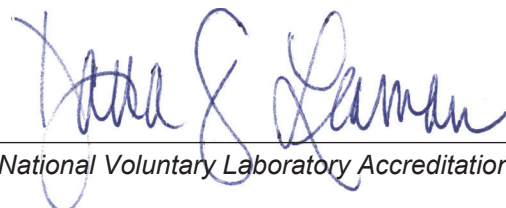
NVLAP LAB CODE 101143-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of 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.



For the National Voluntary Laboratory Accreditation Program

PRE-DEMOLITION HAZARDOUS MATERIAL SURVEY

ONSITE DATES: June 17, 2021 – June 18, 2021

1600 RUTLAND STREET
BALTIMORE, MD

Prepared by:



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Introduction

Project Description

Mayoka Services, LLC was retained by the Maryland Stadium Authority to perform a Hazardous Materials survey of the former Lanvale Transitional Housing building, located at 1600 Rutland Ave, Baltimore, MD 21213.

1600 Rutland is a three-story brick building including a fully finished basement with single story auditorium and gymnasium attached on the west side. The building was originally built as a Baltimore City Public School before being renovated into apartment style units for housing. The building has been abandoned for and extensive damage has need done to the interior finishes by metal scavengers. The building exterior is comprised of brick, metal windows, and metal doors with an asphalt built-up roof. Interior finishes include VCT flooring, acoustical ceiling tile ceilings, and a combination of drywall, plaster, and CMU partition walls.

Scope of Work

The purpose of this survey was to identify and categorize suspect asbestos-containing materials, lead-based paint, and universal wastes which could be affected by future demolition activities. Most areas of the building were accessed and inspected including destructive techniques where necessary. The basement boiler room was not accessible due to standing water and will be inspected at a later date once the water has been addressed. The survey took place on June 17, 2021 – June 18th, 2021, and was completed by accredited inspectors, Mr. Brett Purinton and Mrs. Brittney Grap. The survey was completed using visual inspection techniques and bulk sample collection. A total of one hundred and eight (108) representative bulk samples were collected for PLM analysis.

Asbestos

Asbestos Sampling and Analytical Methods

Bulk Sample Collection

Sampling was performed using invasive investigative techniques and available building penetrations since the building was unoccupied and slated for demolition. Materials were collected using gloves, respirator, and a multitude of easy-to-clean tools. Tools were cleaned after the collection of each sample in order to minimize cross-contamination between samples. Collected samples were placed into sealable plastic containers for transport to the analytical laboratory.

Sample Analysis

The bulk samples were analyzed by AMA Analytical Services, Inc. in Lanham, Maryland using the approved Polarized Light Microscopy (PLM) method, EPA/600/R-93/116 dated July 1993. The technique includes the use of polarized light microscopy with confirmation techniques using dispersion staining. This method is designed to identify asbestos minerals and determine their estimated concentrations as a percent by area. If a material contains greater than 1% asbestos, it is considered to be an asbestos-containing material.

AMA Analytical Services, Inc. is an accredited laboratory by the National Voluntary Laboratory Accreditation Program (NVLAP). The PLM analytical method is modeled after 40 CFR Part 763, Subpart F, Appendix A: "Interim Method for the Determination of Asbestos in Bulk Insulation Samples".

Analysis Limitations

There are some limitations associated with PLM analysis that must be considered when interpreting a "positive" sample result. Heterogeneous samples may be determined "negative" or containing TR or <1% due to other material types interfering with the analysis. Also, some materials are made up of very fine asbestos fibers. These fibers can become invisible to light microscopy techniques. Materials like floor tile and vinyl, trap fibers in a matrix that must be dissolved by a solvent, making it difficult to assign an accurate asbestos content percentage.

In any of the above-mentioned situations, retesting or analysis of a sample using different techniques could yield a higher asbestos content percentage. Due to this, samples that are found to contain TR amounts will be considered positive unless additional testing is performed.

Results

A total of one hundred and eight (108) representative bulk samples of suspect building materials were identified and collected from the designated areas. Laboratory analytical results identified nineteen (19) samples with qualifying amounts of asbestos, including the white exterior caulking, 9" VCT floor tile (multiple colors), black mastic, and the grey cementitious glue dots.

TABLE I contains the summary of the sampling, including location, material description, and analytical result for the samples collected.

TABLE I—Asbestos Bulk Sample Results			
Sample Number	Material Description	Sample Location	Analytical Result
1600 Rutland Ave PLM-1	Drywall, white	Basement classroom, left of stairs	NAD
1600 Rutland Ave PLM-2	Joint compound, white	Basement classroom, left of stairs	NAD
1600 Rutland Ave PLM-3	Cove base mastic, tan	Basement classroom, left of stairs	NAD
1600 Rutland Ave PLM-4	Canvas pipe insulation wrap, white (fiberglass)	Basement fiberglass pipe installation	NAD
1600 Rutland Ave PLM-5	End cap mastic, white	Basement fiberglass pipe installation	NAD
1600 Rutland Ave PLM-6	9" VCT, white with tan carpet glue on top	Basement classroom flooring, halfway down Rutland Ave	3%
1600 Rutland Ave PLM-6A	Tan carpet glue on PLM 6	Basement classroom flooring, halfway down Rutland Ave	NAD
1600 Rutland Ave PLM-7	Mastic, black	Basement classroom flooring, halfway down Rutland Ave	10%
1600 Rutland Ave PLM-8	12" VCT, light red	Basement, two stall restroom	NAD
1600 Rutland Ave PLM-9	Mastic, black	Basement, two stall restroom	2%
1600 Rutland Ave PLM-10	9" VCT, red	Basement hallway	3%
1600 Rutland Ave PLM-11	Mastic, black	Basement hallway	5%
1600 Rutland Ave PLM-12	12" VCT, white with grey and green fleck	Basement landing	NAD
1600 Rutland Ave PLM-13	Mastic, yellow	Beneath PLM 12	NAD
1600 Rutland Ave PLM-14	End cap mastic, white	Basement security office	NAD
1600 Rutland Ave PLM-15	Canvas pipe wrap on yellow fiberglass pipe installation, white	Basement security office	NAD
1600 Rutland Ave PLM-16 A	Wire insulation, woven rope	Boiler room, light switch	NAD
1600 Rutland Ave PLM-16 B	Wire insulation, woven rope	Boiler room, electrical panel	NAD
1600 Rutland Ave PLM-17	Window glazing, white	Boiler room	NAD
1600 Rutland Ave PLM-18	Drywall, white	Basement library, bulkhead	NAD
1600 Rutland Ave PLM-19	Joint compound, white	Basement library, bulkhead	NAD
1600 Rutland Ave PLM-20	2x4 ACT, white	Basement library	NAD
1600 Rutland Ave PLM-21	12" VCT, white	Library storage room (270sqft)	NAD
1600 Rutland Ave PLM-22	Mastic, yellow	Library storage room (270sqft)	NAD
1600 Rutland Ave PLM-23	12" VCT, white with blue cross pattern	Bathrooms near crawl space, basement	NAD

1600 Rutland Ave PLM-24	Window glazing, white	Boiler room	NAD
1600 Rutland Ave PLM-25 A	Pipe wrap, black	Basement crawl space	NAD
1600 Rutland Ave PLM-25 B	Pipe wrap, black	Basement crawl space	NAD
1600 Rutland Ave PLM-26 A	Sink undercoat, white	Basement day care	NAD
1600 Rutland Ave PLM-26 B	Sink undercoat, white	Unit 208	NAD
1600 Rutland Ave PLM-27 A	9" VCT, light grey with brown spots	South stair landing, 1st floor, left side	4%
1600 Rutland Ave PLM-27 B	9" VCT, light grey with brown spots	South stair landing, 1st floor, right side	.*
1600 Rutland Ave PLM-28 A	Mastic, black	South stair landing, 1st floor, left side	NAD
1600 Rutland Ave PLM-28 B	Mastic, black	South stair landing, 1st floor, right side	NAD
1600 Rutland Ave PLM-29 A	9" VCT, green with tan and black fleck	South stairwell landing 2nd floor, left side	3%
1600 Rutland Ave PLM-29 B	9" VCT, green with tan and black fleck	South stairwell landing 2nd floor, right side	.*
1600 Rutland Ave PLM-30 A	Mastic, black	South stairwell landing 2nd floor, left side	NAD
1600 Rutland Ave PLM-30 B	Mastic, black	South stairwell landing 2nd floor, right side	NAD
1600 Rutland Ave PLM-31 A	9" VCT brown with white and dark brown fleck	South stairwell landing 3rd floor, left side	NAD
1600 Rutland Ave PLM-31 B	9" VCT brown with white and dark brown fleck	South stairwell landing 3rd floor, right side	NAD
1600 Rutland Ave PLM-32	12" VCT, replacement with renovation to housing, multi-tonal tan	South Stair, 3rd floor landing	NAD
1600 Rutland Ave PLM-33	Mastic, new yellow and historic black	South Stair, 3rd floor landing	NAD
1600 Rutland Ave PLM-34 A	2x4 ACT, installed below historic 12" ACT, white	3rd floor hallway	NAD
1600 Rutland Ave PLM-34 B	2x4 ACT, installed below historic 12" ACT, white	2nd floor hallway	NAD
1600 Rutland Ave PLM-35 A	12"ACT, white with pinholes	3rd floor hallway	NAD
1600 Rutland Ave PLM-35 B	12"ACT, white with pinholes	2nd floor hallway	NAD
1600 Rutland Ave PLM-36 A	Drywall, white	Unit 301, renovation partition wall	NAD
1600 Rutland Ave PLM-36 B	Drywall, white	Unit 219, renovation partition wall	NAD
1600 Rutland Ave PLM-37 A	Joint compound, white	Unit 301, renovation partition wall	NAD
1600 Rutland Ave PLM-37 B	Joint compound, white	Unit 219, renovation partition wall	NAD
1600 Rutland Ave PLM-38 A	Plaster base coat, grey	Pipe chase, north end, 3rd floor	NAD
1600 Rutland Ave PLM-38 B	Plaster base coat, grey	Pipe chase, south end, 2nd floor	NAD
1600 Rutland Ave PLM-39 A	Plaster top coat, white	Pipe chase, north end, 3rd floor	NAD
1600 Rutland Ave PLM-39 B	Plaster top coat, white	Pipe chase, south end, 2nd floor	NAD
1600 Rutland Ave PLM-40 A	Wood unit entry door, core insulation, white	Unit 302	NAD
1600 Rutland Ave PLM-40 B	Wood unit entry door, core insulation, white	Unit 304	NAD
1600 Rutland Ave PLM-40 C	Wood unit entry door, core insulation, white	Stairwell door, 2nd floor	NAD

