Specifications for: **Moderate Rehabilitation of Huffman-Parnell RAD Conversion** OHFA Tracking No: 22-0292

Dayton, OH 45403



Prepared for: Greater Dayton Premier Management

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Website posting at www.gdpm.org

Prepared by:



Bid Set May 1, 2024

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SECTION 01 10 00 - SUMMARY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Summary:
 - 1. Contract description.
 - 2. Scope of Work.
 - 3. Contractor's use of premises.
 - 4. Specification conventions.
- B. Contractor / General Requirements
- C. Price and Payment Procedures:
- D. Administrative Requirements:
- E. Submittals:
- F. Quality Requirements:
- G. Temporary Facilities and Controls:
- H. Product Requirements:
- I. Execution Requirements:

1.2 CONTRACT DESCRIPTION

Huffman-Parnell RAD Conversion Α. Project Identification: Β. Project Location: 9 A&B, 11 A&B Parnell Ave. 1202 A&B, 1204 A&B, 1208 A&B, 1210 A7B Huffman Ave. Dayton, OH 45403 C. Owner: **Greater Dayton Premier Management** 400 Wayne Avenue Davton, Ohio 45410 937.910.7500 phone D. Architect: RDA Group Architects, LLC 7662 Paragon Road Dayton, OH 45459 937.610.3440 phone E. PME Engineering: Building Systems Engineering, LTD 1370 N. Fairfield Road, Suite E Beavercreek, OH 45432 937.306.1468 phone F. Environmental Consulting: Mac Paran Consulting 3959 Fulton Grove Road Cincinnati, OH 45245 513.752.9111 Phone

1.3 SCOPE OF WORK

- A. Work of the Project includes the rehabilitation of the Huffman-Parnell housing site which includes 12 dwelling units in [1] apartment building
 - 1. All specific scope items shall be coordinated and reviewed on the drawings and specifications as applicable.
 - 2. Site/Exterior Improvements:
 - a. Replacement of concrete walks, curbs, stoops, and driveway approaches.

- b. Replacement of handrails at site stairs.
- c. Mill and repave existing asphalt driveways and parking lots.
- d. Storm system improvements.
- e. Utility Improvements.
- f. Replacement of landscaping and plantings.
- g. Topsoil, minor grading, and site restoration.
- 3. Exterior Building Improvements:
 - a. Repoint masonry facades where indicated.
 - b. Repair foundations where indicated.
 - c. Remove existing, install new windows into existing openings.
 - d. Repair of existing shingle roof systems.
 - e. Remove existing, install new exterior doors.
 - f. Remove existing, install new vinyl siding and trim where indicated.
 - g. Painting of all affected building components requiring paint.
 - h. Installation of new exterior lighting, address plaques, mailboxes, and related exterior components as indicated.
- 4. Interior Improvements:
 - a. Abatement per environmental specifications.
 - b. Selective demolition / removal of the existing interior finishes, partitions, and accessories complete to suit proposed rehabilitation.
 - c. Removal of existing plumbing, mechanical, and electrical components as scheduled to suit work.
 - d. Repair or replacement of any deteriorated/damaged framing or finishes.
 - e. Installation of new gypsum board wall and ceiling finishes where indicated; including fire resistant rated assemblies. Skimcoat / re-finish all existing walls / ceilings scheduled to remain.
 - f. Repair existing or install new kitchen cabinets as indicated.
 - g. Remove existing, install new countertops.
 - h. Install new appliances
 - i. Installation of new bathroom plumbing fixtures, finishes, and accessories as indicated.
 - j. Repair / refinish existing, or install new interior doors as indicated.
 - k. Installation of new interior trim components as indicated.
 - I. Installation of new interior shelving, cleats, hanging rods, etc. as indicated
 - m. Installation of new floor finishes as indicated.
 - n. Painting of all non-prefinished building components as indicated
 - o. New plumbing fixtures and accessories as indicated
 - p. New water heaters as indicated.
 - q. Install new passive radon mitigation systems as indicated.
 - r. Installation of new split system forced air HVAC system / mini-splits, associated air devices, accessories, and controls as indicated.
 - s. New Electrical fixtures and devices; branch circuitry as indicated.
 - t. Electrical system installations for arc-fault, tamper resistant, and ground fault improvements as indicated.
 - u. Protect any finishes scheduled to remain.
 - v. Final cleaning.
- B. Provide all materials and labor for work as noted herein for a complete project.
 - 1. IMPORTANT: Field verify all existing conditions, and coordinate all applicable requirements as related to the scope of the work.
 - 2. Drawings indicate general diagrammatic areas/extent of work, but in no way indicate the intricate nature of the work required for the successful completion of the project.
 - 3. Conditions will vary between units. All conditions shall be verified for each individual unit.
- C. Provide any and all ancillary work related to the above work scope including repair of any Contractor damaged or impacted finishes within the work area.

D. Provide appropriate coordination with GDPM.

1.4 CONTRACTOR'S USE OF SITE

- A. This housing site will be VACATED for the duration of the project. Anticipate and schedule for this work to be accomplished in [1] phase of work.
- B. Perform all work between the hours of 8 AM and 5 PM Monday through Friday, unless work outside these hours and days is requested and granted by the Owner.

1.5 TIME FOR COMPLETION

- A. Contract Period
 - 1. Upon issuance of a contract from the Owner, Supply a work start date within [5] working days. A start date and completion date will be negotiated and a notice to proceed will be issued stating those dates.
 - 2. Consideration for material lead-times will be given for establishing the NTP dates as applicable.
 - 3. Notify the Architect, in writing, upon determination of any delay in material delivery.
- B. The time for completion of this contract work is **Three Hundred Sixty Five [365]** calendar days from the date of the Notice to Proceed.
 - 1. The start date established on the notice to proceed will be communicated and agreed to between GDPM and the Contractor upon execution of the Owner-Contractor Agreement.
 - 2. Final schedule and phasing will be coordinated with the contractor.
 - 3. The Contractor shall anticipate that all units currently occupied and scheduled for relocation shall be made available at the start of the project.
 - 4. The Buildings will be turned over one at a time.
- C. Notify GDPM in writing fourteen [14] days prior to the Contract Completion date if an extension of contract time is necessary with a request for the extension and the reasoning for such request.
 - 1. Failure to comply may result in enforcement of liquidated damages, cancellation of the contract, and possible disablement from future bidding opportunities.
- D. Notify GDPM in writing seven [7] days prior to substantial completion of the project.
- E. It is anticipated that the work of this contract will begin Summer 2024. It will be up to the contractor's responsibility to expedite submittals process and order materials to accommodate the construction schedule.
- F. Coordinate construction schedule/activities with holidays, etc. so as to not inconvenience residents unnecessarily over holiday weekends, etc.
- G. Failure to complete work in the specified contract period will be cause for enforcement of liquidated damages per GDPM requirements.

1.6 SPECIFICATION CONVENTIONS

A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

1.7 CONTRACTOR / GENERAL REQUIREMENTS

- A. Visit the project sites to verify general and pertinent conditions and take measurements necessary for bidding purposes. Arrangements to visit the site may be made by contacting Kevin Arnold or Glen Moss at GDPM.
- B. Pay for all building permits, trade permits, ROW permits, and any other required permits and inspections necessary to complete all work related to these specifications. Comply with Federal, State, and Local Codes. All work shall comply with HUD General Conditions of the Contract for Construction [HUD Form 5370]

- C. Taxes: Pay all applicable taxes, including applicable sales and use taxes, and other taxes as required by governing law.
 - 1. GDPM is a tax-exempt entity.
 - 2. Tax Exempt forms shall be provided upon request.
- D. Provide dumpsters or trash containers needed. Do not use GDPM dumpsters or trash containers at any time for removal of materials, trash, or debris related to the Contractor's work. Remove debris from the site regularly and be placed within appropriate trash receptacles. Keep all work areas neat at all times. Trash shall not be permitted to be left around the site. Take all considerations for resident safety. Do not leave trash or debris on the ground / around the project site.
 - 1. Run magnet around work areas daily to pickup stray nails, etc. when appropriate.
- E. Furnish workers with potable drinking water and any/all sanitary requirements for the workers during the project. Use of GDPM facilities and property is prohibited.
- F. Provide portable generator or required equipment as needed for the completion of the work. Do not use GDPM and/or resident electricity.
- G. A Contractor, working under a contractual agreement with GDPM, MUST BE IN COMPLIANCE WITH OSHA STANDARDS 1926 – REGULATIONS FOR CONSTRUCTION. Any and all sub-contractors, doing work on this project, MUST ALSO BE IN COMPLIANCE WITH OSHA STANDARDS. Non-compliance shall be a basis for making a bid nonresponsive. And, if a Contractor or sub-contractor is found to be in VIOLATION (NON-COMPLIANCE) AT ANY TIME, this could be a basis for termination of the purchase order/contract.
- H. IMPORTANT: Failure to show or mention petty details shall not be warranted for the omission of anything necessary for the proper completion of the work.
- I. The plans and specifications are intended to depict the general scope, layout and quality of workmanship required. The documents are not an "instruction manual" to execute the work nor are they intended to show or describe in detail every item necessary for the proper installation of the work. The means and methods required to execute the work described is the sole responsibility of the Contractor. The Contractor shall include the ancillary work required, whether explicitly stated or not, for the proper completion of the work as intended. The Contractor is required to meet or exceed building code requirements, applicable industry standards, ASTM standards, and/or manufacturer installation requirements as they relate to the work.
- J. The plans and specifications represent a single complete design package indicating the intended scope of the project in its entirety. As such, the project is structured to be awarded to a single Prime Contractor. The documents do not delineate bid packages or assign responsibilities to any subsequent subcontractors, dictate construction sequencing, nor provide coordination between any "trades". Such activities are the responsibility of the holder of the construction contract. In the event of a discrepancy within the drawings or between the drawings and the specifications, the more stringent requirement represented in the documents shall prevail.
- K. Do not take advantage of any clerical errors, omissions, contradictions, or conflicts that may develop in plans, specifications, or details. Such errors, ambiguities and discrepancies shall be reported to the Architect immediately for clarification, revision, or correction prior to the submission of bids. If no notification is given, it shall be assumed that all specifications and conditions will be met.
- L. Submission of a bid shall be considered the Contractor's Certification that the bid is based upon equipment and/or materials that meet or exceed the standards set forth by specification or equipment and/or materials identification. Should a Contractor's product be determined not

equal to that specified, the Contractor shall be required to provide and install a product acceptable as equal by the Architect at no additional cost to the Owner.

- M. The submission of a bid shall indicate that the Contractor has visited the project site and is familiar with the conditions as they exist, and the modifications that may be necessary to provide a complete and professional finished project.
- N. Asbestos containing materials: Refer to Section 02 50 00.
- O. Lead base paint: Refer to Section 02 50 00.
- P. Mold Remediation: Refer to Section 02 50 00.
- Q. There is a strict **NO SMOKING** policy for all work. Any worker found smoking on the jobsite will be subject to removal from the project. No exceptions. Habitual offenders may be subject to a fine in the amount of \$500 per occurrence.
- R. Security: Contractor's Liability for Vandalism
 - 1. Contractor shall be responsible at the Contractor's cost and expense, for the securing and protection of the project which is under the control of the Contractor, and for the repair and replacement of the work until that portion of the work is accepted as completed by the Owner. The Contractor shall take the measures necessary to provide such security.
 - 2. Contractor shall be liable for and shall promptly repair or otherwise remedy any and all damages to said portion of the project and of the accepted construction work caused by vandalism up to \$5,000.00 per incident. Contractor shall indemnify and hold the Owner harmless from and against all damages, liabilities, costs and expenses, including, without limitation, reasonable attorney fees, which may be imposed upon or incurred by the Owner as a result of the Contractor's failure to comply with the requirements of this section.

S. Insurance: Refer to GDPM Terms and Conditions.

- 1. Contractor to provide copy of Certificate of Insurance to GDPM.
- 2. Contractor to submit evidence of Worker's Compensation insurance coverage and builder's risk insurance.
- T. Damages: Any and all damages to Housing Authority Property or resident property shall be repaired equivalent to the existing by the Contractor at no cost to the Authority. NO EXCEPTIONS.
- U. Safety: The work will be accomplished within a high traffic area and the Contractor is responsible for taking all safety precautions necessary or directed to ensure public safety.
 1. RDA nor GDPM are safety consultants. Any and all safety provisions shall be managed
 - and coordinated by the Contractor.
- V. Provide appropriate notification of Residents prior to starting work.

1.8 CONTRACTOR QUALIFICATIONS

- A. The Contractor and/or Sub-contractors must establish their qualifications with GDPM for their ability to complete this type of work. Qualifications may be established by:
 - 1. Provide references of similar projects, past performance, financial disclosures, etc. in the interest of selection of the lowest and best bidder for the project.
 - 2. Providing a letter of approval for the installation of the products from the manufacturer.
 - a. Contractor must be properly trained and approved by the manufacturer for the installation of the products.
 - 3. Providing a recommendation from the supplier of the products.
 - 4. Demonstrating to GDPM the capability to do the work. The Contractor will have a minimum of five years documented experience in similar work.
- B. The Contractor will be responsible for all work performed by the Sub-contractors.

1.9 RESPONSIBILITIES OF THE CONTRACTOR

- A. Protect all finishes and equipment scheduled to remain.
- B. Commence and complete work as noted in the contract.
- C. Furnish labor, materials, equipment, and management required to complete the project.
- D. Furnish all required logistics required to accomplish the work including lifts, scaffolding, ladders, trash chutes, safety equipment, etc.
 - 1. All contractor staging areas and layout areas, etc. shall be coordinated and approved by the Owner prior to the start of the project.
- E. Visit the site to become thoroughly familiar with all working conditions, check and verify all dimensions, and site conditions. Any dimensions given or referred to in the specification or drawing is to be used purely as approximate and not as a basis for exact amounts for bidding. Promptly advise the Architect of any discrepancies, errors with the specifications and drawings before bidding the work.
- F. Provide a valid Certificate of Insurance, follow all Workman's Compensation requirements and regulations, and conduct all work according to OSHA recognized safe work practices.
- G. Provide all bonds, payment schedule, insurance as noted in the contract documents.
- H. The plans and specifications are intended to depict the general scope, layout and quality of workmanship required, they are not intended to show or describe in detail every item necessary for the proper installation of the work, nor are the documents an instruction manual of how to accomplish the work.
- Provide Safety Data Sheets [SDS] on all products used.
 Submit directly to Owner. RDA does not review nor approve SDS.

1.10 REFERENCES

- A. Conform to reference standards by date of issue current as of date of Contract Documents.
- B. When specified reference standard conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

1.11 WARRANTIES AND GUARANTEES

- A. General: The warranty and guarantee provisions of the General Conditions apply to all work of the contract, including but not limited to the following specific categories related to individual units of work specified in various sections of these specifications:
 - 1. Refer to GDPM Contract Requirements / Terms and Conditions for additional information / requirements.
 - 2. Special Project Warranty (Guarantee): A warranty specifically written and signed by the Contractor for a defined portion of the work, and, where required, countersigned by sub-contractor, installer, manufacturer, or other entity engaged by the Contractor.
 - 3. Specified Product Warranty: A warranty which is required by the contract documents, to be provided for a manufactured product incorporated in the Work, regardless of whether manufacturer has published a similar warranty without regard for specific incorporation into the work, or has written and executed a special project warranty as a direct result of contract document requirements.
 - 4. Coincidental Product Warranty: A warranty which is not specifically required by the Contract Documents (other than as specified in this Section); but which is available on a product incorporated into the work, by virtue of the fact that the manufacturer of the product has published a warranty in connection with purchases and users of the product without regard for specific applications except as otherwise limited by terms of the warranty.

PART 2 GENERAL REQUIREMENTS

- A. Follow all applicable requirements of the Owner's Terms and Conditions. If there should be a conflict between the Owner Requirements and those herein, the higher standard shall apply.
- B. Required Inspections by GDPM
 - 1. Contact GDPM Project Manager to:
 - a. Inform GDPM when the job is actually going to start to allow resident notification.
 - b. Mockup inspections.
 - c. Inspection at random or when problems / field conditions arise.
 - d. Final Inspection.
 - e. Punchlist requirements.
 - f. Acceptance of the project by GDPM.

PART 3 EXECUTION

Not Used.

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SECTION 01 20 00 - PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Schedule of values.
- B. Applications for payment.
- C. Change procedures.
- D. Defect assessment.
- E. Unit prices.
- F. Alternates.
- G. Project Allowances.

1.2 PREVAILING WAGE REQUIREMENTS

- A. The work of this project is subject to Davis-Bacon Prevailing Wages.
- B. Include in the bid amount all applicable prevailing wages.
- C. Provide payroll reports indicating compliance to the Owner on a monthly basis.
 - 1. Pay Applications will not be processed without approved payroll reports submitted to the Owner.

1.3 TAXES

- A. GDPM is tax exempt. Tax Exempt Certificates will be provided upon request.
- B. GDPM will not compensate the Contractor for any taxes paid on the project.

1.4 SCHEDULE OF VALUES

- A. Submit schedule on AIA G702 / G703 or other approved HUD forms.
- B. Submit Schedule of Values in duplicate three days prior to the Pre-Construction meeting for approval by Architect and Owner.
- C. Approved Schedule of Values will be signed at the Pre-Construction meeting.
- D. Format: Utilize Table of Contents of this Project Manual. Identify each line item with number and title of major specification Section. Identify site mobilization/general conditions, bonds and insurance.
 - 1. Schedule of values should be broken down by building and also by division / work scope for each building.
- E. Revise schedule to list approved Change Orders, with each Application for Payment.

1.5 APPLICATIONS FOR PAYMENT

- A. Submit **three** copies of each pay application on AIA G702/G703 HUD form 51001. Submit "pencil copy" one week prior to application for review and approval by Architect and Owner.
 1. Pencil copy shall be submitted via email for review.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: Monthly. First pay application at 30 days into contract period.

- D. Submit updated construction schedule with each Application for Payment as applicable to the work. Failure to submit the updated construction schedule can delay the processing of the Application for Payment.
- E. Submit all required waivers of lien/partial release of lien, payroll reports as required by GDPM, etc. Failure to submit required paperwork can delay the processing of the Application for Payment

1.6 CHANGE PROCEDURES

- A. The Architect or Owner may issue a Proposal Request including a detailed description of proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit estimate within 5 days.
- B. On Owner's approval of a proposal from Contractor, Owner will issue a Change Order for all changes to Contract Sum and for all changes to the Contract Time.
- C. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation.
- D. Unit Price Change Order: For contract unit prices and quantities, the Change Order must be executed prior to beginning any work. The Order will be based on fixed unit price basis provided in the Bid Form.
- E. Construction Change Order: Architect may issue directive, on AIA / HUD Forms signed by Owner, instructing Contractor to proceed with changes in the Work. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
- F. Change Order Forms: AIA / HUD Approved Forms with all required backup documentation.
- G. Correlation Of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
 - 2. Promptly revise progress schedules to reflect change in Contract Time, revise subschedules to adjust times for other items of work affected by the change, and resubmit.
 - 3. Promptly enter changes in Project Record Documents.
- H. The Architect will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on Architect's approved forms.
- I. Important: All change orders must be fully executed prior to beginning any work. Failure to comply will result in contractor request being denied and completed at no cost to GDPM.

1.7 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Architect/Owner, it is not practical to remove and replace the Work, the Architect/Owner will direct appropriate remedy.
- C. Authority of Architect/Owner to assess defects and identify payment adjustments is final.
- D. Non-Payment For Rejected Products: Payment will not be made for rejected products.

1.8 UNIT PRICES

A. Architect will take measurements and compute quantities accordingly. Provide assistance in taking of measurements.

- B. Unit Price Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application or installation of item of the Work; overhead and profit.
- C. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Architect/Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.
- D. Unit Price Schedule: Refer to Bid Form

1.9 ALTERNATES

- A. Alternates listed on Bid Form will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work.

1.10 SCHEDULE OF ALTERNATES

A. <u>None</u>

1.11 PROJECT ALLOWANCES

- A. Building & Systems / Unforeseen Conditions Allowance:
 - Provide in bid a draw down allowance in the amount of \$100,000 [one hundred thousand dollars] for Building & Systems / Unforeseen Conditions to address existing building / site / systems conditions as they interface with the project.
- B. Permit Allowance:
 - 1. Provide in bid a draw down allowance in the amount of **\$20,000 [twenty thousand dollars]** for building permits. *Allowance shall be for actual / direct costs only, all labor, coordination, etc. shall be included in the bid amount.*
- C. Contractor's costs for Products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit are included in Change Orders authorizing expenditure of funds from this project allowance.
- D. Any expenditure from this allowance shall be reviewed and approved by Architect and GDPM prior to executing the work.
- E. Any unused amounts will be credited back to GDPM at the completion of the project by a change order.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

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SECTION 01 25 00 – SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 WORK INCLUDES

- A. Includes administration and procedural requirement for Substitutions.
 - 1. Substitutions' for Cause: Changes due to project conditions, such as unavailable of product.
 - 2. Substitutions' for Convenience: Changes that may offer advantages to the Owner.

1.2 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, <u>no options or substitutions allowed</u>.
- C. Products Specified by Naming One or More Manufacturers with Provision for Substitutions / Approved Equal: Submit request for substitution as outlined in this section for manufacturers not named.
 - 1. RDA/Owner is the decision maker if the proposed "approved equal" is in fact equal and approved. Any decision rendered is final.
 - 2. Any Contractor, Sub-contractor, or Supplier who makes their own judgement as to "approved equal" and includes within their bid without a formal approval is doing so at their own risk.

1.3 SUBSTITUTIONS PROCEDURES

- A. RDA will consider requests for Substitutions by the Bidder only [not materials suppliers, etc].
- B. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- C. A request constitutes a representation that the Bidder:
 - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 - 2. Will provide same warranty for Substitution as for specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
- D. Substitution Procedure
 - 1. Submit copy of request for Substitution for consideration to RDA no later than 10 days before bid opening date.
 - 2. Submit shop drawings, product data, and applicable certified test results attesting to proposed product equivalence. <u>Burden on proof is on proposer</u>.
 - 3. RDA will notify Contractor in writing of decision to accept or reject request within 5 days of receipt of request or request additional information or documentation for evaluation.
- E. Substitutions will not be considered when they are indicated or implied on Submittals, without written request or when acceptance will require revision to the Contract Documents.
- F. If the Substitution will require modifications to the Contract / Bidding Documents, the cost for updating the documents shall be paid by the Contractor making the request.
- G. Substitutions will not be considered after award of the project without justification.
- H. Approved substitutions will be identified by Addenda.
 - 1. Bidders shall not rely upon approvals made in any other manner.

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Pre-installation meetings.
- E. Daily Job Logs.
- F. Cutting and patching.
- G. Special procedures.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements. Coordinate rough in locations for accessibility, clearances, maneuvering, etc.
- E. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 FIELD VERIFICATION

A. Prior to ordering materials, Contractor shall verify the actual dimensions of existing conditions and assume responsibility for workable solutions for all new work. Verification that new work and items are workable for existing conditions while providing adequate clearances is the responsibility of the contractor.

1.4 PRECONSTRUCTION MEETING

- A. GDPM will schedule preconstruction meeting after Notice of Award for affected parties.
- B. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of Subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing parties in Contract, and Architect.

- 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
- 7. Scheduling.
- 8. Use of premises by Owner and Contractor.
- 9. GDPM requirements for procedures and inspections
- 10. Construction facilities and controls provided by Owner.
- 11. Security and housekeeping procedures.
- 12. Application for payment procedures.
- 13. Procedures for maintaining record documents.
- 14. Requirements for start-up of equipment.
- 15. Inspection and acceptance of equipment put into service during construction period.
- C. Architect will record minutes and distribute copies via email within two days after meeting to participants and those affected by decisions made.

1.5 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at bi-weekly intervals.
 - 1. Contractor to provide suitable accommodations for holding meetings on-site with a layout table, chairs, etc.
- B. Architect will make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
- C. Attendance Required: Job superintendent, major subcontractors and suppliers, Architect, Owner, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems impeding planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to Work.
- E. Architect shall record minutes and distribute copies via email within two days after meeting to participants and those affected by decisions made.

1.6 PRE-INSTALLATION MEETINGS

- A. When required in individual specification sections, convene pre-installation meetings at Project site prior to commencing work of specific section.
- B. Require attendance of parties directly affecting, or affected by, Work of specific section.
- C. Notify GDPM one week in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of installation, preparation and installation procedures.
 - 2. Review coordination with related work.

1.7 DAILY JOB LOGS

- A. Maintain a daily job log that indicates the personnel on-site and activities performed (including all sub-contractors)
- B. Indicate any safety concerns and incidents.
- C. Indicate weather conditions.
- D. Indicate any visitors or other personnel visiting the project site.
- E. Job log shall be accessible to GDPM and Architect upon request.
 - 1. Email GDPM with daily reports upon request.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements affecting:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- D. Execute work by methods to avoid damage to other Work, and to provide proper surfaces to receive patching and finishing.
- E. Cut masonry and concrete materials using masonry saw or core drill.
- F. Restore Work with new products in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material, to full thickness of penetrated element.
- J. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit. For painted surfaces, paint entire wall from corner to corner, floor to ceiling.
- K. Identify hazardous substances or conditions exposed during the Work to Architect for decision or remedy.

3.2 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

- B. If, in the opinion of the Architect/Owner, it is not practical to remove and replace the Work, the Architect/Owner will direct appropriate remedy.
- C. Authority of Architect/Owner to assess defects and identify payment adjustments is final.
- D. Non-Payment For Rejected Products: Payment will not be made for rejected products.

3.3 SPECIAL PROCEDURES

- A. Materials: As specified in product sections; match existing with new products for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- D. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- E. Remove debris and abandoned items from area and from concealed spaces.
- F. Prepare surface and remove surface finishes to permit installation of new work and finishes.
- G. Remove, cut, and patch Work in manner to minimize damage and to permit restoring products and finishes to original or specified condition.
- H. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with neat transition to adjacent finishes.
- I. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- J. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division and submit recommendation to Architect for review.
- K. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- L. Finish surfaces as specified in individual product sections.

SECTION 01 33 00 - SUBMITTALS

PART 1 GENERAL

1.1 WORK INCLUDES

A. Review of shop drawings and product data by Owner/RDA.

1.2 SUBMITTAL PROCEDURES

- A. Submit product data and shop drawings for all applicable components of the project. Refer to individual sections for additional requirements.
 - 1. Provide a submittal log at the beginning of the project for review by Owner / RDA. Identify proposed submittals by Specification Section.
 - 2. Owner / RDA review of the submittals will be general in nature and does not relieve the Contractor in any way of the responsibility in compliance with the contract requirements, manufacturer requirements, and/or applicable codes.
- B. Accomplish submittals in a digital [PDF] format. Any hard copies received will be scanned and returned electronically. Provide those submittals required to maintain orderly progress of the work and those required for early lead time for manufacturer fabrication.
 - 1. Any hard copies received will be scanned and returned electronically.
 - 2. Provide those submittals required to maintain orderly progress of the work and those required for early lead time for manufacturer fabrication.
 - 3. Mark each component to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this project. Nonidentified submittals will be rejected.
- C. Provide Submittal form / cover sheet to identify Project, Contractor, subcontractor or supplier; and pertinent Contract Document references.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.
- E. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of completed Work.
- F. Revise and resubmit submittals as required; identify changes made since previous submittal.
- G. Accomplish submittals at the beginning of the project to allow the proper ordering of materials for the project.
 - 1. Failure by the Contractor to provide submittals in a timely fashion does not change the project start date nor contract period.
- H. Any materials on the job site that have not been reviewed as part of the submittal process are subject to rejection / removal from the job-site. Any work undertaken without review of the submittal data is at the Contractor's risk and subject to rejection or replacement at no cost to the Owner if submittals are not in conformance with the project documents.
- I. Allow 7 days for review of submittal items.
- J. Allow space on submittals for Contractor and Architect review stamps.
- K. When revised for resubmission, identify changes made since previous submission.
- L. Distribute copies of reviewed submittals as appropriate (electronically as appropriate). Instruct parties to promptly report inability to comply with requirements.
- M. All submittals shall be completed within the first 30 days of the project.

1.3 SUBMITTALS/PRODUCT DATA / SHOP DRAWINGS

General: Submitted to Owner / RDA for review for limited purpose of checking for conformance with information given information expressed in the Contract Documents.

- A. Product Data/Shop Drawings:
 - 1. Submitted to RDA for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
 - 2. All shop drawings shall be to scale, submit drawings on sheets no larger than 24-inch x 36 inch, all other product data can be on $8\frac{1}{2}$ X 11-inch sheets.
- B. Samples for Review:
 - 1. Submitted to RDA for review and selection for aesthetic, color, or finish.
 - 2. Submit samples of finishes from full range of manufacturer's standard colors, textures, and patterns for Owners selection.
 - 3. Submit samples to illustrate functional and aesthetic characteristics of Product.
- C. Personnel/Other Contractors
 - 1. Submit a list of all subcontractors and on-site personnel with the list of lead contact and associated phone numbers.
 - 2. Submit emergency contact sheet with contacts for an emergency 24/7 call list.
- D. Contract Items:
 - 1. Submit Certificate of Insurance, Worker's Comp Certificates as required by Owner.
 - 2. Submit bonds if applicable to the contract.
 - 3. Submit a written Construction Schedule / Implementation and Sequencing Plan outlining starting points and length of time to complete work in each section.
- E. Safety Data Sheets: Submit Safety Data Sheets [SDS] on all products to the Owner.
 - 1. Owner shall be responsible to provide to employees as applicable.
 - 2. Owner's representative /RDA does not review / approve any SDS sheets.
- F. Site Specific Safety Plan
 - 1. Provide to Owner for their Review.
- G. Site Logistics Plan
 - 1. Provide to Owner for their Review.

1.4 SAMPLES

- A. Physical Samples: Submit to Architect for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
 - 1. Physical samples are required to allow Architect to make selections for color and finish. Electronic images of colors/finishes, etc. are not sufficient.
- B. Samples For Selection as Specified in Product Sections:
 - 1. Submit to Architect for aesthetic, color, or finish selection.
 - 2. Submit samples of finishes from full range of manufacturers' standard colors, textures, and patterns for Architect selection.
- C. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- D. Include identification on each sample, with full Project information.
- E. Submit 2 copies of each sample, Architect will retain 1 copy.
- F. Reviewed samples which may be used in the Work are indicated in individual specification sections.

1.5 PROPOSED PRODUCTS LIST

- A. Within 5 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. All products for the project shall be ordered in the first 30 days of the contract. Contractors' failure to order materials is not a reason for a time extension or selection of an alternate material. This is imperative to allow work as scheduled.
- C. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.6 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification sections, submit manufacturer printed instructions for delivery, storage, assembly, installation, [start-up,] adjusting, and finishing, in quantities specified for Product Data.

1.7 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification sections, submit certifications by manufacturer to Owner, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

1.8 CONSTRUCTION PHOTOGRAPHS

- A. Provide digital photographs of construction throughout progress of Work as taken by project superintendent as applicable to document the existing conditions, work in progress, completed work, project wrap up, etc. It is in the best interest of the contractor to document the conditions as this is an occupied unit project.
- B. Deliver photographs to Architect/Owner upon request on CD. Catalog and index in chronological sequence with date indexed.

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SECTION 01 40 00 - QUALITY REQUIREMENTS/PROJECT INSPECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality control and control of installation.
- B. GDPM Construction Inspection Procedures
- C. Tolerances
- D. References.
- E. Mock-up requirements.
- F. Examination & Inspection.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. When manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Owner before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.3 GDPM CONSTRUCTION INSPECTION PROCEDURES

- A. GDPM Staff have clear goals with regard to the importance of thorough construction inspection that ensures compliance with the bid documents. The compliance documents shall include the project specifications, drawings, contract, notice to proceed, codes, regulations and ordinances.
- B. GDPM intends for a GDPM Staff (Project Manager) and an A/E representative to routinely monitor the Contractor's work and progress on all projects. Quality control is an important element which is the responsibility of the Contractor. The Contractor shall provide full cooperation with all inspection steps through the construction process and include such coordination in the base bid of the project.
- C. Accessibility to the work shall be arranged by the Contractor. The necessary ladders, scaffolding, hoisting, etc shall be provided by the Contractor in order to make all areas of the work available to the construction inspector and consultant. The contractor shall have his authorized representative (superintendent) available to interface with and assist with the inspection process.
- D. Acceptance of Conditions:
 - 1. The construction inspector and consultant shall not allow work to proceed when there is a construction deficiency document in place that has not been cleared.

- 2. The construction inspector and consultant shall not allow work to proceed that requires mock-ups until such mock up is acceptable. Subsequent work in like kind shall be equal to or better than the mock-up.
- E. Prior to final completion, the contractor is to be required to inspect all of his work. He shall correct any deficiencies and enter a document that all of the contracted for work has been completed within the scope of the contract and request "final inspection" by the GDPM representative.
- F. The final inspection shall result in either complete acceptance or generation of a punch list that is to be corrected in a timely manner and back punched by GDPM and the consultant.
- G. After review by GDPM Project Manager, GDPM will review project acceptance with site and senior staff for final acceptance of the project. This review may prompt additional punchlist work that may need to be completed.
- H. If work that is clearly not complete, the Punchlist will be suspended until such time that it is evident that the Contractor has completed and reviewed/inspected their own work.
- I. The final inspection acceptance shall include approval and sign-off by the construction inspector, construction coordinator and consultant. Sign off approvals
- J. The warranty blanketing the contract will not be allowed to commence until all work under the contract is completed and accepted for beneficial use by GDPM.
 - 1. This will be accomplished on a building by building basis.
- K. An anniversary inspection for the one year interval following acceptance of the project shall be performed and documented by the construction coordinator and consultant.

1.4 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.5 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. When specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- E. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.6 MOCK-UP REQUIREMENTS

A. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

- B. Accepted mock-ups shall be comparison standard for remaining Work follow requirements of individual sections.
- C. Provide mockups of the work as directed / required by the Architect / GDPM.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

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SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities
- B. Construction Facilities
- C. Temporary Controls
- D. Removal of utilities, facilities, and controls

1.2 SITE CONTROL

- A. Coordinate site control and access with Owner.
- B. Contractor will have site control and shall maintain site / building control while work residents have been temporarily relocated to accomplish rehabilitation work. Building security shall be the responsibility of the contractor during this time.
- C. Contractor will maintain the site for lawn care, snow removal, etc. during the course of the project.

1.3 TEMPORARY UTILITIES

A. Refer to GDPM's Terms and Conditions

1.4 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain temporary lighting for construction operations and for site security/access. Provide repairs as applicable.
- B. Provide and maintain additional lighting as required for construction operations.
- C. Permanent building lighting may be utilized during construction.