1600 Rutland Ave PLM-41	12" VCT, self adhesive, stone texture, reddish brown	3rd floor, unit 303	NAD
1600 Rutland Ave PLM-42	Cove base mastic, light tan	3rd floor, unit 303	NAD
1600 Rutland Ave PLM-43	12" stone latter VCT, self adhesive, white	3rd floor, unit 306	NAD
1600 Rutland Ave PLM-44	Carpet glue, yellow, over historic mastic, black	Unit 306	NAD
1600 Rutland Ave PLM-45 A	Textured wall, on CMU, white	Unit 306	NAD
1600 Rutland Ave PLM-45 B	Textured wall, on CMU, white	Unit 219	NAD
1600 Rutland Ave PLM-46	12" VCT, self adhesive	Unit 219	NAD
1600 Rutland Ave PLM-47	12" VCT, blue	North entryway landing, 1st floor	NAD
1600 Rutland Ave PLM-48	Mastic, grey	North entryway landing, 1st floor	NAD
1600 Rutland Ave PLM-49	12" VCT, white	North entryway landing, 1st floor	NAD
1600 Rutland Ave PLM-50	Mastic, mud base, white	Beneath PLM 49	NAD
1600 Rutland Ave PLM-51	Base layer VCT, unknown size, tan	North entryway landing, 1st floor	NAD
1600 Rutland Ave PLM-52	Paint and wall cement, white	Classroom 8, 1st floor	NAD
1600 Rutland Ave PLM-52A	Cementitious glue dot behind chalk board, grey	Classroom 8, 1st floor	3%
1600 Rutland Ave PLM-53	Drywall, white	Partition wall, preschool between main hall and gym	NAD
1600 Rutland Ave PLM-54	Joint compound, white	Partition wall, preschool between main hall and gym	NAD
1600 Rutland Ave PLM-55	9"VCT, brown	Auditorium walkways	3%
1600 Rutland Ave PLM-56	Mastic, black	Beneath PLM 55	NAD
1600 Rutland Ave PLM-57	Mudded elbow, white	Theater, chase south end	NAD
1600 Rutland Ave PLM-58	Stage curtain, green	Auditorium stage	NAD
1600 Rutland Ave PLM-59	2x4 ACT, white	Entry lobby gym and auditorium	NAD
1600 Rutland Ave PLM-60	12" VCT, top layer	Gym auditorium lobby	NAD
1600 Rutland Ave PLM-61	9" VCT, tan with brown spots, base layer	Gym auditorium lobby	3%
1600 Rutland Ave PLM-62	12" VCT, red	Main lobby entrance	NAD
1600 Rutland Ave PLM-63 A	Roofing felt, under stone	Primary roof	NAD
1600 Rutland Ave PLM-63 B	Roofing felt, under stone	South end, primary roof	NAD
1600 Rutland Ave PLM-64 A	Roofing tar, under foam core insulation at roof deck, black	Primary roof	NAD
1600 Rutland Ave PLM-64 B	Roofing tar, under foam core insulation at roof deck, black	South end, primary roof	NAD
1600 Rutland Ave PLM-65 A	Roof tar, black	Asphalt and metal edge flashing	NAD
1600 Rutland Ave PLM-65 B	Roof tar, black	South penthouse flashing	NAD
1600 Rutland Ave PLM-66 A	Caulking, white	Roof flashing at penthouse edge	3%
1600 Rutland Ave PLM-66 B	Caulking, white	South penthouse flashing	.*
1600 Rutland Ave PLM-67	Ventilation fan gasket, grey	Primary roof	NAD
1600 Rutland Ave PLM-68 A	Asphalt roofing, black	Primary roof	NAD
1600 Rutland Ave PLM-68 B	Asphalt roofing, black	Gym room	NAD
1600 Rutland Ave PLM-69 A	Roofing insulation, brown	Primary roof	NAD
1600 Rutland Ave PLM-69 B	Roofing insulation, brown	Gym room	NAD
1600 Rutland Ave PLM-70 A	Tar base coat, black	Roof, under brown insulation	NAD
1600 Rutland Ave PLM-70 B	Tar base coat, black	Gym room, under brown insulation	NAD
1600 Rutland Ave PLM-71	Cementitious deck, grey	Roof	NAD

1600 Rutland Ave PLM-72	Roof tar, black	Central roof vent	NAD
1600 Rutland Ave PLM-73	Window caulk, white	High gym windows, exterior	2%
1600 Rutland Ave PLM-74	Roof tar, black	Below high gym windows, exterior	NAD
1600 Rutland Ave PLM-75 A	Fibrous gypsum roof decking, white	Gym roof	NAD
1600 Rutland Ave PLM-75 B	Fibrous gypsum roof decking, white	Roof, center	NAD
1600 Rutland Ave PLM-76	Window caulk, white	Main building exterior, 3rd floor	3%
1600 Rutland Ave PLM-77	Door caulk, white	North main entrance door	NAD
1600 Rutland Ave PLM-78	Window caulk, white	1st floor exterior wall vent	2%
1600 Rutland Ave PLM-79	Lintel mortar, white	Exterior, window lintel	NAD
1600 Rutland Ave PLM-80	Window caulk, white	Basement	2%
1600 Rutland Ave PLM-81	Door caulk, white	Exterior, 'All smiles day care' front door	2%

Recommendations

Four (4) types of materials containing asbestos were found in association with the property, including the white exterior caulking, 9" VCT floor tile (multiple colors), black mastic, and grey cementitious glue dots.

TABLE II contains the findings of the sample analysis including location, material description, and analytical result for the positive samples collected.

TABLE II – Chrysotile Asbestos			
Material Description	Sample Location	Friable/Non-Friable	Estimated Quantity
9" VCT flooring	Throughout	Non-friable	~25,000sqft
Black Mastic	Throughout	Non-friable	~70,000sqft
Chalk board glue dots, grey	Classroom 8, 1 st floor, likely present in all classrooms	Non-friable	~1,000sqft
White Exterior Caulking	All metal windows and doors	Non-friable	~10,000lf

Black Mastic & 9" VCT (flooring):

These materials are considered non-friable if removed by hand methods. If demolition or mechanical means are used, these materials can be made friable and should be handled

accordingly. All impact and removal activities must be performed by a Maryland licensed abatement contractor following all Federal and State removal and disposal regulations.

Areas of Impact: Mastic was identified under the 12" VCT floor tile throughout the building. Not all areas of the building have floor tile, and some areas are bare concrete. All cement that has mastic contamination will need to be abated or disposed of as contaminated waste during demolition. Total impacted area is ~70,000 sqft.

Glue Dot, Grey:

Glue dots are non-friable if removed by hand methods prior to demolition. If impacted by mechanical means non-friable materials can be made friable, this should be assessed prior to demolition activities. If these materials are removed all impacted materials should be removed as contaminated waste by a Maryland licensed abatement contractor following all federal and state guidelines.

Areas of Impact: Glue dots were identified behind chalk boards on the first floor but may be present in other locations. Renovation activities on the upper floors have either removed these materials in the past or covered them up with new building materials.

White Exterior Caulking:

This material is non-friable if removed by hand methods. A Maryland licensed asbestos abatement contractor should perform removal of all associated materials prior to demolition activities or a plan should be in place to ensure safe demolition of the building while leaving the non-friable materials in place.

Areas of Impact: White caulking was identified outside all metal entry doors and windows throughout the building.

Lead

Analytical Methods

Visual Inspection

Mayoka performed a visual inspection of the interior and exterior of the property. The property was unoccupied, therefore destructive investigative techniques were used where necessary. Flooring was pulled up, and ceilings were opened and exposed. The presence and condition of paint throughout the property was recorded.

Results

Due to the build date of the building (1956), all paint on the property is assumed to be lead-based paint. This building is slated for complete demolition and as such, an XRF survey was not conducted. A visual inspection identified multiple painted surfaces including interior CMU and drywall walls, doors, and all steel framing and installed mechanical systems. Many surfaces showed signs of paint deterioration including entry doors, CMU painted walls, and painted steel structures.

Recommendations

There is no acceptable concentration for lead under the OSHA lead standard that eliminates the requirement for contractors to comply with this regulation. The Occupational Safety and Health Administration (OSHA) Lead in Construction Regulation, 29 CFR 1926.62, applies to all construction work where an employee may be occupationally exposed to lead. This standard does not indicate a specific percentage or mass per area (mg/cm^2) of lead in paint that is permissible during construction and demolition activities.

Prior to disposal of debris that contains materials that have been found to contain lead-based paint, Toxicity Characteristic Leaching Procedures (TCLP) should be conducted on representative solid wastes in accordance with the Resource Conservation and Recovery Act (RCRA), to determine disposal options. The hazardous waste criteria for lead waste are established under RCRA, Subtitle C, as 5.0 milligrams per liter (mg/L) measured with the TCLP as listed in CFR 40 Part 261. The lead-containing and lead-based paint debris generated during demolition should be handled in accordance with all applicable Federal and State regulations.

Universal Wastes

Analytical Methods

Visual Inspection

Mayoka performed a visual inspection of the interior and exterior of the property. The property was unoccupied, therefore destructive investigative techniques were used where necessary. Flooring was pulled up, and ceilings were opened and exposed. The type and amount of all identified universal wastes and other potentially hazardous materials were recorded. The basement boiler room was not accessible due to standing water and will be inspected at a later date once the water has been addressed.

Limitations

While care has been taken to locate and identify all hazardous materials throughout the building, there is the possibility of uncovering additional hazardous materials during the demolition process. If additional hazardous materials are identified, they should be removed according to the proper protocols for that material.

Results

Table III contains the findings of the survey, including location, material description, material quantity, and hazard type for the property.

TABLE III – Universal Waste			
Material Description	Location	Material Quantity	Hazard Types
Electrical ballasts	Throughout the building	~350	PCBs
Fluorescent bulbs	Throughout the building	~700	Mercury vapor
Exit signs	Throughout the building	~35	Radiation (tritium)
Emergency lights	Throughout the building	~20	Sealed lead acid batteries/Lithium-Ion batteries
Aboveground storage tank (AST)	Basement	1	Unknown/inaccessible
Mercury thermostats	Main floor, 2 nd floor, 3 rd floor	~7	Mercury
Refrigerator/AC units	Throughout the building	~96	Refrigerant
Aerosols	Main floor	~13	Explosive/environmental hazard
Misc. chemicals	Throughout the building	~27	Misc. environmental hazard
Fire extinguishers	Basement, main floor, 3 rd floor	~11	Explosive/hazardous waste

Compressed gas	Main floor, 3 rd floor	~2	Explosive/Flammable
Paint containers	Basement, main floor, 2 nd floor	~25	Environmental Hazard
Standing Water	Basement, Boiler room	~175,000 gallons	Potential health hazard/potential environmental hazard
Mold	Throughout the building	Sporadic throughout	Potential health hazard

Recommendations

Overall findings include the discovery of fluorescent light bulbs, potential PCB ballasts, exit signs, emergency lights, AST, mercury thermostats, Refrigerator/AC units, aerosols, misc. chemicals, fire extinguishers, compressed gas, and paint containers.

PCB Ballasts and Fluorescent Lights:

This building contains multiple sizes and types of fluorescent lights. These bulbs can contain mercury vapor and the ballasts that power them may contain PCB. These materials should be removed intact and disposed of with a Maryland certified hazardous material transporter and disposal company.

Exit signs:

Exit signs can contain a radioactive element (tritium) that if not properly disposed of can be harmful to humans. All exit signs should be removed intact, placed in a temporary storage container, and be disposed of by a certified recycler.

Emergency Lights:

Emergency exit lights contain either sealed lead acid batteries or sealed lithium-ion batteries. All emergency lights should be removed intact, placed in a temporary storage container, and be disposed of by a certified recycler.

AST:

One above-ground storage tank of unknown size was observed in the basement boiler room. The tank was observed from the doorway as it was inaccessible due to the standing water. Once the tank is accessible, it will be evaluated in order to ascertain what it does or may have contained.

Mercury Thermostats:

Mercury is a toxic substance that can result in both acute and long-term illness. All mercury-containing thermostats should be removed intact, placed in a labeled temporary storage container, and be disposed of by a licensed hazardous disposal company prior to the start of demolition.

AC/Refrigeration Units:

These units contain refrigerant which is an environmental hazard. These units should be drained down by a licensed recovery technician and recycled or disposed of according to state and federal guidelines prior to the start of demolition.

Aerosols:

Aerosol cans are pressurized and have the potential result in explosions. Aerosol cans that are not completely empty also have the potential to be hazardous. All aerosol cans should be removed intact, placed in a temporary storage container, and be disposed of by a with a Maryland certified hazardous material transporter and disposal company.

Misc. Chemicals:

Cleaning products contain many different chemicals that can result in contamination of the surrounding environment including soils and water systems. Some products can be harmful to human contact as well. All chemical containers should be removed intact, placed in a temporary storage container, and disposed of with a Maryland certified hazardous material transporter and disposal company.

Fire Extinguishers:

Both dry chemical and CO2 fire extinguishers are under pressure and can result in dangerous explosions. Fire extinguishers that are not completely empty are also considered to be a hazardous waste. All fire extinguishers should be removed intact, placed in a temporary storage container, and be disposed of by a certified recycler.

Compressed Gas:

Compressed gasses are potential explosion hazards if damaged during demolition. All compressed gasses should be removed prior to demolition and disposed/recycled depending on the contents. Observed tank was oxygen but each tank should be confirmed and properly disposed of.

Paint Containers:

All stored paint products should be sorted and disposed of according to content, latex, oil based, possibly lead containing. Paint products must be removed prior to demolition and recycled by a licensed contractor or disposed of at a licensed landfill following all federal, state and city guidelines.

Standing Water:

There is ~175, 000 gallons of standing water located in the basement boiler room. The standing water may contain chemicals that are potentially harmful to humans and the environment. The standing water also has the potential to act as a vector for infectious diseases. Water samples should be collected and analyzed by a third part laboratory. If

the water is determined to be uncontaminated, it may be disposed of using the city stormwater system with the proper permitting. If the water is determined to be contaminated, it must be pumped out and disposed of by a certified hazardous waste company.

Mold:

Mold growth was observed on the walls sporadically throughout the building. Mold spores may act as an allergen and could potentially impact people with allergies, respiratory issues, or anyone taking immunosuppressants. Anyone performing work inside the building prior to demolition should be notified of the potential health hazard so they may determine the appropriate PPE.

Limitations

Please note that this survey was limited only to those materials identified within the report. All other asbestos containing building materials uncovered during demolition activities, not identified within this report, should be assumed to be asbestos containing, unless future sampling determines otherwise. All other universal wastes uncovered during demolition activities, not identified within this report, should be recycled or disposed of in accordance with local, state, and federal regulations.

If you have any questions, please contact our office at (410) 647-1354.

Sincerely,

Mayoka Services, LLC



Brett Purinton
VP - Director of Operations
Senior Industrial Hygienist
Certified Asbestos Inspector



Stacey Cayetano
President
Senior Industrial Hygienist
Certified Asbestos Inspector

Appendix A – AMA Lab Report

CERTIFICATE OF ANALYSIS

Chain of Custody: 627729
Client: Mayoka Services LLC
Address: 3437 9th Street
 Building A
 Baltimore, MD 21225
Attention: Stacey Cayetano

Job Name: 1600 Rutland Avenue
Job Location: 1600 Rutland Avenue
Job Number: Not Provided
P.O. Number: Not Provided

Date Submitted: 06/18/2021
Date Analyzed: 06/25/2021
Report Date: 06/25/2021
Date Sampled: 06/17/2021
Person Submitting: N/A

Summary of Polarized Light Microscopy

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627729-1	1600 Rutland Ave PLM-1	NAD	--	--	--	--	--	--	10	--	--	90	DW	Multi	Layered	SW	
627729-2	1600 Rutland Ave PLM-2	NAD	--	--	--	--	--	--	--	--	--	100	JC	White	Homogeneous	SW	
627729-3	1600 Rutland Ave PLM-3	NAD	--	--	--	--	--	--	--	--	--	100	MS	Tan	Homogeneous	SW	
627729-4	1600 Rutland Ave PLM-4	NAD	--	--	--	--	--	--	90	--	--	10	Wrap	White	Homogeneous	SW	
627729-5	1600 Rutland Ave PLM-5	NAD	--	--	--	--	--	TR	--	--	--	100	EC	White	Homogeneous	SW	
627729-6	1600 Rutland Ave PLM-6	3	3	--	--	--	--	--	--	--	--	97	FT	White	Homogeneous	SW	
627729-6A	1600 Rutland Ave PLM-6	NAD	--	--	--	--	--	--	--	--	--	100	CM	Tan	Homogeneous	SW	
627729-7	1600 Rutland Ave PLM-7	10	10	--	--	--	--	--	--	--	--	90	MS	Black	Homogeneous	SW	
627729-8	1600 Rutland Ave PLM-8	NAD	--	--	--	--	--	--	--	--	--	100	FT	Red	Homogeneous	SW	
627729-9	1600 Rutland Ave PLM-9	2	2	--	--	--	--	--	TR	--	--	98	MS	Black	Homogeneous	SW	
627729-10	1600 Rutland Ave PLM-10	3	3	--	--	--	--	--	--	--	--	97	FT	Red	Homogeneous	SW	
627729-11	1600 Rutland Ave PLM-11	5	5	--	--	--	--	--	--	--	--	95	MS	Black	Homogeneous	SW	
627729-12	1600 Rutland Ave PLM-12	NAD	--	--	--	--	--	--	--	--	--	100	FT	Multi	Homogeneous	SW	
627729-13	1600 Rutland Ave PLM-13	NAD	--	--	--	--	--	--	--	--	--	100	MS	Yellow	Homogeneous	SW	
627729-14	1600 Rutland Ave PLM-14	NAD	--	--	--	--	--	TR	--	--	--	100	EC	White	Homogeneous	SW	
627729-15	1600 Rutland Ave PLM-15	NAD	--	--	--	--	--	--	80	--	--	20	CVS	Tan	Homogeneous	SW	
627729-16	1600 Rutland Ave PLM-16	NAD	--	--	--	--	--	--	40	--	--	60	WW	Multi	Homogeneous	SW	



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Person Submitting: N/A

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627729-16A	1600 Rutland Ave PLM-16	NAD	--	--	--	--	--	--	40	--	--	60	WW	White	Homogeneous	SW	
627729-17	1600 Rutland Ave PLM-17	NAD	--	--	--	--	--	--	--	--	--	100	WG	White	Homogeneous	SW	
627729-18	1600 Rutland Ave PLM-18	NAD	--	--	--	--	--	--	10	--	--	90	DW	Multi	Layered	SW	
627729-19	1600 Rutland Ave PLM-19	NAD	--	--	--	--	--	--	--	--	--	100	JC	White	Homogeneous	SW	
627729-20	1600 Rutland Ave PLM-20	NAD	--	--	--	--	10	--	50	--	--	40	CT	Multi	Layered	SW	
627729-21	1600 Rutland Ave PLM-21	NAD	--	--	--	--	--	--	--	--	--	100	FT	Tan	Homogeneous	SW	
627729-22	1600 Rutland Ave PLM-22	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Yellow	Homogeneous	SW	
627729-23	1600 Rutland Ave PLM-23	NAD	--	--	--	--	--	--	--	--	--	100	FT	Multi	Homogeneous	SW	
627729-24	1600 Rutland Ave PLM-24	NAD	--	--	--	--	--	--	--	--	--	100	MS	Yellow	Homogeneous	SW	
627729-25	1600 Rutland Ave PLM-25	NAD	--	--	--	--	--	--	20	TR	--	80	PW	Black	Homogeneous	SW	
627729-25A	1600 Rutland Ave PLM-25	NAD	--	--	--	--	--	--	20	TR	--	80	PW	Black	Homogeneous	SW	
627729-26	1600 Rutland Ave PLM-26	NAD	--	--	--	--	--	--	20	--	--	80	SC	White	Homogeneous	SW	
627729-26A	1600 Rutland Ave PLM-26	NAD	--	--	--	--	--	--	20	--	--	80	SC	White	Homogeneous	SW	
627729-27	1600 Rutland Ave PLM-27A	4	4	--	--	--	--	--	--	--	--	96	FT	Multi	Homogeneous	SW	