1.5 TEMPORARY HEATING/COOLING

A. Provide temporary heating / cooling to facilitate the project. Pay for the cost to maintain temporary heating / cooling. Existing systems may remain in place until new systems are installed to the extent feasible.

1.6 TEMPORARY VENTILATION

- A. Ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- B. Provide temporary fan units as required to maintain clean air for construction operations.

1.7 TELEPHONE SERVICE

A. Provide, maintain, and pay for cellular telephone service for project superintendant.

1.8 EMAIL

A. Provide email service for project superintendant. Email communication will be an important tool for all information and communication on this project.

1.9 TEMPORARY WATER SERVICE

- A. Connect to existing water source for construction operations.
- B. Extend branch piping with outlets located so water is available by hoses with threaded connections.

1.10 TEMPORARY SANITARY FACILITIES

- A. Provide temporary sanitary facilities for use during construction. Maintain daily in clean and sanitary condition.
 - 1. Contractor may not use resident toilet facilities for temporary facilities.
 - 2. Contractor may not use new plumbing fixtures for temporary facilities.
- B. Provide potable drinking water for workers.

1.11 FIELD OFFICES AND SHEDS

- A. Provide securable on-site space for storage as required by the contractor. Contractor shall coordinate with GDPM for approved location of such storage space. Obtain required right of way permits, etc. if storage is placed in street.
- B. Provide location where field drawings and related documents can be safely stored on-site out of weather to prevent damage.
- C. Provide field office for construction operations as deemed necessary by Contractor. Contractor shall pay for field offices and related expenses. One of the units to be modernized may be used.

1.12 VEHICULAR ACCESS

- A. Utilize existing street parking / driveways / parking areas for construction activities. Contractor shall not block or prohibit vehicular access to adjacent buildings / parking areas. Do not allow driving/parking in turf areas.
- B. Provide unimpeded access for emergency vehicles. Maintain 20 feet wide driveways with turning space between and around combustible materials.
- C. Provide and maintain access to fire hydrants and control valves free of obstructions.

1.13 PARKING

- A. Use of designated existing on-site driveways / street parking used for construction traffic is permitted. Tracked vehicles not allowed on paved areas. Do not block resident vehicles or those of adjacent buildings with a shared driveway.
- B. Use of designated areas of existing parking facilities used by construction personnel is permitted.
- C. Do not allow heavy vehicles or construction equipment in parking areas.
- D. Maintenance:
 - 1. Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, products, mud, snow, and ice.
 - 2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.
- E. Removal, Repair:
 - 1. Repair existing and permanent facilities damaged by use, to original or specified condition.

1.14 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition **DAILY.**
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing spaces.

- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from site daily and dispose off-site. Sort and recycle as applicable.
- E. Provide dumpsters or trash containers needed for the proper removal of project materials, trash, or debris related to the work. Keep all work areas and project sites neat and free of trash and clutter at all times. Project site consists of occupied apartment units. Do not leave trash around the project site. Take all considerations necessary for safety.

1.15 PROTECTION OF INSTALLED WORK

A. Protect installed Work and provide special protection where specified in individual specification sections. Restore any damaged work to new condition.

1.16 FIRE PREVENTION FACILITIES

- A. Prohibit smoking within building or on site under construction. NO SMOKING IS PERMITTED ON SITE [INTERIOR OR EXTERIOR]. NO EXCEPTIONS.
- B. Establish fire watch for cutting and welding and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.
- C. Portable Fire Extinguishers: NFPA 10; 10 pound capacity, 4A-60B: C UL rating.
 - 1. Provide one fire extinguisher at each building under construction.
 - 2. Provide minimum one fire extinguisher in storage shed.

1.17 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.
- C. Protect Work existing premises from theft, vandalism, and unauthorized entry.

1.18 SECURITY

- A. Security Program:
 - 1. Protect Work and existing premises from theft, vandalism, and unauthorized entry.
 - 2. Maintain program throughout construction period until Owner occupancy
- B. Entry Control:
 - 1. Restrict entrance of persons into Project site.
 - 2. Allow entrance only to authorized persons with proper identification.
 - 3. Maintain log of workers and visitors, make available to Owner on request.

1.19 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere and to other areas of the unit. Provide temporary visqueen (or similar) dust control measures to minimize the spread of dust and debris. Provide drop cloths, protective coverings as necessary.

1.20 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.
SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Product requirements.
- B. Product options and substitution procedures.
- C. Equipment electrical characteristics and components.

1.2 PRODUCTS

- A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.
- C. Furnish interchangeable components from same manufacturer for components being replaced.
- D. Products shall be ordered in the first 30 days of the contract. Provide documentation of orders upon request.
- E. It shall be solely the Contractor's responsibility to order products to allow timely delivery for installation. The failure to order materials early in the project shall not be a reason for a contract time extension or additional costs related to expedited shipping and/or delivery. Nor shall this be a reason for a product substitution.

1.3 LABELING

- A. Attach label from agency approved by authority having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.
- B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label.
 - 1. Model number.
 - 2. Serial number.
 - 3. Performance characteristics.

1.4 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.5 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

- F. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.6 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only:
 1. Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with NO Provision for "Approved Equal":
 - 1. Products of one of the manufacturers named and meeting specifications, NO options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with Provision for "Equal / Approved Equal" Substitutions :
 - 1. Products of one of manufacturers named and meeting specifications.
 - 2. Submit request for substitution [Approved Equal] for any manufacturer not named in accordance with "Product Substitution Procedures".

1.7 PRODUCT SUBSTITUTION PROCEDURES – REFER TO SECTION 01 25 00

PART 2 PRODUCTS

2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Wiring Terminations: Furnish terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Include lugs for terminal box.
- B. Cord and Plug: Furnish minimum 6 foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

2.2 TOLERANCES

- A. Monitor fabrication and installation tolerance control of installed Products over suppliers, manufacturers, Products, site conditions, and workmanship, to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply fully with manufacturer's tolerances.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Close-out of the actual work, including warranties, project record documents and operations / maintenance manuals, and final cleaning. Close-out of all contract obligations.

1.2 CLOSEOUT PROCEDURES

- A. Notify Owner five [5] days prior to the work being complete to establish the desired inspection date. Owner / RDA will either proceed with the inspection or notify Contractor of unfulfilled requirements.
 - 1. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for punch list inspection.
- B. Owner / RDA shall inspect the completed project and notify the Contractor of any deficiencies. Deficiencies will form 'punch list' for final acceptance.
- C. Provide submittals to Owner required by authorities having jurisdiction.
- D. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.3 PUNCHLIST REQUIREMENTS

- A. Review and inspect all work prior to notifying the Owner for a Punchlist inspection of the work. Provide written documentation certifying review along with documentation of Contractor generated Punchlist.
- B. If work is clearly not complete, the Punchlist will be suspended until such time that it is evident that the Contractor has completed and reviewed/inspected their own work.
 - 1. RDA anticipates [1] punchlist inspection and [1] back-punch / final inspection as part of our services to the Owner.
 - 2. Failures by the Contractor to complete the work, complete punchlists, etc. may result in a backcharge to the Contractor for the additional time to closeout the project.
- C. Review and provide the noted repairs and corrective work necessary at each of the Punchlist inspections to allow project close out.
 - 1. Back-punch walk through may result in additional punchlist items which need to be addressed by the Contractor.
- D. Provide adequate time in the construction schedule to accomplish punchout work within the overall contract period indicated within the bid documents.
- E. The failure to identify any punchlist item during a walk through / inspection does not release the Contractor from contractual responsibility to address any item during the warranty period.

1.4 SUBSTANTIAL COMPLETION

A. Certificate of Substantial Completion will be issued upon completion of all the work.

1.5 PREREQUISITIES TO FINAL ACCEPTANCE AND PAYMENT

- A. Prior to acceptance and final payment, all claims or disputes must have been resolved and the Contractor must have provided the following items to the Owner:
 - 1. Notarized affidavit of waiver of liens [contractor of record], sub-contractors and material suppliers
 - 2. Certificates of release from authorities having jurisdiction over permitting.
 - 3. Final statement of charges [100% application for payment].

- a. Submit a final Application for Payment according to Section 01 29 00, Payment Procedures.
- 4. Documented evidence of completing 'punch list' as applicable.
- 5. Manufacturer's original warranties [copy to RDA].
- 6. Evidence that claims have been settled.
- 7. O+M Manuals including Manufacturer's maintenance and repair instructions.
- 8. Manufacturer's maintenance and repair instructions.
- 9. Record Drawings.
- 10. Final cleaning of all work areas:
- 11. Restore all work staging and lay-out areas to pre-construction conditions, including but not limited to, removal of debris, temporary facilities, grading and grass seeding and cleaning or repair of impacted structures.

1.6 PHOTOGRAPHIC DOCUMENTATION

A. When requested by the Owner, photos of the completed punch list along with any supporting documentation can be submitted, in lieu of a final walkthrough.

1.7 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Directives/Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, Product Data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Submit documents to Architect.

1.8 **PROJECT WARRANTIES**

- A. General: Original warranties are required to be provided to the Owner prior to final payment.
- B. Submit two sets prior to final inspection or when available, bound in 8-1/2 x 11-inch text pages, binder covers.
- C. Prepare binder cover with printed title "WARRANTIES" and title of project.
- D. Bind warranties in a heavy duty three ring loose leaf binder. Provide a typed description of the product under warranty and phone number of the installer.
- E. General: The warranty and guarantee provisions of the General Conditions apply to all work of the contract, including but not limited to the following specific categories related to individual units of work specified in various sections of these specifications:
 - 1. Refer to GDPM Contract Requirements / Terms and Conditions for additional information / requirements.

- 2. Special Project Warranty (Guarantee): A warranty specifically written and signed by the Contractor for a defined portion of the work, and, where required, countersigned by sub-contractor, installer, manufacturer, or other entity engaged by the Contractor.
- 3. Specified Product Warranty: A warranty which is required by the contract documents, to be provided for a manufactured product incorporated in the Work, regardless of whether manufacturer has published a similar warranty without regard for specific incorporation into the work, or has written and executed a special project warranty as a direct result of contract document requirements.
- 4. Coincidental Product Warranty: A warranty which is not specifically required by the Contract Documents (other than as specified in this Section); but which is available on a product incorporated into the work, by virtue of the fact that the manufacturer of the product has published a warranty in connection with purchases and users of the product without regard for specific applications except as otherwise limited by terms of the warranty.
- F. All work undertaken as part of the project shall be warranted for a period of not less than [1] year. Individual sections / products may have specific additional warranty requirements.
- G. Provide notarized copies of warranty documents to the Owner.
 - 1. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers.
- H. Original warranties are required to be provided to the Owner prior to final payment.

1.9 OPERATION AND MAINTENANCE DATA

- A. Submit TWO sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, three D side ring binders with durable plastic covers.
 - 1. Submit one copy for review by the Architect/Owner, electronic submission preferred. Submit at 75% of overall gross contract completion. Failure to submit O+M at this point will delay Applications for Payment.
 - 2. Prepare one final copy upon approval and correction of any missing or deficient items by the Architect/Owner.
 - 3. Provide (2) CDs of the O+M Manual in PDF format that is formatted and organized to match the hard copy.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS" and title of project. Label on the front and spine of the binder.
- C. Internally subdivide binder contents with permanent page dividers, logically organized, with tab titles legibly printed under reinforced laminated plastic tabs.
- D. Contents:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, subcontractors, and major equipment suppliers.
 - 2. Part 2: Permit and Inspection Information
 - 3. Part 3: Project submittals, organized by CSI division
 - 4. Part 4: Operation and maintenance instructions, arranged by system.
 - a. Building Products, Equipment, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations.
 - b. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
 - c. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.

- d. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- e. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- f. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- g. Include original shop drawing submittals, fold larger submittals to fit into binder.
- 5. Part 5: Project documents and certificates.
 - a. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers.
- 6. Part 6: Colors / finishes / samples
- 7. Part 7: Other documentation required.

1.10 FINAL CLEANING

- A. Execute final cleaning on a **unit by unit** basis at completion of work in each unit prior to final project assessment / punch list inspection.
 - 1. Clean interior and exterior surfaces exposed to view.
 - 2. Remove manufacturer or temporary labels, stains, and foreign substances from surfaces.
 - 3. Polish transparent and glossy surfaces.
 - 4. Vacuum carpeted and soft surfaces.
 - 5. Clean interiors of all cabinetry.
 - 6. Clean all fixtures and finishes.
 - 7. Replace filters of operating equipment.
 - 8. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.
 - 9. Clean site; sweep paved areas, rake clean landscaped surfaces.
 - 10. Remove waste and surplus materials, rubbish, and construction facilities from site.
- B. Restore all work staging and lay-out areas to pre-construction conditions, including but not limited to, removal of debris, temporary facilities, grading and grass seeding and cleaning or repair of impacted structures.

1.11 STARTING OF SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify RDA and GDPM seven [7] days prior to start-up of each item.
- C. Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractor's personnel in accordance with manufacturer's instructions.

1.12 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel prior to date of Substantial Completion.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled times, at Project Site location.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time at equipment location/project site.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

1.13 TESTING, ADJUSTING AND BALANCING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.14 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic from landscaped areas.

1.15 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.
- B. Deliver to Owner and place in location as directed; obtain receipt prior to final payment. Items shall be boxed and labeled with contents.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

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SECTION 02 41 16 - SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Demolishing designated building equipment and fixtures.
 - 2. Demolishing designated construction.
 - 3. Cutting and alterations for completion of the Work.
 - 4. Removing designated items for salvage by GDPM.
 - 5. Protecting items designated to remain.
 - 6. Removing demolished materials.

1.2 CLOSEOUT SUBMITTALS

A. Project Record Documents: Record actual locations of capped utilities, concealed utilities discovered during demolition and any subsurface obstructions or conditions that require noting.

1.3 QUALITY ASSURANCE

A. Conform to applicable code for demolition work, dust control, protection, products requiring electrical disconnection and re-connection

1.4 SCHEDULING

- A. Schedule Work to coincide with improvements of the unit.
- B. Coordinate utility and building service interruptions with Owner.
- C. Do not disable or disrupt site fire or life safety systems without three days prior written notice to Owner.
- D. Schedule tie-ins to existing systems to minimize disruption.

1.5 **PROJECT CONDITIONS**

A. Cease operations immediately if structure appears to be in danger and notify Architect. Do not resume operations until directed.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PREPARATION

- A. Notify affected utility companies before starting work and comply with their requirements.
- B. Call Local Utility Line Information service not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas. Supplement with private locator company as is applicable and required to fully locate and identify existing underground utilities, including both public and private.
- C. Mark location and termination of utilities.
- D. Erect, and maintain temporary barriers and security devices including warning signs and lights, and similar measures, for protection of the public, Owner, and existing improvements indicated to remain.

- E. Erect and maintain weatherproof closures for exterior openings as applicable to work/scope.
- F. Erect and maintain temporary partitions.
- G. Prevent movement of structure; provide temporary bracing and shoring as required.
- H. Provide appropriate temporary signage.
- I. Do not close or obstruct building egress path.
- J. Do not disable or disrupt building fire or life safety systems without **three** days prior written notice to Owner. Coordinate with Fire Department / Building Official.
- K. Protect existing structure / items to remain.

3.2 SALVAGE REQUIREMENTS

- A. Coordinate with Owner to identify building components and equipment required to be removed and delivered to Owner.
- B. Tag components and equipment Owner designates for salvage.
- C. Protect designated salvage items from demolition operations until items can be removed.
- D. Carefully remove building components and equipment indicated to be salvaged.
- E. Disassemble as required to permit removal from building.
- F. Package small and loose parts to avoid loss.
- G. Mark equipment and packaged parts to permit identification and consolidation of components of each salvaged item.
- H. Prepare assembly instructions consistent with disassembled parts. Package assembly instructions in protective envelope and securely attach to each disassembled salvaged item.
- I. Deliver salvaged items to location identified by GDPM. Obtain signed receipt from GDPM.

3.3 RECYCLING AND WASTE REDUCTION

- A. Implement measures to reduce waste going to Landfills by creating a recycling and waste reduction plan for all demolition activities.
- B. Sort demolition debris as applicable to separate different salvageable and recyclable materials.
- C. Provide necessary hauling and coordination to such facilities.
- D. Identify materials to be recycled as part of the project and submit an itemized list to the Architect/Owner along with the location. Submit proposed documentation prior to the start of work.
- E. Continuous recycling and waste reduction throughout the course of construction.
- F. Provide area designated for sorting of materials in an effort to maximize the potential recycling efforts.
- G. Maintain a log of waste refuse by type/weight/volume and of recycling efforts by the same.

3.4 DEMOLITION

- A. Provide all demolition and removals necessary for the proposed work. Field coordinate all conditions with the design intend on the drawings.
 - 1. Drawings are diagrammatic and may not reflect the full extent of demolition / removals required to accomplish the proposed scope of work.

- 2. The Contractor shall coordinate design intent and verify that all demolition work and restoration / repair work required is included in the scope of the project, regardless of specifically being noted on the drawings.
- 3. Work includes abandoned furnishings, equipment, building components that are required to be removed to render rent ready.
- 4. Confirm with GDPM personnel prior to demolition to verify any items to be salvaged and turned over to GDPM.
- B. Provide abatement of hazardous materials from the buildings as applicable for the completion of the work. Refer to the requirements of the report by Mac Paran Consulting.
- C. Conduct demolition to minimize interference with adjacent and occupied buildings/units.
- D. Maintain protected egress from and access to adjacent existing buildings/units at all times.
- E. Cease operations immediately when structure appears to be in danger and notify Architect/Engineer.
- F. Disconnect and remove utilities within demolition areas, refer to Drawings.
- G. Cap and identify abandoned utilities at termination points when utility is not completely removed.
- H. Do not close or obstruct roadways or sidewalks without permits.
- I. Demolish in orderly and careful manner. Protect existing improvements.
- J. Carefully remove building components indicated to be reused.
- K. See drawings for items to be salvaged and turned over to GDPM.
- L. Disassemble components as required to permit removal.
- M. Box and label contents for all items scheduled to salvage. Obtain sign off.
- N. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.
- O. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.
- P. Remove temporary Work.

3.5 CLEAN UP

- A. Remove demolished materials from site as work progresses.
- B. Leave areas of work in clean condition.

END OF SECTION

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SECTION 02 41 19 - SEALERS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Sealers for smoke damage to framing and finishes.

1.2 SUBMITTALS

A. Product Data: Submit data for each sealer, application, and accessories.

1.3 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years experience.

PART 2 PRODUCTS

2.1 SEALERS

- A. Shellac Base Primer / Sealer: Zinzzer B-I-N Shellac Based Primer by Rustoleum or Equal 1. Shellac Base
 - 2. Weight per gallon: 9.8 lbs/gal
 - 3. Solids by weight: 51.0%
 - 4. Solids by Volume: 29.0%
 - 5. DFT: 075-0.9 mils per coat

2.2 HOT THERMAL FOG

- A. Concentrated, solvent based odor removal chemical formulated for application via thermal fogging apparatus: ODORx Thermo 55 by ProRestore or Equal
- B. Thermal Fogger: as applicable to produce a dry fog at a particle size of 0.25 to 0.50 microns. Small particle size allows for complete penetration of the contaminated surfaces as well as reduction of airborne odor particles.

PART 3 EXECUTION

3.1 APPLICATION

- A. Remove existing finishes as specified on drawings / scope of work.
- B. Soda-blast, scrape, etc. charring from exposed floor trusses as required by the conditions. Report framing deficiencies to Architect.
- C. Surfaces should be clean, dry, sound, and free of excess dust, dirt, chalky material, grime, grease, oil, wax, mildew, contamination that interfere with adhesion.
- D. Follow all installation / application instructions from the product manufacturer.
- E. Apply [1] coat of primer / sealer to all exposed surfaces to seal in smoke / odor.
- F. Apply dry fog of the attic space with thermal fogger to seal in smoke / odor.
- G. Apply additional applications as necessary to completely seal / block all odors.

END OF SECTION

02 41 19 - 1 SEALERS

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SECTION 02 50 00 - HAZARDOUS MATERIALS SPECIFICATIONS

PART 1 GENERAL

1.1 SAMPLING

- A. Turn Key Environmental provided sampling of the existing building materials including asbestos and lead based paint. Additionally, Turn key environmental provided Phase 1 Environmental Report for the Property [available upon request]
- B. Mac Paran Consulting provided sampling of the existing building materials including radon and lead piping.
- C. Copies of these reports are attached for review and inclusion into the scope of the project as is applicable.

1.2 SUMMARY

- A. Contractor shall provide the appropriate abatement of the identified materials per the reports / specifications prepared by the Environmental Consultants that follow this section, using industry standard practices as identified for the proper execution of the proposed renovations to the buildings. Contractor shall provide all necessary protection, <u>air clearance testing</u>, removal, and disposal.
- B. Contractors must comply with Occupational Safety and Health Administration regulation 29 CFR 1926.62 "Lead in Construction Standard" as well as the Environmental Protection Agency Lead, Renovation, Repair and Painting Rule.
- C. Contractor shall follow all applicable EPA rules and regulations when working with hazardous materials. It shall be the contractor's responsibility to remain in compliance at all times during the project.
- D. Hazardous materials exist at various areas of the project site as identified.
- E. If any work person encounters any material which they suspect may be hazardous or toxic, they shall immediately advise the Owner. The contractor shall take immediate and appropriate action to protect the building users and workers in accordance w/ federal, state, and local laws, codes and regulations. The architect and architect's consultants shall have no responsibility for the discovery, presence, handling, removal or disposal of or exposure of persons to hazardous materials in any form at the projects site, including but not limited to asbestos, asbestos products, polychlorinated biphenyl (pcb) or other toxic substances.
 - 1. The contractor is hereby advised that RDA Group Architects, LLC is not a design professional in the determination of the presence of hazardous materials, nor is RDA a design professional involved in making recommendations regarding the testing, removal, encapsulation or other corrective measures pertaining to hazardous materials.
 - 2. If the work which is to be performed under the contract interfaces in any way with the existing components which contain hazardous materials, it is the contractor's responsibility to contact the owner's environmental consultant regarding the proper means & methods to be utilized in dealing with hazardous materials.
 - 3. By execution of the contract for construction, the contractor hereby agrees to bring no claim for negligence, breach of contract, indemnity or otherwise against the architect, his principles, employees, agents or consultants if such a claim in any way would involve the investigation of or remedial work related to hazardous materials in the project.
 - 4. By execution of the contract for construction, the contractor further agrees to defend, indemnify and hold the architect, his principles, employees, agents or consultants harmless from any such asbestos or other hazardous materials related claims that may be brought by the contractor's subcontractors, suppliers or other third parties who may be acting under the direction of the contractor pursuant to this project.

1.3 EXECUTION

A. Contractor shall be fully responsible for the proper removal and disposal of materials. All work shall be performed by trained individuals in accordance with the requirements of this Section, all current Federal, State, and Local laws/regulations.

END OF SECTION



LEAD-BASED PAINT INSPECTION OF THE 21 PARNELL BUILDING, DAYTON, OHIO 45403

Prepared for

Mr. Bill Treasure **Turn-Key Environmental Consultants, Inc.** 790 Barnhart Road Vandalia, Ohio 45373

Prepared by

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R. A. Froehlich, CIH, CSP, QEP President

Site Visit: March 25-29, 2019 Report Date: April 16, 2019

Helix 6842



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1. EXECUTIVE SUMMARY

On March 18, 2019, Turn-Key Environmental Consultants, Inc. contracted with Helix Environmental, Inc. to perform a Lead-Based Paint Inspection of a 12-unit apartment building at 21 Parnell Avenue, Dayton, Ohio. Between March 25 and 29, 2019, lead measurements were made of all accessible painted surfaces of each room-equivalent in the apartments and common areas using a calibrated X-Ray Fluorescence Spectrum Analyzer (XRF) to document the lead content of painted surfaces.

A total of 2,274 lead measurements were made with the XRF Analyzer, including both paint film locations and quality assurance measurements. Of these, only 113 measurements indicated lead concentrations above 1 mg/cm^2 , the HUD definition of Lead-Based Paint. A significant number of elevated lead levels were associated with white ceramic tiles above kitchen sinks and around bathtubs. Lead-Based Paint was measured in each apartment in one or more locations.

The relatively low number of Lead-Based Paint measurements is an indication that past efforts to reduce the number of identified Lead-Based Paint hazards in the building have been successful. Additional abatement, however, is still needed to ensure that all apartments are free from "Lead-Based Paint" hazards.

A list of locations where XRF measurements indicate that Lead-Based Paint is present is presented in the Discussion and Recommendations section of the report.

Based on the sampling results, Helix Environmental, Inc. recommends:

- 1. Schedule Lead-Based Paint abatement during upcoming renovations of the inspected apartments and common spaces. Lead-Based Paint abatement can reduce the potential for lead poisoning in children six years old and younger. Abatement can use several methods to achieve a "permanent" removal of a Lead-Based Paint hazard: paint removal, encapsulation, enclosure or replacement. It may be necessary to temporarily remove tenants from the apartment in order to perform abatement depending on the location of the lead abatement and the time needed to perform the abatement and cleaning of the work area.
- 2. Consider airborne lead exposure monitoring whenever abatement is performed in an occupied unit. Measurements should be made using calibrated sampling equipment under the supervision of a Certified Industrial Hygienist. Laboratory analyses should be performed by an AIHA-accredited industrial hygiene laboratory to ensure valid measurement results.
- 3. Hire an independent licensed consultant to perform clearance inspections and surface sampling after abatement to document that the abatement was performed as designed, and that surface contamination levels are less than the clearance criteria before the contractor is allowed to remove engineering controls or containments. Lead clearance inspections and testing must be performed by an Ohio-licensed Lead Paint Inspector or Lead Risk Assessor.

4. Until the identified Lead-Based Paint hazards have been abated, maintain paint in an undamaged condition by painting damaged paint to stabilize it from further deterioration, and by correcting water intrusions where necessary. Paint in an intact or good condition presents little potential for lead poisoning in children six years and younger.

2. INTRODUCTION

On March 18, 2019, Turn-Key Environmental Consultants, Inc. contracted with Helix Environmental, Inc. to perform a Lead-Based Paint Inspection of a 12-unit apartment building at 21 Parnell Avenue, Dayton, Ohio. Between March 25 and 29, 2019, lead measurements were made of all accessible painted surfaces of each room-equivalent in the apartments and common areas using a calibrated X-Ray Fluorescence Spectrum Analyzer (XRF) to document the lead content of painted surfaces.

This report summarizes the results for the Lead-Based Paint Inspection of the apartment building. The apartments included:

- 9 Parnell Avenue, Apartment A,
- 9 Parnell Avenue, Apartment B,
- 11 Parnell Avenue, Apartment A,
- 11 Parnell Avenue, Apartment B,
- 1202 Huffman Avenue, Apartment A,
- 1202 Huffman Avenue, Apartment B,
- 1204 Huffman Avenue, Apartment A,
- 1204 Huffman Avenue, Apartment B,
- 1208 Huffman Avenue, Apartment A,
- 1208 Huffman Avenue, Apartment B,
- 1210 Huffman Avenue, Common Areas (Hall, Basement, Stairs)
- 1210 Huffman Avenue, Apartment A, and
- 1210 Huffman Avenue, Apartment B.

The apartment is a 15,672 SF masonry-sided two-story plus basement apartment building with 12 two-bedroom apartments. The building is located in a residential neighborhood east of downtown Dayton, Ohio. The structure was built in 1952 according to county auditor records. The building has replacement aluminum or vinyl windows and has been managed and maintained by Greater Dayton Premier Management and previous owners. Each apartment includes two bedrooms and one bathroom, in addition to a kitchen, combined living/dining room and basement laundry/storage area. Paint within the apartments ranged from poor to excellent condition, with damaged or deteriorated paint found in few locations. Floors in the apartments were covered with vinyl floor tiles or carpeted, with the exception of the stairs which were varnished or painted wood and the basement where the concrete floor was bare or painted. An exterior porch area is located on the street side of the building and provides an entrance to two apartments. Access to each apartment entrance is from either Parnell Avenue or Huffman Avenue. Exterior soffits were covered with aluminum coil stock.

Measurements were made in each room equivalent, with the surface location described as "A" for the street side, "B" for the left side of A, "C" for the left side of B, and "D" for the left side of C, rotating in a clockwise direction as seen from above. For example, the A side wall of the Kitchen at 9 Parnell Avenue, Apartment A, is the east wall towards the front of the apartment. Ceiling and floor measurements were made in the

approximate center of the surface. Both painted surfaces, varnished surfaces and ceramic surfaces were measured.

Since the apartments were occupied during the inspection, attempts were made to measure readily accessible surfaces. Where occupant possessions were placed to impede access to surfaces at measurement locations, no measurements were made to avoid liability for potential damage to possessions. As a result, some components of specific rooms could not be measured.

Ohio Law (Section 5301.30 of the Ohio Revised Code) requires every person who intends to transfer any residential real property by sale, land installment contract, lease with option to purchase, exchange or lease for a term of ninety nine years and renewable forever, to complete and provide a copy to the prospective transferee of the applicable property disclosure forms, disclosing known hazardous conditions of the property, including lead based paint hazards.

Federal Law (24 CFR Part 30 and 40 CFR, Part 745) requires sellers and lessors of residential units constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than six years of age resides or is expected to reside in such housing) or any zero bedroom dwelling, to disclose and provide a copy of this report to new purchasers or lessees before they become obligated under a lease or sales contract. Property owners and sellers are also required to distribute an educational pamphlet approved by the United States Environmental Protection Agency and include standard warning language in leases or sales contracts to ensure that parents have the information they need to protect children from lead hazards.

Mr. Ralph A. Froehlich, CIH, CSP, QEP assisted by Mr. Benjamin Froehlich, Industrial Hygienist performed the lead-based paint inspection. Mr. Froehlich is a Certified Industrial Hygienist, Certified Safety Professional, and Quality Environmental Professional with more than thirty years experience in the fields of occupational and environmental health. Mr. Ben Froehlich, IH has more than ten years experience in industrial hygiene. Mr. Jonathan Riedel of Greater Dayton Premier Management arranged for the site visit and provided access to the site and information on the processes during the site visit.

3. INSPECTION AND MEASUREMENT PROCEDURES

The lead-based paint inspection was performed by Mr. Ralph A. Froehlich, CIH, CSP, QEP of Helix Environmental, Inc. Mr. Froehlich is a Certified Industrial Hygienist, Certified Safety Professional and a Qualified Environmental Professional with more than thirty years experience in the fields of environmental and occupational health. Mr. Froehlich is licensed as a Lead Risk Assessor by the Ohio Department of Health (OH LA-000559).

XRF measurements were made using an Olympus Innov-X XRF Alpha 4000 Classic ROHS Spectrum Analyzer (SN 170710, IE Rents B19244B) according to the manufacturer's instructions. Standardization was performed successfully upon startup, and triplicate calibrations were made. Calibration checks were also successfully performed during measurement cycles, and, where possible, at the end of measurement cycles. Calibration checks were made at intervals of less than four hours.

Calibration measurements were made of National Institute for Standards and Technology (NIST®) Standard Reference Materials with known lead concentration (NIST® SRM 2570 White with 0.0 mg Pb/cm² and NIST® SRM 2573 Red with 1.040 mg Pb/cm²). A Performance Characteristic Sheet for the Innov-X LBP4000 was developed by the Midwest Research Institute and QuanTech, Inc. for U. S. Environmental Protection Agency (EPA) and the U. S. Department of Housing and Urban Development (HUD).

The condition of the materials was rated as to the extent of paint deterioration on each component during the lead inspection. Please refer to Table 1 for a complete description of the rating categories (intact, fair, poor) for painted surfaces. Tables 2-14 documents the lead content of representative painted surfaces in separate apartments or common areas measured using the XRF. The Building Condition Form, which documents the overall condition of the apartment as observed by the Lead Risk Assessor, is attached as well.

4. APPLICABLE REQUIREMENTS

The U.S. Department of Housing and Urban Development (HUD) has adopted 0.5% or 5,000 ppm by weight as indicative of the presence of Lead-Based Paint, when analyzed by chemical methods. In addition, HUD identifies lead paint concentrations of 1.0 mg/cm² as Lead-Based Paint when measured by certified calibrated XRF spectrometers. ("Lead-Based Paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing," April, 1990.) The Ohio Department of Health (ODH) has also adopted these definitions of Lead-Based Paint.

5. MEASUREMENT RESULTS

TABLE 1: DEFINITIONS FOR ASSESSING PAINTED SURFACE CONDITION.

Intact	No peeling paint on the component. Entire surface is intact.		
Fair	For large components, such as walls, ceilings, floors, and doors: less than or equal to 2 square feet of peeling or damaged paint.		
	For small components, such as baseboards, moldings, and window frames: less than or equal to 10% of the total surface area has peeling or damaged paint.		
Poor	For large components, such as walls, ceilings, floors, and doors: more than 2 square feet of peeling or damaged paint.		
	For small components, such baseboards, moldings, and window frames: more than 10% of the total surface area has peeling or damaged paint.		