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627729-27A	1600 Rutland Ave PLM-28A	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SW	
627729-28	1600 Rutland Ave PLM-27B	--	--	--	--	--	--	--	--	--	--	--	FT	--	--	SW	Sample not analyzed. Positive stop.
627729-28A	1600 Rutland Ave PLM-28B	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SW	
627729-29	1600 Rutland Ave PLM-29A	3	3	--	--	--	--	--	--	--	--	97	FT	Green	Homogeneous	SW	
627729-29A	1600 Rutland Ave PLM-30A	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SW	
627729-30	1600 Rutland Ave PLM-29B	--	--	--	--	--	--	--	--	--	--	--	FT	--	--	SW	Sample not analyzed. Positive stop.
627729-30A	1600 Rutland Ave PLM-30B	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SW	
627729-31	1600 Rutland Ave PLM-31A	NAD	--	--	--	--	--	--	--	--	--	100	FT	Multi	Homogeneous	SW	
627729-31A	1600 Rutland Ave PLM-31B	NAD	--	--	--	--	--	--	--	--	--	100	MS	Tan	Homogeneous	SW	
627729-32	1600 Rutland Ave PLM-32	NAD	--	--	--	--	--	--	--	--	--	100	FT	Tan	Homogeneous	SW	
627729-33	1600 Rutland Ave PLM-33	NAD	--	--	--	--	--	--	--	--	--	100	MS	Multi	Homogeneous	SW	
627729-34	1600 Rutland Ave PLM-34	NAD	--	--	--	--	20	--	40	--	--	40	CT	Multi	Layered	SW	



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627729-34A	1600 Rutland Ave PLM-34	NAD	--	--	--	--	20	--	40	--	--	40	CT	Multi	Layered	SW	
627729-35	1600 Rutland Ave PLM-35	NAD	--	--	--	--	--	--	60	--	--	40	CT	Multi	Layered	SW	
627729-35A	1600 Rutland Ave PLM-35	NAD	--	--	--	--	--	--	60	--	--	40	CT	Multi	Layered	SW	
627729-36	1600 Rutland Ave PLM-36	NAD	--	--	--	--	--	--	10	--	--	90	DW	Multi	Layered	SW	
627729-36A	1600 Rutland Ave PLM-36	NAD	--	--	--	--	--	--	10	--	--	90	DW	Multi	Layered	SW	
627729-37	1600 Rutland Ave PLM-37	NAD	--	--	--	--	--	--	--	--	--	100	JC	White	Homogeneous	SW	
627729-37A	1600 Rutland Ave PLM-37	NAD	--	--	--	--	--	--	--	--	--	100	JC	White	Homogeneous	SW	
627729-38	1600 Rutland Ave PLM-38A	NAD	--	--	--	--	--	--	--	--	--	100	BC	Gray	Homogeneous	SW	
627729-38A	1600 Rutland Ave PLM-39A	NAD	--	--	--	--	--	--	--	--	--	100	PL	White	Homogeneous	SW	
627729-39	1600 Rutland Ave PLM-38B	NAD	--	--	--	--	--	--	--	--	--	100	BC	Gray	Homogeneous	SW	
627729-39A	1600 Rutland Ave PLM-39B	NAD	--	--	--	--	--	--	--	--	--	100	PL	White	Homogeneous	SW	
627729-40	1600 Rutland Ave PLM-40	NAD	--	--	--	--	--	--	--	--	--	100	IN	White	Homogeneous	SW	
627729-40A	1600 Rutland Ave PLM-40	NAD	--	--	--	--	--	--	--	--	--	100	IN	White	Homogeneous	SW	
627729-40B	1600 Rutland Ave PLM-40	NAD	--	--	--	--	--	--	--	--	--	100	IN	White	Homogeneous	SW	



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627729-41	1600 Rutland Ave PLM-41	NAD	--	--	--	--	--	--	--	--	--	100	FT	Brown	Homogeneous	SW	
627729-42	1600 Rutland Ave PLM-42	NAD	--	--	--	--	--	--	--	--	--	100	MS	Tan	Homogeneous	SW	
627729-43	1600 Rutland Ave PLM-43	NAD	--	--	--	--	--	--	--	--	--	100	LN	Multi	Homogeneous	SW	
627729-44	1600 Rutland Ave PLM-44	NAD	--	--	--	--	--	--	--	--	--	100	MS	Multi	Homogeneous	SW	
627729-45	1600 Rutland Ave PLM-45	NAD	--	--	--	--	--	--	--	--	--	100	Texture	White	Homogeneous	SW	
627729-45A	1600 Rutland Ave PLM-45	NAD	--	--	--	--	--	--	--	--	--	100	Texture	White	Homogeneous	SW	
627729-46	1600 Rutland Ave PLM-46	NAD	--	--	--	--	--	--	--	--	--	100	Ads	Tan	Homogeneous	SW	
627729-47	1600 Rutland Ave PLM-47	NAD	--	--	--	--	--	--	--	--	--	100	FT	Blue	Homogeneous	SW	
627729-48	1600 Rutland Ave PLM-48	NAD	--	--	--	--	--	--	--	--	--	100	MS	Tan	Homogeneous	SW	
627729-49	1600 Rutland Ave PLM-49	NAD	--	--	--	--	--	--	--	--	--	100	FT	White	Heterogenous	SW	
627729-50	1600 Rutland Ave PLM-50	NAD	--	--	--	--	--	--	--	--	--	100	MS	Tan	Homogeneous	SW	
627729-51	1600 Rutland Ave PLM-51	NAD	--	--	--	--	--	--	--	--	--	100	FT	Tan	Homogeneous	SW	
627729-52	1600 Rutland Ave PLM-52	NAD	--	--	--	--	--	--	--	--	--	100	Glue	White	Homogeneous	SW	
627729-52A	1600 Rutland Ave PLM-52	3	3	--	--	--	--	--	--	--	--	97	Cement	Gray	Homogeneous	SW	



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627729-53	1600 Rutland Ave PLM-53	NAD	--	--	--	--	--	--	10	--	--	90	DW	Multi	Layered	SW	
627729-54	1600 Rutland Ave PLM-54	NAD	--	--	--	--	--	--	--	--	--	100	JC	White	Homogeneous	SW	
627729-55	1600 Rutland Ave PLM-55	3	3	--	--	--	--	--	--	--	--	97	FT	Brown	Homogeneous	SW	
627729-56	1600 Rutland Ave PLM-56	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SW	
627729-57	1600 Rutland Ave PLM-57	NAD	--	--	--	--	30	--	--	--	--	70	MLB	White	Homogeneous	SW	
627729-58	1600 Rutland Ave PLM-58	NAD	--	--	--	--	--	--	--	70	--	30	Cloth	Green	Homogeneous	SW	
627729-59	1600 Rutland Ave PLM-59	NAD	--	--	--	--	20	--	40	--	--	40	CT	Multi	Layered	SW	
627729-60	1600 Rutland Ave PLM-60	NAD	--	--	--	--	--	--	--	--	--	100	FT	Tan	Homogeneous	SW	
627729-61	1600 Rutland Ave PLM-61	3	3	--	--	--	--	--	--	--	--	97	FT	Tan	Homogeneous	SW	
627729-62	1600 Rutland Ave PLM-62	NAD	--	--	--	--	--	--	--	--	--	100	FT	Red	Homogeneous	SW	
627729-63	1600 Rutland Ave PLM-63	NAD	--	--	--	--	--	--	--	30	--	70	Felt	Gray	Homogeneous	SW	
627729-63A	1600 Rutland Ave PLM-63	NAD	--	--	--	--	--	--	--	--	--	100	Tar	Black	Homogeneous	SW	
627729-64	1600 Rutland Ave PLM-64	NAD	--	--	--	--	--	--	--	30	--	70	Felt	Black	Homogeneous	SW	
627729-64A	1600 Rutland Ave PLM-64	NAD	--	--	--	--	--	--	--	--	--	100	Tar	Black	Homogeneous	SW	



CERTIFICATE OF ANALYSIS

Chain of Custody: 627729
Client: Mayoka Services LLC
Address: 3437 9th Street
Building A
Baltimore, MD 21225
Attention: Stacey Cayetano

Job Name: 1600 Rutland Avenue
Job Location: 1600 Rutland Avenue
Job Number: Not Provided
P.O. Number: Not Provided

Date Submitted: 06/18/2021
Date Analyzed: 06/25/2021
Report Date: 06/25/2021
Date Sampled: 06/17/2021
Person Submitting: N/A

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample Number	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
627729-65	1600 Rutland Ave PLM-65	NAD	--	--	--	--	--	--	--	--	--	100	Tar	Black	Homogeneous	SW	
627729-65A	1600 Rutland Ave PLM-65	NAD	--	--	--	--	--	--	--	--	--	100	Tar	Black	Homogeneous	SW	
627729-66	1600 Rutland Ave PLM-66	3	3	--	--	--	--	--	--	--	--	97	CK	White	Homogeneous	SW	
627729-66A	1600 Rutland Ave PLM-66	--	--	--	--	--	--	--	--	--	--	--	CK	--	--	SW	Sample not analyzed. Positive stop.
627729-67	1600 Rutland Ave PLM-67	NAD	--	--	--	--	--	60	--	--	--	40	GK	Gray	Homogeneous	LBP	
627729-68	1600 Rutland Ave PLM-68	NAD	--	--	--	--	--	10	--	5	--	85	Asph	Black	Homogeneous	LBP	
627729-68A	1600 Rutland Ave PLM-68	NAD	--	--	--	--	--	20	--	--	--	80	Asph	Black	Homogeneous	LBP	
627729-69	1600 Rutland Ave PLM-69	NAD	--	--	--	--	--	--	90	--	--	10	RI	Brown	Homogeneous	LBP	
627729-69A	1600 Rutland Ave PLM-69	NAD	--	--	--	--	--	--	90	--	--	10	RI	Brown	Homogeneous	LBP	
627729-70	1600 Rutland Ave PLM-70	NAD	--	--	--	--	--	--	10	--	--	80	Tar	Black	Homogeneous	LBP	
627729-70A	1600 Rutland Ave PLM-70	NAD	--	--	--	--	--	10	--	--	--	90	Tar	Black	Homogeneous	LBP	
627729-71	1600 Rutland Ave PLM-71	NAD	--	--	--	--	--	--	--	--	--	100	Cement	Gray	Homogeneous	LBP	
627729-72	1600 Rutland Ave PLM-72	NAD	--	--	--	--	--	--	5	--	--	95	RT	Black	Homogeneous	LBP	



CERTIFICATE OF ANALYSIS

Chain of Custody: 627729
Client: Mayoka Services LLC
Address: 3437 9th Street
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Baltimore, MD 21225
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Job Name: 1600 Rutland Avenue
Job Location: 1600 Rutland Avenue
Job Number: Not Provided
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Date Submitted: 06/18/2021
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Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample Number	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
627729-73	1600 Rutland Ave PLM-73	2	2	--	--	--	--	--	--	--	--	98	CK	White	Homogeneous	LBP	
627729-74	1600 Rutland Ave PLM-74	NAD	--	--	--	--	--	--	--	--	--	100	RT	Black	Homogeneous	LBP	
627729-75	1600 Rutland Ave PLM-75	NAD	--	--	--	--	--	--	10	--	--	90	FiB	White	Homogeneous	LBP	
627729-75A	1600 Rutland Ave PLM-75	NAD	--	--	--	--	--	--	5	--	--	95	FiB	White	Homogeneous	LBP	
627729-76	1600 Rutland Ave PLM-76	3	3	--	--	--	--	--	--	--	--	97	CK	White	Homogeneous	LBP	
627729-77	1600 Rutland Ave PLM-77	NAD	--	--	--	--	--	--	--	--	--	100	CK	White	Homogeneous	LBP	
627729-78	1600 Rutland Ave PLM-78	2	2	--	--	--	--	--	--	--	--	98	CK	White	Homogeneous	LBP	
627729-79	1600 Rutland Ave PLM-79	NAD	--	--	--	--	--	--	--	--	--	100	Mortar	White	Homogeneous	LBP	
627729-80	1600 Rutland Ave PLM-80	2	2	--	--	--	--	--	--	--	--	98	CK	White	Homogeneous	LBP	
627729-81	1600 Rutland Ave PLM-81	2	2	--	--	--	--	--	--	--	--	98	CK	White	Homogeneous	LBP	



CERTIFICATE OF ANALYSIS

Chain of Custody: 627729
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Address: 3437 9th Street
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Date Submitted: 06/18/2021
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Date Sampled: 06/17/2021
Person Submitting: N/A

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample Number	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
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The following footnotes only apply to those samples which the total asbestos result is flagged with a note number.

¹ TEM RECOMMENDATION - Please note, due to resolution limitations with optical microscopy and/or interference from matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos. It is recommended that the additional analytical technique of TEM be used to check for asbestos fibers below the resolution limits of optical microscopy.

² MATRIX REDUCTION RECOMMENDATION - Please note, due to interference from the matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos which is obscured from view. It is recommended that the additional preparation technique of gravimetric reduction be performed on this sample to minimize the obscuring effects of matrix components, followed by reanalysis by PLM and/or TEM.

Analysis Method - EPA/600/R-93/116 dated July 1993
NAD = "No Asbestos Detected" TR = "Trace equals less than 1% of this component"

Uncertainty: For samples containing asbestos in range of 1-10% the CV is 0.43, 11-35% CV=0.55, >35 CV=0.23. All results are to be considered preliminary and subject to change unless signed by the Technical Director or Deputy.

Analyst(s): Surat Watson, Lom Butruk

Technical Director Michael Greenberg

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NVLAP or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.



Project Name: 1600 Rutland Ave
 Location: 1600 Rutland Ave
 Baltimore, MD
 Project Number:
 Client: MSA










Sample ID	Sample Type/Description	Location
1	1600 Rutland Ave PLM-1 Drywall, white	Basement classroom, left of stairs
2	1600 Rutland Ave PLM-2 JC, white	Basement classroom, left of stairs
3	1600 Rutland Ave PLM-3 Cove base mastic, Tan	Basement classroom
4	1600 Rutland Ave PLM-4 Canvas pipe insulation wrap, white (fiberglass)	Basement fiberglass pipe installation
5	1600 Rutland Ave PLM-5 End cap mastic, white	Basement fiberglass pipe installation
6	1600 Rutland Ave PLM-6 9" VCT, white with tan carpet glue on top	Basement hallway down Rutland Ave
7	1600 Rutland Ave PLM-7 Mastic, Black	Below sample 6
8	1600 Rutland Ave PLM-8 12" VCT, light red	Basement two stall restroom
9	1600 Rutland Ave PLM-9 Mastic, unknown color (too much moisture and mold growth)	Below sample 8
10	1600 Rutland Ave PLM-10 9" VCT, red	Basement hallway
11	1600 Rutland Ave PLM-11 Mastic, black	Beneath sample 10
12	1600 Rutland Ave PLM-12 12" VCT, white with grey and green fleck	Basement Landing room
13	1600 Rutland Ave PLM-13 Mastic, Yellow	Beneath sample 12
14	1600 Rutland Ave PLM-14 End cap mastic, white	Basement security office
15	1600 Rutland Ave PLM-15 Canvas pipe wrap on yellow fiberglass pipe installation, white a. wire insulation, woven rope b. wire insulation	Basement security office a. Boiler room light switch b. Boiler room electrical panel
16	1600 Rutland Ave PLM-16 a/b Window glazing, white	Boiler room
17	1600 Rutland Ave PLM-17 Drywall, white	Basement library bulkhead
18	1600 Rutland Ave PLM-18 JC, white	Basement library bulkhead
19	1600 Rutland Ave PLM-19 2x4 ACT, white	Basement library
20	1600 Rutland Ave PLM-20 12" VCT, white	Library storage room (270sqft)
21	1600 Rutland Ave PLM-21 Mastic, yellow	Beneath 21
22	1600 Rutland Ave PLM-22 12" VCT, white with blue cross pattern	
23	1600 Rutland Ave PLM-23 Mastic, yellow	Beneath sample 23
24	1600 Rutland Ave PLM-24 a. pipe wrap, black b. pipe wrap, black	a. Basement crawl space b. Basement crawl space
25	1600 Rutland Ave PLM-25 a/b a. sink undercoat, white b. sink undercoat, white	a. Basement day care b. Unit 208
26	1600 Rutland Ave PLM-26 a/b 9" VCT, light grey with brown spots	South stair landing 1st floor
27	1600 Rutland Ave PLM-27 a/b Mastic, black	Below 27
28	1600 Rutland Ave PLM-28 a/b 9" VCT, green with tan and black fleck	South stairwell landing 2nd floor
29	1600 Rutland Ave PLM-29 a/b Mastic, black	Beneath 29
30	1600 Rutland Ave PLM-30 a/b 9" VCT brown with white and dark brown fleck	South stair landing 3rd floor
31	1600 Rutland Ave PLM-31 a/b 12" VCT, replacement with renovation to housing, multi-tonal	South Stair 3rd floor landing
32	1600 Rutland Ave PLM-32 Mastic, new yellow and historic black	South Stair 3rd floor landing
33	1600 Rutland Ave PLM-33 2x4 ACT, installed below historic 12" ACT, white	a. 3rd floor hall b. 2nd floor hall
34	1600 Rutland Ave PLM-34 a/b 12" ACT, white with pinholes	a. 3rd floor hall b. 2nd floor hall
35	1600 Rutland Ave PLM-35 a/b Drywall, renovation partition wall, white	a. Unit 301 b. Unit 219
36	1600 Rutland Ave PLM-36 a/b JC, renovation partition wall, white	a. Unit 301 b. Unit 219
37	1600 Rutland Ave PLM-37 a/b plaster base coat, pipe chase	a. north end 3rd floor b. south end 2nd floor
38	1600 Rutland Ave PLM-38 a/b plaster top coat, pipe chase	a. north end 3rd floor b. south end 2nd floor
39	1600 Rutland Ave PLM-39 a/b wood unit entry door code Brill insulation, white	a. Unit 302 b. Unit 304 c. stairwell door 2nd floor
40	1600 Rutland Ave PLM-40 a/b 12" VCT, self adhesive, stone texture, reddish brown	
41	1600 Rutland Ave PLM-41 Cove base mastic, light tan	3rd floor unit 303
42	1600 Rutland Ave PLM-42 12" stone later VCT, self adhesive, white	
43	1600 Rutland Ave PLM-43 carpet glue, yellow, over historic mastic, black	Unit 306
44	1600 Rutland Ave PLM-44 Textured wall, on CMU, white	a. Unit 306 b. Unit 219 c.
45	1600 Rutland Ave PLM-45 a/b 12" VCT, self adhesive	
46	1600 Rutland Ave PLM-46 12" VCT, blue	north entryway landing 1st floor
47	1600 Rutland Ave PLM-47 mastic, grey	beneath 47
48	1600 Rutland Ave PLM-48 12" VCT white	beneath 49
49	1600 Rutland Ave PLM-49 Mastic, mud base, white	north entryway landing 1st floor
50	1600 Rutland Ave PLM-50 base layer VCT, unknown size, tan	classroom 8, 1st floor
51	1600 Rutland Ave PLM-51 Cementitious glue dot behind chalk board, grey	partition wall preschool between main hall and gym
52	1600 Rutland Ave PLM-52 drywall, white	partition wall preschool between main hall and gym
53	1600 Rutland Ave PLM-53 JC, white	auditorium walkways
54	1600 Rutland Ave PLM-54 9" VCT, brown	beneath 55
55	1600 Rutland Ave PLM-55 mastic, black	theater, chase south end
56	1600 Rutland Ave PLM-56 mudded elbow, white	theater
57	1600 Rutland Ave PLM-57 stage curtain, green	Enty lobby gym and auditorium
58	1600 Rutland Ave PLM-58 2x4 ACT	gym auditorium lobby
59	1600 Rutland Ave PLM-59 12" VCT, top layer VCT	gym auditorium lobby
60	1600 Rutland Ave PLM-60 9" VCT, tan with brown spots base layer	gym lobby entrance
61	1600 Rutland Ave PLM-61 12" VCT, red	a. primary roof b. south end primary roof
62	1600 Rutland Ave PLM-62 roofing felt under stone	a. primary roof b. south end primary roof
63	1600 Rutland Ave PLM-63 a/b Roofing tar under foam core insulation at roof deck, black	asphalt and metal edge flashing b. south penthouse flashing
64	1600 Rutland Ave PLM-64 a/b Roof tar, black	roof flashing at penthouse edge b. south penthouse flashing
65	1600 Rutland Ave PLM-65 a/b caulking, white	
66	1600 Rutland Ave PLM-66 a/b ventilation fan gasket, grey	
67	1600 Rutland Ave PLM-67 asphalt roofing, black	a. Roof b. Gym room
68	1600 Rutland Ave PLM-68 a/b roofing insulation, brown	a. Roof b. Gym room
69	1600 Rutland Ave PLM-69 a/b tar base coat under brown insulation, black	a. Roof b. Gym room
70	1600 Rutland Ave PLM-70 a/b cementitious deck, grey	roof
71	1600 Rutland Ave PLM-71 roof tar, black	central roof vent
72	1600 Rutland Ave PLM-72 window caulk, white	high gym windows exterior
73	1600 Rutland Ave PLM-73 roof tar, black	below window in 73
74	1600 Rutland Ave PLM-74 fibroids gypsum roof decking, white	gym roof
75	1600 Rutland Ave PLM-75 a/b window caulk, white	main building exterior, 3rd floor
76	1600 Rutland Ave PLM-76 door caulk, white	north main entrance door
77	1600 Rutland Ave PLM-77 window caulk, white	1st floor exterior wall vent
78	1600 Rutland Ave PLM-78 lintel mortar, white	exterior
79	1600 Rutland Ave PLM-79 window caulk, white	Basement
80	1600 Rutland Ave PLM-80 door caulk, white	exterior, 'All smiles day care' front door
81	1600 Rutland Ave PLM-81	