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	9 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-8	INTERIOR/ Kitchen	A Wall Beige Drywall	0.00
3/28/19-9	INTERIOR/ Kitchen	B Wall Beige Drywall	>1.00
3/28/19-10	INTERIOR/ Kitchen	C Wall Beige Drywall	0.12
3/28/19-11	INTERIOR/ Kitchen	D Wall Beige Drywall	0.00
3/28/19-12	INTERIOR/ Kitchen	Ceiling Beige Drywall	0.00
3/28/19-13	INTERIOR/ Kitchen	A Door Varnish Wood	0.00
3/28/19-14	INTERIOR/ Kitchen	A Door Casing Beige Metal	>1.00
3/28/19-15	INTERIOR/ Kitchen	C Door Beige Metal	0.00
3/28/19-16	INTERIOR/ Kitchen	C Door Casing Beige Metal	>1.04
3/28/19-17	INTERIOR/ Kitchen	A Cabinet Varnished Wood	0.00
3/28/19-18	INTERIOR/ Kitchen	B Cabinet Varnished Wood	0.00
3/28/19-19	INTERIOR/ Kitchen	D Cabinet Varnished Wood	0.00
3/28/19-22	INTERIOR/ Living Room	A Wall Beige Drywall	0.11
3/28/19-23	INTERIOR/ Living Room	B Wall Beige Drywall	0.05
3/28/19-24	INTERIOR/ Living Room	C Wall Beige Drywall	0.39
3/28/19-25	INTERIOR/ Living Room	D Wall Beige Drywall	0.49
3/28/19-26	INTERIOR/ Living Room	Ceiling Beige Drywall	0.00
3/28/19-27	INTERIOR/ Living Room	A Window Sill Beige Wood	0.00
3/28/19-28	INTERIOR/ Living Room	A Window Casing Brown Metal	0.00
3/28/19-29	INTERIOR/ Living Room	A Window Sash Brown Metal	0.00
3/28/19-30	INTERIOR/ Living Room	C Window Sill Beige Wood	0.00
3/28/19-31	INTERIOR/ Living Room	C Window Casing Brown Metal	0.00
3/28/19-32	INTERIOR/ Living Room	C Window Sash Brown Metal	0.00
3/28/19-33	INTERIOR/ Living Room	B Door Beige Metal	1.98
3/28/19-34	INTERIOR/ Living Room	B Door Casing Beige Metal	0.70

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	9 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-35	INTERIOR/ Living Room	C Door Brown Wood	0.00
3/28/19-36	INTERIOR/ Living Room	C Door Casing Beige Metal	0.21
3/28/19-37	INTERIOR/ Living Room	A Baseboard Beige Wood	0.23
3/28/19-38	INTERIOR/ Living Room	B Baseboard Beige Wood	0.04
3/28/19-39	INTERIOR/ Living Room	C Baseboard Beige Wood	0.06
3/28/19-40	INTERIOR/ Living Room	D Baseboard Beige Wood	0.14
3/28/19-41	INTERIOR/ Basement	A Wall Beige Drywall	0.00
3/28/19-42	INTERIOR/ Basement	B Wall Beige Drywall	0.00
3/28/19-43	INTERIOR/ Basement	C Wall Beige Drywall	0.00
3/28/19-44	INTERIOR/ Basement	D Wall Beige Drywall	0.00
3/28/19-45	INTERIOR/ Basement	C Door Varnish Wood	0.00
3/28/19-46	INTERIOR/ Basement	C Door Casing Beige Metal	0.22
3/28/19-47	INTERIOR/ Basement	A Wall Trim Beige Wood	0.06
3/28/19-48	INTERIOR/ Basement	B Wall Trim Beige Wood	0.02
3/28/19-49	INTERIOR/ Basement	D Wall Trim Beige Wood	0.04
3/28/19-50	INTERIOR/ Basement	Ceiling Beige Drywall	0.00
3/28/19-51	INTERIOR/ Basement	B Handrail Gray Wood	0.51
3/28/19-52	INTERIOR/ Basement	B Stringer Gray Wood	0.68
3/28/19-53	INTERIOR/ Basement	D Stringer Gray Wood	0.43
3/28/19-54	INTERIOR/ Basement	Stair Tread Gray Wood	0.87
3/28/19-55	INTERIOR/ Basement	Beam Gray Steel	0.38
3/28/19-56	INTERIOR/ Basement	C Post Gray Steel	0.41
3/28/19-57	INTERIOR/ Basement	A Wall Beige Concrete	0.00
3/28/19-58	INTERIOR/ Basement	B Wall Beige Block	0.00
3/28/19-59	INTERIOR/ Basement	C Wall Beige Concrete	0.00
3/28/19-60	INTERIOR/ Basement	D Wall Beige Block	0.00
3/28/19-61	INTERIOR/ Stairs	A Wall Beige Drywall	0.17
3/28/19-62	INTERIOR / Stairs	B Wall Beige Drywall	0.11
3/28/19-63	INTERIOR / Stairs	D Wall Beige Drywall	0.06
3/28/19-64	INTERIOR / Stairs	Ceiling Beige Drywall	0.35
3/28/19-65	INTERIOR / Stairs	Handrail Varnish Wood	0.00
3/28/19-66	INTERIOR/ Stairs	B Stringer Beige Wood	0.08

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	9 PARNELL AVENU	JE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-67	INTERIOR / Stairs	D Stringer Beige Wood	0.04
3/28/19-68	INTERIOR / Stairs	Stair Tread Varnish Wood	0.00
3/28/19-69	INTERIOR / Stairs	Riser Beige Wood	0.14
3/28/19-70	INTERIOR / Stairs	A Baseboard Beige Wood	0.08
3/28/19-71	INTERIOR/ Stairs	B Baseboard Beige Wood	0.13
3/28/19-72	INTERIOR/ Hall	B Wall Beige Drywall	0.07
3/28/19-73	INTERIOR/ Hall	C Wall Beige Drywall	0.10
3/28/19-74	INTERIOR/ Hall	D Wall Beige Drywall	0.15
3/28/19-75	INTERIOR/ Hall	Ceiling Beige Drywall	0.00
3/28/19-76	INTERIOR/ Hall	A Door Brown Wood	0.02
3/28/19-77	INTERIOR/ Hall	A Door Casing Beige Metal	0.16
3/28/19-78	INTERIOR/ Hall	C Door Brown Wood	0.02
3/28/19-79	INTERIOR/ Hall	C Door Casing Beige Metal	0.13
3/28/19-80	INTERIOR/ Hall	D Door Brown Wood	0.00
3/28/19-81	INTERIOR/ Hall	D Door Casing Beige Metal	0.14
3/28/19-82	INTERIOR/ Hall	Wall Cap Beige Wood	0.36
3/28/19-83	INTERIOR/ Hall	B Baseboard Beige Wood	0.03
3/28/19-84	INTERIOR/ Hall	C Baseboard Beige Wood	0.03
3/28/19-85	INTERIOR/ Hall	D Baseboard Beige Wood	0.04
3/28/19-86	INTERIOR / Bathroom	A Wall Purple Drywall	0.00
3/28/19-87	INTERIOR/ Bathroom	B Wall Purple Drywall	0.03
3/28/19-88	INTERIOR / Bathroom	C Wall Purple Drywall	0.04
3/28/19-89	INTERIOR / Bathroom	D Wall Purple Drywall	0.05
3/28/19-90	INTERIOR / Bathroom	Ceiling Beige Drywall POOR	0.15
3/28/19-91	INTERIOR / Bathroom	A Door Brown Wood	0.00
3/28/19-92	INTERIOR / Bathroom	A Door Casing Beige Metal	0.21
3/28/19-93	INTERIOR / Bathroom	C Window Sill Beige Wood	0.00
3/28/19-94	INTERIOR / Bathroom	C Window Casing Brown Metal	0.00
3/28/19-95	INTERIOR / Bathroom	C Window Sash Brown Metal	0.00
3/28/19-96	INTERIOR/ Bathroom	B Tub White Ceramic Tile	>1.00
3/28/19-97	INTERIOR/ Bathroom	C Tub White Ceramic Tile	>1.00
3/28/19-98	INTERIOR/ Bathroom	D Tub White Ceramic Tile	>1.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	9 PARNELL AVENU	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-99	INTERIOR/Bedroom 1 NW	A Wall Pink Drywall	0.01
3/28/19-100	INTERIOR/Bedroom 1 NW	B Wall Pink Drywall	0.06
3/28/19-101	INTERIOR/Bedroom 1 NW	C Wall Pink Drywall	0.00
3/28/19-102	INTERIOR/Bedroom 1 NW	D Wall Pink Drywall	0.03
3/28/19-103	INTERIOR/Bedroom 1 NW	Ceiling Beige Drywall POOR	0.11
3/28/19-104	INTERIOR/Bedroom 1 NW	A Door Brown Wood	0.00
3/28/19-105	INTERIOR/Bedroom 1 NW	A Door Casing Beige Metal	0.06
3/28/19-106	INTERIOR/Bedroom 1 NW	B Door Brown Wood	0.00
3/28/19-107	INTERIOR/Bedroom 1 NW	B Door Casing Beige Metal	0.17
3/28/19-108	INTERIOR/Bedroom 1 NW	C Window Sill Pink Wood	0.00
3/28/19-109	INTERIOR/Bedroom 1 NW	C Window Casing Brown Metal	0.00
3/28/19-110	INTERIOR/Bedroom 1 NW	C Window Sash Brown Metal	0.00
3/28/19-111	INTERIOR/Bedroom 1 NW	A Baseboard Pink Wood	0.02
3/28/19-112	INTERIOR/Bedroom 1 NW	B Baseboard Pink Wood	0.16
3/28/19-113	INTERIOR/Bedroom 1 NW	C Baseboard Pink Wood	0.09
3/28/19-114	INTERIOR/Bedroom 1 NW	D Baseboard Pink Wood	0.09
3/28/19-115	INTERIOR/Bedroom 1 Closet	A Wall Beige Drywall	0.08
3/28/19-116	INTERIOR/Bedroom 1 Closet	B Wall Beige Drywall	0.07
3/28/19-117	INTERIOR/Bedroom 1 Closet	C Wall Beige Drywall	0.10
3/28/19-118	INTERIOR/Bedroom 1 Closet	D Wall Beige Drywall	0.13
3/28/19-119	INTERIOR/Bedroom 1 Closet	Ceiling Beige Drywall	0.06
3/28/19-120	INTERIOR/Bedroom 1 Closet	C Door Brown Wood	0.00
3/28/19-121	INTERIOR/Bedroom 1 Closet	C Door Casing Beige Metal	0.06
3/28/19-122	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.05
3/28/19-123	INTERIOR/Bedroom 1 Closet	Shelf Support D Beige Wood	0.04
3/28/19-124	INTERIOR/Bedroom 1 Closet	A Baseboard Beige Wood	0.11
3/28/19-125	INTERIOR/Bedroom 1 Closet	B Baseboard Beige Wood	0.08
3/28/19-126	INTERIOR/Bedroom 1 Closet	C Baseboard Beige Wood	0.06
3/28/19-127	INTERIOR/Bedroom 1 Closet	D Baseboard Beige Wood	>1.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	9 PARNELL AVENU	JE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-128	INTERIOR/Hall Closet	A Wall Beige Drywall	>1.00
3/28/19-129	INTERIOR/Hall Closet	C Wall Beige Drywall	0.11
3/28/19-130	INTERIOR/Hall Closet	D Wall Beige Drywall	0.13
3/28/19-131	INTERIOR/Hall Closet	Ceiling Beige Drywall	0.07
3/28/19-132	INTERIOR/Hall Closet	B Door Brown Wood	0.01
3/28/19-133	INTERIOR/Hall Closet	B Door Casing Beige Metal	0.13
3/28/19-134	INTERIOR/Hall Closet	Shelf Beige Wood	0.04
3/28/19-135	INTERIOR/Hall Closet	Shelf Support A Beige Wood	0.08
3/28/19-136	INTERIOR/Hall Closet	A Baseboard Beige Wood	0.12
3/28/19-137	INTERIOR/Hall Closet	C Baseboard Beige Wood	0.08
3/28/19-138	INTERIOR/Hall Closet	D Baseboard Beige Wood	0.07
3/28/19-139	INTERIOR/ Bedroom 2 NE	A Wall Beige Drywall	0.00
3/28/19-140	INTERIOR/ Bedroom 2 NE	B Wall Beige Drywall	0.15
3/28/19-141	INTERIOR/ Bedroom 2 NE	C Wall Beige Drywall	0.04
3/28/19-142	INTERIOR/ Bedroom 2 NE	D Wall Beige Drywall	0.05
3/28/19-143	INTERIOR/ Bedroom 2 NE	Ceiling Beige Drywall	0.00
3/28/19-144	INTERIOR/ Bedroom 2 NE	A Window Sill Beige Wood	0.00
3/28/19-145	INTERIOR/ Bedroom 2 NE	A Window Casing Brown Metal	0.00
3/28/19-146	INTERIOR/ Bedroom 2 NE	A Window Sash Brown Metal	0.00
3/28/19-147	INTERIOR / Bedroom 2 NE	B Door Brown Wood	0.00
3/28/19-148	INTERIOR/ Bedroom 2 NE	B Door Casing Beige Metal	0.09
3/28/19-149	INTERIOR/ Bedroom 2 NE	C Door Varnish Wood	0.04
3/28/19-150	INTERIOR/ Bedroom 2 NE	C Door Casing Beige Metal	0.11
3/28/19-151	INTERIOR / Bedroom 2 NE	A Baseboard Beige Wood	0.14
3/28/19-152	INTERIOR / Bedroom 2 NE	B Baseboard Beige Wood	0.08
3/28/19-155	INTERIOR/ Bedroom 2 NE	C Baseboard Beige Wood	0.05
3/28/19-156	INTERIOR/ Bedroom 2 NE	D Baseboard Beige Wood	0.07
3/28/19-157	INTERIOR/ Bedroom 2 Closet	A Wall Beige Drywall	0.10
3/28/19-158	INTERIOR/ Bedroom 2 Closet	B Wall Beige Drywall	0.19
3/28/19-159	INTERIOR/ Bedroom 2 Closet	C Wall Beige Drywall	0.00
3/28/19-160	INTERIOR/ Bedroom 2 Closet	D Wall Beige Drywall	0.28

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	9 PARNELL AVENU	JE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-161	INTERIOR / Bedroom 2 Closet	Ceiling Beige Drywall	0.11
3/28/19-162	INTERIOR/ Bedroom 2 Closet	D Door Brown Wood	0.00
3/28/19-163	INTERIOR/ Bedroom 2 Closet	D Door Casing Beige Metal	0.11
3/28/19-164	INTERIOR/ Bedroom 2 Closet	Shelf Beige Wood	0.10
3/28/19-165	INTERIOR/ Bedroom 2 Closet	Shelf Support B Beige Wood	0.06
3/28/19-166	INTERIOR/ Bedroom 2 Closet	A Baseboard Beige Wood	0.07
3/28/19-167	INTERIOR/ Bedroom 2 Closet	B Baseboard Beige Wood	0.06
3/28/19-168	INTERIOR/ Bedroom 2 Closet	C Baseboard Beige Wood	0.05
3/28/19-169	INTERIOR/ Bedroom 2 Closet	D Baseboard Beige Wood	0.03
3/28/19-3	EXTERIOR/Rear C	C Storm Door Brown Metal	0.00
3/28/19-4	EXTERIOR/Rear C	C Storm Door Casing Brown Metal	0.00
3/28/19-5	EXTERIOR/Rear C	C Lintel White Metal POOR	1.32
3/28/19-6	EXTERIOR/Rear C	C Window Casing Brown Metal	0.00
3/28/19-7	EXTERIOR/Rear C	C Window Sash Brown Metal	0.00
3/28/19-20	EXTERIOR/Rear C	C Door White Metal	0.00
3/28/19-21	EXTERIOR/Rear C	C Door Casing Beige Metal	1.44
3/28/19-180	EXTERIOR/Porch	D Wall Painted Brick White	>1.44
3/28/19-181	EXTERIOR/Porch	Storm Door Brown Metal	0.00
3/28/19-182	EXTERIOR/Porch	Storm Door Casing Brown Metal	2.25
3/28/19-183	EXTERIOR/Porch	Door White Metal	2.28
3/28/19-184	EXTERIOR/Porch	Ceiling White Plywood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	9 PARNELL AVENU	JE, APARTMENT B (MEASURED 3/28/2019)	
3/28/19-386	INTERIOR/ Kitchen	A Wall Beige Drywall	0.13
3/28/19-387	INTERIOR/ Kitchen	B Wall Beige Drywall	0.20
3/28/19-388	INTERIOR/ Kitchen	C Wall Beige Drywall	0.31
3/28/19-389	INTERIOR/ Kitchen	D Wall Beige Drywall	0.32
3/28/19-390	INTERIOR/ Kitchen	Ceiling Beige Drywall	0.07
3/28/19-391	INTERIOR/ Kitchen	A Door Brown Wood	0.01
3/28/19-392	INTERIOR/ Kitchen	A Door Casing Beige Metal	0.10
3/28/19-393	INTERIOR/ Kitchen	C Door Beige Metal	0.00
3/28/19-394	INTERIOR/ Kitchen	C Door Casing Beige Metal	0.00
3/28/19-395	INTERIOR/ Kitchen	A Cabinet Varnished Wood	0.00
3/28/19-396	INTERIOR/ Kitchen	C Cabinet Varnished Wood	0.00
3/28/19-397	INTERIOR/ Kitchen	D Cabinet Varnished Wood	0.00
3/28/19-398	INTERIOR/ Kitchen	D Wall White Ceramic	0.00
3/28/19-399	INTERIOR/ Living Room	A Wall Beige Drywall	0.01
3/28/19-400	INTERIOR/ Living Room	B Wall Beige Drywall	0.02
3/28/19-401	INTERIOR / Living Room	C Wall Beige Drywall	0.00
3/28/19-402	INTERIOR / Living Room	D Wall Beige Drywall	0.00
3/28/19-403	INTERIOR/ Living Room	Ceiling Beige Drywall	0.00
3/28/19-404	INTERIOR / Living Room	A Window Sill Beige Wood	0.00
3/28/19-405	INTERIOR/ Living Room	A Window Casing Brown Metal	0.00
3/28/19-406	INTERIOR / Living Room	A Window Sash Brown Metal	0.00
3/28/19-407	INTERIOR / Living Room	C Window Sill Beige Wood	0.00
3/28/19-408	INTERIOR/ Living Room	C Window Casing Brown Metal	0.00
3/28/19-409	INTERIOR / Living Room	C Window Sash Brown Metal	0.00
3/28/19-410	INTERIOR / Living Room	C Door Brown Wood	0.01
3/28/19-411	INTERIOR / Living Room	C Door Casing Beige Metal	0.16
3/28/19-412	INTERIOR / Living Room	D Door Grey Metal	0.00
3/28/19-413	INTERIOR/ Living Room	D Door Casing Beige Metal	0.00
3/28/19-414	INTERIOR/ Living Room	A Baseboard Beige Wood	0.08
3/28/19-415	INTERIOR / Living Room	B Baseboard Beige Wood	0.06

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	9 PARNELL AVENU	JE, APARTMENT B (MEASURED 3/28/2019)	
3/28/19-416	INTERIOR / Living Room	C Baseboard Beige Wood	0.15
3/28/19-417	INTERIOR / Living Room	D Baseboard Beige Wood	0.09
3/28/19-418	INTERIOR / Living Room Closet	A Wall Beige Drywall	0.00
3/28/19-419	INTERIOR / Living Room Closet	B Wall Beige Drywall	0.02
3/28/19-420	INTERIOR / Living Room Closet	C Wall Beige Drywall	0.00
3/28/19-421	INTERIOR/ Living Room Closet	D Wall Beige Drywall	0.01
3/28/19-422	INTERIOR/ Living Room Closet	Ceiling Beige Drywall	0.00
3/28/19-423	INTERIOR / Living Room Closet	A Door Brown Wood	0.04
3/28/19-424	INTERIOR/ Living Room Closet	A Door Casing Beige Metal	0.10
3/28/19-425	INTERIOR/ Living Room Closet	Shelf Beige Wood	0.02
3/28/19-426	INTERIOR/ Living Room Closet	B Shelf Support Beige Wood	0.05
3/28/19-427	INTERIOR/ Basement	A Wall Beige Drywall	0.00
3/28/19-428	INTERIOR / Basement	B Wall Beige Drywall	0.00
3/28/19-429	INTERIOR/ Basement	C Wall Beige Drywall	0.00
3/28/19-430	INTERIOR/ Basement	D Wall Beige Drywall	0.00
3/28/19-431	INTERIOR/ Basement	Ceiling Beige Drywall	0.00
3/28/19-432	INTERIOR/ Basement	A Wall Trim Beige Wood	0.09
3/28/19-433	INTERIOR/ Basement	B Wall Trim Beige Wood	0.12
3/28/19-434	INTERIOR/ Basement	D Wall Trim Beige Wood	0.08
3/28/19-435	INTERIOR / Basement	C Door Brown Wood	0.00
3/28/19-436	INTERIOR / Basement	C Door Casing Beige Metal	0.07
3/28/19-437	INTERIOR / Basement	D Handrail Gray Wood	0.00
3/28/19-438	INTERIOR / Basement	B Stringer Gray Wood	0.00
3/28/19-439	INTERIOR / Basement	D Stringer Gray Wood	0.00
3/28/19-440	INTERIOR / Basement	Stair Tread Gray Wood	0.00
3/28/19-441	INTERIOR / Basement	Beam Gray Steel	0.59
3/28/19-442	INTERIOR / Basement	A Post Gray Steel	0.39
3/28/19-443	INTERIOR / Basement	A Wall Beige Block	0.00
3/28/19-444	INTERIOR / Basement	D Wall Beige Block	0.00
3/28/19-445	INTERIOR / Basement	Floor Grey Concrete	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	9 PARNELL AVEN	UE, APARTMENT B (MEASURED 3/28/2019)	
3/28/19-446	INTERIOR/ Stairs	A Wall Beige Drywall	0.00
3/28/19-447	INTERIOR/ Stairs	B Wall Beige Drywall	0.00
3/28/19-448	INTERIOR/ Stairs	D Wall Beige Drywall	0.00
3/28/19-449	INTERIOR/ Stairs	Ceiling Beige Drywall	0.00
3/28/19-450	INTERIOR/ Stairs	Handrail Varnish Wood	0.00
3/28/19-451	INTERIOR/ Stairs	B Stringer Beige Wood	0.06
3/28/19-452	INTERIOR/ Stairs	D Stringer Beige Wood	0.17
3/28/19-453	INTERIOR/ Stairs	Tread Varnish Wood	0.00
3/28/19-454	INTERIOR/ Stairs	Riser Beige Wood	0.04
3/28/19-455	INTERIOR/ Stairs	A Baseboard Beige Wood	0.11
3/28/19-456	INTERIOR/ Stairs	C Baseboard Beige Wood	0.15
3/28/19-457	INTERIOR/ Stairs	D Baseboard Beige Wood	0.11
3/28/19-458	INTERIOR/ Stairs	Floor Varnish Wood	0.00
3/28/19-459	INTERIOR/ Hall	A Wall Beige Drywall	0.00
3/28/19-460	INTERIOR/ Hall	B Wall Beige Drywall	0.00
3/28/19-461	INTERIOR/ Hall	C Wall Beige Drywall	0.00
3/28/19-462	INTERIOR/ Hall	D Wall Beige Drywall	0.00
3/28/19-463	INTERIOR/ Hall	Ceiling Beige Drywall	0.07
3/28/19-464	INTERIOR/ Hall	A Door Brown Wood	0.09
3/28/19-465	INTERIOR/ Hall	A Door Casing Beige Metal	0.08
3/28/19-466	INTERIOR/ Hall	B Door Brown Wood	0.03
3/28/19-467	INTERIOR/ Hall	B Door Casing Beige Metal	0.10
3/28/19-468	INTERIOR/ Hall	C Door Brown Wood	0.03
3/28/19-469	INTERIOR/ Hall	C Door Casing Beige Metal	0.05
3/28/19-470	INTERIOR/ Hall	Wall Cap Beige Wood	0.09
3/28/19-471	INTERIOR/ Hall	B Baseboard Beige Wood	0.08
3/28/19-472	INTERIOR/ Hall	C Baseboard Beige Wood	0.07
3/28/19-473	INTERIOR/ Hall	D Baseboard Beige Wood	0.11

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	9 PARNELL AVENU	JE, APARTMENT B (MEASURED 3/28/2019)	
3/28/19-474	INTERIOR/ Bathroom	A Wall Beige Drywall	0.14
3/28/19-475	INTERIOR/ Bathroom	B Wall Beige Drywall	0.05
3/28/19-476	INTERIOR/ Bathroom	C Wall Beige Drywall	0.00
3/28/19-477	INTERIOR / Bathroom	D Wall Beige Drywall	0.10
3/28/19-478	INTERIOR/ Bathroom	Ceiling Beige Drywall POOR	0.05
3/28/19-479	INTERIOR/ Bathroom	A Door Brown Wood	0.02
3/28/19-480	INTERIOR/ Bathroom	A Door Casing Beige Metal	0.00
3/28/19-481	INTERIOR/ Bathroom	C Window Sill Beige Wood	0.00
3/28/19-482	INTERIOR/ Bathroom	C Window Casing Brown Metal	0.00
3/28/19-483	INTERIOR/ Bathroom	C Window Sash Brown Metal	0.00
3/28/19-484	INTERIOR/ Bathroom	B Tub White Ceramic Tile	>1.00
3/28/19-485	INTERIOR/ Bathroom	C Tub White Ceramic Tile	>1.00
3/28/19-486	INTERIOR/ Bathroom	D Tub White Ceramic Tile	>1.00
3/28/19-487	INTERIOR/Bedroom 1 SW	A Wall Beige Drywall	0.00
3/28/19-488	INTERIOR/Bedroom 1 SW	B Wall Beige Drywall	0.00
3/28/19-489	INTERIOR/Bedroom 1 SW	C Wall Beige Drywall	0.00
3/28/19-490	INTERIOR/Bedroom 1 SW	D Wall Beige Drywall	0.00
3/28/19-491	INTERIOR/Bedroom 1 SW	Ceiling Beige Drywall	0.00
3/28/19-492	INTERIOR/Bedroom 1 SW	A Door Brown Wood	0.02
3/28/19-493	INTERIOR/Bedroom 1 SW	A Door Casing Beige Metal	0.05
3/28/19-494	INTERIOR/Bedroom 1 SW	B Door Brown Wood	0.03
3/28/19-495	INTERIOR/Bedroom 1 SW	B Door Casing Beige Metal	0.03
3/28/19-496	INTERIOR/Bedroom 1 SW	C Window Sill Beige Wood	0.00
3/28/19-497	INTERIOR/Bedroom 1 SW	C Window Casing Brown Metal	0.00
3/28/19-498	INTERIOR/Bedroom 1 SW	C Window Sash Brown Metal	0.00
3/28/19-499	INTERIOR/Bedroom 1 SW	A Baseboard Grey Wood	0.04
3/28/19-500	INTERIOR/Bedroom 1 SW	B Baseboard Grey Wood	0.13
3/28/19-501	INTERIOR/Bedroom 1 SW	C Baseboard Grey Wood	0.12
3/28/19-502	INTERIOR/Bedroom 1 SW	D Baseboard Grey Wood	0.07

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
9 PARNELL AVENUE, APARTMENT B (MEASURED 3/28/2019)			
3/28/19-503	INTERIOR/Bedroom 1 Closet	A Wall Beige Drywall	0.00
3/28/19-504	INTERIOR/Bedroom 1 Closet	B Wall Beige Drywall	0.00
3/28/19-505	INTERIOR/Bedroom 1 Closet	C Wall Beige Drywall	0.00
3/28/19-506	INTERIOR/Bedroom 1 Closet	D Wall Beige Drywall	0.00
3/28/19-507	INTERIOR/Bedroom 1 Closet	Ceiling Beige Drywall	0.00
3/28/19-508	INTERIOR/Bedroom 1 Closet	C Door Brown Wood	0.00
3/28/19-509	INTERIOR/Bedroom 1 Closet	C Door Casing Beige Metal	0.05
3/28/19-510	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.01
3/28/19-511	INTERIOR/Bedroom 1 Closet	Shelf Support B Beige Wood	0.02
3/28/19-512	INTERIOR/Hall Closet	A Wall Beige Drywall	0.00
3/28/19-513	INTERIOR/Hall Closet	B Wall Beige Drywall	0.00
3/28/19-514	INTERIOR/Hall Closet	C Wall Beige Drywall	0.00
3/28/19-515	INTERIOR/Hall Closet	Ceiling Beige Drywall	0.00
3/28/19-516	INTERIOR/Hall Closet	D Door Brown Wood	0.01
3/28/19-517	INTERIOR/Hall Closet	D Door Casing Beige Metal	0.07
3/28/19-518	INTERIOR/Hall Closet	Shelf Beige Wood	0.07
3/28/19-519	INTERIOR/Hall Closet	Shelf Support A Beige Wood	0.06
3/28/19-520	INTERIOR/Hall Closet	A Baseboard Beige Wood	0.03
3/28/19-521	INTERIOR/Hall Closet	B Baseboard Beige Wood	0.03
3/28/19-522	INTERIOR/Hall Closet	C Baseboard Beige Wood	0.05
3/28/19-523	INTERIOR/ Bedroom 2 SE	A Wall Beige Drywall	0.00
3/28/19-524	INTERIOR/ Bedroom 2 SE	B Wall Beige Drywall	0.00
3/28/19-525	INTERIOR/ Bedroom 2 SE	C Wall Beige Drywall	0.00
3/28/19-526	INTERIOR/ Bedroom 2 SE	D Wall Beige Drywall	0.00
3/28/19-527	INTERIOR/ Bedroom 2 SE	Ceiling Beige Drywall	0.00
3/28/19-528	INTERIOR/ Bedroom 2 SE	A Window Sill Beige Wood	0.00
3/28/19-529	INTERIOR/ Bedroom 2 SE	A Window Casing Brown Metal	0.00
3/28/19-530	INTERIOR/ Bedroom 2 SE	A Window Sash Brown Metal	0.00
3/28/19-531	INTERIOR/ Bedroom 2 SE	C Door Brown Wood	0.05
3/28/19-532	INTERIOR/ Bedroom 2 SE	C Door Casing Beige Metal	0.13
Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
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	9 PARNELL AVENI	UE, APARTMENT B (MEASURED 3/28/2019)	
3/28/19-533	INTERIOR/ Bedroom 2 SE	D Door Brown Wood	0.00
3/28/19-534	INTERIOR/ Bedroom 2 SE	D Door Casing Beige Metal	0.02
3/28/19-535	INTERIOR/ Bedroom 2 SE	A Baseboard Beige Wood	0.04
3/28/19-536	INTERIOR/ Bedroom 2 SE	B Baseboard Beige Wood	0.15
3/28/19-537	INTERIOR/ Bedroom 2 SE	C Baseboard Beige Wood	0.03
3/28/19-538	INTERIOR/ Bedroom 2 SE	D Baseboard Beige Wood	0.10
3/28/19-539	INTERIOR/ Bedroom 2 Closet	A Wall Beige Drywall	0.00
3/28/19-540	INTERIOR/ Bedroom 2 Closet	B Wall Beige Drywall	0.00
3/28/19-541	INTERIOR/ Bedroom 2 Closet	C Wall Beige Drywall	0.00
3/28/19-542	INTERIOR/ Bedroom 2 Closet	D Wall Beige Drywall	0.00
3/28/19-543	INTERIOR/ Bedroom 2 Closet	Ceiling Beige Drywall	0.00
3/28/19-545	INTERIOR/ Bedroom 2 Closet	B Door Brown Wood	0.02
3/28/19-546	INTERIOR/ Bedroom 2 Closet	B Door Casing Beige Metal	0.04
3/28/19-547	INTERIOR/ Bedroom 2 Closet	Shelf Beige Wood	0.01
3/28/19-548	INTERIOR/ Bedroom 2 Closet	Shelf Support B Beige Wood	0.05
3/28/19-185	EXTERIOR/Porch	A Wall White Brick	>1.91
3/28/19-186	EXTERIOR/Porch	B Wall White Brick	>1.31
3/28/19-187	EXTERIOR/Porch	C Wall White Brick	>2.07
3/28/19-188	EXTERIOR/Porch	Storm Door Brown Metal	0.00
3/28/19-189	EXTERIOR/Porch	Storm Door Casing Brown Metal	0.00
3/28/19-190	EXTERIOR/Porch	Ceiling White Plywood	0.00
3/28/19-191	EXTERIOR/Porch	Painted Tan Brick	0.00
3/28/19-192	EXTERIOR	A Window Casing Brown Metal	0.00
3/28/19-193	EXTERIOR	A Window Sash Brown Metal	0.00
3/28/19-384	EXTERIOR/Porch	A Door Beige Metal	0.00
3/28/19-385	EXTERIOR/Porch	A Door Casing Beige Metal	0.00
3/28/19-549	EXTERIOR/Porch	A Door Grey Metal	0.00
3/28/19-550	EXTERIOR/Rear C	C Storm Door Brown Metal	0.00
3/28/19-551	EXTERIOR/Rear C	C Storm Door Casing Brown Metal	0.00
3/28/19-552	EXTERIOR/Rear C	C Lintel White Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)		
	9 PARNELL AVENUE, APARTMENT B (MEASURED 3/28/2019)				
3/28/19-553	EXTERIOR/Rear C	C Door White Metal	0.00		
3/28/19-554	EXTERIOR/Rear C	C Door Jamb White Wood	0.00		
3/28/19-555	EXTERIOR/Rear C	C Window Casing Brown Metal	0.00		
3/28/19-556	EXTERIOR/Rear C	C Window Lintel Brown Steel	0.00		

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-205	INTERIOR/ Kitchen	A Wall Beige Plaster	0.24
3/28/19-206	INTERIOR/ Kitchen	B Wall Beige Plaster	0.27
3/28/19-207	INTERIOR/ Kitchen	C Wall Beige Plaster	0.38
3/28/19-208	INTERIOR/ Kitchen	D Wall Beige Plaster	0.00
3/28/19-209	INTERIOR/ Kitchen	Ceiling Beige Plaster	0.00
3/28/19-210	INTERIOR/ Kitchen	A Door White Wood	0.00
3/28/19-211	INTERIOR/ Kitchen	A Door Casing Beige Metal	0.09
3/28/19-212	INTERIOR/ Kitchen	C Door Beige Wood	0.00
3/28/19-213	INTERIOR/ Kitchen	C Door Casing Beige Metal	0.87
3/28/19-214	INTERIOR/ Kitchen	A Cabinet Varnished Wood	0.00
3/28/19-215	INTERIOR/ Kitchen	B Cabinet Varnished Wood	0.00
3/28/19-216	INTERIOR/ Kitchen	C Cabinet Varnished Wood	0.00
3/28/19-217	INTERIOR/ Kitchen	B Wall White Ceramic	>1.00
3/28/19-218	INTERIOR/ Living Room	A Wall Beige Plaster	0.18
3/28/19-219	INTERIOR/ Living Room	B Wall Beige Plaster	0.40
3/28/19-220	INTERIOR/ Living Room	C Wall Beige Plaster	0.63
3/28/19-221	INTERIOR/ Living Room	D Wall Beige Plaster	0.49
3/28/19-222	INTERIOR/ Living Room	Ceiling Beige Plaster	0.10
3/28/19-223	INTERIOR/ Living Room	A Window Sill Beige Wood	0.00
3/28/19-224	INTERIOR/ Living Room	A Window Casing Brown Metal	0.00
3/28/19-225	INTERIOR/ Living Room	A Window Sash Brown Metal	0.00
3/28/19-226	INTERIOR/ Living Room	C Window Sill Beige Wood	0.00
3/28/19-227	INTERIOR/ Living Room	C Window Casing Brown Metal	0.00
3/28/19-228	INTERIOR/ Living Room	C Window Sash Brown Metal	0.00
3/28/19-229	INTERIOR/ Living Room	B Door Beige Wood	0.75
3/28/19-230	INTERIOR/ Living Room	B Door Casing Beige Metal	0.13
3/28/19-231	INTERIOR/ Living Room	C Door Beige Metal	0.00
3/28/19-232	INTERIOR/ Living Room	C Door Casing Beige Metal	0.11
3/28/19-233	INTERIOR/ Living Room	A Baseboard Beige Wood	0.05
3/28/19-234	INTERIOR/ Living Room	B Baseboard Beige Wood	0.30
3/28/19-235	INTERIOR/ Living Room	C Baseboard Beige Wood	0.30
3/28/19-236	INTERIOR/ Living Room	D Baseboard Beige Wood	0.27