Appendix B – Photographic Documentation










PHOTOGRAPHIC DOCUMENTATION

<p>Rutland Elementary School, established 1956</p>	<p>Once renovated, Rutland Elementary became Lanvale Transitional Housing</p>	<p>North east corner of the building</p>
<p>Exterior walls of the gymnasium and auditorium, over the rear parking lot</p>	<p>Large rear parking lot off the west side of the residential building</p>	<p>Large rear parking lot off the west side of the residential building</p>
<p>Example of exterior window systems, white caulking is positive for asbestos</p>	<p>Roof access door at north stairwell</p>	<p>View of asphalt roofing at auditorium and gymnasium, negative for asbestos</p>

PHOTOGRAPHIC DOCUMENTATION

		
<p>Asphalt, tar and gravel roofing on three story residential building</p>	<p>View of asphalt roofing at auditorium and gymnasium, negative for asbestos</p>	<p>Rear playground between primary building and auditorium</p>
		
<p>Example of remaining HVAC systems, most of the motors, coolant system and radiator have been salvaged</p>	<p>Example of remaining HVAC systems, most of the motors, coolant system and radiator have been salvaged</p>	<p>Example of silver roof coat and caulking present at roof flashing, all materials tested negative for asbestos</p>
		
<p>Example of roof core performed on primary three story roof. Multiple layers identified including foam insulation. All materials were found to be negative for asbestos</p>	<p>Example of roof core performed on primary three story roof. Multiple layers identified including fibrous brown insulation. All materials were found to be negative for asbestos</p>	<p>Flooded basement, area not inspected.</p>










PHOTOGRAPHIC DOCUMENTATION

		
<p>Example of exposed ceiling in basement library with fiberglass insulated piping</p>	<p>Basement crawl space, all insulation is fiberglass with black waterproofing mastic. All materials tested negative for asbestos</p>	<p>Fiberglass insulation on heating pipe</p>
		
<p>Standard 1st floor finishes with classroom spaces</p>	<p>Standard 1st floor finishes with classroom spaces</p>	<p>Standard 1st floor finishes with classroom spaces. Glue dots behind chalk board tested positive for asbestos</p>
		
<p>Standard 1st floor finishes with classroom spaces</p>	<p>Standard 1st floor finishes with classroom spaces</p>	<p>Basement classroom, extensive mold growth present throughout basement</p>

PHOTOGRAPHIC DOCUMENTATION

		
Basement classroom, extensive mold growth present throughout basement	Standard hallway VCT, 12" tile is replacement over historic black mastic	Example of mudded elbow found in auditorium
		
Example of mudded elbow found in auditorium	Example of mudded elbow found in auditorium	Fiberglass wrapped forced air duct work in basement
		
Mudded elbow tested negative for asbestos	Boiler control room	Example of old electrical wiring found throughout building, tested negative for asbestos










PHOTOGRAPHIC DOCUMENTATION

		
<p>Example of old electrical wiring found throughout building, tested negative for asbestos</p>	<p>Example of forced air HVAC system installed in renovated space, no suspect materials</p>	<p>Example of mercury thermostat installed with forced air HVAC systems</p>
		
<p>Example of PTAC HVAC system installed in residential units, no suspect materials present</p>	<p>Rooftop ventilation van on primary roof</p>	<p>Vibration gasket at rooftop ventilation, negative for asbestos</p>
		
<p>VCT with black mastic in basement storage room</p>	<p>Extensive mold contamination in all basement finished spaces</p>	<p>12" white VCT installed over historic black mastic, positive for asbestos</p>

PHOTOGRAPHIC DOCUMENTATION

		
<p>9" white VCT installed in basement hallway, positive for asbestos</p>	<p>Mold covered basement materials</p>	<p>9" green VCT installed in basement hallway with black mastic beneath, positive for asbestos</p>
		
<p>9" white VCT installed in basement hallway, positive for asbestos</p>	<p>South stairwell with 9" VCT and black mastic installed at landings, positive for asbestos</p>	<p>Stone entryway at south stair well, ground floor</p>
		
	<p>Example of renovated hallway, residential units along each side</p>	<p>Double layer drop ceiling, both materials tested negative for asbestos</p>

PHOTOGRAPHIC DOCUMENTATION

		
<p>Replacement 12" VCT installed over historic black mastic</p>	<p>Self-adhesive VCT installed in some units, black mastic present on sub-floor</p>	<p>Multi-layer flooring identified in north stairwell including layers of 9" VCT and black mastic</p>
		
<p>Example of residential unit entry door, door insulation tested and found negative for asbestos</p>	<p>Yellow carpet glue on top of black mastic</p>	<p>Example of textured wall covering on CMU walls, tested negative for asbestos</p>
		
<p>9" VCT and black mastic in auditorium, positive for asbestos</p>		<p>Theater curtain, negative for asbestos</p>

PHOTOGRAPHIC DOCUMENTATION



Large transformer located at north edge of property



Example of standard fluorescent light fixture including 2 bulbs and one possible PCB containing ballast



Example of stored materials including paints and cleaning products



Example of stored materials including paints and cleaning products



Example of stored materials including paints and cleaning products

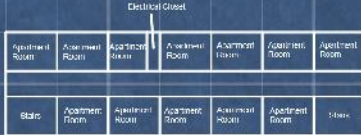
Appendix C – Site Diagram



Basement



Third Floor



Main Floor



Second Floor

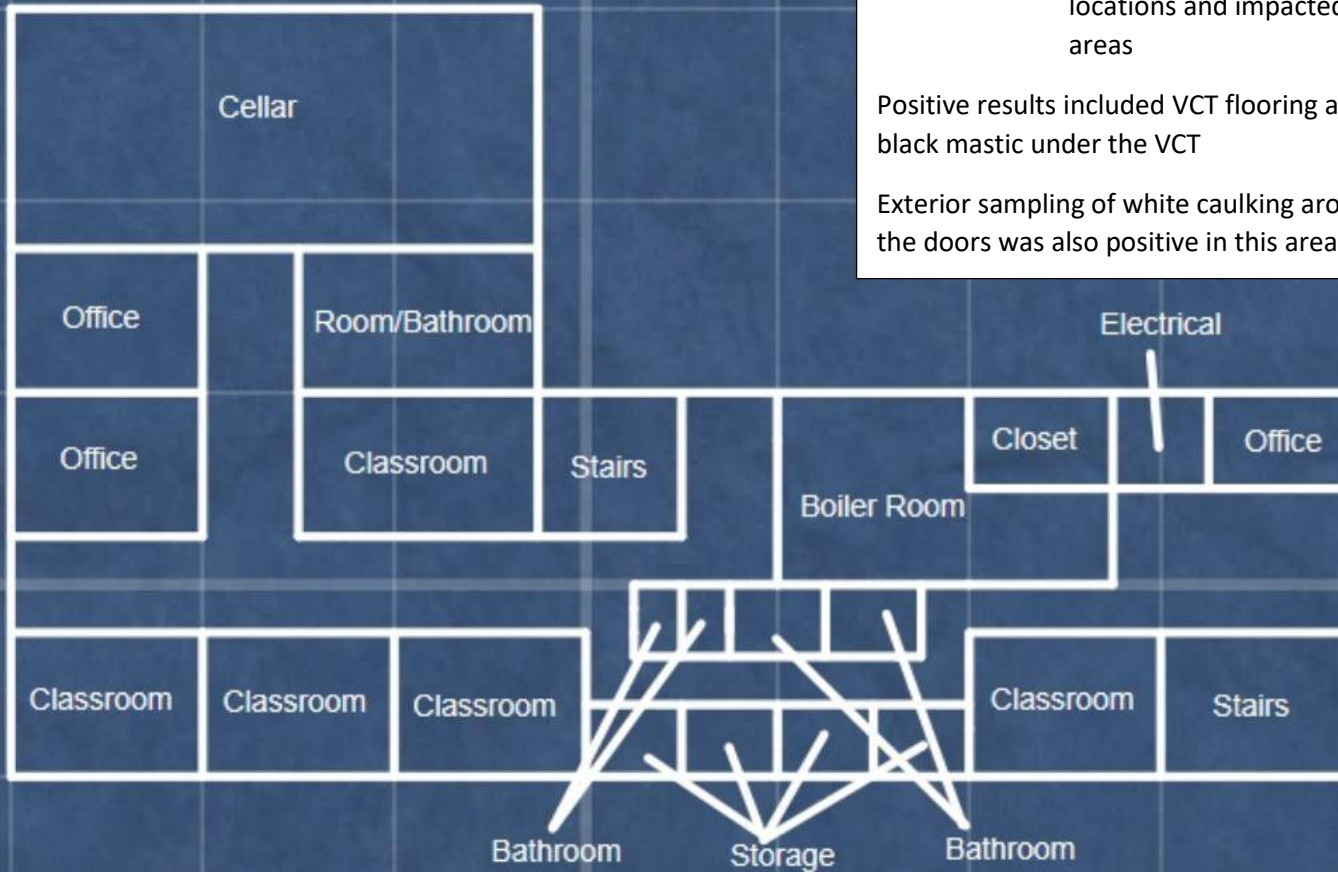
Basement

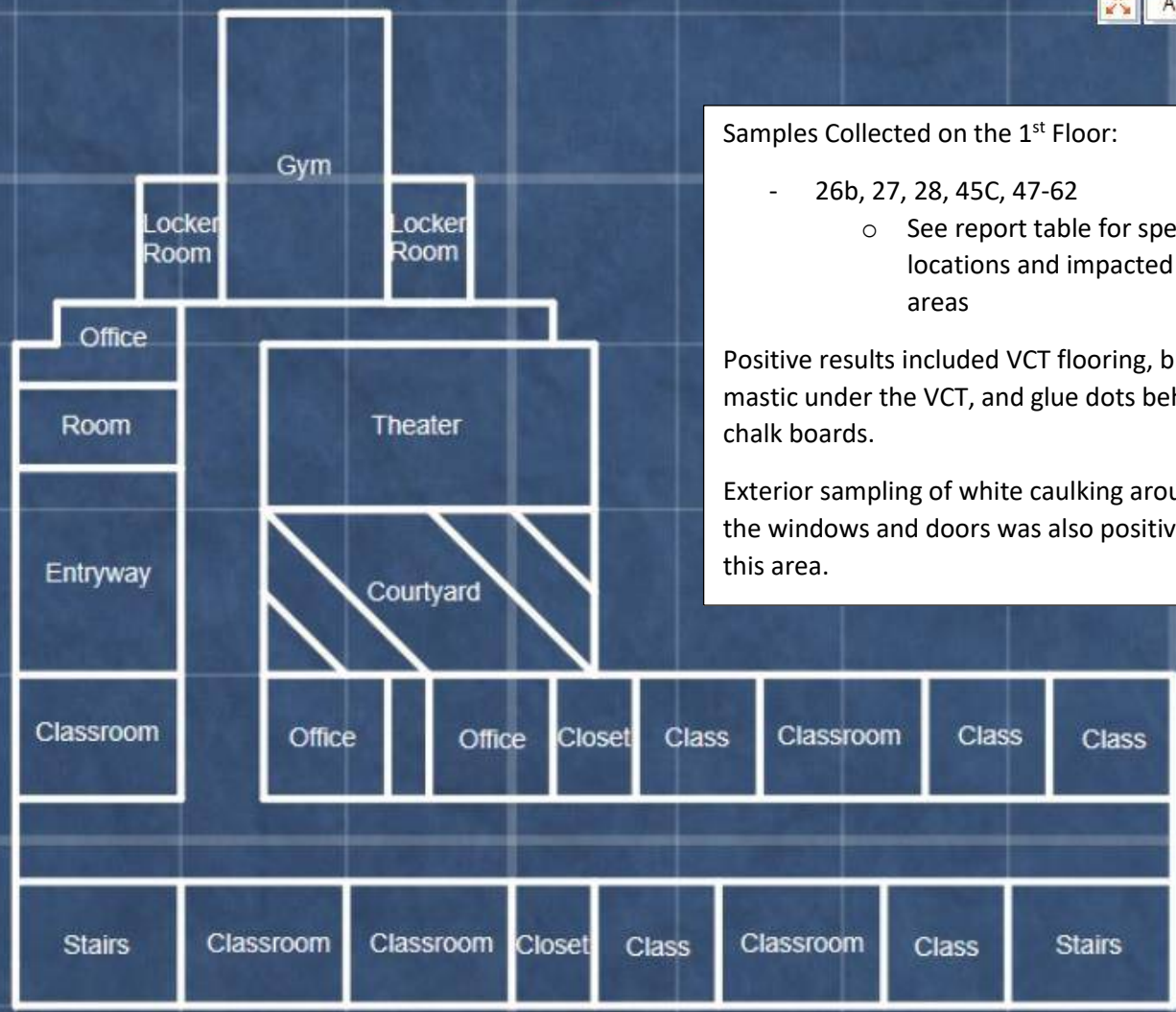
Samples Collected in the Basement:

- 1-25, 26a
 - o See report table for specific locations and impacted areas

Positive results included VCT flooring and black mastic under the VCT

Exterior sampling of white caulking around the doors was also positive in this area.





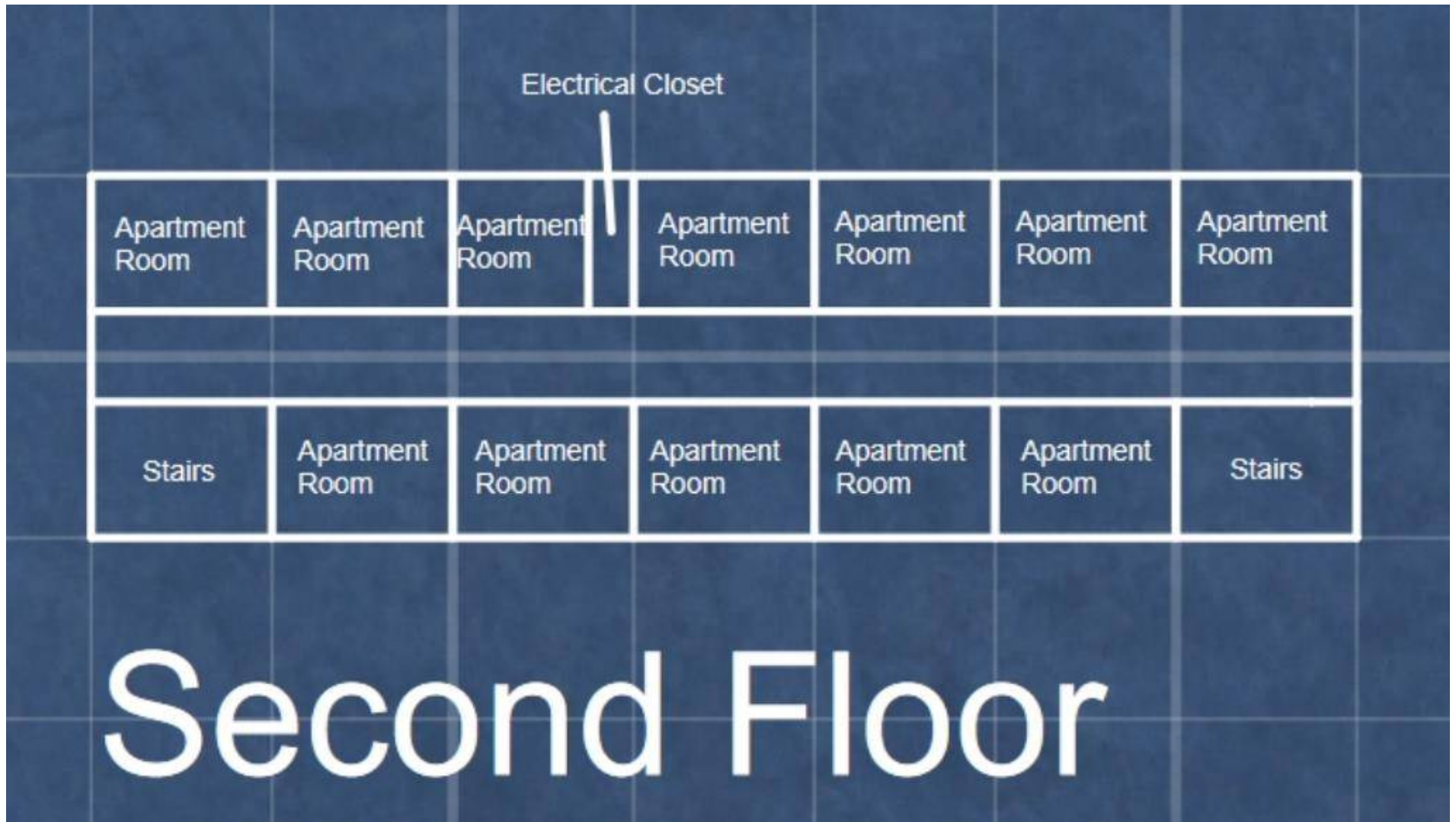
Samples Collected on the 1st Floor:

- 26b, 27, 28, 45C, 47-62
 - o See report table for specific locations and impacted areas

Positive results included VCT flooring, black mastic under the VCT, and glue dots behind chalk boards.

Exterior sampling of white caulking around the windows and doors was also positive in this area.

Main Floor



Second Floor

Samples Collected on the 2nd Floor:

- 29, 30, 34b, 35b, 36b, 37b, 38b, 39b, 40c, 45b, 46
 - o See report table for specific locations and impacted areas

Positive results included VCT flooring and black mastic under the VCT.

Exterior sampling of white caulking around the windows was also positive in this area.