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-237	INTERIOR/ Living Room Closet	A Wall Beige Drywall	0.08
3/28/19-238	INTERIOR/ Living Room Closet	B Wall Beige Drywall	0.42
3/28/19-239	INTERIOR / Living Room Closet	C Wall Beige Drywall	0.21
3/28/19-240	INTERIOR / Living Room Closet	D Wall Beige Drywall	0.22
3/28/19-241	INTERIOR / Living Room Closet	Ceiling Beige Drywall	0.28
3/28/19-242	INTERIOR / Living Room Closet	A Door Beige Wood	0.01
3/28/19-243	INTERIOR/ Living Room Closet	A Door Casing Beige Metal	>1.00
3/28/19-244	INTERIOR / Living Room Closet	Shelf Beige Wood	0.00
3/28/19-245	INTERIOR / Living Room Closet	B Shelf Support Beige Wood	0.09
3/28/19-246	INTERIOR / Living Room Closet	A Baseboard Beige Wood	0.07
3/28/19-247	INTERIOR / Living Room Closet	B Baseboard Beige Wood	0.17
3/28/19-248	INTERIOR / Living Room Closet	C Baseboard Beige Wood	0.16
3/28/19-249	INTERIOR / Living Room Closet	D Baseboard Beige Wood	0.20
3/28/19-250	INTERIOR/ Basement	A Wall Beige Plaster	0.00
3/28/19-251	INTERIOR/ Basement	B Wall Beige Plaster	0.02
3/28/19-252	INTERIOR/ Basement	C Wall Beige Plaster	0.00
3/28/19-253	INTERIOR/ Basement	D Wall Beige Plaster	0.00
3/28/19-254	INTERIOR/ Basement	Ceiling Beige Plaster	0.00
3/28/19-255	INTERIOR/ Basement	C Door Beige Wood	0.00
3/28/19-256	INTERIOR/ Basement	C Door Casing Beige Metal	0.11
3/28/19-257	INTERIOR/ Basement	Handrail Brown Wood	0.53
3/28/19-258	INTERIOR/ Basement	A Wall Trim Beige Wood	0.08
3/28/19-259	INTERIOR/ Basement	B Wall Trim Beige Wood	0.00
3/28/19-260	INTERIOR/ Basement	D Wall Trim Beige Wood	0.10
3/28/19-261	INTERIOR / Basement	B Stringer Gray Wood	0.23
3/28/19-262	INTERIOR / Basement	D Stringer Gray Wood	0.30
3/28/19-263	INTERIOR/ Basement	Stair Tread Gray Wood	0.37

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	11 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-264	INTERIOR/ Basement	Beam Gray Steel	0.63
3/28/19-265	INTERIOR/ Basement	A Post Gray Steel	0.64
3/28/19-266	INTERIOR/ Basement	A Wall Beige Concrete	>1.00
3/28/19-267	INTERIOR/ Basement	B Wall Beige Block	0.11
3/28/19-268	INTERIOR/ Basement	C Wall Beige Concrete	0.00
3/28/19-269	INTERIOR/ Basement	D Wall Beige Block	0.00
3/28/19-270	INTERIOR/ Basement	Floor Blue Cement	0.00
3/28/19-271	INTERIOR/ Stairs	A Wall Beige Plaster	0.32
3/28/19-272	INTERIOR/ Stairs	B Wall Beige Plaster	0.00
3/28/19-273	INTERIOR/ Stairs	D Wall Beige Plaster	0.05
3/28/19-274	INTERIOR/ Stairs	Ceiling Beige Plaster	0.75
3/28/19-275	INTERIOR/ Stairs	Handrail Varnish Wood	0.02
3/28/19-276	INTERIOR/ Stairs	B Stringer Brown Wood	0.13
3/28/19-277	INTERIOR/ Stairs	D Stringer Brown Wood	0.06
3/28/19-278	INTERIOR/ Stairs	Tread Brown Wood	0.00
3/28/19-279	INTERIOR/ Stairs	Riser Brown Wood	0.00
3/28/19-280	INTERIOR/ Stairs	Floor Brown Wood	0.00
3/28/19-281	INTERIOR/ Stairs	A Baseboard Brown Wood	0.11
3/28/19-282	INTERIOR/ Stairs	B Baseboard Brown Wood	0.16
3/28/19-283	INTERIOR/ Stairs	C Baseboard Brown Wood	0.04
3/28/19-294	INTERIOR/ Hall	B Wall Beige Drywall	0.05
3/28/19-285	INTERIOR/ Hall	C Wall Beige Drywall	0.00
3/28/19-286	INTERIOR/ Hall	D Wall Beige Drywall	0.07
3/28/19-287	INTERIOR/ Hall	Ceiling Beige Drywall	0.07
3/28/19-288	INTERIOR/ Hall	A Door Beige Wood	0.00
3/28/19-289	INTERIOR/ Hall	A Door Casing Beige Metal	>1.00
3/28/19-290	INTERIOR/ Hall	C Door Beige Wood	0.00
3/28/19-291	INTERIOR/ Hall	C Door Casing Beige Metal	0.11
3/28/19-292	INTERIOR/ Hall	D Door Beige Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	11 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-293	INTERIOR/ Hall	D Door Casing Beige Metal	>1.00
3/28/19-294	INTERIOR/ Hall	Wall Cap Beige Wood	1.27
3/28/19-295	INTERIOR/ Hall	B Baseboard Beige Wood	0.09
3/28/19-296	INTERIOR/ Hall	C Baseboard Beige Wood	0.11
3/28/19-297	INTERIOR/ Hall	D Baseboard Beige Wood	0.05
3/28/19-298	INTERIOR/ Bathroom	A Wall Beige Plaster	0.01
3/28/19-299	INTERIOR/ Bathroom	B Wall Beige Plaster	0.18
3/28/19-300	INTERIOR/ Bathroom	C Wall Beige Plaster	0.00
3/28/19-301	INTERIOR/ Bathroom	D Wall Beige Plaster	0.23
3/28/19-302	INTERIOR/ Bathroom	Ceiling White Plaster	0.00
3/28/19-303	INTERIOR/ Bathroom	A Door Beige Wood	0.00
3/28/19-304	INTERIOR/ Bathroom	A Door Casing Beige Metal	0.17
3/28/19-305	INTERIOR/ Bathroom	C Window Sill Beige Wood	0.00
3/28/19-306	INTERIOR/ Bathroom	C Window Casing Brown Metal	0.00
3/28/19-307	INTERIOR/ Bathroom	C Window Sash Brown Metal	0.00
3/28/19-308	INTERIOR/ Bathroom	B Tub White Ceramic Tile	>1.00
3/28/19-309	INTERIOR/ Bathroom	C Tub White Ceramic Tile	>1.00
3/28/19-310	INTERIOR/ Bathroom	D Tub White Ceramic Tile	>1.00
3/28/19-311	INTERIOR/Bedroom 1 NW	A Wall Beige Plaster	0.10
3/28/19-312	INTERIOR/Bedroom 1 NW	B Wall Beige Plaster	0.09
3/28/19-313	INTERIOR/Bedroom 1 NW	C Wall Beige Plaster	0.08
3/28/19-314	INTERIOR/Bedroom 1 NW	D Wall Beige Plaster	0.04
3/28/19-315	INTERIOR/Bedroom 1 NW	Ceiling Beige Plaster	0.33
3/28/19-316	INTERIOR/Bedroom 1 NW	A Door Beige Wood	0.00
3/28/19-317	INTERIOR/Bedroom 1 NW	A Door Casing Beige Metal	0.05
3/28/19-318	INTERIOR/Bedroom 1 NW	B Door Beige Wood	0.01
3/28/19-319	INTERIOR/Bedroom 1 NW	B Door Casing Beige Metal	0.13
3/28/19-320	INTERIOR/Bedroom 1 NW	C Window Sill Beige Wood	0.00
3/28/19-321	INTERIOR/Bedroom 1 NW	C Window Casing Brown Metal	0.00
3/28/19-322	INTERIOR/Bedroom 1 NW	C Window Sash Brown Metal	0.00
3/28/19-323	INTERIOR/Bedroom 1 NW	A Baseboard Beige Wood	0.10

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-324	INTERIOR/Bedroom 1 NW	B Baseboard Beige Wood	0.25
3/28/19-325	INTERIOR/Bedroom 1 NW	C Baseboard Beige Wood	0.10
3/28/19-326	INTERIOR/Bedroom 1 NW	D Baseboard Beige Wood	0.12
3/28/19-327	INTERIOR/Bedroom 1 Closet	A Wall Beige Plaster	0.11
3/28/19-328	INTERIOR/Bedroom 1 Closet	B Wall Beige Plaster	0.21
3/28/19-329	INTERIOR/Bedroom 1 Closet	C Wall Beige Plaster	0.14
3/28/19-330	INTERIOR/Bedroom 1 Closet	D Wall Beige Plaster	0.36
3/28/19-331	INTERIOR/Bedroom 1 Closet	Ceiling Beige Plaster	0.00
3/28/19-332	INTERIOR/Bedroom 1 Closet	C Door Beige Wood	0.00
3/28/19-333	INTERIOR/Bedroom 1 Closet	C Door Casing Beige Metal	>1.00
3/28/19-334	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.06
3/28/19-335	INTERIOR/Bedroom 1 Closet	B Shelf Support Beige Wood	0.03
3/28/19-336	INTERIOR/Bedroom 1 Closet	A Baseboard Beige Wood	0.03
3/28/19-337	INTERIOR/Bedroom 1 Closet	B Baseboard Beige Wood	0.03
3/28/19-338	INTERIOR/Bedroom 1 Closet	C Baseboard Beige Wood	0.07
3/28/19-339	INTERIOR/Bedroom 1 Closet	D Baseboard Beige Wood	0.008
3/28/19-340	INTERIOR/Hall Closet	A Wall Beige Plaster	0.00
3/28/19-341	INTERIOR/Hall Closet	C Wall Beige Plaster	0.00
3/28/19-342	INTERIOR/Hall Closet	D Wall Beige Plaster	0.00
3/28/19-343	INTERIOR/Hall Closet	Ceiling Beige Plaster	0.00
3/28/19-344	INTERIOR/Hall Closet	B Door Beige Wood	0.00
3/28/19-345	INTERIOR/Hall Closet	Shelf Beige Wood	0.00
3/28/19-346	INTERIOR/Hall Closet	B Door Casing Beige Metal	0.19
3/28/19-347	INTERIOR/Hall Closet	A Shelf Support Beige Wood	0.01
3/28/19-348	INTERIOR/Hall Closet	A Baseboard Beige Wood	0.09
3/28/19-349	INTERIOR/Hall Closet	C Baseboard Beige Wood	0.04
3/28/19-350	INTERIOR/Hall Closet	D Baseboard Beige Wood	0.08

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-351	INTERIOR/ Bedroom 2 NE	A Wall Beige Plaster	0.33
3/28/19-352	INTERIOR/ Bedroom 2 NE	B Wall Beige Plaster	0.26
3/28/19-353	INTERIOR/ Bedroom 2 NE	C Wall Beige Plaster	0.10
3/28/19-354	INTERIOR/ Bedroom 2 NE	D Wall Beige Plaster	0.21
3/28/19-355	INTERIOR/ Bedroom 2 NE	Ceiling Beige Plaster	0.08
3/28/19-356	INTERIOR/ Bedroom 2 NE	A Window Sill Beige Wood	0.02
3/28/19-357	INTERIOR/ Bedroom 2 NE	A Window Casing Brown Metal	0.00
3/28/19-358	INTERIOR/ Bedroom 2 NE	A Window Sash Brown Metal	0.00
3/28/19-359	INTERIOR/ Bedroom 2 NE	B Door Beige Wood	0.00
3/28/19-360	INTERIOR/ Bedroom 2 NE	B Door Casing Beige Metal	0.10
3/28/19-361	INTERIOR/ Bedroom 2 NE	C Door Beige Wood	0.09
3/28/19-362	INTERIOR/ Bedroom 2 NE	C Door Casing Beige Metal	0.02
3/28/19-363	INTERIOR/ Bedroom 2 NE	A Baseboard Beige Wood	0.08
3/28/19-364	INTERIOR/ Bedroom 2 NE	B Baseboard Beige Wood	0.05
3/28/19-365	INTERIOR/ Bedroom 2 NE	C Baseboard Beige Wood	0.08
3/28/19-366	INTERIOR/ Bedroom 2 NE	D Baseboard Beige Wood	0.11
3/28/19-367	INTERIOR/ Bedroom 2 Closet	A Wall Beige Plaster	0.08
3/28/19-368	INTERIOR/ Bedroom 2 Closet	B Wall Beige Plaster	0.09
3/28/19-369	INTERIOR/ Bedroom 2 Closet	C Wall Beige Plaster	0.16
3/28/19-370	INTERIOR/ Bedroom 2 Closet	D Wall Beige Plaster	0.18
3/28/19-371	INTERIOR/ Bedroom 2 Closet	Ceiling Beige Plaster	0.13
3/28/19-372	INTERIOR/ Bedroom 2 Closet	D Door Beige Wood	0.00
3/28/19-373	INTERIOR/ Bedroom 2 Closet	D Door Casing Beige Metal	0.12
3/28/19-374	INTERIOR / Bedroom 2 Closet	Shelf Beige Wood	0.01
3/28/19-375	INTERIOR/ Bedroom 2 Closet	A Shelf Support Beige Wood	0.04
3/28/19-376	INTERIOR/ Bedroom 2 Closet	A Baseboard Beige Wood	0.06
3/28/19-377	INTERIOR/ Bedroom 2 Closet	B Baseboard Beige Wood	0.01
3/28/19-378	INTERIOR/ Bedroom 2 Closet	C Baseboard Beige Wood	0.05
3/28/19-379	INTERIOR/ Bedroom 2 Closet	D Baseboard Beige Wood	0.04

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	11 PARNELL AVEN	UE, APARTMENT A (MEASURED 3/28/2019)	
3/28/19-194	EXTERIOR/Porch A	A Window Casing Brown Metal	0.00
3/28/19-195	EXTERIOR/Porch A	A Window Sash Brown Metal	0.00
3/28/19-196	EXTERIOR/Porch A	A Trim Tan Wood	0.00
3/28/19-197	EXTERIOR/Porch	A Wall Tan Brick	0.02
3/28/19-198	EXTERIOR/Porch	A Wall White Brick	0.09
3/28/19-199	EXTERIOR/Porch	C Wall White Brick	>1.00
3/28/19-200	EXTERIOR/Rear C	D Wall White Brick	0.03
3/28/19-201	EXTERIOR/Rear C	D Storm Door Brown Metal	0.00
3/28/19-202	EXTERIOR/Rear C	D Storm Door Casing White Metal	1.34
3/28/19-203	EXTERIOR/Rear C	D Door White Metal	1.88
3/28/19-204	EXTERIOR/Rear C	Ceiling White Wood	0.44

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	11 PARNELL AVENUI	E, APARTMENT B (MEASURED 3/28 & 29/2019)	
3/29/19-03	INTERIOR/ Kitchen	A Wall Beige Plaster	0.17
3/29/19-04	INTERIOR/ Kitchen	B Wall Beige Plaster	0.00
3/29/19-05	INTERIOR/ Kitchen	C Wall Beige Plaster	0.23
3/29/19-06	INTERIOR/ Kitchen	D Wall Beige Plaster	0.10
3/29/19-07	INTERIOR/ Kitchen	A Door Brown Wood	0.00
3/29/19-08	INTERIOR/ Kitchen	A Door Casing Beige Metal	>1.00
3/29/19-09	INTERIOR/ Kitchen	Ceiling Beige Plaster	0.00
3/29/19-10	INTERIOR/ Kitchen	C Door Beige Metal	0.00
3/29/19-11	INTERIOR/ Kitchen	C Door Casing Beige Metal	0.00
3/29/19-12	INTERIOR/ Kitchen	A Cabinet Varnished Wood	0.00
3/29/19-13	INTERIOR/ Kitchen	C Cabinet Varnished Wood	0.00
3/29/19-14	INTERIOR/ Kitchen	D Cabinet Varnished Wood	0.00
3/29/19-15	INTERIOR/ Kitchen	D Wall White Ceramic	0.00
3/29/19-16	INTERIOR/ Living Room	A Wall Beige Plaster	0.02
3/29/19-17	INTERIOR/ Living Room	B Wall Beige Plaster	0.04
3/29/19-18	INTERIOR/ Living Room	C Wall Beige Plaster	0.00
3/29/19-19	INTERIOR/ Living Room	D Wall Beige Plaster	0.00
3/29/19-20	INTERIOR/ Living Room	A Window Sill Beige Wood	0.00
3/29/19-21	INTERIOR/ Living Room	A Window Casing Brown Metal	0.00
3/29/19-22	INTERIOR/ Living Room	A Window Sash Brown Metal	0.00
3/29/19-23	INTERIOR/ Living Room	B Window Sill Beige Wood	0.03
3/29/19-24	INTERIOR/ Living Room	B Window Casing Brown Metal	0.00
3/29/19-25	INTERIOR/ Living Room	B Window Sash Brown Metal	0.00
3/29/19-26	INTERIOR/ Living Room	C Window Sill Beige Wood	0.07
3/29/19-27	INTERIOR/ Living Room	C Window Casing Brown Metal	0.00
3/29/19-28	INTERIOR/ Living Room	C Window Sash Brown Metal	0.00
3/29/19-29	INTERIOR/ Living Room	C Door Beige Wood	0.00
3/29/19-30	INTERIOR/ Living Room	C Door Casing Beige Metal	0.15
3/29/19-31	INTERIOR/ Living Room	D Door Beige Metal	0.00
3/29/19-32	INTERIOR/ Living Room	D Door Casing Beige Metal	0.00
3/29/19-33	INTERIOR/ Living Room	A Baseboard Beige Wood	0.40

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVENUE	, APARTMENT B (MEASURED 3/28 & 29/2019)	
3/29/19-34	INTERIOR / Living Room	B Baseboard Beige Wood	0.45
3/29/19-35	INTERIOR/ Living Room	C Baseboard Beige Wood	>1.00
3/29/19-36	INTERIOR / Living Room	D Baseboard Beige Wood	0.34
3/29/19-37	INTERIOR / Living Room	Ceiling Beige Plaster	0.08
3/29/19-38	INTERIOR/ Living Room Closet	A Wall Beige Drywall	0.04
3/29/19-39	INTERIOR/ Living Room Closet	B Wall Beige Drywall	>1.00
3/29/19-40	INTERIOR/ Living Room Closet	C Wall Beige Drywall	0.03
3/29/19-41	INTERIOR/ Living Room Closet	D Wall Beige Drywall	0.02
3/29/19-42	INTERIOR/ Living Room Closet	Ceiling Beige Drywall	>1.00
3/29/19-43	INTERIOR/ Living Room Closet	A Door Brown Wood	0.00
3/29/19-44	INTERIOR/ Living Room Closet	A Door Casing Beige Metal	0.17
3/29/19-45	INTERIOR/ Living Room Closet	Shelf Beige Wood	0.21
3/29/19-46	INTERIOR/ Living Room Closet	B Shelf Support Beige Wood	0.12
3/29/19-47	INTERIOR/ Living Room Closet	A Baseboard Beige Wood	0.13
3/29/19-48	INTERIOR/ Living Room Closet	B Baseboard Beige Wood	0.41
3/29/19-49	INTERIOR/ Living Room Closet	C Baseboard Beige Wood	0.13
3/29/19-50	INTERIOR/ Living Room Closet	D Baseboard Beige Wood	0.36
3/29/19-51	INTERIOR / Basement	A Wall Beige Plaster	0.00
3/29/19-52	INTERIOR / Basement	B Wall Beige Plaster	0.00
3/29/19-53	INTERIOR / Basement	C Wall Beige Plaster	0.00
3/29/19-54	INTERIOR / Basement	D Wall Beige Plaster	0.00
3/29/19-55	INTERIOR/ Basement	Ceiling Beige Plaster	0.00
3/29/19-56	INTERIOR/ Basement	C Door Beige Wood	0.02
3/29/19-57	INTERIOR/ Basement	C Door Casing Beige Metal	0.10
3/29/19-58	INTERIOR/ Basement	Handrail Gray Wood	0.00
3/29/19-59	INTERIOR/ Basement	B Stringer Gray Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	11 PARNELL AVENUE	E, APARTMENT B (MEASURED 3/28 & 29/2019)	
3/29/19-60	INTERIOR/ Basement	D Stringer Gray Wood	0.00
3/29/19-61	INTERIOR/ Basement	Stair Tread Gray Wood	0.00
3/29/19-62	INTERIOR/ Basement	A Wall Trim Beige Wood	0.13
3/29/19-63	INTERIOR/ Basement	B Wall Trim Beige Wood	0.01
3/29/19-64	INTERIOR/ Basement	D Wall Trim Beige Wood	0.06
3/29/19-65	INTERIOR/ Basement	Beam Gray Steel	0.58
3/29/19-66	INTERIOR/ Basement	C Post Gray Steel	0.60
3/29/19-67	INTERIOR/ Basement	A Wall Beige Block	0.11
3/29/19-68	INTERIOR/ Basement	B Wall Beige Concrete	0.00
3/29/19-69	INTERIOR/ Basement	C Wall Beige Concrete	>1.00
3/29/19-70	INTERIOR/ Basement	D Wall Beige Block	0.00
3/29/19-71	INTERIOR/ Basement	Floor Brown Cement	0.04
3/29/19-72	INTERIOR/ Stairs	A Wall Beige Plaster	0.06
3/29/19-73	INTERIOR/ Stairs	B Wall Beige Plaster	0.02
3/29/19-74	INTERIOR/ Stairs	D Wall Beige Plaster	0.03
3/29/19-75	INTERIOR/ Stairs	Ceiling Beige Plaster	0.07
3/29/19-76	INTERIOR/ Stairs	Handrail Varnish Wood	0.02
3/29/19-77	INTERIOR/ Stairs	B Stringer Brown Wood	1.02
3/29/19-78	INTERIOR/ Stairs	D Stringer Brown Wood	0.74
3/29/19-79	INTERIOR/ Stairs	Tread Brown Wood	0.00
3/29/19-80	INTERIOR/ Stairs	Riser Brown Wood	1.07
3/29/19-81	INTERIOR/ Stairs	Floor Brown Wood	0.00
3/29/19-82	INTERIOR/ Stairs	A Baseboard Brown Wood	0.50
3/29/19-83	INTERIOR/ Stairs	C Baseboard Brown Wood	0.45
3/29/19-84	INTERIOR/ Stairs	D Baseboard Brown Wood	0.61
3/29/19-85	INTERIOR/ Hall	A Wall Beige Drywall	0.05
3/29/19-86	INTERIOR/ Hall	B Wall Beige Drywall	0.03
3/29/19-87	INTERIOR/ Hall	C Wall Beige Drywall	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVENUE	, APARTMENT B (MEASURED 3/28 & 29/2019)	
3/29/19-88	INTERIOR/ Hall	D Wall Beige Drywall	0.00
3/29/19-89	INTERIOR/ Hall	Ceiling Beige Drywall	0.07
3/29/19-90	INTERIOR/ Hall	A Door Beige Wood	0.02
3/29/19-91	INTERIOR/ Hall	A Door Casing Beige Metal	0.23
3/29/19-92	INTERIOR/ Hall	B Door Beige Wood	0.00
3/29/19-93	INTERIOR/ Hall	B Door Casing Beige Metal	0.22
3/29/19-94	INTERIOR/ Hall	C Door Beige Wood	0.00
3/29/19-95	INTERIOR/ Hall	C Door Casing Beige Metal	0.19
3/29/19-96	INTERIOR/ Hall	Wall Cap Beige Wood	0.20
3/29/19-97	INTERIOR/ Hall	B Baseboard Beige Wood	0.07
3/29/19-98	INTERIOR/ Hall	C Baseboard Beige Wood	0.40
3/29/19-99	INTERIOR/ Hall	D Baseboard Beige Wood	0.58
3/29/19-100	INTERIOR/ Bathroom	A Wall Beige Plaster	0.02
3/29/19-101	INTERIOR/ Bathroom	B Wall Beige Plaster	0.06
3/29/19-102	INTERIOR/ Bathroom	C Wall Beige Plaster	0.00
3/29/19-103	INTERIOR/ Bathroom	D Wall Beige Plaster	0.05
3/29/19-104	INTERIOR/ Bathroom	Ceiling White Plaster	0.00
3/29/19-105	INTERIOR/ Bathroom	A Door White Wood	0.00
3/29/19-106	INTERIOR/ Bathroom	A Door Casing Beige Metal	0.15
3/29/19-107	INTERIOR/ Bathroom	C Window Sill Beige Wood	0.00
3/29/19-108	INTERIOR/ Bathroom	C Window Casing Brown Metal	0.00
3/29/19-109	INTERIOR/ Bathroom	C Window Sash Brown Metal	0.00
3/29/19-110	INTERIOR/ Bathroom	B Tub White Ceramic Tile	>1.00
3/29/19-111	INTERIOR/ Bathroom	C Tub White Ceramic Tile	>1.00
3/29/19-112	INTERIOR/ Bathroom	D Tub White Ceramic Tile	>1.00
3/29/19-113	INTERIOR/Bedroom 1 SW	A Wall Beige Plaster	0.24
3/29/19-114	INTERIOR/Bedroom 1 SW	B Wall Beige Plaster	0.28
3/29/19-115	INTERIOR/Bedroom 1 SW	C Wall Beige Plaster	0.42
33/29/19-116	INTERIOR/Bedroom 1 SW	D Wall Beige Plaster	0.39
33/29/19-117	INTERIOR/Bedroom 1 SW	Ceiling Beige Plaster	0.00
3/29/19-118	INTERIOR/Bedroom 1 SW	A Door Beige Wood	0.00
3/29/19-119	INTERIOR/Bedroom 1 SW	A Door Casing Beige Metal	0.09
3/29/19-120	INTERIOR/Bedroom 1 SW	D Door Beige Wood	0.04

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVENUE	, APARTMENT B (MEASURED 3/28 & 29/2019)	•
3/29/19-121	INTERIOR/Bedroom 1 SW	D Door Casing Beige Metal	>1.00
3/29/19-122	INTERIOR/Bedroom 1 SW	B Window Sill Beige Wood	0.32
33/29/19-123	INTERIOR/Bedroom 1 SW	B Window Casing Brown Metal	0.00
3/29/19-124	INTERIOR/Bedroom 1 SW	B Window Sash Brown Metal	0.00
3/29/19-125	INTERIOR/Bedroom 1 SW	C Window Sill Beige Wood	0.50
3/29/19-126	INTERIOR/Bedroom 1 SW	C Window Casing Brown Metal	0.00
3/29/19-127	INTERIOR/Bedroom 1 SW	C Window Sash Brown Metal	0.00
3/29/19-128	INTERIOR/Bedroom 1 Closet	A Wall Beige Plaster	>1.00
3/29/19-129	INTERIOR/Bedroom 1 Closet	B Wall Beige Plaster	>1.00
3/29/19-130	INTERIOR/Bedroom 1 Closet	C Wall Beige Plaster	>1.00
3/29/19-131	INTERIOR/Bedroom 1 Closet	D Wall Beige Plaster	0.36
3/29/19-132	INTERIOR/Bedroom 1 Closet	Ceiling Beige Plaster	>1.00
3/29/19-133	INTERIOR/Bedroom 1 SW	A Baseboard Beige Wood	0.34
3/29/19-134	INTERIOR/Bedroom 1 SW	B Baseboard Beige Wood	0.42
3/29/19-135	INTERIOR/Bedroom 1 SW	C Baseboard Beige Wood	0.48
3/29/19-136	INTERIOR/Bedroom 1 SW	D Baseboard Beige Wood	0.32
3/29/19-137	INTERIOR/Bedroom 1 Closet	A Door Beige Wood	0.02
3/29/19-138	INTERIOR/Bedroom 1 Closet	A Door Casing Beige Metal	0.15
3/29/19-139	INTERIOR/Bedroom 1 Closet	A Shelf Beige Wood	0.39
3/29/19-140	INTERIOR/Bedroom 1 Closet	A Shelf Support Beige Wood	0.37
3/29/19-141	INTERIOR/Bedroom 1 Closet	A Baseboard Beige Wood	0.49
3/29/19-142	INTERIOR/Bedroom 1 Closet	B Baseboard Beige Wood	0.39
3/29/19-143	INTERIOR/Bedroom 1 Closet	C Baseboard Beige Wood	0.23
3/29/19-144	INTERIOR/Bedroom 1 Closet	D Baseboard Beige Wood	0.30

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVENUE	E, APARTMENT B (MEASURED 3/28 & 29/2019)	
3/29/19-145	INTERIOR/Hall Closet	A Wall Beige Plaster	0.05
3/29/19-146	INTERIOR/Hall Closet	B Wall Beige Plaster	0.06
3/29/19-147	INTERIOR/Hall Closet	C Wall Beige Plaster	>1.00
3/29/19-148	INTERIOR/Hall Closet	Ceiling Beige Plaster	0.13
3/29/19-149	INTERIOR/Hall Closet	D Door Brown Wood	0.00
3/29/19-150	INTERIOR/Hall Closet	D Door Casing Beige Metal	0.05
3/29/19-151	INTERIOR/Hall Closet	Shelf Beige Wood	0.03
3/29/19-152	INTERIOR/Hall Closet	C Shelf Support Beige Wood	0.05
3/29/19-153	INTERIOR/Hall Closet	A Baseboard Beige Wood	0.35
3/29/19-154	INTERIOR/Hall Closet	B Baseboard Beige Wood	0.33
3/29/19-155	INTERIOR/Hall Closet	C Baseboard Beige Wood	0.40
3/29/19-156	INTERIOR/ Bedroom 2 SE	A Wall Beige Plaster	0.01
3/29/19-157	INTERIOR/ Bedroom 2 SE	B Wall Beige Plaster	0.00
3/29/19-158	INTERIOR/ Bedroom 2 SE	C Wall Beige Plaster	0.00
3/29/19-159	INTERIOR/ Bedroom 2 SE	D Wall Beige Plaster	0.13
3/29/19-160	INTERIOR/ Bedroom 2 SE	Ceiling Beige Plaster	0.00
3/29/19-161	INTERIOR/ Bedroom 2 SE	A Window Sill Beige Wood	0.01
3/29/19-162	INTERIOR/ Bedroom 2 SE	A Window Casing Brown Metal	0.00
3/29/19-163	INTERIOR/ Bedroom 2 SE	A Window Sash Brown Metal	0.00
3/29/19-164	INTERIOR/ Bedroom 2 SE	B Window Sill Beige Wood POOR	0.00
3/29/19-165	INTERIOR/ Bedroom 2 SE	B Window Casing Brown Metal	0.00
3/29/19-166	INTERIOR/ Bedroom 2 SE	B Window Sash Brown Metal	0.00
3/29/19-167	INTERIOR/ Bedroom 2 SE	C Door Beige Wood	0.02
3/29/19-168	INTERIOR/ Bedroom 2 SE	C Door Casing Beige Metal	0.10
3/29/19-169	INTERIOR/ Bedroom 2 SE	D Door Beige Wood	0.00
3/29/19-170	INTERIOR/ Bedroom 2 SE	D Door Casing Beige Metal	0.08
3/29/19-171	INTERIOR / Bedroom 2 SE	A Baseboard Beige Wood	0.36
3/29/19-172	INTERIOR/ Bedroom 2 SE	B Baseboard Beige Wood	0.31
3/29/19-173	INTERIOR/ Bedroom 2 SE	C Baseboard Beige Wood	0.36
3/29/19-174	INTERIOR/ Bedroom 2 SE	D Baseboard Beige Wood	0.35

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVENU	E, APARTMENT B (MEASURED 3/28 & 29/2019)	
3/29/19-175	INTERIOR / Bedroom 2 Closet	A Wall Beige Plaster	0.29
3/29/19-176	INTERIOR/ Bedroom 2 Closet	B Wall Beige Plaster	0.20
3/29/19-177	INTERIOR/ Bedroom 2 Closet	C Wall Beige Plaster	0.35
3/29/19-178	INTERIOR/ Bedroom 2 Closet	D Wall Beige Plaster	0.02
3/29/19-179	INTERIOR/ Bedroom 2 Closet	Ceiling Beige Plaster	0.13
3/29/19-180	INTERIOR/ Bedroom 2 Closet	B Door Beige Wood	0.00
3/29/19-181	INTERIOR/ Bedroom 2 Closet	B Door Casing Beige Metal	0.12
3/29/19-182	INTERIOR/ Bedroom 2 Closet	Shelf Beige Wood	0.07
3/29/19-183	INTERIOR/ Bedroom 2 Closet	A Shelf Support Beige Wood	0.09
3/29/19-184	INTERIOR/ Bedroom 2 Closet	A Baseboard Beige Wood	0.29
3/29/19-185	INTERIOR/ Bedroom 2 Closet	B Baseboard Beige Wood	0.36
3/29/19-186	INTERIOR/ Bedroom 2 Closet	C Baseboard Beige Wood	0.52
3/29/19-187	INTERIOR/ Bedroom 2 Closet	D Baseboard Beige Wood	0.36
3/29/19-188	INTERIOR/ Bedroom 2 SE	A Blinds White Vinyl	0.00
3/28/19-557	EXTERIOR/Rear C	C Storm Door Brown Metal	0.00
3/28/19-558	EXTERIOR/Rear C	C Storm Door Casing Brown Metal	0.00
3/28/19-559	EXTERIOR/Rear C	C Door Beige Metal	0.00
3/28/19-560	EXTERIOR/Rear C	C Door Casing Beige Metal	0.00
3/28/19-561	EXTERIOR/Rear C	C Lintel Beige Wood	0.01
3/28/19-562	EXTERIOR/Rear C	C Window Casing Brown Metal	0.00
3/28/19-563	EXTERIOR/Rear C	C Window Sash Brown Metal	0.00
3/28/19-564	EXTERIOR/Rear C	C Window Lintel Brown Steel	0.07
3/28/19-565	EXTERIOR/Side B	B Window Casing Brown Metal	0.00
3/28/19-566	EXTERIOR/Side B	B Window Sash Brown Metal	0.00
3/28/19-567	EXTERIOR/Side B	B Window Lintel Brown Steel	0.17
3/28/19-568	EXTERIOR/Front A	A Window Casing Brown Metal	0.00
3/28/19-569	EXTERIOR/Front A	A Window Sash Brown Metal	0.00
3/28/19-570	EXTERIOR/Front A	A Window Lintel Brown Steel	0.14
3/28/19-571	EXTERIOR/Porch A	A Trim Tan Wood	0.00
3/28/19-572	EXTERIOR/Porch A	A Wall White Brick	0.04

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	11 PARNELL AVENUE	, APARTMENT B (MEASURED 3/28 & 29/2019)	
3/28/19-573	EXTERIOR/Porch A	B Wall White Brick	0.03
3/28/19-574	EXTERIOR/Porch A	C Wall White Brick	0.20
3/28/19-575	EXTERIOR/Porch A	Ceiling White Wood	0.01
3/28/19-576	EXTERIOR/Porch A	B Wall Tan Brick	0.04
3/28/19-578	EXTERIOR/Porch A	B Storm Door Brown Metal	0.00
3/28/19-579	EXTERIOR/Porch A	B Door Casing White Wood	0.00
3/28/19-580	EXTERIOR/Porch A	B Door White Metal	0.00
3/28/19-581	EXTERIOR/Porch A	B Door Casing White Wood	0.00
3/28/19-582	EXTERIOR/Porch A	B Lintel White Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1202 HUFFMAN AVENU	JE, APARTMENT A (MEASURED 3/25 & 26/2019)	
3/25/19-05	INTERIOR/Kitchen	B Wall Beige Drywall	0.29
3/25/19-06	INTERIOR/Kitchen	C Wall Beige Drywall	0.29
3/25/19-07	INTERIOR/Kitchen	D Wall Beige Drywall	0.00
3/25/19-08	INTERIOR / Kitchen	A Wall Beige Drywall	0.20
3/25/19-09	INTERIOR / Kitchen	A Door Varnish Wood	0.05
3/25/19-10	INTERIOR / Kitchen	C Door Beige Metal	0.00
3/25/19-11	INTERIOR/Kitchen	B Wall White Ceramic	3.73
3/25/19-12	INTERIOR/Kitchen	A Door Casing Beige Metal	0.13
3/25/19-13	INTERIOR / Kitchen	C Door Casing Beige Metal	0.00
3/25/19-14	INTERIOR / Kitchen	Ceiling Beige Drywall	0.21
3/25/19-15	INTERIOR / Kitchen	B Cabinet Varnish Wood	0.00
3/25/19-16	INTERIOR / Kitchen	C Cabinet Varnish Wood	0.00
3/25/19-17	INTERIOR/Living Room	A Wall Beige Drywall	0.03
3/25/19-18	INTERIOR/Living Room	B Wall Beige Drywall	0.08
3/25/19-19	INTERIOR/Living Room	C Wall Beige Drywall	0.04
3/25/19-20	INTERIOR/Living Room	D Wall Beige Drywall	0.00
3/25/19-21	INTERIOR/Living Room	A Window Sill Brown Wood	0.01
3/25/19-22	INTERIOR/Living Room	C Window Sill Brown Wood	0.00
3/25/19-23	INTERIOR/Living Room	D Window Sill Brown Wood	0.00
3/25/19-24	INTERIOR/Living Room	A Window Casing Brown Metal	0.00
3/25/19-25	INTERIOR/Living Room	C Window Casing Brown Metal	0.00
3/25/19-26	INTERIOR/Living Room	D Window Casing Brown Metal	0.00
3/25/19-27	INTERIOR/Living Room	B Baseboard Beige Wood	0.03
3/25/19-28	INTERIOR/Living Room	A Baseboard Beige Wood	0.49
3/25/19-29	INTERIOR/Living Room	C Baseboard Beige Wood	0.00
3/25/19-30	INTERIOR/Living Room	D Baseboard Beige Wood	0.00
3/25/19-31	INTERIOR/Living Room	A Window Sash Brown Metal	0.00
3/25/19-32	INTERIOR/Living Room	C Window Sash Brown Metal	0.00
3/25/19-33	INTERIOR/Living Room	D Window Sash Brown Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1202 HUFFMAN AVEN	UE, APARTMENT A (MEASURED 3/25 & 26/2019)	
3/25/19-34	INTERIOR/Living Room	Ceiling Beige Drywall	0.14
3/25/19-35	INTERIOR/Living Room	B Door Beige Metal	0.00
3/25/19-36	INTERIOR/Living Room	C Door Beige Wood	0.00
3/25/19-38	INTERIOR/Living Room	B Door Casing Beige Metal	0.00
3/25/19-39	INTERIOR/Living Room	C Door Casing Beige Wood	0.09
3/25/19-37	INTERIOR/Living Room Closet	A Door Beige Wood	0.01
3/25/19-40	INTERIOR/Living Room Closet	A Wall Beige Drywall	0.05
3/25/19-41	INTERIOR/Living Room Closet	B Wall Beige Drywall	0.07
3/25/19-42	INTERIOR/Living Room Closet	C Wall Beige Drywall	0.06
3/25/19-43	INTERIOR/Living Room Closet	D Wall Beige Drywall	0.08
3/25/19-44	INTERIOR/Living Room Closet	A Door Casing Beige Metal	0.11
3/25/19-45	INTERIOR/Living Room Closet	Shelf Beige Wood	0.05
3/25/19-46	INTERIOR/Living Room Closet	B Shelf Support Beige Wood	0.38
3/25/19-47	INTERIOR/Living Room Closet	B Shelf Support Beige Wood	0.39
3/25/19-48	INTERIOR/Living Room Closet	B Baseboard Beige Wood	0.44
3/25/19-49	INTERIOR/Living Room Closet	C Baseboard Beige Wood	0.32
3/25/19-50	INTERIOR/Living Room Closet	D Baseboard Beige Wood	0.40
3/25/19-52	INTERIOR/Basement	Stringer Grey Wood	0.05
3/25/19-53	INTERIOR/Basement	Tread Grey Wood	0.00
3/25/19-54	INTERIOR/Basement	Handrail White Wood	0.14
3/25/19-55	INTERIOR/Basement	Post Grey Metal	0.02
3/25/19-56	INTERIOR/Basement	Beam Grey Steel	0.07
3/25/19-57	INTERIOR/Basement	Ceiling Beige Drywall	0.00
3/25/19-58	INTERIOR/Basement	A Wall Beige Drywall	0.00
3/25/19-59	INTERIOR/Basement	B Wall Beige Drywall	0.00
3/25/19-60	INTERIOR/Basement	C Wall Beige Drywall	0.00
3/25/19-61	INTERIOR/Basement	D Wall Beige Drywall	0.00
3/25/19-62	INTERIOR/Basement	C Door Varnish Wood	0.06
3/25/19-63	INTERIOR/Basement	C Door Casing Beige Metal	0.13

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1202 HUFFMAN AVENU	JE, APARTMENT A (MEASURED 3/25 & 26/2019)	
3/25/19-64	INTERIOR/Basement	B Trim Beige Wood	0.16
3/25/19-65	INTERIOR/Basement	D Trim Beige Wood	0.04
3/25/19-66	INTERIOR/Stairs	A Wall Beige Drywall	0.09
3/25/19-67	INTERIOR/Stairs	B Wall Beige Drywall	0.14
3/25/19-68	INTERIOR/Stairs	C Wall Beige Drywall	0.06
3/25/19-69	INTERIOR/Stairs	D Wall Beige Drywall	0.07
3/25/19-70	INTERIOR/Stairs	B Stringer Beige Wood	0.09
3/25/19-71	INTERIOR/Stairs	D Stringer Beige Wood	0.09
3/25/19-72	INTERIOR/Stairs	Riser Beige Wood	0.16
3/25/19-73	INTERIOR/Stairs	Tread Varnish Wood	0.05
3/25/19-74	INTERIOR/Stairs	Handrail Varnish Wood	0.00
3/25/19-75	INTERIOR/Stairs	Floor Varnish Wood	0.00
3/25/19-76	INTERIOR/Stairs	A Baseboard Beige Wood	0.69
3/25/19-77	INTERIOR/Stairs	B Baseboard Beige Wood	0.61
3/25/19-78	INTERIOR/Stairs	C Baseboard Beige Wood	0.53
3/25/19-79	INTERIOR/Hall	A Wall Beige Drywall	0.11
3/25/19-80	INTERIOR/Hall	B Wall Beige Drywall	0.11
3/25/19-81	INTERIOR/Hall	C Wall Beige Drywall	0.09
3/25/19-82	INTERIOR/Hall	D Wall Beige Drywall	0.11
3/25/19-83	INTERIOR/Hall	Ceiling Beige Drywall	0.03
3/25/19-84	INTERIOR/Hall	C Door Brown Wood	0.02
3/25/19-85	INTERIOR/Hall	C Door Casing Beige Metal	0.13
3/25/19-86	INTERIOR/Hall	B Baseboard Beige Wood	0.42
3/25/19-87	INTERIOR/Hall	C Baseboard Beige Wood	0.57
3/25/19-88	INTERIOR/Hall	D Baseboard Beige Wood	0.63
3/25/19-89	INTERIOR/Hall	D Baseboard Beige Wood	0.58
3/25/19-90	INTERIOR/Hall	D Door Brown Wood	0.02
3/25/19-91	INTERIOR/Hall	D Door Casing Beige Metal	0.07
3/25/19-92	INTERIOR/Hall	A Door Brown Wood	0.01
3/25/19-93	INTERIOR/Hall	A Door Casing Beige Metal	0.17
3/25/19-94	INTERIOR/Hall	Wall Cap Beige Wood	0.49

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1202 HUFFMAN AVEN	UE, APARTMENT A (MEASURED 3/25 & 26/2019)	
3/25/19-95	INTERIOR/Bathroom	A Wall Beige Drywall	0.44
3/25/19-96	INTERIOR/Bathroom	B Wall Beige Drywall	0.00
3/25/19-97	INTERIOR/Bathroom	C Wall Beige Drywall	0.00
3/25/19-98	INTERIOR/Bathroom	D Wall Beige Drywall	0.00
3/25/19-99	INTERIOR/Bathroom	A Door Brown Wood	0.01
3/25/19-100	INTERIOR/Bathroom	A Door Casing Beige Metal	0.19
3/25/19-101	INTERIOR/Bathroom	Ceiling Beige Drywall	0.00
3/25/19-102	INTERIOR/Bathroom	C Window Sill Beige Wood	0.00
3/25/19-103	INTERIOR/Bathroom	C Window Sash Beige Metal	0.00
3/25/19-104	INTERIOR/Bathroom	C Window Casing Brown Metal	0.00
3/25/19-105	INTERIOR/Bathroom	C Wall White Ceramic	>1.00
3/25/19-106	INTERIOR/Bathroom	B Wall White Ceramic	>1.00
3/25/19-107	INTERIOR/Bathroom	D Wall White Ceramic	>1.00
3/25/19-108	INTERIOR/Bedroom 1 SW	A Wall Beige Drywall	0.06
3/25/19-109	INTERIOR/Bedroom 1 SW	B Wall Beige Drywall	0.02
3/25/19-110	INTERIOR/Bedroom 1 SW	C Wall Beige Drywall	0.06
3/25/19-111	INTERIOR/Bedroom 1 SW	D Wall Beige Drywall	0.07
3/25/19-112	INTERIOR/Bedroom 1 SW	Ceiling Beige Drywall	0.03
3/25/19-113	INTERIOR/Bedroom 1 SW	B Door Brown Wood	0.03
3/25/19-114	INTERIOR/Bedroom 1 SW	B Door Casing Beige Metal	0.17
3/25/19-115	INTERIOR/Bedroom 1 SW	A Door Brown Wood	0.01
3/25/19-116	INTERIOR/Bedroom 1 SW	A Door Casing Beige Metal	0.16
3/25/19-117	INTERIOR/Bedroom 1 SW	C Window Sill Beige Wood	0.00
3/25/19-118	INTERIOR/Bedroom 1 SW	C Window Sash Brown Metal	0.00
3/25/19-119	INTERIOR/Bedroom 1 SW	C Window Casing Brown Metal	0.00
3/25/19-120	INTERIOR/Bedroom 1 SW	D Window Sill Beige Wood	0.00
3/25/19-121	INTERIOR/Bedroom 1 SW	D Window Sash Beige Metal	0.00
3/25/19-122	INTERIOR/Bedroom 1 SW	D Window Casing Brown Metal	0.00
3/25/19-123	INTERIOR/Bedroom 1 SW	A Baseboard Beige Wood	0.13
3/25/19-124	INTERIOR/Bedroom 1 SW	B Baseboard Beige Wood	0.17

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1202 HUFFMAN AVEN	UE, APARTMENT A (MEASURED 3/25 & 26/2019)	
3/25/19-125	INTERIOR/Bedroom 1 SW	C Baseboard Beige Wood	0.11
3/25/19-126	INTERIOR/Bedroom 1 SW	D Baseboard Beige Wood	0.11
3/25/19-127	INTERIOR/Bedroom 1 Closet	A Wall Beige Drywall	0.00
3/25/19-128	INTERIOR/Bedroom 1 Closet	B Wall Beige Drywall	0.00
3/25/19-129	INTERIOR/Bedroom 1 Closet	C Wall Beige Drywall	0.00
3/25/19-130	INTERIOR/Bedroom 1 Closet	D Wall Beige Drywall	0.00
3/25/19-131	INTERIOR/Bedroom 1 Closet	Ceiling Beige Drywall	0.00
3/25/19-132	INTERIOR/Bedroom 1 Closet	C Door Brown Wood	0.03
3/25/19-133	INTERIOR/Bedroom 1 Closet	C Door Casing Beige Metal	0.26
3/25/19-134	INTERIOR/Bedroom 1 Closet	A Baseboard Beige Wood	0.12
3/25/19-135	INTERIOR/Bedroom 1 Closet	B Baseboard Beige Wood	0.24
3/25/19-136	INTERIOR/Bedroom 1 Closet	C Baseboard Beige Wood	0.17
3/25/19-137	INTERIOR/Bedroom 1 Closet	D Baseboard Beige Wood	0.19
3/25/19-138	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.09
3/25/19-139	INTERIOR/Bedroom 1 Closet	Shelf Support Beige Wood	0.12
3/25/19-140	INTERIOR/Hall Closet	A Wall Beige Drywall	0.00
3/25/19-141	INTERIOR/Hall Closet	C Wall Beige Drywall	0.00
3/25/19-142	INTERIOR/Hall Closet	D Wall Beige Drywall	0.00
3/25/19-143	INTERIOR/Hall Closet	Ceiling Beige Drywall	0.00
3/25/19-144	INTERIOR/Hall Closet	Shelf Beige Wood	0.08
3/25/19-145	INTERIOR/Hall Closet	Shelf Support Beige Wood	0.79
3/25/19-146	INTERIOR/Hall Closet	B Door Brown Wood	0.02
3/25/19-147	INTERIOR/Hall Closet	B Door Casing Beige Metal	0.12
3/25/19-148	INTERIOR/Bedroom 2 N	A Wall Beige Drywall	0.10
3/25/19-149	INTERIOR/Bedroom 2 N	B Wall Beige Drywall	0.06
3/25/19-150	INTERIOR/Bedroom 2 N	C Wall Beige Drywall	0.06
3/25/19-151	INTERIOR/Bedroom 2 N	D Wall Beige Drywall	0.06

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1202 HUFFMAN AVEN	UE, APARTMENT A (MEASURED 3/25 & 26/2019)	
3/25/19-152	INTERIOR/Bedroom 2 N	Ceiling Beige Drywall	0.01
3/25/19-153	INTERIOR/Bedroom 2 N	B Door Brown Wood	0.02
3/25/19-154	INTERIOR/Bedroom 2 N	B Door Casing Beige Metal	0.02
3/25/19-155	INTERIOR/Bedroom 2 N	C Door Brown Wood	0.00
3/25/19-156	INTERIOR/Bedroom 2 N	C Door Casing Beige Metal	0.15
3/25/19-157	INTERIOR/Bedroom 2 N	A Window Sill Beige Wood	0.00
3/25/19-158	INTERIOR/Bedroom 2 N	A Window Casing Brown Metal	0.00
3/25/19-159	INTERIOR/Bedroom 2 N	A Window Sash Brown Metal	0.00
3/25/19-160	INTERIOR/Bedroom 2 N	D Window Sill Beige Wood	0.00
3/25/19-161	INTERIOR/Bedroom 2 N	D Window Casing Brown Metal	0.00
3/25/19-162	INTERIOR/Bedroom 2 N	D Window Sash Brown Metal	0.00
3/25/19-163	INTERIOR/Bedroom 2 N	A Baseboard Beige Wood	0.16
3/25/19-164	INTERIOR/Bedroom 2 N	B Baseboard Beige Wood	0.12
3/25/19-165	INTERIOR/Bedroom 2 N	C Baseboard Beige Wood	0.11
3/25/19-166	INTERIOR/Bedroom 2 N	D Baseboard Beige Wood	0.05
3/25/19-167	INTERIOR/Bedroom 2 Closet	A Wall Beige Drywall	0.00
3/25/19-168	INTERIOR/Bedroom 2 Closet	B Wall Beige Drywall	0.00
3/25/19-169	INTERIOR/Bedroom 2 Closet	C Wall Beige Drywall	0.00
3/25/19-170	INTERIOR/Bedroom 2 Closet	D Wall Beige Drywall	0.00
3/25/19-171	INTERIOR/Bedroom 2 Closet	Ceiling Beige Drywall	0.00
3/25/19-172	INTERIOR/Bedroom 2 Closet	D Door Brown Wood	0.00
3/25/19-173	INTERIOR/Bedroom 2 Closet	D Door Casing Beige Metal	0.13
3/25/19-174	INTERIOR/Bedroom 2 Closet	A Baseboard Beige Wood	0.12
3/25/19-175	INTERIOR/Bedroom 2 Closet	B Baseboard Beige Wood	0.11
3/25/19-176	INTERIOR/Bedroom 2 Closet	C Baseboard Beige Wood	0.10
3/25/19-177	INTERIOR/Bedroom 2 Closet	D Baseboard Beige Wood	0.05
3/25/19-178	INTERIOR/Bedroom 2 Closet	Shelf Beige Wood	0.12
3/25/19-179	INTERIOR/Bedroom 2 Closet	Shelf Support Beige Wood	0.15

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1202 HUFFMAN AVENU	JE, APARTMENT A (MEASURED 3/25 & 26/2019)	
3/25/19-334	EXTERIOR/Rear C	Railing Black Metal	0.00
3/25/19-335	EXTERIOR/Rear C	C Storm Door Brown Metal	0.00
3/25/19-336	EXTERIOR/Rear C	C Door Casing Brown Metal	0.00
3/25/19-337	EXTERIOR/Rear C	C Door Beige Metal	0.00
3/25/19-338	EXTERIOR/Rear C	C Door Casing Beige Metal	1.51
3/25/19-339	EXTERIOR/Rear C	Lintel White Metal POOR	1.12
3/25/19-340	EXTERIOR/Side D	D Window Casing Brown Metal	0.00
3/25/19-341	EXTERIOR/Side D	D Window Sash Brown Metal	0.00
3/25/19-342	EXTERIOR/Front A	A Window Casing Brown Metal	0.00
3/25/19-343	EXTERIOR/Front A	A Window Sash Brown Metal	0.00
3/25/19-344	EXTERIOR/Front A	A Storm Door Brown Metal	0.00
3/25/19-345	EXTERIOR/Front A	A Door Casing Brown Metal	0.00
3/25/19-346	EXTERIOR/Front A	A Trim Tan Wood	0.00
3/25/19-347	EXTERIOR/Front A	A Wall Beige Brick	0.06
3/26/19-356	EXTERIOR/Front A	Handrail Black Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1202 HUFFMAN AVENU	JE, APARTMENT B (MEASURED 3/25 & 26/2019)	
3/25/19-184	INTERIOR/Kitchen	A Wall Beige Drywall	0.16
3/25/19-185	INTERIOR/Kitchen	A Wall Beige Drywall	>1.00
3/25/19-186	INTERIOR/Kitchen	B Wall Beige Drywall	0.00
3/25/19-187	INTERIOR/Kitchen	C Wall Beige Drywall	0.18
3/25/19-188	INTERIOR/Kitchen	D Wall Beige Drywall	0.11
3/25/19-189	INTERIOR/Kitchen	A Wall Beige Drywall	0.10
3/25/19-190	INTERIOR/Kitchen	Ceiling Beige Drywall	0.00
3/25/19-191	INTERIOR/Kitchen	A Door Brown Metal	0.00
3/25/19-192	INTERIOR/Kitchen	A Door Casing Beige Metal	0.06
3/25/19-193	INTERIOR/Kitchen	C Door Beige Metal	0.00
3/25/19-194	INTERIOR/Kitchen	C Door Casing Beige Metal	0.00
3/25/19-195	INTERIOR/Kitchen	D Wall White Ceramic	0.00
3/25/19-196	INTERIOR / Kitchen	D Cabinet Varnish Wood	0.00
3/25/19-197	INTERIOR/Kitchen	C Cabinet Varnish Wood	0.00
3/25/19-198	INTERIOR/Kitchen	A Cabinet Varnish Wood	0.00
3/25/19-199	INTERIOR/Living Room	A Wall Beige Drywall	0.00
3/25/19-200	INTERIOR/Living Room	B Wall Beige Drywall	0.24
3/25/19-201	INTERIOR/Living Room	C Wall Beige Drywall	0.28
3/25/19-202	INTERIOR/Living Room	D Wall Beige Drywall	0.01
3/25/19-203	INTERIOR/Living Room	Ceiling Beige Drywall	0.04
3/25/19-204	INTERIOR/Living Room	A Window Sill Beige Wood	0.00
3/25/19-205	INTERIOR/Living Room	A Window Sash Brown Metal	0.00
3/25/19-206	INTERIOR/Living Room	A Window Sash Brown Metal	0.00
3/25/19-207	INTERIOR/Living Room	C Window Sill Beige Wood	0.00
3/25/19-208	INTERIOR/Living Room	C Window Sash Brown Metal	0.00
3/25/19-209	INTERIOR/Living Room	C Window Sash Brown Metal	0.00
3/25/19-210	INTERIOR/Living Room	C Door Brown Wood	0.00
3/25/19-211	INTERIOR/Living Room	C Door Casing Beige Metal	0.19

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1202 HUFFMAN AVEN	UE, APARTMENT B (MEASURED 3/25 & 26/2019)	
3/25/19-212	INTERIOR/Living Room	D Door Brown Wood	0.00
3/25/19-213	INTERIOR/Living Room	D Door Casing Beige Metal	0.00
3/25/19-214	INTERIOR/Living Room Closet	A Wall Beige Drywall	0.07
3/25/19-215	INTERIOR/Living Room Closet	B Wall Beige Drywall	0.15
3/25/19-216	INTERIOR/Living Room Closet	C Wall Beige Drywall	0.09
3/25/19-217	INTERIOR/Living Room Closet	D Wall Beige Drywall	0.08
3/25/19-218	INTERIOR/Living Room Closet	Shelf Beige Wood	0.01
3/25/19-219	INTERIOR/Living Room Closet	Shelf Support Beige Wood	0.06
3/25/19-220	INTERIOR/Basement	A Wall Beige Drywall	0.04
3/25/19-221	INTERIOR/Basement	B Wall Beige Drywall	0.01
3/25/19-222	INTERIOR/Basement	C Wall Beige Drywall	0.02
3/25/19-223	INTERIOR/Basement	D Wall Beige Drywall	0.05
3/25/19-224	INTERIOR/Basement	Ceiling Beige Drywall	0.03
3/25/19-225	INTERIOR/Basement	A Trim Beige Wood	0.06
3/25/19-226	INTERIOR/Basement	B Trim Beige Wood	0.06
3/25/19-227	INTERIOR/Basement	D Trim Beige Wood	0.03
3/25/19-228	INTERIOR/Basement	Handrail White Wood	0.12
3/25/19-229	INTERIOR/Basement	Stringer Grey Wood	0.03
3/25/19-230	INTERIOR/Basement	Tread Grey Wood	0.15
3/25/19-231	INTERIOR/Basement	Beam Grey Steel	0.02
3/25/19-232	INTERIOR/Basement	A Post White Metal	0.01
3/25/19-233	INTERIOR/Basement	C Post Grey Metal	0.06
3/25/19-234	INTERIOR/Basement	A Wall Beige Concrete	>1.00
3/25/19-235	INTERIOR/Basement	B Wall Beige Block	0.00
3/25/19-240	INTERIOR/Basement	C Wall Beige Concrete	0.00
3/25/19-241	INTERIOR/Basement	D Wall Beige Block	0.02
3/25/19-242	INTERIOR/Basement	A Wall Beige Concrete	0.01
3/25/19-243	INTERIOR/Basement	A Wall Beige Concrete	>1.00
3/25/19-244	INTERIOR/Stairs	A Wall Beige Drywall	0.05
3/25/19-245	INTERIOR/Stairs	B Wall Beige Drywall	0.07

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1202 HUFFMAN AVEN	IUE, APARTMENT B (MEASURED 3/25 & 26/2019)	
3/25/19-246	INTERIOR/Stairs	D Wall Beige Drywall	0.05
3/25/19-247	INTERIOR/Stairs	Ceiling Beige Drywall	0.05
3/25/19-248	INTERIOR/Stairs	Handrail Varnish Wood	0.05
3/25/19-249	INTERIOR/Stairs	B Stringer Beige Wood	0.19
3/25/19-250	INTERIOR/Stairs	D Stringer Beige Wood	0.21
3/25/19-251	INTERIOR/Stairs	Riser Beige Wood	0.06
3/25/19-252	INTERIOR/Stairs	Tread Varnish Wood	0.00
3/25/19-253	INTERIOR/Stairs	A Baseboard Beige Wood	0.07
3/25/19-254	INTERIOR/Stairs	C Baseboard Beige Wood	0.06
3/25/19-255	INTERIOR/Stairs	D Baseboard Beige Wood	0.06
3/25/19-256	INTERIOR/Stairs	Floor Varnish Wood	0.00
3/25/19-257	INTERIOR/Hall	A Wall Beige Drywall	0.13
3/25/19-258	INTERIOR/Hall	B Wall Beige Drywall	0.06
3/25/19-259	INTERIOR/Hall	C Wall Beige Drywall	0.03
3/25/19-260	INTERIOR/Hall	D Wall Beige Drywall	0.00
3/25/19-261	INTERIOR/Hall	Ceiling Beige Drywall	0.02
3/25/19-262	INTERIOR/Hall	A Door Brown Wood	0.00
3/25/19-263	INTERIOR/Hall	A Door Casing Beige Metal	0.12
3/25/19-264	INTERIOR/Hall	B Door Brown Wood	0.00
3/25/19-265	INTERIOR/Hall	B Door Casing Beige Metal	0.00
3/25/19-266	INTERIOR/Hall	C Door Brown Wood	0.00
3/25/19-267	INTERIOR/Hall	C Door Casing Beige Metal	0.07
3/25/19-305	INTERIOR/Hall	Wall Cap Beige Wood	0.06
3/25/19-268	INTERIOR/Bathroom	A Wall Beige Drywall	0.00
3/25/19-269	INTERIOR/Bathroom	B Wall Beige Drywall	0.00
3/25/19-270	INTERIOR/Bathroom	C Wall Beige Drywall	0.00
3/25/19-271	INTERIOR/Bathroom	D Wall Beige Drywall	0.00
3/25/19-272	INTERIOR/Bathroom	Ceiling Beige Drywall	0.00
3/25/19-273	INTERIOR/Bathroom	A Door Brown Wood	0.00
3/25/19-274	INTERIOR/Bathroom	A Door Casing Beige Metal	0.06
3/25/19-275	INTERIOR/Bedroom 1 SE	A Wall Beige Drywall	0.08

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1202 HUFFMAN AVEN	UE, APARTMENT B (MEASURED 3/25 & 26/2019)	
3/25/19-276	INTERIOR/Bedroom 1 SE	B Wall Beige Drywall	0.33
3/25/19-277	INTERIOR/Bedroom 1 SE	C Wall Beige Drywall	0.13
3/25/19-278	INTERIOR/Bedroom 1 SE	D Wall Beige Drywall	0.10
3/25/19-279	INTERIOR/Bedroom 1 SE	Ceiling Beige Drywall	0.05
3/25/19-280	INTERIOR/Bedroom 1 SE	A Door Brown Wood	0.00
3/25/19-281	INTERIOR/Bedroom 1 SE	A Door Casing Beige Metal	0.06
3/25/19-282	INTERIOR/Bedroom 1 SE	D Door Brown Wood	0.00
3/25/19-283	INTERIOR/Bedroom 1 SE	D Door Casing Beige Metal	0.16
3/25/19-284	INTERIOR/Bedroom 1 SE	C Window Sill Beige Wood	0.00
3/25/19-285	INTERIOR/Bedroom 1 SE	C Window Casing Brown Metal	0.00
3/25/19-286	INTERIOR/Bedroom 1 SE	C Window Sash Brown Metal	0.00
3/25/19-287	INTERIOR/Bedroom 1 Closet	A Wall Beige Drywall	0.12
3/25/19-288	INTERIOR/Bedroom 1 Closet	B Wall Beige Drywall	0.04
3/25/19-289	INTERIOR/Bedroom 1 Closet	C Wall Beige Drywall	0.06
3/25/19-290	INTERIOR/Bedroom 1 Closet	D Wall Beige Drywall	0.02
3/25/19-291	INTERIOR/Bedroom 1 Closet	Ceiling Beige Drywall	0.06
3/25/19-292	INTERIOR/Bedroom 1 Closet	A Door Brown Wood	0.00
3/25/19-293	INTERIOR/Bedroom 1 Closet	A Door Casing Beige Metal	0.06
3/25/19-294	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.05
3/25/19-295	INTERIOR/Bedroom 1 Closet	A Shelf Support Beige Wood	0.07
3/25/19-296	INTERIOR/Hall Closet	D Door Brown Wood	0.02
3/25/19-297	INTERIOR/Hall Closet	D Door Casing Beige Metal	0.22
3/25/19-298	INTERIOR/Hall Closet	A Wall Beige Drywall	0.07
3/25/19-299	INTERIOR/Hall Closet	B Wall Beige Drywall	0.12
3/25/19-300	INTERIOR/Hall Closet	C Wall Beige Drywall	0.10
3/25/19-301	INTERIOR/Hall Closet	D Wall Beige Drywall	0.07
3/25/19-302	INTERIOR/Hall Closet	Ceiling Beige Drywall	0.11
3/25/19-303	INTERIOR/Hall Closet	Shelf Beige Wood	0.07
3/25/19-304	INTERIOR/Hall Closet	A Shelf Support Beige Wood	0.04

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1202 HUFFMAN AVENU	UE, APARTMENT B (MEASURED 3/25 & 26/2019)	
3/25/19-306	INTERIOR/Bedroom 2	A Wall Beige Drywall	0.31
3/25/19-307	INTERIOR/Bedroom 2	B Wall Beige Drywall	0.10
3/25/19-308	INTERIOR/Bedroom 2	C Wall Beige Drywall	0.10
3/25/19-309	INTERIOR/Bedroom 2	D Wall Beige Drywall	0.22
3/25/19-310	INTERIOR/Bedroom 2	Ceiling Beige Drywall	0.06
3/25/19-311	INTERIOR/Bedroom 2	C Door Brown Wood	0.00
3/25/19-312	INTERIOR/Bedroom 2	C Door Casing Beige Metal	0.30
3/25/19-313	INTERIOR/Bedroom 2	A Window Sill Beige Wood	0.00
3/25/19-314	INTERIOR/Bedroom 2	A Window Sash Brown Metal	0.00
3/25/19-315	INTERIOR/Bedroom 2	A Window Sash Brown Metal	0.00
3/25/19-316	INTERIOR/Bedroom 2	D Door Brown Wood	0.00
3/25/19-317	INTERIOR/Bedroom 2	D Door Casing Beige Metal	0.09
3/25/19-318	INTERIOR/Bedroom 2 Closet	A Wall Beige Drywall	0.15
3/25/19-319	INTERIOR/Bedroom 2 Closet	B Wall Beige Drywall	0.22
3/25/19-320	INTERIOR/Bedroom 2 Closet	C Wall Beige Drywall	0.14
3/25/19-321	INTERIOR/Bedroom 2 Closet	D Wall Beige Drywall	0.14
3/25/19-322	INTERIOR/Bedroom 2 Closet	Ceiling Beige Drywall	0.09
3/25/19-323	INTERIOR/Bedroom 2 Closet	Shelf Beige Wood	0.06
3/25/19-324	INTERIOR/Bedroom 2 Closet	B Shelf Support Beige Wood	0.08
3/25/19-327	EXTERIOR/Rear C	C Door Beige Metal	0.00
3/25/19-328	EXTERIOR/Rear C	C Door Casing Beige Wood	1.75
3/25/19-329	EXTERIOR/Rear C	Lintel White Metal POOR	0.97
3/25/19-330	EXTERIOR/Rear C	C Storm Door Brown Metal	0.00
3/25/19-331	EXTERIOR/Rear C	C Door Casing White Wood	0.00
3/25/19-332	EXTERIOR/Rear C	C Window Casing Brown Metal	0.00
3/25/19-333	EXTERIOR/Rear C	C Window Sash Brown Metal	0.00
3/25/19-348	EXTERIOR/Front A	B Wall White Brick	0.03
3/25/19-349	EXTERIOR/Front A	C Wall White Brick	0.02
3/25/19-350	EXTERIOR/Front A	D Storm Door Brown Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)		
1202 HUFFMAN AVENUE, APARTMENT B (MEASURED 3/25 & 26/2019)					
3/25/19-351	EXTERIOR/Front A	D Storm Door Casing Brown Metal	0.00		
3/25/19-356	EXTERIOR/Front A	A Handrail Black Metal	0.00		