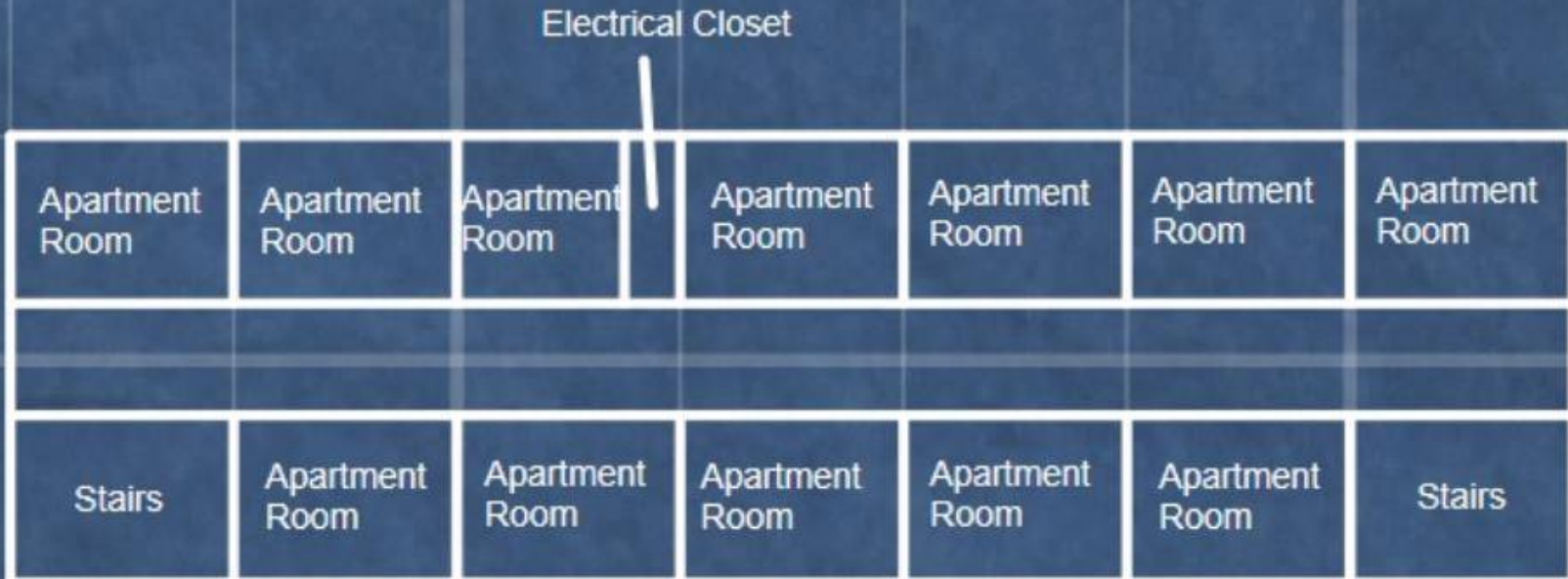
Third Floor

Samples Collected on the 3rd Floor:

- 31, 32, 33, 34a, 35a, 36a, 27a, 38a, 39a, 40 a&b, 41-44, 45a
 - o See report table for specific locations and impacted areas

Positive results included VCT flooring and black mastic under the VCT.

Exterior sampling of white caulking around the windows and doors was also positive in this area.



Appendix D – Inspector Credentials

Results

Maryland Asbestos Accreditation Exam

Certificate Number: VAIR09012020-8

First Name: Brett

Last Name: Purinton

Address: 3437 9th St, Building A

City: Baltimore

State: MD

Zip: 21225



According to our records this test was completed on: **10/13/2020**

We administered the following asbestos certification exam: **Inspector**

Your Results

Score: **96%**

Congratulations you have passed your Maryland asbestos accreditation exam. This document and your training certificate will serve as a temporary license until you receive your official license in the mail. Prior to issuing a license, MDE will verify all necessary information and submitted documents.
necessary information and submitted documents.

Thank you for taking the Maryland asbestos accreditation exam. If you have any concerns or questions about the exam, including how to collect your photo ID, please direct them to the Maryland Department of the environment at (410) 537-3200.

Issued By _____

Date **10/13/2020**

Sam Bragan

From: Devona Addison -MDE- <devona.addison@maryland.gov>
Sent: Wednesday, December 2, 2020 3:33 PM
To: Sam Bragan
Cc: Stacey Cayetano; Laura Insley; Carol Robinson -MDE-; Becky Singleton -MDE-; Michelle Armiger -MDE-
Subject: Re: Pending/Denial Maryland Lead Paint Abatement Services Applications for: A1 Environmental and Safety Training, LLC

Follow Up Flag: Follow up
Flag Status: Flagged

Stacy Caytano,

Your accreditations for A1 Environmental and Safety Training LLC as well as Brittney L. Grap have been approved. Please allow 10-14 business days to receive your accreditation certificates in the mail at the address(es) listed on your application(s).

Your accreditation information is as follows:

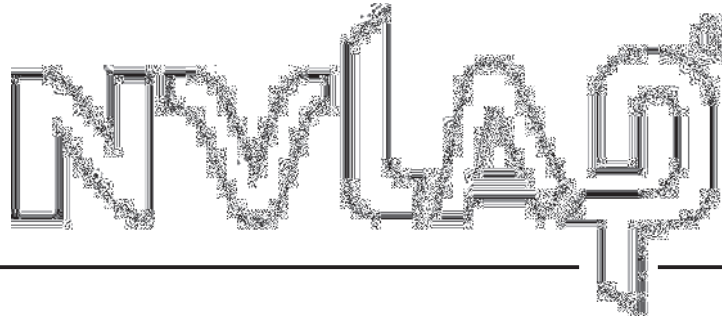
A1 Environmental and Safety Training LLC (Inspector Contractor) #16076 Expires 10/19/2022

Brittney L. Grap (Inspector Technician) #18025 expires 10/19/2022

If you have any further questions regarding your accreditations you may contact via replying to this email.

Appendix E – Laboratory Accreditations

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101143-0

AMA Analytical Services, Inc.
Lanham, MD

*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 17025:2017.
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).*

2020-07-01 through 2021-06-30

Effective Dates



A handwritten signature in blue ink, reading 'Dana S. Laman'. The signature is fluid and cursive.

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

AMA Analytical Services, Inc.
4475 Forbes Blvd.
Lanham, MD 20706
Mr. Andreas Saldivar
Phone: 301-459-2640 Fax: 301-459-2643
Email: andreas@amalab.com
<http://www.amalab.com>

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 101143-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of 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.

A handwritten signature in blue ink, appearing to read 'Anna S. Laman', is written over a horizontal line.

For the National Voluntary Laboratory Accreditation Program

ATTACHMENT M
PROJECT MAPS & DOCUMENTS

Baker St

Baker St

Ashburton St

Variety Carryout
& Bakery
Takeout

Braddish Ave

1511 Ashburton St,
Baltimore, MD 21216

Presstman St

Br

E Lanvale St

E Lanvale St

N Register St

Rutland Ave

Rutland Ave



1600 Rutland Ave,
Baltimore, MD 21213



St Joseph
Will Baptist

Allsmiles Daycare Center



Federal St

Federal St

CITY OF BALTIMORE

DEPARTMENT OF PUBLIC WORKS
WATER FACILITIES - ASHBURTON LABORATORY

DISTRIBUTION SYSTEMS COMPLAINTS

Complaint Identification Number 136 Work Order # _____

Nature of complaint _____

Address 1600 RUTLAND AVE.

Pertinent field information: WATER FILLING BASEMENT OF BUILDING SCHEDULED TO BE DEMOLISHED. NEED TO DETERMINE IF WATER IS POTABLE OR GROUND OR OTHER

Sample taken: Date: 4/24/21 Time: 9:54 AM By: VAN STURTEVANT

Sample received in lab: Date: 4/26/21 Time: 2:04 PM By: lab

Report results to: Name: AMANDA OXENDINE Phone: 410-396-0732
AMANDA.OXENDINE@BALTIMORECITY.GOV

Laboratory Analyses (All values in mg/L except as indicated)

- | | |
|--|--|
| () Turbidity, NTU _____ | () NH ₃ -N <u>0.05</u> |
| () Color, units _____ | () PO ₄ -P <u><0.01</u> |
| () Odor _____ | () Chloride <u>98.0</u> |
| () Free chlorine <u>ND</u> | () Manganese _____ |
| () pH, units <u>7.79</u> | () Iron _____ |
| () Alkalinity (CaCO ₃) _____ | () Copper _____ |
| () Tot. Hardness (CaCO ₃) _____ | () MF _____ |
| () Tot. Dis. Solids <u>388</u> | () MPN _____ |
| () Suspended Solids _____ | () Other _____ |
| () Fluoride <u>0.235</u> | () _____ |

Remarks : _____

Filtered # _____ # _____

- Probable results: (X) Groundwater
 () City water
 () Sewage
 () Other
 () RAS

Analyst GB 396 - 0150

Results reported: Date: 04/26/2021 TIME : 2:40 pm

NOTE: THESE RESULTS ARE TO BE CORRELATED WITH FIELD INFORMATION OBTAINED AT SAMPLING SITE.

Sent scanned copy to Amanda Oxendine GB
on 04/26/2021 @ 2:40 pm

ATTACHMENT N
CAPACITY SUMMARY FORM

ATTACHMENT O
CORPORATE PROFILE

Corporate Profile

Firm Contact Information

Firm Name: _____

Federal ID Number: _____

Point of Contact: _____ Phone Number: _____

Regional Office Address: _____

Firm Background Information

Year Firm Founded: _____

Is the firm MDOT MBE Certified? Yes No If certified, provide the certification number and minority status.

Primary Business / Service Provided: _____

Number of Years Performing Services: _____

Number Full Time Employees (Corporate / Regional Office): _____ / _____

Provide a brief narrative outlining the firm's history. Elaborate on the firm's experience and expertise performing in a prime contractor capacity. Specifically, elaborate on the firm's experience completing abatement and demolition services.

Provide a brief narrative outlining what services the firm intends to self-perform.

Volume	Annual Sales	Completed Projects	Largest Project	EMR Rating
2017	_____	_____	_____	_____
2018	_____	_____	_____	_____
2019	_____	_____	_____	_____
Current EMR Rating				_____

Firm References

Provide three (3) references. Note that references are to be from different projects; that is, only one reference per project is allowed.

Project Name: _____

Name: _____
Title: _____
Company Name: _____
Phone Number and email: _____
Project Relationship: _____

Project Name: _____

Name: _____
Title: _____
Company Name: _____
Phone Number and email: _____
Project Relationship: _____

Project Name: _____

Name: _____
Title: _____
Company Name: _____
Phone Number and email: _____
Project Relationship: _____

Disclosure of Contract Issues; Litigation

Disclose any alleged significant prior or ongoing contract failures, contract breaches, any civil or criminal litigation or investigation pending which involves your firm. List any contracts in which your firm has been found guilty or liable, or which may affect the performance of the services to be rendered herein, in which your firm has been involved in within the last 5 years.

Failure to Complete

In the last five (5) years, disclose any projects that your firm was involved with that were not completed.

Insurance

Include current certificates of insurance showing the limits of liability maintained by your firm in each of the following categories: workers’s compensation, employer’s liability, commercial general liability, automobile liability, umbrella or excess liability, and property insurance.

Bonding

Include a letter from your bonding company stating bonding limits and current available bonding capacity.

Prepared By:

Name: _____

Title: _____

Signature: _____

Date: _____