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1204 HUFFMAN AVE	ENUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-03	INTERIOR/Kitchen	A Wall Beige Drywall	0.01
3/26/19-04	INTERIOR/Kitchen	B Wall Beige Drywall	0.01
3/26/19-05	INTERIOR/Kitchen	C Wall Beige Drywall	0.12
3/26/19-06	INTERIOR/Kitchen	D Wall Beige Drywall	0.00
3/26/19-07	INTERIOR/Kitchen	Ceiling Beige Drywall	0.00
3/26/19-08	INTERIOR/Kitchen	A Door Beige Wood	0.00
3/26/19-09	INTERIOR/Kitchen	A Door Casing Beige Metal	0.22
3/26/19-10	INTERIOR/Kitchen	C Door White Metal	0.00
3/26/19-11	INTERIOR/Kitchen	C Door Casing White Wood	0.00
3/26/19-12	INTERIOR/Kitchen	B Wall White Ceramic	0.00
3/26/19-13	INTERIOR/Kitchen	A Cabinet Varnish Wood	0.00
3/26/19-14	INTERIOR/Kitchen	B Cabinet Varnish Wood	0.00
3/26/19-15	INTERIOR/Kitchen	C Cabinet Varnish Wood	0.00
3/26/19-16	INTERIOR/Kitchen	A Baseboard White Wood	0.00
3/26/19-17	INTERIOR/Kitchen	B Baseboard White Wood	0.00
3/26/19-18	INTERIOR/Kitchen	C Baseboard White Wood	0.00
3/26/19-19	INTERIOR/Kitchen	D Baseboard White Wood	0.00
3/26/19-20	INTERIOR/Living Room	A Wall Beige Drywall	0.04
3/26/19-21	INTERIOR/Living Room	B Wall Beige Drywall	0.00
3/26/19-22	INTERIOR/Living Room	C Wall Beige Drywall	0.11
3/26/19-23	INTERIOR/Living Room	D Wall Beige Drywall	0.00
3/26/19-24	INTERIOR/Living Room	Ceiling Beige Drywall	0.07
3/26/19-25	INTERIOR/Living Room	A Window Sill Black Wood	0.02
3/26/19-26	INTERIOR/Living Room	A Window Casing White Vinyl	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVI	ENUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-27	INTERIOR/Living Room	A Window Sash White Vinyl	0.00
3/26/19-28	INTERIOR/Living Room	C Window Sill Black Wood	0.01
3/26/19-29	INTERIOR/Living Room	C Window Casing White Vinyl	0.00
3/26/19-30	INTERIOR/Living Room	C Window Sash White Vinyl	0.00
3/26/19-31	INTERIOR/Living Room	B Door White Metal	0.00
3/26/19-32	INTERIOR/Living Room	B Door Casing White Metal	0.00
3/26/19-33	INTERIOR/Living Room	C Door White Wood	0.00
3/26/19-34	INTERIOR/Living Room	C Door Casing White Metal	0.13
3/26/19-35	INTERIOR/Living Room	A Baseboard White Wood	0.00
3/26/19-36	INTERIOR/Living Room	B Baseboard White Wood	0.00
3/26/19-37	INTERIOR/Living Room	C Baseboard White Wood	0.00
3/26/19-38	INTERIOR/Living Room	D Baseboard White Wood	0.00
3/26/19-39	INTERIOR/Living Room Closet	A Wall Beige Drywall	0.14
3/26/19-40	INTERIOR/Living Room Closet	B Wall Beige Drywall	0.07
3/26/19-41	INTERIOR/Living Room Closet	C Wall Beige Drywall	0.06
3/26/19-42	INTERIOR/Living Room Closet	D Wall Beige Drywall	0.06
3/26/19-43	INTERIOR/Living Room Closet	Ceiling Beige Drywall	0.07
3/26/19-44	INTERIOR/Living Room Closet	C Door White Wood	0.00
3/26/19-45	INTERIOR/Living Room Closet	C Door Casing White Metal	0.14
3/26/19-46	INTERIOR/Living Room Closet	B Baseboard White Wood	0.00
3/26/19-47	INTERIOR/Living Room Closet	C Baseboard White Wood	0.00
3/26/19-48	INTERIOR/Living Room Closet	D Baseboard White Wood	0.00
3/26/19-49	INTERIOR/Living Room Closet	Shelf Beige Wood	0.17
3/26/19-50	INTERIOR/Living Room Closet	Shelf Support Beige Wood	0.05
3/26/19-51	INTERIOR/Basement	A Wall Beige Drywall	0.01
3/26/19-52	INTERIOR/Basement	B Wall Beige Drywall	0.01
3/26/19-53	INTERIOR/Basement	C Wall Beige Drywall	0.04
3/26/19-54	INTERIOR/Basement	D Wall Beige Drywall	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	•
3/26/19-55	INTERIOR/Basement	Ceiling Beige Drywall	0.00
3/26/19-56	INTERIOR/Basement	A Trim Beige Wood	0.02
3/26/19-57	INTERIOR/Basement	B Trim Beige Wood	0.03
3/26/19-58	INTERIOR/Basement	D Trim Beige Wood	0.07
3/26/19-59	INTERIOR/Basement	C Door White Wood	0.05
3/26/19-60	INTERIOR/Basement	C Door Casing White Metal	0.23
3/26/19-61	INTERIOR/Basement	Handrail Gray Wood	0.00
3/26/19-62	INTERIOR/Basement	B Stringer Gray Wood	0.07
3/26/19-63	INTERIOR/Basement	D Stringer Gray Wood	0.16
3/26/19-64	INTERIOR/Basement	Stair Tread Gray Wood	0.16
3/26/19-65	INTERIOR/Basement	Beam Gray Steel	0.06
3/26/19-66	INTERIOR/Basement	A Post Gray Steel	0.01
3/26/19-67	INTERIOR/Basement	Floor Grey Concrete	0.00
3/26/19-68	INTERIOR/Stairs	A Wall Beige Drywall	0.03
3/26/19-69	INTERIOR/Stairs	B Wall Beige Drywall	0.25
3/26/19-70	INTERIOR/Stairs	D Wall Beige Drywall	0.09
3/26/19-71	INTERIOR/Stairs	Ceiling Beige Drywall	0.16
3/26/19-72	INTERIOR/Stairs	Handrail Brown Wood	0.00
3/26/19-73	INTERIOR/Stairs	B Stringer Brown Wood	0.07
3/26/19-74	INTERIOR/Stairs	D Stringer Brown Wood	0.07
3/26/19-75	INTERIOR/Stairs	Tread Brown Wood	0.00
3/26/19-76	INTERIOR/Stairs	Riser Brown Wood	0.00
3/26/19-77	INTERIOR/Stairs	Floor Brown Wood	0.00
3/26/19-78	INTERIOR/Stairs	A Baseboard White Wood	0.05
3/26/19-79	INTERIOR/Stairs	B Baseboard White Wood	0.06
3/26/19-80	INTERIOR/Stairs	C Baseboard White Wood	0.21
3/26/19-81	INTERIOR/Hall	A Wall Beige Drywall	0.00
3/26/19-82	INTERIOR/Hall	B Wall Beige Drywall	0.30
3/26/19-83	INTERIOR/Hall	C Wall Beige Drywall	0.00
3/26/19-84	INTERIOR/Hall	D Wall Beige Drywall	0.00
3/26/19-85	INTERIOR/Hall	Ceiling Beige Drywall	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-86	INTERIOR/Hall	A Door White Wood	0.00
3/26/19-87	INTERIOR/Hall	A Door Casing White Metal	0.00
3/26/19-88	INTERIOR/Hall	C Door White Wood	0.00
3/26/19-89	INTERIOR/Hall	C Door Casing White Metal	0.00
3/26/19-90	INTERIOR/Hall	D Door White Wood	0.00
3/26/19-91	INTERIOR/Hall	D Door Casing White Metal	0.00
3/26/19-92	INTERIOR/Hall	Wall Cap White Wood	0.06
3/26/19-93	INTERIOR/Hall	B Baseboard White Wood	0.00
3/26/19-94	INTERIOR/Hall	C Baseboard White Wood	0.00
3/26/19-95	INTERIOR/Hall	D Baseboard White Wood	0.00
3/26/19-96	INTERIOR/ Bathroom	A Wall Beige Plaster	0.00
3/26/19-97	INTERIOR/ Bathroom	B Wall Beige Plaster	0.00
3/26/19-98	INTERIOR/ Bathroom	C Wall Beige Plaster	0.00
3/26/19-99	INTERIOR/ Bathroom	D Wall Beige Plaster	0.00
3/26/19-100	INTERIOR/ Bathroom	A Door White Wood	0.00
3/26/19-101	INTERIOR/ Bathroom	A Door Casing White Metal	0.00
3/26/19-102	INTERIOR/ Bathroom	Ceiling Beige Plaster	0.00
3/26/19-103	INTERIOR/ Bathroom	B Tub White Ceramic Tile	0.00
3/26/19-104	INTERIOR/ Bathroom	C Tub White Ceramic Tile	0.00
3/26/19-105	INTERIOR/ Bathroom	D Tub White Ceramic Tile	0.00
3/26/19-106	INTERIOR/ Bathroom	C Window Casing White Vinyl	0.00
3/26/19-107	INTERIOR/ Bathroom	C Window Sash White Vinyl	0.00
3/26/19-108	INTERIOR/Bedroom 1 SW	A Wall Beige Plaster	0.00
3/26/19-109	INTERIOR/Bedroom 1 SW	B Wall Beige Plaster	0.00
3/26/19-110	INTERIOR/Bedroom 1 SW	C Wall Beige Plaster	0.00
3/26/19-111	INTERIOR/Bedroom 1 SW	D Wall Beige Plaster	0.04
3/26/19-112	INTERIOR/Bedroom 1 SW	Ceiling Beige Plaster	0.00
3/26/19-113	INTERIOR/Bedroom 1 SW	A Door White Wood	0.00
3/26/19-114	INTERIOR/Bedroom 1 SW	A Door Casing White Metal	0.00
3/26/19-115	INTERIOR/Bedroom 1 SW	B Door White Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-116	INTERIOR/Bedroom 1 SW	B Door Casing White Metal	0.00
3/26/19-117	INTERIOR/Bedroom 1 SW	C Window Sill Beige Wood	0.00
3/26/19-118	INTERIOR/Bedroom 1 SW	C Window Casing White Vinyl	0.00
3/26/19-119	INTERIOR/Bedroom 1 SW	C Window Sash White Vinyl	0.00
3/26/19-120	INTERIOR/Bedroom 1 SW	A Baseboard White Wood	0.00
3/26/19-121	INTERIOR/Bedroom 1 SW	B Baseboard White Wood	0.00
3/26/19-122	INTERIOR/Bedroom 1 SW	C Baseboard White Wood	0.00
3/26/19-123	INTERIOR/Bedroom 1 SW	D Baseboard White Wood	0.00
3/26/19-124	INTERIOR/Bedroom 1 SW	D Baseboard White Wood	0.00
3/26/19-125	INTERIOR/Bedroom 1 Closet	A Wall Beige Plaster	0.00
3/26/19-126	INTERIOR/Bedroom 1 Closet	B Wall Beige Plaster	0.00
3/26/19-127	INTERIOR/Bedroom 1 Closet	C Wall Beige Plaster	0.00
3/26/19-128	INTERIOR/Bedroom 1 Closet	D Wall Beige Plaster	0.13
3/26/19-129	INTERIOR/Bedroom 1 Closet	C Door White Wood	0.00
3/26/19-130	INTERIOR/Bedroom 1 Closet	C Door Casing White Metal	0.00
3/26/19-131	INTERIOR/Bedroom 1 Closet	Ceiling Beige Plaster	0.00
3/26/19-132	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.00
3/26/19-133	INTERIOR/Bedroom 1 Closet	Shelf Support Beige Wood	0.00
3/26/19-134	INTERIOR/Bedroom 1 Closet	A Baseboard White Wood	0.00
3/26/19-135	INTERIOR/Bedroom 1 Closet	B Baseboard White Wood	0.00
3/26/19-136	INTERIOR/Bedroom 1 Closet	C Baseboard White Wood	0.00
3/26/19-137	INTERIOR/Bedroom 1 Closet	D Baseboard White Wood	0.00
3/26/19-138	INTERIOR/Hall Closet	A Wall Beige Plaster	0.00
3/26/19-139	INTERIOR/Hall Closet	C Wall Beige Plaster	0.00
3/26/19-140	INTERIOR/Hall Closet	D Wall Beige Plaster	0.00
3/26/19-141	INTERIOR/Hall Closet	Ceiling Beige Plaster	0.00
3/26/19-142	INTERIOR/Hall Closet	B Door White Wood	0.00
3/26/19-143	INTERIOR/Hall Closet	D Door Casing White Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-144	INTERIOR/Hall Closet	Shelf White Wood	0.00
3/26/19-145	INTERIOR/Hall Closet	C Shelf Support White Wood	0.00
3/26/19-146	INTERIOR/Hall Closet	A Baseboard Beige Wood	0.00
3/26/19-147	INTERIOR/Hall Closet	C Baseboard Beige Wood	0.00
3/26/19-148	INTERIOR/Hall Closet	D Baseboard Beige Wood	0.00
3/26/19-149	INTERIOR/ Bedroom 2 NW	A Wall Beige Plaster	0.00
3/26/19-150	INTERIOR/ Bedroom 2 NW	B Wall Beige Plaster	0.00
3/26/19-151	INTERIOR/ Bedroom 2 NW	C Wall Beige Plaster	0.00
3/26/19-152	INTERIOR/ Bedroom 2 NW	D Wall Beige Plaster	0.10
3/26/19-153	INTERIOR/ Bedroom 2 NW	Ceiling Beige Plaster	0.00
3/26/19-154	INTERIOR/ Bedroom 2 NW	A Window Sill Beige Wood	0.00
3/26/19-155	INTERIOR/ Bedroom 2 NW	A Window Casing White Vinyl	0.00
3/26/19-156	INTERIOR/ Bedroom 2 NW	A Window Sash White Vinyl	0.00
3/26/19-157	INTERIOR/ Bedroom 2 NW	B Door White Wood	0.00
3/26/19-158	INTERIOR/ Bedroom 2 NW	B Door Casing White Metal	0.00
3/26/19-159	INTERIOR/ Bedroom 2 NW	C Door White Wood	0.00
3/26/19-160	INTERIOR/ Bedroom 2 NW	C Door Casing White Metal	0.00
3/26/19-161	INTERIOR/ Bedroom 2 NW	A Baseboard White Wood	0.00
3/26/19-162	INTERIOR/ Bedroom 2 NW	B Baseboard White Wood	0.00
3/26/19-163	INTERIOR/ Bedroom 2 NW	C Baseboard White Wood	0.00
3/26/19-164	INTERIOR/ Bedroom 2 NW	D Baseboard White Wood	0.00
3/26/19-165	INTERIOR/ Bedroom 2 Closet	A Wall Beige Plaster	0.00
3/26/19-166	INTERIOR/ Bedroom 2 Closet	B Wall Beige Plaster	0.00
3/26/19-167	INTERIOR/ Bedroom 2 Closet	C Wall Beige Plaster	0.00
3/26/19-168	INTERIOR/ Bedroom 2 Closet	D Wall Beige Plaster	0.00
3/26/19-169	INTERIOR / Bedroom 2 Closet	Ceiling Beige Plaster	0.00
3/26/19-170	INTERIOR/ Bedroom 2 Closet	D Door White Wood	0.00
3/26/19-171	INTERIOR / Bedroom 2 Closet	D Door Casing White Metal	0.00
3/26/19-172	INTERIOR/ Bedroom 2 Closet	Shelf White Wood	0.00
Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
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	1204 HUFFMAN AV	ENUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-173	INTERIOR/ Bedroom 2 Closet	A Shelf Support White Wood	0.00
3/26/19-174	INTERIOR/ Bedroom 2 Closet	B Baseboard White Wood	0.00
3/26/19-175	INTERIOR/ Bedroom 2 Closet	C Baseboard White Wood	0.00
3/26/19-176	INTERIOR/ Bedroom 2 Closet	D Baseboard White Wood	0.00
3/26/19-320	EXTERIOR/Rear C	C Storm Door Brown Metal	0.00
3/26/19-321	EXTERIOR/Rear C	C Storm Door Casing Brown Metal	0.00
3/26/19-322	EXTERIOR/Rear C	C Door Lintel Beige Steel	0.98
3/26/19-323	EXTERIOR/Rear C	C Door Casing Beige Wood	0.00
3/26/19-324	EXTERIOR/Rear C	C Door Beige Metal	0.00
3/26/19-325	EXTERIOR/Rear C	C Window Casing Brown Metal	0.00
3/26/19-326	EXTERIOR/Rear C	C Window Sash Brown Metal	0.00
3/26/19-334	EXTERIOR/Front A	A Window Casing Brown Metal	0.00
3/26/19-335	EXTERIOR/Front A	A Window Sash Brown Metal	0.00
3/26/19-336	EXTERIOR/Front A	A Storm Door Brown Metal	0.00
3/26/19-337	EXTERIOR/Front A	A Storm Door Casing Brown Metal	0.00
3/26/19-338	EXTERIOR/Front A	A Door White Metal	0.00
3/26/19-339	EXTERIOR/Front A	A Door Casing White Metal	>1.00
3/26/19-340	EXTERIOR/Front A	A Wall Tan Brick	0.00
3/26/19-341	EXTERIOR/Front A	D Wall White Brick	1.43
3/26/19-342	EXTERIOR/Front A	C Wall White Brick	1.52
3/26/19-350	EXTERIOR/Front A	Door Lintel Beige Metal	2.52
3/26/19-351	EXTERIOR/Front A	Ceiling White Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVI	ENUE, APARTMENT B (MEASURED 3/26/2019)	1
3/26/19-179	INTERIOR/Kitchen	A Wall Beige Drywall	0.15
3/26/19-180	INTERIOR/Kitchen	B Wall Beige Drywall	0.01
3/26/19-181	INTERIOR/Kitchen	C Wall Beige Drywall	0.33
3/26/19-182	INTERIOR/Kitchen	D Wall Beige Drywall	0.31
3/26/19-183	INTERIOR/Kitchen	Ceiling Beige Drywall	0.00
3/26/19-184	INTERIOR/Kitchen	D Wall White Ceramic	0.00
3/26/19-185	INTERIOR/Kitchen	A Cabinet Varnish Wood	0.01
3/26/19-186	INTERIOR/Kitchen	C Cabinet Varnish Wood	0.00
3/26/19-187	INTERIOR/Kitchen	D Cabinet Varnish Wood	0.00
3/26/19-199	INTERIOR/Kitchen	A Door Beige Wood	0.00
3/26/19-200	INTERIOR/Kitchen	A Door Casing Beige Metal	>1.00
3/26/19-188	INTERIOR/Living Room	A Wall Beige Drywall	0.38
3/26/19-189	INTERIOR/Living Room	B Wall Beige Drywall	0.39
3/26/19-190	INTERIOR/Living Room	C Wall Beige Drywall	0.19
3/26/19-191	INTERIOR/Living Room	D Wall Beige Drywall	0.00
3/26/19-192	INTERIOR/Living Room	Ceiling Beige Drywall	0.06
3/26/19-193	INTERIOR/Living Room	A Window Sill Beige Wood	0.00
3/26/19-194	INTERIOR/Living Room	A Window Casing Brown Metal	0.00
3/26/19-195	INTERIOR/Living Room	A Window Sash Brown Metal	0.00
3/26/19-196	INTERIOR/Living Room	C Window Sill Beige Wood	0.00
3/26/19-197	INTERIOR/Living Room	C Window Casing Brown Metal	0.00
3/26/19-198	INTERIOR/Living Room	C Window Sash Brown Metal	0.00
3/26/19-201	INTERIOR/Living Room	B Door Beige Metal	0.00
3/26/19-202	INTERIOR/Living Room	B Door Casing Beige Metal	0.00
3/26/19-203	INTERIOR/Living Room	C Door Beige Wood	0.00
3/26/19-204	INTERIOR/Living Room	C Door Casing Beige Metal	>1.00
3/26/19-205	INTERIOR/Living Room	A Baseboard Beige Wood	0.18
3/26/19-206	INTERIOR/Living Room	B Baseboard Beige Wood	0.04
3/26/19-207	INTERIOR/Living Room	C Baseboard Beige Wood	0.00
3/26/19-208	INTERIOR/Living Room	D Baseboard Beige Wood	0.03

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	
3/26/19-209	INTERIOR/Living Room Closet	A Wall Beige Drywall	0.51
3/26/19-210	INTERIOR/Living Room Closet	B Wall Beige Drywall	0.19
3/26/19-211	INTERIOR/Living Room Closet	C Wall Beige Drywall	0.13
3/26/19-212	INTERIOR/Living Room Closet	D Wall Beige Drywall	0.15
3/26/19-213	INTERIOR/Living Room Closet	Ceiling Beige Drywall	0.26
3/26/19-214	INTERIOR/Living Room Closet	A Door Beige Wood	0.02
3/26/19-215	INTERIOR/Living Room Closet	A Door Casing Beige Metal	0.14
3/26/19-216	INTERIOR/Living Room Closet	Shelf Beige Wood	0.07
3/26/19-217	INTERIOR/Living Room Closet	Shelf Support Beige Wood	0.13
3/26/19-218	INTERIOR/Basement	A Wall Beige Drywall	0.33
3/26/19-219	INTERIOR/Basement	B Wall Beige Drywall	0.24
3/26/19-220	INTERIOR/Basement	C Wall Beige Drywall	0.17
3/26/19-221	INTERIOR/Basement	D Wall Beige Drywall	0.18
3/26/19-222	INTERIOR/Basement	Ceiling Beige Drywall	0.38
3/26/19-223	INTERIOR / Basement	A Trim Beige Wood	0.14
3/26/19-224	INTERIOR/Basement	B Trim Beige Wood	0.37
3/26/19-225	INTERIOR/Basement	D Trim Beige Wood	0.29
3/26/19-226	INTERIOR / Basement	Handrail Brown Wood	0.11
3/26/19-227	INTERIOR/Basement	B Stringer Brown Wood	0.04
3/26/19-228	INTERIOR / Basement	D Stringer Brown Wood	0.06
3/26/19-229	INTERIOR/Basement	Stair Tread Brown Wood	0.08
3/26/19-230	INTERIOR/Basement	Beam Gray Steel	0.03
3/26/19-231	INTERIOR/Basement	A Post Gray Steel	0.05
3/26/19-232	INTERIOR/Basement	A Wall Beige Block	0.00
3/26/19-233	INTERIOR/Basement	B Wall Beige Block	0.00
3/26/19-234	INTERIOR/Basement	C Wall Beige Concrete	0.00
3/26/19-235	INTERIOR/Basement	D Wall Beige Block	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	<u></u>
3/26/19-236	INTERIOR/Stairs	A Wall Beige Drywall	0.36
3/26/19-237	INTERIOR/Stairs	B Wall Beige Drywall	0.36
3/26/19-238	INTERIOR/Stairs	D Wall Beige Drywall	0.24
3/26/19-239	INTERIOR/Stairs	Ceiling Beige Drywall	0.01
3/26/19-240	INTERIOR/Stairs	Handrail Varnish Wood	0.00
3/26/19-241	INTERIOR/Stairs	B Stringer Beige Wood	0.03
3/26/19-242	INTERIOR/Stairs	D Stringer Beige Wood	0.06
3/26/19-243	INTERIOR/Stairs	Stair Tread Varnish Wood	0.00
3/26/19-244	INTERIOR/Stairs	Riser Beige Wood	0.44
3/26/19-245	INTERIOR/Stairs	Floor Varnish Wood	0.00
3/26/19-246	INTERIOR/Stairs	A Baseboard Beige Wood	0.00
3/26/19-247	INTERIOR/Stairs	C Baseboard Beige Wood	0.07
3/26/19-248	INTERIOR/Stairs	D Baseboard Beige Wood	0.16
3/26/19-249	INTERIOR/Hall	A Wall Beige Drywall	0.22
3/26/19-250	INTERIOR/Hall	B Wall Beige Drywall	0.43
3/26/19-251	INTERIOR/Hall	C Wall Beige Drywall	0.26
3/26/19-252	INTERIOR/Hall	D Wall Beige Drywall	0.43
3/26/19-253	INTERIOR/Hall	Ceiling Beige Drywall	0.05
3/26/19-254	INTERIOR/Hall	A Door Beige Wood	0.00
3/26/19-255	INTERIOR/Hall	A Door Casing Beige Metal	0.10
3/26/19-256	INTERIOR/Hall	B Door Beige Wood	0.00
3/26/19-257	INTERIOR/Hall	B Door Casing Beige Metal	0.02
3/26/19-259	INTERIOR/Hall	C Door Beige Wood	0.02
3/26/19-259	INTERIOR/Hall	C Door Casing Beige Metal	0.06
3/26/19-260	INTERIOR/Hall	Wall Cap Beige Wood	0.06
3/26/19-261	INTERIOR/Hall	B Baseboard Beige Wood	0.31
3/26/19-262	INTERIOR/Hall	C Baseboard Beige Wood	0.11
3/26/19-263	INTERIOR/Hall	D Baseboard Beige Wood	0.06

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	ENUE, APARTMENT B (MEASURED 3/26/2019)	I
3/26/19-264	INTERIOR/Bathroom	A Wall Beige Drywall	0.05
3/26/19-265	INTERIOR/Bathroom	B Wall Beige Drywall	0.07
3/26/19-266	INTERIOR/Bathroom	C Wall Beige Drywall	0.11
3/26/19-267	INTERIOR/Bathroom	D Wall Beige Drywall	0.14
3/26/19-268	INTERIOR/Bathroom	Ceiling Beige Drywall	0.15
3/29/19-269	INTERIOR/Bathroom	C Window Sill Beige Wood	0.05
3/26/19-270	INTERIOR/Bathroom	C Window Casing Brown Metal	0.00
3/26/19-271	INTERIOR/Bathroom	C Window Sash Brown Metal	0.00
3/26/19-272	INTERIOR/Bathroom	A Door Beige Wood	0.00
3/26/19-273	INTERIOR/Bathroom	A Door Casing Beige Metal	0.10
3/26/19-274	INTERIOR/Bathroom	B Tub White Ceramic Tile	>1.00
3/26/19-275	INTERIOR/Bathroom	C Tub White Ceramic Tile	>1.00
3/26/19-276	INTERIOR/Bathroom	D Tub White Ceramic Tile	>1.00
3/26/19-277	INTERIOR/Bedroom 1 SE	A Wall Beige Plaster	0.39
3/26/19-278	INTERIOR/Bedroom 1 SE	B Wall Beige Plaster	0.43
3/26/19-279	INTERIOR/Bedroom 1 SE	C Wall Beige Plaster	0.23
3/26/19-280	INTERIOR/Bedroom 1 SE	D Wall Beige Plaster	0.22
3/26/19-281	INTERIOR/Bedroom 1 SE	Ceiling Beige Plaster	0.02
3/26/19-282	INTERIOR/Bedroom 1 SE	C Window Sill Beige Wood	0.00
3/26/19-283	INTERIOR/Bedroom 1 SE	C Window Casing Brown Metal	0.00
3/26/19-284	INTERIOR/Bedroom 1 SE	C Window Sash Brown Metal	0.00
3/26/19-285	INTERIOR/Bedroom 1 SE	A Door Beige Wood	0.01
3/26/19-286	INTERIOR/Bedroom 1 SE	A Door Casing Beige Metal	0.07
3/26/19-287	INTERIOR/Bedroom 1 SE	D Door Beige Wood	0.06
3/26/19-288	INTERIOR/Bedroom 1 SE	D Door Casing Beige Metal	0.09
3/26/19-289	INTERIOR/Bedroom 1 SE	A Baseboard Beige Wood	0.40
3/26/19-290	INTERIOR/Bedroom 1 SE	C Baseboard Beige Wood	0.14
3/26/19-291	INTERIOR/Bedroom 1 SE	D Baseboard Beige Wood	0.13
3/26/19-292	INTERIOR/Bedroom 1 Closet	A Wall Beige Plaster	0.05
3/26/19-293	INTERIOR/Bedroom 1 Closet	B Wall Beige Plaster	0.68
3/26/19-294	INTERIOR/Bedroom 1 Closet	C Wall Beige Plaster	0.30
3/26/19-295	INTERIOR/Bedroom 1 Closet	D Wall Beige Plaster	0.67

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	
3/26/19-296	INTERIOR/Bedroom 1 Closet	Ceiling Beige Plaster	0.33
3/26/19-297	INTERIOR/Bedroom 1 Closet	C Door Beige Wood	0.00
3/26/19-298	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.21
3/26/19-299	INTERIOR/Bedroom 1 Closet	Shelf Support Beige Wood	0.07
3/26/19-301	INTERIOR/Bedroom 1 Closet	C Door Casing Beige Metal	0.05
3/26/19-300	INTERIOR/Hall Closet	A Wall Beige Plaster	0.06
3/26/19-302	INTERIOR/Hall Closet	B Wall Beige Plaster	0.02
3/26/19-303	INTERIOR/Hall Closet	C Wall Beige Plaster	0.03
3/26/19-304	INTERIOR/Hall Closet	Ceiling Beige Plaster	0.01
3/26/19-305	INTERIOR/Hall Closet	Shelf Beige Wood	0.03
3/26/19-306	INTERIOR/Hall Closet	Shelf Support Beige Wood	0.07
3/26/19-307	INTERIOR/Hall Closet	D Door Beige Wood	0.00
3/26/19-308	INTERIOR/Hall Closet	D Door Casing Beige Wood	0.06
3/26/19-309	INTERIOR/Bedroom 2 NE	A Wall Beige Plaster	0.57
3/26/19-310	INTERIOR/Bedroom 2 NE	B Wall Beige Plaster	0.58
3/26/19-311	INTERIOR/Bedroom 2 NE	C Wall Beige Plaster	0.68
3/26/19-312	INTERIOR/Bedroom 2 NE	D Wall Beige Plaster	0.73
3/26/19-313	INTERIOR/Bedroom 2 NE	Ceiling Beige Plaster	0.09
3/26/19-314	INTERIOR/Bedroom 2 NE	A Window Sill Beige Wood	0.02
3/26/19-315	INTERIOR/Bedroom 2 NE	A Window Casing Brown Metal	0.00
3/26/19-316	INTERIOR/Bedroom 2 NE	A Window Sash Brown Metal	0.00
3/26/19-317	INTERIOR/Bedroom 2 NE	C Door Casing Beige Metal	0.06
3/26/19-318	INTERIOR/Bedroom 2 NE	D Door Beige Wood	0.01
3/26/19-319	INTERIOR/Bedroom 2 NE	D Door Casing Beige Wood	0.19
3/26/19-327	EXTERIOR/Rear C	C Storm Door Brown Metal	0.00
3/26/19-328	EXTERIOR/Rear C	C Storm Door Casing Brown Metal	0.00
3/26/19-329	EXTERIOR/Rear C	C Door Casing White Metal	0.00
3/26/19-330	EXTERIOR/Rear C	C Door White Metal	0.00
3/26/19-331	EXTERIOR/Rear C	C Window Casing Brown Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1204 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	
3/26/19-332	EXTERIOR/Rear C	C Window Sash Brown Metal	0.00
3/26/19-333	EXTERIOR/Rear C	C Lintel POOR	0.55
3/26/19-343	EXTERIOR/Front A	C Wall White Brick	1.31
3/26/19-344	EXTERIOR/Front A	D Wall White Brick	1.56
3/26/19-345	EXTERIOR/Front A	D Storm Door Brown Metal	0.00
3/26/19-346	EXTERIOR/Front A	D Storm Door Casing Brown Metal	0.00
3/26/19-347	EXTERIOR/Front A	D Door White Metal	0.00
3/26/19-348	EXTERIOR/Front A	D Door Casing White Metal	1.61
3/26/19-349	EXTERIOR/Front A	D Door Lintel Beige Steel	1.75
3/26/19-352	EXTERIOR/Front A	A Window Casing Brown Metal	0.00
3/26/19-353	EXTERIOR/Front A	A Window Sash Brown Metal	0.00
3/26/19-354	EXTERIOR/Front A	Trim Tan Wood	1.69
3/26/19-355	EXTERIOR/Front A	Handrail Black Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-368	INTERIOR/Kitchen	A Wall Beige Drywall	0.00
3/26/19-369	INTERIOR/Kitchen	B Wall Beige Drywall	0.21
3/26/19-370	INTERIOR/Kitchen	C Wall Beige Drywall	0.13
3/26/19-371	INTERIOR / Kitchen	D Wall Beige Drywall	0.00
3/26/19-372	INTERIOR/Kitchen	Ceiling Beige Drywall	0.00
3/26/19-373	INTERIOR/Kitchen	A Door Beige Wood	0.00
3/26/19-374	INTERIOR/Kitchen	A Door Casing Beige Metal	0.21
3/26/19-375	INTERIOR/Kitchen	C Door Beige Metal	0.00
3/26/19-376	INTERIOR/Kitchen	C Door Casing Beige Metal	0.00
3/26/19-377	INTERIOR/Kitchen	B Wall White Ceramic	>1.00
3/26/19-378	INTERIOR/Kitchen	B Cabinet Varnish Wood	0.00
3/26/19-379	INTERIOR/Kitchen	A Cabinet Varnish Wood	0.00
3/26/19-380	INTERIOR/Kitchen	C Cabinet Varnish Wood	0.00
3/26/19-381	INTERIOR/Living Room	A Wall Beige Drywall	0.08
3/26/19-382	INTERIOR/Living Room	B Wall Beige Drywall	0.12
3/26/19-383	INTERIOR/Living Room	C Wall Beige Drywall	0.13
3/26/19-384	INTERIOR/Living Room	D Wall Beige Drywall	0.38
3/26/19-385	INTERIOR/Living Room	Ceiling Beige Drywall	0.09
3/26/19-386	INTERIOR/Living Room	A Window Sill Beige Wood	0.00
3/26/19-387	INTERIOR/Living Room	A Window Casing Brown Metal	0.00
3/26/19-388	INTERIOR/Living Room	A Window Sash Brown Metal	0.00
3/26/19-389	INTERIOR/Living Room	C Window Sill Beige Wood	0.00
3/26/19-390	INTERIOR/Living Room	C Window Casing Brown Metal	0.00
3/26/19-391	INTERIOR/Living Room	C Window Sash Brown Metal	0.00
3/26/19-392	INTERIOR/Living Room	B Door Beige Metal	0.00
3/26/19-393	INTERIOR/Living Room	B Door Casing Beige Metal	0.00
3/26/19-394	INTERIOR/Living Room	C Door Beige Wood	0.00
3/26/19-395	INTERIOR/Living Room	C Door Casing Beige Metal	0.09
3/26/19-396	INTERIOR/Living Room	A Baseboard Beige Wood	0.26
3/26/19-397	INTERIOR/Living Room	B Baseboard Beige Wood	0.01
3/26/19-398	INTERIOR/Living Room	C Baseboard Beige Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-399	INTERIOR/Living Room	D Baseboard Beige Wood	0.09
3/26/19-400	INTERIOR/Living Room Closet	A Wall Beige Drywall	0.17
3/26/19-401	INTERIOR/Living Room Closet	B Wall Beige Drywall	0.15
3/26/19-402	INTERIOR/Living Room Closet	C Wall Beige Drywall	0.24
3/26/19-403	INTERIOR/Living Room Closet	D Wall Beige Drywall	0.17
3/26/19-404	INTERIOR/Living Room Closet	Ceiling Beige Drywall	0.11
3/26/19-405	INTERIOR/Living Room Closet	Shelf Beige Wood	0.07
3/26/19-406	INTERIOR/Living Room Closet	Shelf Support Beige Wood	0.07
3/26/19-407	INTERIOR/Living Room Closet	A Door Beige Wood	0.00
3/26/19-408	INTERIOR/Living Room Closet	A Door Casing Beige Metal	0.09
3/26/19-409	INTERIOR/Living Room Closet	B Baseboard Beige Wood	0.01
3/26/19-410	INTERIOR/Living Room Closet	C Baseboard Beige Wood	0.03
3/26/19-411	INTERIOR/Living Room Closet	D Baseboard Beige Wood	0.03
3/26/19-412	INTERIOR/Basement	A Wall Beige Drywall	0.00
3/26/19-413	INTERIOR/Basement	B Wall Beige Drywall	0.00
3/26/19-414	INTERIOR/Basement	C Wall Beige Drywall	0.01
3/26/19-415	INTERIOR/Basement	D Wall Beige Drywall	0.00
3/26/19-416	INTERIOR/Basement	Ceiling Beige Drywall	0.01
3/26/19-417	INTERIOR/Basement	A Trim Beige Wood	0.05
3/26/19-418	INTERIOR/Basement	B Trim Beige Wood	0.04
3/26/19-419	INTERIOR/Basement	Handrail Grey Wood	0.05
3/26/19-420	INTERIOR/Basement	B Stringer Grey Wood	0.02
3/26/19-421	INTERIOR/Basement	D Stringer Grey Wood	0.03
3/26/19-422	INTERIOR/Basement	Stair Tread Grey Wood	0.07
3/26/19-423	INTERIOR/Basement	Beam Gray Steel	0.03
3/26/19-424	INTERIOR/Basement	C Post Gray Steel	0.10
3/26/19-425	INTERIOR/Basement	A Wall White Concrete	>1.00
3/26/19-426	INTERIOR/Basement	B Wall White Block	0.02

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-427	INTERIOR/Basement	C Wall White Concrete	>1.00
3/26/19-428	INTERIOR/Basement	D Wall White Block	0.05
3/26/19-429	INTERIOR/Basement	Ceiling Beige Wood	0.04
3/26/19-430	INTERIOR/Basement	Flat Duct Beige Metal	0.02
3/26/19-431	INTERIOR/Basement	Round Duct Beige Metal	0.01
3/26/19-432	INTERIOR/Stairs	A Wall Beige Drywall	0.01
3/26/19-433	INTERIOR/Stairs	B Wall Beige Drywall	0.27
3/26/19-434	INTERIOR/Stairs	D Wall Beige Drywall	0.16
3/26/19-435	INTERIOR/Stairs	Ceiling Beige Drywall	0.15
3/26/19-436	INTERIOR/Stairs	B Stringer Beige Wood	0.03
3/26/19-437	INTERIOR/Stairs	D Stringer Beige Wood	0.05
3/26/19-438	INTERIOR/Stairs	Stair Tread Varnish Wood	0.00
3/26/19-439	INTERIOR/Stairs	Riser Beige Wood	0.23
3/26/19-440	INTERIOR/Stairs	Handrail Varnish Wood	0.00
3/26/19-441	INTERIOR/Stairs	Floor Varnish Wood	0.00
3/26/19-442	INTERIOR/Stairs	B Baseboard Beige Wood	0.02
3/26/19-443	INTERIOR/Stairs	C Baseboard Beige Wood	0.01
3/26/19-444	INTERIOR/Stairs	D Baseboard Beige Wood	0.13
3/26/19-445	INTERIOR/Hall	A Wall Beige Drywall	0.12
3/26/19-446	INTERIOR/Hall	B Wall Beige Drywall	0.08
3/26/19-447	INTERIOR/Hall	C Wall Beige Drywall	0.12
3/26/19-448	INTERIOR/Hall	D Wall Beige Drywall	0.19
3/26/19-449	INTERIOR/Hall	Ceiling Beige Drywall	0.18
3/26/19-450	INTERIOR/Hall	A Door Beige Wood	0.00
3/26/19-451	INTERIOR/Hall	A Door Casing Beige Metal	0.14
3/26/19-452	INTERIOR/Hall	C Door Beige Wood	0.00
3/26/19-454	INTERIOR/Hall	C Door Casing Beige Metal	0.12
3/26/19-455	INTERIOR/Hall	D Door Beige Wood	0.00
3/26/19-456	INTERIOR/Hall	D Door Casing Beige Metal	0.12
3/26/19-457	INTERIOR/Hall	Wall Cap Beige Wood	0.01
3/26/19-458	INTERIOR/Hall	B Baseboard Beige Wood	0.02

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1208 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-459	INTERIOR/Hall	C Baseboard Beige Wood	0.11
3/26/19-460	INTERIOR/Hall	D Baseboard Beige Wood	0.10
3/26/19-461	INTERIOR/Bathroom	A Wall Beige Drywall	0.20
3/26/19-462	INTERIOR/Bathroom	B Wall Beige Drywall	0.14
3/26/19-463	INTERIOR/Bathroom	C Wall Beige Drywall	0.14
3/26/19-464	INTERIOR/Bathroom	D Wall Beige Drywall	0.00
3/26/19-465	INTERIOR/Bathroom	Ceiling Beige Drywall	0.22
3/26/19-466	INTERIOR/Bathroom	A Door Beige Wood	0.00
3/26/19-467	INTERIOR/Bathroom	A Door Casing Beige Metal	0.06
3/26/19-468	INTERIOR/Bathroom	C Window Sill Beige Wood	0.00
3/26/19-469	INTERIOR/Bathroom	C Window Casing Brown Metal	0.00
3/26/19-470	INTERIOR/Bathroom	C Window Sash Brown Metal	0.00
3/26/19-471	INTERIOR/Bathroom	B Tub White Ceramic Tile	>1.00
3/26/19-472	INTERIOR/Bathroom	C Tub White Ceramic Tile	>1.00
3/26/19-473	INTERIOR/Bathroom	D Tub White Ceramic Tile	>1.00
3/26/19-474	INTERIOR/Bedroom 1 SW	A Wall Beige Drywall	0.08
3/26/19-475	INTERIOR/Bedroom 1 SW	B Wall Beige Drywall	0.14
3/26/19-476	INTERIOR/Bedroom 1 SW	C Wall Beige Drywall	0.35
3/26/19-477	INTERIOR/Bedroom 1 SW	D Wall Beige Drywall	0.19
3/26/19-478	INTERIOR/Bedroom 1 SW	Ceiling Beige Drywall	0.17
3/26/19-479	INTERIOR/Bedroom 1 SW	A Door Beige Wood	0.00
3/26/19-480	INTERIOR/Bedroom 1 SW	A Door Casing Beige Metal	0.15
3/26/19-481	INTERIOR/Bedroom 1 SW	B Door Beige Wood	0.00
3/26/19-482	INTERIOR/Bedroom 1 SW	B Door Casing Beige Metal	0.12
3/26/19-483	INTERIOR/Bedroom 1 SW	C Window Sill Beige Wood	0.00
3/26/19-484	INTERIOR/Bedroom 1 SW	C Window Casing Brown Metal	0.00
3/26/19-485	INTERIOR/Bedroom 1 SW	C Window Sash Brown Metal	0.00
3/26/19-486	INTERIOR/Bedroom 1 SW	A Baseboard Beige Wood	0.29
3/26/19-487	INTERIOR/Bedroom 1 SW	B Baseboard Beige Wood	0.07
3/26/19-488	INTERIOR/Bedroom 1 SW	C Baseboard Beige Wood	0.10
3/26/19-489	INTERIOR/Bedroom 1 SW	D Baseboard Beige Wood	0.09

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-490	INTERIOR/Bedroom Closet	A Wall Beige Drywall	>1.00
3/26/19-491	INTERIOR/Bedroom Closet	B Wall Beige Drywall	0.09
3/26/19-492	INTERIOR/Bedroom Closet	C Wall Beige Drywall	0.17
3/26/19-493	INTERIOR/Bedroom Closet	D Wall Beige Drywall	0.16
3/26/19-494	INTERIOR/Bedroom Closet	Ceiling Beige Drywall	0.13
3/26/19-495	INTERIOR/Bedroom Closet	C Door Beige Wood	0.00
3/26/19-496	INTERIOR/Bedroom Closet	C Door Casing Beige Metal	0.09
3/26/19-497	INTERIOR/Bedroom Closet	Shelf Beige Wood	0.05
3/26/19-498	INTERIOR/Bedroom Closet	Shelf Support Beige Wood	0.01
3/26/19-499	INTERIOR/Bedroom Closet	A Baseboard Beige Wood	0.06
3/26/19-500	INTERIOR/Bedroom Closet	B Baseboard Beige Wood	0.07
3/26/19-501	INTERIOR/Bedroom Closet	C Baseboard Beige Wood	0.02
3/26/19-502	INTERIOR/Hall Closet	A Wall Beige Drywall	0.17
3/26/19-503	INTERIOR/Hall Closet	C Wall Beige Drywall	>1.00
3/26/19-504	INTERIOR/Hall Closet	D Wall Beige Drywall	>1.00
3/26/19-505	INTERIOR/Hall Closet	Ceiling Beige Drywall	>1.00
3/26/19-506	INTERIOR/Hall Closet	Shelf Beige Wood	0.02
3/26/19-507	INTERIOR/Hall Closet	Shelf Support Beige Wood	0.06
3/26/19-510	INTERIOR/Hall Closet	A Baseboard Beige Wood	0.09
3/26/19-511	INTERIOR/Hall Closet	C Baseboard Beige Wood	0.12
3/26/19-512	INTERIOR/Hall Closet	D Baseboard Beige Wood	0.07
3/26/19-513	INTERIOR/Hall Closet	B Door Beige Wood	0.01
3/26/19-514	INTERIOR/Hall Closet	B Door Casing Beige Metal	0.09
3/26/19-515	INTERIOR/Bedroom 2 N	A Wall Beige Drywall	0.09
3/26/19-516	INTERIOR/Bedroom 2 N	B Wall Beige Drywall	0.12
3/26/19-517	INTERIOR/Bedroom 2 N	C Wall Beige Drywall	0.07
3/26/19-518	INTERIOR/Bedroom 2 N	D Wall Beige Drywall	0.09
3/26/19-519	INTERIOR/Bedroom 2 N	Ceiling Beige Drywall	0.13
3/26/19-520	INTERIOR/Bedroom 2 N	A Window Sill Beige Wood	0.00
3/26/19-521	INTERIOR/Bedroom 2 N	A Window Casing Brown Metal	0.00
3/26/19-522	INTERIOR/Bedroom 2 N	A Window Sash Brown Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1208 HUFFMAN AVE	NUE, APARTMENT A (MEASURED 3/26/2019)	
3/26/19-523	INTERIOR/Bedroom 2 N	B Door Beige Wood	0.01
3/26/19-524	INTERIOR/Bedroom 2 N	B Door Casing Beige Metal	0.07
3/26/19-525	INTERIOR/Bedroom 2 N	C Door Beige Wood	0.00
3/26/19-526	INTERIOR/Bedroom 2 N	C Door Casing Beige Metal	>1.00
3/26/19-527	INTERIOR/Bedroom 2 N	A Baseboard Beige Wood	0.08
3/26/19-528	INTERIOR/Bedroom 2 N	B Baseboard Beige Wood	0.05
3/26/19-529	INTERIOR/Bedroom 2 N	C Baseboard Beige Wood	0.01
3/26/19-530	INTERIOR/Bedroom 2 N	D Baseboard Beige Wood	0.02
3/26/19-531	INTERIOR/Bedroom Closet	A Wall Beige Drywall	0.14
3/26/19-532	INTERIOR/Bedroom Closet	A Wall Beige Drywall	>1.00
3/26/19-533	INTERIOR/Bedroom Closet	B Wall Beige Drywall	0.19
3/26/19-534	INTERIOR/Bedroom Closet	C Wall Beige Drywall	0.09
3/26/19-535	INTERIOR/Bedroom Closet	D Wall Beige Drywall	0.19
3/26/19-536	INTERIOR/Bedroom Closet	Ceiling Beige Drywall	>1.00
3/26/19-537	INTERIOR/Bedroom Closet	Shelf Beige Wood	0.00
3/26/19-538	INTERIOR/Bedroom Closet	Shelf Support Beige Wood	0.05
3/26/19-539	INTERIOR/Bedroom Closet	D Door Beige Wood	0.00
3/26/19-540	INTERIOR/Bedroom Closet	D Door Casing Beige Metal	0.08
3/26/19-541	INTERIOR/Bedroom Closet	A Baseboard Beige Wood	0.18
3/26/19-542	INTERIOR/Bedroom Closet	B Baseboard Beige Wood	0.03
3/26/19-543	INTERIOR/Bedroom Closet	C Baseboard Beige Wood	0.06
3/26/19-544	INTERIOR/Bedroom Closet	D Baseboard Beige Wood	0.13
3/26/19-361	EXTERIOR/Rear C	C Storm Door Brown Metal	0.00
3/26/19-362	EXTERIOR/Rear C	C Storm Door Casing Brown Metal	0.00
3/26/19-363	EXTERIOR/Rear C	C Window Casing Brown Metal	0.00
3/26/19-364	EXTERIOR/Rear C	C Window Sash Brown Metal	0.00
3/26/19-365	EXTERIOR/Rear C	C Door Casing Beige Metal	1.46
3/26/19-366	EXTERIOR/Rear C	C Lintel White Steel	1.14
3/26/19-367	EXTERIOR/Rear C	C Door Beige Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1208 HUFFMAN AVE	ENUE, APARTMENT B (MEASURED 3/26/2019)	
3/26/19-545	INTERIOR/Kitchen	A Wall Beige Drywall	0.00
3/26/19-546	INTERIOR/Kitchen	B Wall Beige Drywall	0.00
3/26/19-547	INTERIOR/Kitchen	C Wall Beige Drywall	0.26
3/26/19-548	INTERIOR/Kitchen	D Wall Beige Drywall	0.04
3/26/19-549	INTERIOR/Kitchen	Ceiling Beige Drywall	0.23
3/26/19-550	INTERIOR/Kitchen	A Door Beige Wood	0.00
3/26/19-551	INTERIOR/Kitchen	A Door Casing Beige Metal	0.00
3/26/19-552	INTERIOR/Kitchen	C Door Beige Metal	0.00
3/26/19-553	INTERIOR/Kitchen	C Door Casing Beige Metal	0.00
3/26/19-554	INTERIOR/Kitchen	A Cabinet Varnish Wood	0.00
3/26/19-555	INTERIOR/Kitchen	C Cabinet Varnish Wood	0.00
3/26/19-556	INTERIOR/Kitchen	D Cabinet Varnish Wood	0.00
3/26/19-557	INTERIOR/Kitchen	D Wall White Ceramic	0.00
3/26/19-558	INTERIOR/Living Room	A Wall Beige Drywall	0.10
3/26/19-559	INTERIOR/Living Room	B Wall Beige Drywall	0.06
3/26/19-560	INTERIOR/Living Room	C Wall Beige Drywall	0.13
3/26/19-561	INTERIOR/Living Room	D Wall Beige Drywall	0.05
3/26/19-562	INTERIOR/Living Room	Ceiling Beige Drywall	0.08
3/26/19-563	INTERIOR/Living Room	A Window Sill Beige Wood	0.02
3/26/19-564	INTERIOR/Living Room	A Window Casing Brown Metal	0.00
3/26/19-565	INTERIOR/Living Room	A Window Sash Brown Metal	0.00
3/26/19-566	INTERIOR/Living Room	C Window Sill Beige Wood	0.00
3/26/19-567	INTERIOR/Living Room	C Window Casing Brown Metal	0.00
3/26/19-568	INTERIOR/Living Room	C Window Sash Brown Metal	0.00
3/26/19-569	INTERIOR/Living Room	C Door Beige Wood	0.00
3/26/19-570	INTERIOR/Living Room	C Door Casing Beige Metal	0.17
3/26/19-571	INTERIOR/Living Room	A Baseboard Beige Wood	0.07
3/26/19-572	INTERIOR/Living Room	B Baseboard Beige Wood	0.21
3/26/19-573	INTERIOR/Living Room	C Baseboard Beige Wood	0.00
3/26/19-574	INTERIOR/Living Room	D Baseboard Beige Wood	0.11
3/26/19-575	INTERIOR/Living Room Closet	A Wall Beige Drywall	0.19

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	
3/26/19-576	INTERIOR/Living Room Closet	B Wall Beige Drywall	0.16
3/26/19-577	INTERIOR/Living Room Closet	C Wall Beige Drywall	0.12
3/26/19-578	INTERIOR/Living Room Closet	D Wall Beige Drywall	0.15
3/26/19-579	INTERIOR/Living Room Closet	Ceiling Beige Drywall	0.16
3/26/19-580	INTERIOR/Living Room Closet	Shelf Beige Wood	0.01
3/26/19-581	INTERIOR/Living Room Closet	B Shelf Support Beige Wood	0.00
3/26/19-582	INTERIOR/Living Room Closet	A Baseboard Beige Wood	0.04
3/26/19-583	INTERIOR/Living Room Closet	B Baseboard Beige Wood	0.03
3/26/19-584	INTERIOR/Living Room Closet	C Baseboard Beige Wood	0.12
3/26/19-585	INTERIOR/Living Room Closet	D Baseboard Beige Wood	0.01
3/26/19-586	INTERIOR/Living Room Closet	A Door Beige Wood	0.03
3/26/19-587	INTERIOR/Living Room Closet	A Door Casing Beige Metal	0.06
3/26/19-588	INTERIOR/Basement	A Wall Beige Drywall	0.02
3/26/19-589	INTERIOR/Basement	B Wall Beige Drywall	0.00
3/26/19-590	INTERIOR/Basement	C Wall Beige Drywall	0.02
3/26/19-591	INTERIOR/Basement	D Wall Beige Drywall	0.00
3/26/19-592	INTERIOR / Basement	Ceiling Beige Drywall	0.00
3/26/19-593	INTERIOR/Basement	C Door Beige Wood	0.00
3/26/19-594	INTERIOR/Basement	C Door Casing Beige Metal	0.06
3/26/19-595	INTERIOR/Basement	A Trim Beige Wood	0.13
3/26/19-596	INTERIOR/Basement	B Trim Beige Wood	0.16
3/26/19-597	INTERIOR/Basement	D Trim Beige Wood	0.11
3/26/19-598	INTERIOR/Basement	Handrail Brown Wood	0.11
3/26/19-599	INTERIOR/Basement	B Stringer Brown Wood	0.06
3/26/19-600	INTERIOR/Basement	D Stringer Brown Wood	0.12
3/26/19-601	INTERIOR/Basement	Stair Tread Brown Wood	0.06
3/26/19-602	INTERIOR/Basement	Beam Brown Steel	0.05
3/26/19-603	INTERIOR/Basement	A Post Brown Steel	0.02

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	
3/26/19-604	INTERIOR/Stairs	A Wall Beige Drywall	0.04
3/26/19-605	INTERIOR/Stairs	B Wall Beige Drywall	0.06
3/26/19-606	INTERIOR/Stairs	D Wall Beige Drywall	0.08
3/26/19-607	INTERIOR/Stairs	Ceiling Beige Drywall	0.05
3/26/19-608	INTERIOR/Stairs	Handrail Varnish Wood	0.00
3/26/19-609	INTERIOR/Stairs	B Stringer Brown Wood	0.04
3/26/19-610	INTERIOR/Stairs	D Stringer Brown Wood	0.01
3/26/19-611	INTERIOR/Stairs	Stair Tread Brown Wood	0.03
3/26/19-612	INTERIOR/Stairs	Riser Brown Wood	0.21
3/26/19-613	INTERIOR/Stairs	Floor Brown Wood	0.03
3/26/19-614	INTERIOR/Stairs	A Baseboard Beige Wood	0.09
3/26/19-615	INTERIOR/Stairs	C Baseboard Beige Wood	0.14
3/26/19-616	INTERIOR/Stairs	D Baseboard Beige Wood	0.23
3/26/19-617	INTERIOR/Hall	A Wall Beige Drywall	0.23
3/26/19-618	INTERIOR/Hall	B Wall Beige Drywall	0.08
3/26/19-619	INTERIOR/Hall	C Wall Beige Drywall	0.06
3/26/19-620	INTERIOR/Hall	D Wall Beige Drywall	0.04
3/26/19-621	INTERIOR/Hall	Ceiling Beige Drywall	0.20
3/26/19-622	INTERIOR/Hall	A Door White Wood	0.00
3/26/19-623	INTERIOR/Hall	A Door Casing Beige Metal	0.09
3/26/19-624	INTERIOR/Hall	B Door Beige Wood	0.00
3/26/19-625	INTERIOR/Hall	B Door Casing Beige Metal	0.28
3/26/19-626	INTERIOR/Hall	C Door Beige Wood	0.00
3/26/19-627	INTERIOR/Hall	C Door Casing Beige Metal	0.07
3/26/19-628	INTERIOR/Hall	Wall Cap Beige Wood	0.01
3/26/19-629	INTERIOR/Hall	B Baseboard Beige Wood	0.10
3/26/19-630	INTERIOR/Hall	C Baseboard Beige Wood	0.26
3/26/19-631	INTERIOR/Hall	D Baseboard Beige Wood	0.20
3/26/19-632	INTERIOR/Bathroom	A Wall Beige Drywall	0.11
3/26/19-633	INTERIOR/Bathroom	B Wall Beige Drywall	0.00
3/26/19-634	INTERIOR/Bathroom	C Wall Beige Drywall	0.08

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	•
3/26/19-635	INTERIOR/Bathroom	D Wall Beige Drywall	0.00
3/26/19-636	INTERIOR/Bathroom	Ceiling Beige Drywall	0.00
3/26/19-637	INTERIOR/Bathroom	A Door White Wood	0.00
3/26/19-638	INTERIOR/Bathroom	A Door Casing Beige Metal	0.08
3/26/19-639	INTERIOR/Bathroom	C Window Sill Brown Wood	0.00
3/26/19-640	INTERIOR/Bathroom	C Window Casing Brown Metal	0.00
3/26/19-641	INTERIOR/Bathroom	C Window Sash Brown Metal	0.00
3/26/19-642	INTERIOR/Bathroom	B Tub White Ceramic Tile	>1.00
3/26/19-643	INTERIOR/Bathroom	C Tub White Ceramic Tile	>1.00
3/26/19-644	INTERIOR/Bathroom	D Tub White Ceramic Tile	>1.00
3/26/19-645	INTERIOR/Bathroom	A Wall Beige Drywall	0.05
3/26/19-646	INTERIOR/Bedroom SE	B Wall Beige Drywall	0.05
3/26/19-647	INTERIOR/Bedroom SE	C Wall Beige Drywall	0.13
3/26/19-648	INTERIOR/Bedroom SE	D Wall Beige Drywall	0.09
3/26/19-649	INTERIOR/Bedroom SE	Ceiling Beige Drywall	0.02
3/26/19-650	INTERIOR/Bedroom SE	A Door Varnish Wood	0.02
3/26/19-651	INTERIOR/Bedroom SE	A Door Casing Beige Metal	0.05
3/26/19-652	INTERIOR/Bedroom SE	D Door Beige Wood	0.00
3/26/19-653	INTERIOR/Bedroom SE	D Door Casing Beige Metal	0.04
3/26/19-654	INTERIOR/Bedroom SE	C Window Sill Brown Wood	0.00
3/26/19-655	INTERIOR/Bedroom SE	C Window Casing Brown Metal	0.00
3/26/19-656	INTERIOR/Bedroom SE	C Window Sash Brown Metal	0.00
3/26/19-657	INTERIOR/Bedroom SE	A Baseboard Beige Wood	0.15
3/26/19-658	INTERIOR/Bedroom SE	B Baseboard Beige Wood	0.31
3/26/19-659	INTERIOR/Bedroom SE	C Baseboard Beige Wood	0.14
3/26/19-660	INTERIOR/Bedroom SE	D Baseboard Beige Wood	0.25
3/26/19-661	INTERIOR/Bedroom Closet	A Wall Beige Drywall	0.03
3/26/19-662	INTERIOR/Bedroom Closet	B Wall Beige Drywall	0.08
3/26/19-663	INTERIOR/Bedroom Closet	C Wall Beige Drywall	0.08
3/26/19-664	INTERIOR/Bedroom Closet	D Wall Beige Drywall	0.08
3/26/19-665	INTERIOR/Bedroom Closet	Ceiling Beige Drywall	0.10

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	
3/26/19-666	INTERIOR/Bedroom Closet	C Door White Wood	0.03
3/26/19-667	INTERIOR/Bedroom Closet	C Door Casing Beige Metal	0.04
3/26/19-668	INTERIOR/Bedroom Closet	Shelf Beige Wood	0.00
3/26/19-669	INTERIOR/Bedroom Closet	B Shelf Support Beige Wood	0.01
3/26/19-670	INTERIOR/Bedroom Closet	A Baseboard Beige Wood	0.12
3/26/19-671	INTERIOR/Bedroom Closet	B Baseboard Beige Wood	0.09
3/26/19-672	INTERIOR/Bedroom Closet	C Baseboard Beige Wood	0.15
3/26/19-673	INTERIOR/Bedroom Closet	D Baseboard Beige Wood	0.09
3/26/19-674	INTERIOR/Bedroom Closet	A Wall Beige Drywall	0.00
3/26/19-675	INTERIOR/Bedroom Closet	B Wall Beige Drywall	0.00
3/26/19-676	INTERIOR/Bedroom Closet	C Wall Beige Drywall	0.00
3/26/19-677	INTERIOR/Bedroom Closet	Ceiling Beige Drywall	0.00
3/26/19-678	INTERIOR/Bedroom Closet	D Door Beige Wood	0.00
3/26/19-679	INTERIOR/Bedroom Closet	D Door Casing Beige Metal	0.02
3/26/19-680	INTERIOR/Bedroom Closet	Shelf Beige Wood	0.00
3/26/19-681	INTERIOR/Bedroom Closet	Shelf Support Beige Wood	0.01
3/26/19-682	INTERIOR/Bedroom Closet	A Baseboard Beige Wood	0.17
3/26/19-683	INTERIOR/Bedroom Closet	B Baseboard Beige Wood	0.13
3/26/19-684	INTERIOR/Bedroom Closet	C Baseboard Beige Wood	0.02
3/26/19-685	INTERIOR/Bedroom 2 NE	A Wall Beige Drywall	0.07
3/26/19-686	INTERIOR/Bedroom 2 NE	B Wall Beige Drywall	0.10
3/26/19-687	INTERIOR/Bedroom 2 NE	C Wall Beige Drywall	0.09
3/26/19-688	INTERIOR/Bedroom 2 NE	D Wall Beige Drywall	0.20
3/26/19-689	INTERIOR/Bedroom 2 NE	Ceiling Beige Drywall	0.09
3/26/19-690	INTERIOR/Bedroom 2 NE	A Window Sill Brown Wood	0.00
3/26/19-691	INTERIOR/Bedroom 2 NE	A Window Casing Brown Metal	0.00
3/26/19-692	INTERIOR/Bedroom 2 NE	A Window Sash Brown Metal	0.00
3/26/19-693	INTERIOR/Bedroom 2 NE	C Door Beige Wood	0.00
3/26/19-694	INTERIOR/Bedroom 2 NE	C Door Casing Beige Metal	0.02
3/26/19-695	INTERIOR/Bedroom 2 NE	D Door Varnish Wood	0.00
3/26/19-696	INTERIOR/Bedroom 2 NE	D Door Casing Beige Metal	0.05

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1208 HUFFMAN AVE	NUE, APARTMENT B (MEASURED 3/26/2019)	
3/26/19-697	INTERIOR/Bedroom 2 NE	A Baseboard Beige Wood	0.10
3/26/19-698	INTERIOR/Bedroom 2 NE	B Baseboard Beige Wood	0.03
3/26/19-699	INTERIOR/Bedroom 2 NE	C Baseboard Beige Wood	0.06
3/26/19-700	INTERIOR/Bedroom 2 NE	D Baseboard Beige Wood	0.06
3/26/19-701	INTERIOR/Bedroom 2 Closet	A Wall Beige Drywall	0.11
3/26/19-702	INTERIOR/Bedroom 2 Closet	B Wall Beige Drywall	0.08
3/26/19-703	INTERIOR/Bedroom 2 Closet	C Wall Beige Drywall	0.10
3/26/19-704	INTERIOR/Bedroom 2 Closet	D Wall Beige Drywall	0.09
3/26/19-705	INTERIOR/Bedroom 2 Closet	Ceiling Beige Drywall	0.07
3/26/19-706	INTERIOR/Bedroom 2 Closet	D Door Varnish Wood	0.01
3/26/19-707	INTERIOR/Bedroom 2 Closet	D Door Casing Beige Metal	0.04
3/26/19-708	INTERIOR/Bedroom 2 Closet	Shelf Beige Wood	0.00
3/26/19-709	INTERIOR/Bedroom 2 Closet	A Shelf Support Beige Wood	0.01
3/26/19-710	INTERIOR/Bedroom 2 Closet	A Baseboard Beige Wood	0.11
3/26/19-711	INTERIOR/Bedroom 2 Closet	B Baseboard Beige Wood	0.03
3/26/19-712	INTERIOR/Bedroom 2 Closet	C Baseboard Beige Wood	0.10
3/26/19-713	INTERIOR/Bedroom 2 Closet	D Baseboard Beige Wood	0.09
3/26/19-714	EXTERIOR/Rear C	C Storm Door Drown Metal	0.00
3/26/19-715	EXTERIOR/Rear C	C Storm Door Casing Drown Metal	0.00
3/26/19-716	EXTERIOR/Rear C	C Lintel White Metal POOR	1.30
3/26/19-717	EXTERIOR/Rear C	C Door Beige Metal	1.43
3/26/19-718	EXTERIOR/Rear C	C Door Casing Beige Metal	0.00
3/26/19-719	EXTERIOR/Rear C	C Window Casing Brown Metal	0.00
3/26/19-720	EXTERIOR/Rear C	C Window Sash Brown Metal	0.00

TABLE 12: LEAD CONCENTRATIONS MEASURED WITH XRF SPECTRUM ANALYZER AT 1210 HUFFMAN AVENUE, COMMON AREAS, DAYTON, OHIO, SAMPLED BY HELIX ENVIRONMENTAL, INC., MARCH 26 & 27, 2019.

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1210 HUFFMAN AVE	NUE, COMMON (MEASURED 3/26 & 27/2019)	
3/26/19-721	INTERIOR/Hall	A Wall Beige Drywall	0.13
3/26/19-722	INTERIOR/Hall	B Wall Beige Drywall	0.06
3/26/19-723	INTERIOR/Hall	C Wall Beige Drywall	0.18
3/26/19-724	INTERIOR/Hall	D Wall Beige Drywall	0.14
3/26/19-725	INTERIOR/Hall	Ceiling Beige Drywall	0.12
3/26/19-726	INTERIOR/Hall	A Basement Door Beige Wood	0.03
3/26/19-727	INTERIOR/Hall	A Door Casing Beige Metal	0.04
3/26/19-728	INTERIOR/Hall	B Door Beige Metal	0.00
3/26/19-729	INTERIOR/Hall	B Door Casing Beige Metal	0.00
3/26/19-732	INTERIOR/Hall	D Door Grey Metal	0.00
3/26/19-733	INTERIOR/Hall	D Door Casing Beige Metal	0.00
3/26/19-734	INTERIOR/Hall	A Window Sill Beige Wood	0.00
3/26/19-735	INTERIOR/Hall	B Stringer Beige Wood	0.04
3/26/19-736	INTERIOR/Hall	D Stringer Beige Wood	0.06
3/26/19-737	INTERIOR/Hall	Stair Tread Varnish Wood	0.04
3/26/19-738	INTERIOR/Hall	Riser Beige Wood	0.98
3/26/19-739	INTERIOR/Hall	Handrail Beige Wood	0.14
3/27/19-003	INTERIOR/Basement	A Wall Beige Drywall	>1.00
3/27/19-004	INTERIOR/Basement	B Wall Beige Drywall	0.66
3/27/19-005	INTERIOR/Basement	C Wall Beige Drywall	0.63
3/27/19-006	INTERIOR/Basement	D Wall Beige Drywall	>1.00
3/27/19-007	INTERIOR/Basement	Ceiling Beige Drywall	0.59
3/27/19-008	INTERIOR/Basement	B Trim Beige Wood	0.64
3/27/19-009	INTERIOR/Basement	D Trim Beige Wood	0.35
3/27/19-010	INTERIOR/Basement	Handrail Grey Wood	0.25
3/27/19-011	INTERIOR/Basement	B Stringer Grey Wood	0.49
3/27/19-012	INTERIOR/Basement	D Stringer Grey Wood	0.44
3/27/19-013	INTERIOR/Basement	Stair Tread Grey Wood	0.80
3/27/19-014	INTERIOR/Basement	Riser Grey Wood	0.84
3/27/19-015	INTERIOR/Basement	A Beam Grey Steel	0.69
3/27/19-016	INTERIOR/Basement	A Post Grey Steel	0.92

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1210 HUFFMAN AV	ENUE, COMMON (MEASURED 3/26 & 27/2019)	
3/27/19-017	INTERIOR/Basement	C Beam Grey Steel	0.45
3/27/19-018	INTERIOR/Basement	C Post Grey Steel	0.37
3/27/19-019	INTERIOR/Basement	Cage Wall Brown Wood	0.05
3/27/19-196	INTERIOR/Stairs	B Wall Beige Drywall	0.15
3/27/19-197	INTERIOR/Stairs	C Wall Beige Drywall	0.12
3/27/19-198	INTERIOR/Stairs	D Wall Beige Drywall	0.31
3/27/19-199	INTERIOR/Stairs	Ceiling Beige Drywall	0.18
3/27/19-200	INTERIOR/Stairs	Handrail Varnish Wood	0.00
3/27/19-201	INTERIOR/Stairs	B Door Beige Metal	0.02
3/27/19-202	INTERIOR/Stairs	B Door Casing Beige Metal	0.07
3/27/19-203	INTERIOR/Stairs	C Door Beige Metal	0.02
3/27/19-204	INTERIOR/Stairs	C Door Casing Beige Metal	0.29
3/27/19-215	INTERIOR/Stairs	C Baseboard Beige Wood	0.07
3/27/19-216	INTERIOR/Stairs	D Baseboard Beige Wood	0.10
3/27/19-205	INTERIOR/Stair Closet	B Wall Beige Drywall	0.00
3/27/19-206	INTERIOR/Stair Closet	C Wall Beige Drywall	0.06
3/27/19-207	INTERIOR/Stair Closet	D Wall Beige Drywall	>1.00
3/27/19-208	INTERIOR/Stair Closet	Ceiling Beige Drywall	>1.00
3/27/19-209	INTERIOR/Stair Closet	A Door Varnish Wood	0.01
3/27/19-210	INTERIOR/Stair Closet	A Door Casing Beige Metal	0.09
3/27/19-211	INTERIOR/Stair Closet	Shelf Beige Wood	0.07
3/27/19-212	INTERIOR/Stair Closet	B Shelf Support Beige Wood	0.12
3/27/19-213	INTERIOR/Stair Closet	A Baseboard Beige Wood	0.08
3/27/19-214	INTERIOR/Stair Closet	D Baseboard Beige Wood	0.10
3/26/19-730	EXTERIOR/Hall	C Door Grey Metal	0.00
3/26/19-731	EXTERIOR/Hall	C Door Casing Beige Metal	0.00
3/26/19-740	EXTERIOR/Front A	A Door Grey Metal	0.00
3/26/19-741	EXTERIOR/Front A	A Door Trim Tan Metal	2.30
3/26/19-742	EXTERIOR/Front A	A Window Casing Brown Metal	0.00
3/26/19-743	EXTERIOR/Front A	A Window Sash Brown Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1210 HUFFMAN AV	'ENUE, APARTMENT A (MEASURED 27/2019)	
3/27/19-020	INTERIOR/Living Room	A Wall Beige Drywall	0.05
3/27/19-021	INTERIOR/Living Room	B Wall Beige Drywall	0.11
3/27/19-022	INTERIOR/Living Room	C Wall Beige Drywall	0.36
3/27/19-023	INTERIOR/Living Room	D Wall Beige Drywall	0.00
3/27/19-024	INTERIOR/Living Room	Ceiling Beige Drywall	0.02
3/27/19-025	INTERIOR/Living Room	A Window Sill Beige Wood	0.00
3/27/19-026	INTERIOR/Living Room	A Window Casing Brown Metal	0.00
3/27/19-027	INTERIOR/Living Room	A Window Sash Brown Metal	0.00
3/27/19-028	INTERIOR/Living Room	D Door Beige Metal	0.00
3/27/19-029	INTERIOR/Living Room	D Door Casing Beige Wood	0.00
3/27/19-030	INTERIOR/Living Room	A Baseboard Beige Wood	0.04
3/27/19-031	INTERIOR/Living Room	B Baseboard Beige Wood	0.12
3/27/19-032	INTERIOR/Living Room	C Baseboard Beige Wood	0.06
3/27/19-033	INTERIOR/Living Room	D Baseboard Beige Wood	0.17
3/27/19-034	INTERIOR/Dining Room	A Wall Beige Drywall	0.26
3/27/19-035	INTERIOR/Dining Room	B Wall Beige Drywall	0.09
3/27/19-036	INTERIOR/Dining Room	C Wall Beige Drywall	0.14
3/27/19-037	INTERIOR/Dining Room	D Wall Beige Drywall	0.09
3/27/19-038	INTERIOR/Dining Room	Ceiling Beige Drywall	0.13
3/27/19-039	INTERIOR/Dining Room	A Window Sill Beige Wood	0.00
3/27/19-040	INTERIOR/Dining Room	A Window Casing Brown Metal	0.00
3/27/19-041	INTERIOR/Dining Room	A Window Sash Brown Metal	0.00
3/27/19-042	INTERIOR/Dining Room	B Window Sill Beige Wood	0.00
3/27/19-043	INTERIOR/Dining Room	B Window Casing Brown Metal	0.00
3/27/19-044	INTERIOR/Dining Room	B Window Sash Brown Metal	0.00
3/27/19-045	INTERIOR/Dining Room	A Baseboard Beige Wood	0.34
3/27/19-046	INTERIOR/Dining Room	B Baseboard Beige Wood	0.10
3/27/19-047	INTERIOR/Dining Room	C Baseboard Beige Wood	0.10
3/27/19-048	INTERIOR/Dining Room	D Baseboard Beige Wood	0.01
3/27/19-049	INTERIOR/Dining Room	C Door Casing Beige Wood	0.12
3/27/19-050	INTERIOR/Dining Room	C Door Trim Beige Wood	0.01

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1210 HUFFMAN AV	ENUE, APARTMENT A (MEASURED 27/2019)	
3/27/19-051	INTERIOR/Kitchen	A Wall Beige Drywall	0.10
3/27/19-052	INTERIOR/Kitchen	B Wall Beige Drywall	0.10
3/27/19-053	INTERIOR/Kitchen	C Wall Beige Drywall	0.00
3/27/19-054	INTERIOR/Kitchen	D Wall Beige Drywall	0.22
3/27/19-055	INTERIOR/Kitchen	Ceiling Beige Drywall	0.34
3/27/19-056	INTERIOR/Kitchen	A Door Beige Metal	0.00
3/27/19-057	INTERIOR/Kitchen	A Door Casing Beige Wood	0.00
3/27/19-058	INTERIOR/Kitchen	B Window Sill Beige Wood	0.00
3/27/19-059	INTERIOR/Kitchen	B Window Casing Brown Metal	0.00
3/27/19-060	INTERIOR/Kitchen	B Window Sash Brown Metal	0.00
3/27/19-061	INTERIOR/Kitchen	C Cabinet Varnish Wood	0.00
3/27/19-062	INTERIOR/Hall	B Wall Beige Drywall	0.13
3/27/19-063	INTERIOR/Hall	C Wall Beige Drywall	0.05
3/27/19-064	INTERIOR/Hall	D Wall Beige Drywall	0.05
3/27/19-065	INTERIOR/Hall	B Door Brown Wood	0.00
3/27/19-066	INTERIOR/Hall	B Door Casing Beige Wood	0.09
3/27/19-067	INTERIOR/Hall	C Door Brown Wood	0.00
3/27/19-068	INTERIOR/Hall	C Door Casing Beige Wood	0.07
3/27/19-069	INTERIOR/Hall	A Door Brown Wood	0.07
3/27/19-070	INTERIOR/Hall	A Door Casing Beige Wood	0.16
3/27/19-071	INTERIOR/Hall	A Baseboard Beige Wood	0.04
3/27/19-072	INTERIOR/Hall	A Wall Beige Wood	0.28
3/27/19-073	INTERIOR/Hall	Ceiling Beige Drywall	0.10
3/27/19-074	INTERIOR/Hall	B Baseboard Beige Wood	0.11
3/27/19-075	INTERIOR/Hall	C Baseboard Beige Wood	0.06
3/27/19-076	INTERIOR/Hall	D Baseboard Beige Wood	0.06
3/27/19-077	INTERIOR/Bedroom 1 NE	A Wall Beige Drywall	0.05
3/27/19-078	INTERIOR/Bedroom 1 NE	B Wall Beige Drywall	0.06
3/27/19-079	INTERIOR/Bedroom 1 NE	C Wall Beige Drywall	0.06
3/27/19-080	INTERIOR/Bedroom 1 NE	D Wall Beige Drywall	0.01
3/27/19-081	INTERIOR/Bedroom 1 NE	Ceiling Beige Drywall	0.09

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1210 HUFFMAN AV	ENUE, APARTMENT A (MEASURED 27/2019)	
3/27/19-082	INTERIOR/Bedroom 1 NE	B Window Sill Beige Wood	0.00
3/27/19-083	INTERIOR/Bedroom 1 NE	B Window Casing Brown Metal	0.00
3/27/19-084	INTERIOR/Bedroom 1 NE	B Window Sash Brown Metal	0.00
3/27/19-085	INTERIOR/Bedroom 1 NE	D Door Brown Wood	0.00
3/27/19-086	INTERIOR/Bedroom 1 NE	D Door Casing Beige Wood	0.07
3/27/19-087	INTERIOR/Bedroom 1 NE	A Baseboard Beige Wood	0.22
3/27/19-088	INTERIOR/Bedroom 1 NE	B Baseboard Beige Wood	0.04
3/27/19-089	INTERIOR/Bedroom 1 NE	C Baseboard Beige Wood	0.09
3/27/19-090	INTERIOR/Bedroom 1 NE	D Baseboard Beige Wood	0.09
3/27/19-091	INTERIOR/Bedroom 1 Closet	A Wall Beige Drywall	0.09
3/27/19-092	INTERIOR/Bedroom 1 Closet	B Wall Beige Drywall	0.12
3/27/19-093	INTERIOR/Bedroom 1 Closet	C Wall Beige Drywall	0.09
3/27/19-094	INTERIOR/Bedroom 1 Closet	D Wall Beige Drywall	0.09
3/27/19-095	INTERIOR/Bedroom 1 Closet	Ceiling Beige Drywall	0.07
3/27/19-096	INTERIOR/Bedroom 1 Closet	B Door Brown Wood	0.04
3/27/19-097	INTERIOR/Bedroom 1 Closet	B Door Casing Beige Wood	0.06
3/27/19-098	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.57
3/27/19-099	INTERIOR/Bedroom 1 Closet	A Shelf Support Beige Wood	0.03
3/27/19-100	INTERIOR/Bedroom 1 Closet	A Baseboard Beige Wood	0.06
3/27/19-101	INTERIOR/Bedroom 1 Closet	B Baseboard Beige Wood	0.07
3/27/19-102	INTERIOR/Bedroom 1 Closet	C Baseboard Beige Wood	0.10
3/27/19-103	INTERIOR/Bedroom 1 Closet	D Baseboard Beige Wood	0.01
3/27/19-104	INTERIOR/Bedroom 2 SE	A Wall Beige Drywall	0.01
3/27/19-105	INTERIOR/Bedroom 2 SE	B Wall Beige Drywall	0.08
3/27/19-106	INTERIOR/Bedroom 2 SE	C Wall Beige Drywall	0.08
3/27/19-107	INTERIOR/Bedroom 2 SE	D Wall Beige Drywall	0.07
3/27/19-108	INTERIOR/Bedroom 2 SE	Ceiling Beige Drywall	0.05
3/27/19-109	INTERIOR/Bedroom 2 SE	B Window Sill Beige Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1210 HUFFMAN AV	ENUE, APARTMENT A (MEASURED 27/2019)	
3/27/19-110	INTERIOR/Bedroom 2 SE	B Window Casing Brown Metal	0.00
3/27/19-111	INTERIOR/Bedroom 2 SE	B Window Sash Brown Metal	0.00
3/27/19-112	INTERIOR/Bedroom 2 SE	D Door Brown Wood	0.00
3/27/19-113	INTERIOR/Bedroom 2 SE	D Door Casing Beige Wood	0.14
3/27/19-114	INTERIOR/Bedroom 2 Closet SW	A Wall Beige Drywall	0.07
3/27/19-115	INTERIOR/Bedroom 2 Closet SW	B Wall Beige Drywall	0.19
3/27/19-116	INTERIOR/Bedroom 2 Closet SW	C Wall Beige Drywall	0.05
3/27/19-117	INTERIOR/Bedroom 2 Closet SW	D Wall Beige Drywall	0.04
3/27/19-118	INTERIOR/Bedroom 2 Closet SW	Ceiling Beige Drywall	0.03
3/27/19-119	INTERIOR/Bedroom 2 Closet SW	B Door Brown Wood	0.05
3/27/19-120	INTERIOR/Bedroom 2 Closet SW	B Door Casing Beige Wood	0.07
3/27/19-127	INTERIOR/Bedroom 2 Closet SW	Shelf Beige Wood	0.02
3/27/19-128	INTERIOR/Bedroom 2 Closet SW	C Shelf Support Beige Wood	0.05
3/27/19-129	INTERIOR/Bedroom 2 Closet SW	A Baseboard Beige Wood	0.03
3/27/19-130	INTERIOR/Bedroom 2 Closet SW	B Baseboard Beige Wood	0.05
3/27/19-131	INTERIOR/Bedroom 2 Closet SW	C Baseboard Beige Wood	0.07
3/27/19-132	INTERIOR/Bedroom 2 Closet SW	D Baseboard Beige Wood	0.01
3/27/19-133	INTERIOR/Bedroom 2 Closet NW	A Wall Beige Drywall	0.06
3/27/19-134	INTERIOR/Bedroom 2 Closet NW	B Wall Beige Drywall	0.02
3/27/19-135	INTERIOR/Bedroom 2 Closet NW	C Wall Beige Drywall	0.07
3/27/19-136	INTERIOR/Bedroom 2 Closet NW	D Wall Beige Drywall	0.02
3/27/19-137	INTERIOR/Bedroom 2 Closet NW	Ceiling Beige Drywall	0.11
3/27/19-138	INTERIOR/Bedroom 2 Closet NW	B Door Brown Wood	0.01
3/27/19-139	INTERIOR/Bedroom 2 Closet NW	B Door Casing Beige Wood	0.24
3/27/19-140	INTERIOR/Bedroom 2 Closet NW	Shelf Beige Wood	0.04
3/27/19-141	INTERIOR/Bedroom 2 Closet NW	C Shelf Support Beige Wood	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1210 HUFFMAN AVE	ENUE, APARTMENT A (MEASURED 27/2019)	
3/27/19-142	INTERIOR/Bedroom 2 Closet NW	A Baseboard Beige Wood	0.04
3/27/19-143	INTERIOR/Be0.03droom 2 Closet NW	B Baseboard Beige Wood	0.08
3/27/19-144	INTERIOR/Bedroom 2 Closet NW	C Baseboard Beige Wood	0.03
3/27/19-145	INTERIOR/Bedroom 2 Closet NW	D Baseboard Beige Wood	0.04
3/27/19-146	INTERIOR/Bathroom	A Wall Beige Drywall	0.00
3/27/19-147	INTERIOR/Bathroom	B Wall Beige Drywall	0.00
3/27/19-148	INTERIOR/Bathroom	C Wall Beige Drywall	0.07
3/27/19-149	INTERIOR/Bathroom	D Wall Beige Drywall	0.00
3/27/19-150	INTERIOR/Bathroom	Ceiling Beige Drywall	0.02
3/27/19-151	INTERIOR/Bathroom	A Door Brown Wood	0.00
3/27/19-152	INTERIOR/Bathroom	A Door Casing Beige Metal	0.03
3/27/19-153	INTERIOR/Bathroom	D Window Sill Beige Wood	0.00
3/27/19-154	INTERIOR/Bathroom	D Window Casing Brown Metal	0.00
3/27/19-155	INTERIOR/Bathroom	D Window Sash Brown Metal	0.00
3/27/19-156	INTERIOR/Bathroom	A Tub White Ceramic Tile	0.01
3/27/19-157	INTERIOR/Bathroom	C Tub White Ceramic Tile	0.01
3/27/19-158	INTERIOR/Bathroom	D Tub White Ceramic Tile	0.01
3/27/19-159	INTERIOR/Bathroom Closet	B Wall Beige Drywall	0.00
3/27/19-160	INTERIOR/Bathroom Closet	C Wall Beige Drywall	0.00
3/27/19-161	INTERIOR/Bathroom Closet	D Wall Beige Drywall	0.01
3/27/19-162	INTERIOR/Bathroom Closet	A Door Brown Wood	0.00
3/27/19-163	INTERIOR/Bathroom Closet	Ceiling Beige Drywall	0.00
3/27/19-164	INTERIOR/Bathroom Closet	A Door Casing Beige Metal	0.01
3/27/19-165	INTERIOR/Bathroom Closet	Shelf Beige Wood	0.03
3/27/19-166	INTERIOR/Bathroom Closet	D Shelf Support Beige Wood	0.02
3/27/19-167	INTERIOR/Bathroom Closet	B Baseboard Beige Wood	0.04
3/27/19-168	INTERIOR/Bathroom Closet	C Baseboard Beige Wood	0.01
3/27/19-169	INTERIOR/Bathroom Closet	D Baseboard Beige Wood	0.06
3/27/19-170	INTERIOR/Hall D Closet	A Wall Beige Drywall	0.11
3/27/19-171	INTERIOR/Hall D Closet	B Wall Beige Drywall	0.10

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1210 HUFFMAN AVE	ENUE, APARTMENT A (MEASURED 27/2019)	
3/27/19-172	INTERIOR/Hall D Closet	C Wall Beige Drywall	0.11
3/27/19-173	INTERIOR/Hall D Closet	D Wall Beige Drywall	0.09
3/27/19-174	INTERIOR/Hall D Closet	Ceiling Beige Drywall	0.14
3/27/19-175	INTERIOR/Hall D Closet	C Door Beige Wood	0.01
3/27/19-176	INTERIOR/Hall D Closet	C Door Casing Beige Metal	0.08
3/27/19-177	INTERIOR/Hall D Closet	Shelf Beige Wood	0.19
3/27/19-178	INTERIOR/Hall D Closet	D Shelf Support Beige Wood	0.01
3/27/19-179	INTERIOR/Hall D Closet	A Baseboard Beige Wood	0.07
3/27/19-180	INTERIOR/Hall D Closet	B Baseboard Beige Wood	0.10
3/27/19-181	INTERIOR/Hall D Closet	C Baseboard Beige Wood	0.07
3/27/19-182	INTERIOR/Hall D Closet	D Baseboard Beige Wood	0.07
3/27/19-183	INTERIOR/Hall NW Closet	A Wall Beige Drywall	>1.00
3/27/19-184	INTERIOR/Hall NW Closet	B Wall Beige Drywall	0.06
3/27/19-185	INTERIOR/Hall NW Closet	C Wall Beige Drywall	0.09
3/27/19-186	INTERIOR/Hall NW Closet	D Wall Beige Drywall	0.05
3/27/19-187	INTERIOR/Hall NW Closet	Ceiling Beige Drywall	0.04
3/27/19-188	INTERIOR/Hall NW Closet	B Door Brown Wood	0.01
3/27/19-189	INTERIOR/Hall NW Closet	B Door Casing Beige Metal	0.07
3/27/19-190	INTERIOR/Hall NW Closet	Shelf Beige Wood	0.03
3/27/19-191	INTERIOR/Hall NW Closet	D Shelf Support Beige Wood	0.04
3/27/19-192	INTERIOR/Hall NW Closet	A Baseboard Beige Wood	0.03
3/27/19-193	INTERIOR/Hall NW Closet	B Baseboard Beige Wood	0.14
3/27/19-194	INTERIOR/Hall NW Closet	C Baseboard Beige Wood	0.08
3/27/19-195	INTERIOR/Hall NW Closet	D Baseboard Beige Wood	0.09
3/27/19-392	EXTERIOR/Front A	A Window Casing Brown Metal	0.00
3/27/19-392	EXTERIOR/Front A	A Window Sash Brown Metal	0.00
3/27/19-392	EXTERIOR/Front B	B Window Casing Brown Metal	0.00
3/27/19-392	EXTERIOR/Front B	B Window Sash Brown Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1210 HUFFMAN AV	ENUE, APARTMENT B (MEASURED 27/2019)	
3/27/19-217	INTERIOR/Living Room	A Wall Beige Drywall	0.32
3/27/19-218	INTERIOR/Living Room	B Wall Beige Drywall	0.48
3/27/19-219	INTERIOR/Living Room	C Wall Beige Drywall	0.37
3/27/19-220	INTERIOR/Living Room	D Wall Beige Drywall	0.44
3/27/19-221	INTERIOR/Living Room	Ceiling Beige Drywall	0.04
3/27/19-222	INTERIOR/Living Room	A Window Sill Beige Wood	0.00
3/27/19-223	INTERIOR/Living Room	A Window Casing Brown Metal	0.00
3/27/19-224	INTERIOR/Living Room	A Window Sash Brown Metal	0.00
3/27/19-225	INTERIOR/Living Room	D Door Beige Metal	0.00
3/27/19-226	INTERIOR/Living Room	D Door Casing Beige Wood	0.20
3/27/19-227	INTERIOR/Living Room	D Shelf Beige Wood	0.15
3/27/19-228	INTERIOR/Living Room	D Shelf Support Beige Wood	0.47
3/27/19-229	INTERIOR/Living Room	A Baseboard Beige Wood	0.04
3/27/19-230	INTERIOR/Living Room	B Baseboard Beige Wood	0.04
3/27/19-231	INTERIOR/Living Room	C Baseboard Beige Wood	0.17
3/27/19-232	INTERIOR/Living Room	D Baseboard Beige Wood	0.04
3/27/19-233	INTERIOR/Living Room	A Crown Molding Beige Wood	0.01
3/27/19-234	INTERIOR/Living Room	B Crown Molding Beige Wood	0.14
3/27/19-235	INTERIOR/Living Room	C Crown Molding Beige Wood	0.02
3/27/19-236	INTERIOR/Living Room	D Crown Molding Beige Wood	0.14
3/27/19-237	INTERIOR/Dining Room	A Wall Beige Drywall	0.53
3/27/19-238	INTERIOR/Dining Room	B Wall Beige Drywall	0.50
3/27/19-239	INTERIOR/Dining Room	C Wall Beige Drywall	0.45
3/27/19-240	INTERIOR/Dining Room	D Wall Beige Drywall	0.42
3/27/19-241	INTERIOR/Dining Room	Ceiling Beige Drywall	0.06
3/27/19-242	INTERIOR/Dining Room	A Window Sill Beige Wood	0.00
3/27/19-243	INTERIOR/Dining Room	A Window Casing Brown Metal	0.00
3/27/19-244	INTERIOR/Dining Room	A Window Sash Brown Metal	0.00
3/27/19-245	INTERIOR/Dining Room	B Window Sill Beige Wood	0.00
3/27/19-246	INTERIOR/Dining Room	B Window Casing Brown Metal	0.00
3/27/19-247	INTERIOR/Dining Room	B Window Sash Brown Metal	0.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)		
	1210 HUFFMAN AVENUE, APARTMENT B (MEASURED 27/2019)				
3/27/19-248	INTERIOR/Dining Room	C Door Trim Beige Wood	0.03		
3/27/19-249	INTERIOR/Dining Room	C Door Jamb Beige Wood	0.32		
3/27/19-250	INTERIOR/Dining Room	A Baseboard Beige Wood	0.13		
3/27/19-251	INTERIOR/Dining Room	B Baseboard Beige Wood	0.07		
3/27/19-252	INTERIOR/Dining Room	C Baseboard Beige Wood	0.07		
3/27/19-253	INTERIOR/Dining Room	A Crown Molding Beige Wood	0.15		
3/27/19-254	INTERIOR/Dining Room	B Crown Molding Beige Wood	0.07		
3/27/19-255	INTERIOR/Dining Room	C Crown Molding Beige Wood	0.09		
3/27/19-256	INTERIOR/Dining Room	D Crown Molding Beige Wood	0.27		
3/27/19-257	INTERIOR/Kitchen	A Wall Beige Drywall	0.20		
3/27/19-258	INTERIOR/Kitchen	B Wall Beige Drywall	0.16		
3/27/19-259	INTERIOR/Kitchen	C Wall Beige Drywall	0.00		
3/27/19-260	INTERIOR/Kitchen	D Wall Beige Drywall	0.28		
3/27/19-261	INTERIOR/Kitchen	Ceiling Beige Drywall	0.07		
3/27/19-262	INTERIOR/Kitchen	A Door Jamb Beige Wood	0,32		
3/27/19-263	INTERIOR/Kitchen	A Door Trim Beige Wood	0.23		
3/27/19-264	INTERIOR/Kitchen	B Window Sill Beige Wood	0.00		
3/27/19-265	INTERIOR/Kitchen	B Window Casing White Vinyl	0.00		
3/27/19-266	INTERIOR/Kitchen	B Window Sash White Vinyl	0.00		
3/27/19-267	INTERIOR/Kitchen	C Cabinet Varnish Wood	0.00		
3/27/19-268	INTERIOR/Kitchen	B cabinet Varnish Wood	0.00		
3/27/19-269	INTERIOR/Hall	B Wall Beige Drywall	0.43		
3/27/19-270	INTERIOR/Hall	C Wall Beige Drywall	0.47		
3/27/19-271	INTERIOR/Hall	D Wall Beige Drywall	0.33		
3/27/19-272	INTERIOR/Hall	Ceiling Beige Drywall	0.02		
3/27/19-273	INTERIOR/Hall	B Door Beige Metal	0.00		
3/27/19-274	INTERIOR/Hall	B Door Casing Beige Wood	>1.00		
3/27/19-275	INTERIOR/Hall	D Door Beige Metal	0.00		
3/27/19-276	INTERIOR/Hall	D Door Casing Beige Wood	>1.00		
3/27/19-277	INTERIOR/Hall	B Baseboard Beige Wood	0.19		
3/27/19-278	INTERIOR/Hall	C Baseboard Beige Wood	0.07		

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1210 HUFFMAN AVI	ENUE, APARTMENT B (MEASURED 27/2019)	
3/27/19-279	INTERIOR/Hall	D Baseboard Beige Wood	0.07
3/27/19-280	INTERIOR/Hall	B Crown Molding Beige Wood	0.09
3/27/19-281	INTERIOR/Hall	C Crown Molding Beige Wood	0.12
3/27/19-282	INTERIOR/Hall	D Crown Molding Beige Wood	0.24
3/27/19-283	INTERIOR/Bedroom 1 NE	A Wall Beige Drywall	0.11
3/27/19-284	INTERIOR/Bedroom 1 NE	B Wall Beige Drywall	0.49
3/27/19-285	INTERIOR/Bedroom 1 NE	C Wall Beige Drywall	0.23
3/27/19-286	INTERIOR/Bedroom 1 NE	D Wall Beige Drywall	0.02
3/27/19-287	INTERIOR/Bedroom 1 NE	Ceiling Beige Drywall	0.10
3/27/19-288	INTERIOR/Bedroom 1 NE	A Window Sill Beige Wood	0.00
3/27/19-289	INTERIOR/Bedroom 1 NE	A Window Casing Brown Metal	0.00
3/27/19-290	INTERIOR/Bedroom 1 NE	A Window Sash Brown Metal	0.00
3/27/19-291	INTERIOR/Bedroom 1 NE	D Door Beige Wood	0.00
3/27/19-292	INTERIOR/Bedroom 1 NE	D Door Casing Beige Metal	0.11
3/27/19-293	INTERIOR/Bedroom 1 NE	A Baseboard Beige Wood	0.05
3/27/19-294	INTERIOR/Bedroom 1 NE	B Baseboard Beige Wood	0.16
3/27/19-295	INTERIOR/Bedroom 1 NE	C Baseboard Beige Wood	0.05
3/27/19-296	INTERIOR/Bedroom 1 NE	D Baseboard Beige Wood	0.11
3/27/19-297	INTERIOR/Bedroom 1 Closet	A Wall Beige Drywall	0.14
3/27/19-298	INTERIOR/Bedroom 1 Closet	B Wall Beige Drywall	0.15
3/27/19-299	INTERIOR/Bedroom 1 Closet	C Wall Beige Drywall	>1.00
3/27/19-300	INTERIOR/Bedroom 1 Closet	D Wall Beige Drywall	0.05
3/27/19-301	INTERIOR/Bedroom 1 Closet	Ceiling Beige Drywall	>1.00
3/27/19-302	INTERIOR/Bedroom 1 Closet	C Door Beige Wood	0.00
3/27/19-303	INTERIOR/Bedroom 1 Closet	C Door Casing Beige Metal	0.12
3/27/19-304	INTERIOR/Bedroom 1 Closet	Shelf Beige Wood	0.09
3/27/19-305	INTERIOR/Bedroom 1 Closet	A Shelf Support Beige Wood	0.07
3/27/19-306	INTERIOR/Bedroom 1 Closet	A Baseboard Beige Wood	0.09
3/27/19-307	INTERIOR/Bedroom 1 Closet	B Baseboard Beige Wood	0.14

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm²)
	1210 HUFFMAN AVI	ENUE, APARTMENT B (MEASURED 27/2019)	
3/27/19-308	INTERIOR/Bedroom 1 Closet	C Baseboard Beige Wood	0.12
3/27/19-309	INTERIOR/Bedroom 1 Closet	D Baseboard Beige Wood	0.13
3/27/19-310	INTERIOR/Bedroom 2 SE	A Wall Beige Drywall	0.38
3/27/19-311	INTERIOR/Bedroom 2 SE	B Wall Beige Drywall	0.65
3/27/19-312	INTERIOR/Bedroom 2 SE	C Wall Beige Drywall	0.50
3/27/19-313	INTERIOR/Bedroom 2 SE	D Wall Beige Drywall	0.41
3/27/19-314	INTERIOR/Bedroom 2 SE	Ceiling Beige Drywall	0.10
3/27/19-315	INTERIOR/Bedroom 2 SE	B Window Sill Beige Wood	0.00
3/27/19-316	INTERIOR/Bedroom 2 SE	B Window Casing Brown Metal	0.00
3/27/19-317	INTERIOR/Bedroom 2 SE	B Window Sash Brown Metal	0.00
3/27/19-318	INTERIOR/Bedroom 2 SE	D Closet Door Varnish Wood	0.05
3/27/19-319	INTERIOR/Bedroom 2 SE	D Closet Door Casing Beige Metal	0.12
3/27/19-320	INTERIOR/Bedroom 2 SE	D Closet Door Jamb Beige Wood	0.13
3/27/19-321	INTERIOR/Bedroom 2 SE	D Door Beige Wood	0.02
3/27/19-322	INTERIOR/Bedroom 2 SE	D Door Casing Beige Metal	0.20
3/27/19-323	INTERIOR/Bedroom 2 SE	A Baseboard Beige Wood	0.05
3/27/19-324	INTERIOR/Bedroom 2 SE	B Baseboard Beige Wood	0.16
3/27/19-325	INTERIOR/Bedroom 2 SE	C Baseboard Beige Wood	0.06
3/27/19-326	INTERIOR/Bedroom 2 SE	D Baseboard Beige Wood	0.04
3/27/19-327	INTERIOR/Bedroom 2 Closet	A Wall Beige Drywall	0.41
3/27/19-328	INTERIOR/Bedroom 2 Closet	B Wall Beige Drywall	0.21
3/27/19-329	INTERIOR/Bedroom 2 Closet	C Wall Beige Drywall	0.26
3/27/19-330	INTERIOR/Bedroom 2 Closet	D Wall Beige Drywall	>1.00
3/27/19-331	INTERIOR/Bedroom 2 Closet	Ceiling Beige Drywall	>1.00
3/27/19-332	INTERIOR/Bedroom 2 Closet	B Door Varnish Wood	0.02
3/27/19-333	INTERIOR/Bedroom 2 Closet	B Door Casing Beige Wood	0.20
3/27/19-334	INTERIOR/Bedroom 2 Closet	D Door Casing Beige Wood	0.14
3/27/19-335	INTERIOR/Bedroom 2 Closet	Shelf Beige Wood	0.11

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)
	1210 HUFFMAN AVE	ENUE, APARTMENT B (MEASURED 27/2019)	
3/27/19-336	INTERIOR/Bedroom 2 Closet	C Shelf Support Beige Wood	0.13
3/27/19-337	INTERIOR/Bedroom 2 Closet	A Baseboard Beige Wood	0.06
3/27/19-338	INTERIOR/Bedroom 2 Closet	B Baseboard Beige Wood	0.06
3/27/19-339	INTERIOR/Bedroom 2 Closet	C Baseboard Beige Wood	0.05
3/27/19-340	INTERIOR/Bedroom 2 Closet	D Baseboard Beige Wood	0.14
3/27/19-341	INTERIOR/Bathroom	A Wall Beige Drywall	0.05
3/27/19-342	INTERIOR/Bathroom	B Wall Beige Drywall	0.07
3/27/19-343	INTERIOR/Bathroom	C Wall Beige Drywall	0.03
3/27/19-344	INTERIOR/Bathroom	D Wall Beige Drywall	0.00
3/27/19-345	INTERIOR/Bathroom	Ceiling Beige Drywall	0.04
3/27/19-346	INTERIOR/Bathroom	A Door Beige Wood	0.00
3/27/19-347	INTERIOR/Bathroom	A Door Casing Beige Metal	0.12
3/27/19-348	INTERIOR/Bathroom	D Door Beige Wood	0.07
3/27/19-349	INTERIOR/Bathroom	D Door Casing Beige Metal	0.12
3/27/19-350	INTERIOR/Bathroom	D Window Sill Beige Wood	0.00
3/27/19-351	INTERIOR/Bathroom	D Window Casing Brown Metal	0.00
3/27/19-352	INTERIOR/Bathroom	D Window Sash Brown Metal	0.00
3/27/19-353	INTERIOR/Bathroom	A Tub White Ceramic Tile	>1.00
3/27/19-355	INTERIOR/Bathroom	C Tub White Ceramic Tile	>1.00
3/27/19-356	INTERIOR/Bathroom	D Tub White Ceramic Tile	>1.00
3/27/19-357	INTERIOR/Bathroom Closet	A Wall Beige Drywall	0.00
3/27/19-358	INTERIOR/Bathroom Closet	C Wall Beige Drywall	0.01
3/27/19-359	INTERIOR/Bathroom Closet	D Wall Beige Drywall	0.02
3/27/19-360	INTERIOR/Bathroom Closet	Ceiling Beige Drywall	0.02
3/27/19-361	INTERIOR/Bathroom Closet	B Door Beige Wood	0.00
3/27/19-362	INTERIOR/Bathroom Closet	B Door Casing Beige Metal	0.13
3/27/19-363	INTERIOR/Bathroom Closet	Shelf Beige Wood	0.06
3/27/19-364	INTERIOR/Bathroom Closet	A Shelf Support Beige Wood	0.03
3/27/19-365	INTERIOR/Laundry	A Wall Beige Drywall	0.10
3/27/19-366	INTERIOR/Laundry	B Wall Beige Drywall	>1.00

Date- Measurement No.	Sample Location	Description	Lead Content (mg/cm ²)	
	1210 HUFFMAN AVENUE, APARTMENT B (MEASURED 27/2019)			
3/27/19-367	INTERIOR/Laundry	C Wall Beige Drywall	0.32	
3/27/19-368	INTERIOR/Laundry	D Wall Beige Drywall	>1.00	
3/27/19-369	INTERIOR/Laundry	A Wall Beige Drywall	0.05	
3/27/19-370	INTERIOR/Laundry	Ceiling Beige Drywall	>1.00	
3/27/19-371	INTERIOR/Laundry	B Door Casing Beige Metal	0.09	
3/27/19-372	INTERIOR/Laundry	B Door Jamb Beige Wood	0.06	
3/27/19-373	INTERIOR/Laundry	C Door Beige Wood	0.00	
3/27/19-374	INTERIOR/Laundry	B Door Casing Beige Metal	0.11	
3/27/19-375	INTERIOR/Laundry	B Shelf Beige Wood	0.01	
3/27/19-376	INTERIOR/Laundry	B Shelf Support Beige Wood	0.16	
3/27/19-377	INTERIOR/Laundry	C Baseboard Beige Wood	0.12	
3/27/19-378	INTERIOR/Laundry	D Baseboard Beige Wood	0.21	
3/27/19-379	INTERIOR/Laundry	A Baseboard Beige Wood	0.03	
3/27/19-380	INTERIOR/Hall NW Closet	A Wall Beige Drywall	>1.00	
3/27/19-381	INTERIOR/Hall NW Closet	B Wall Beige Drywall	0.17	
3/27/19-382	INTERIOR/Hall NW Closet	C Wall Beige Drywall	>1.00	
3/27/19-383	INTERIOR/Hall NW Closet	D Wall Beige Drywall	>1.00	
3/27/19-384	INTERIOR/Hall NW Closet	B Door Beige Wood	0.00	
3/27/19-385	INTERIOR/Hall Closet	B Door Casing Beige Metal	0.20	
3/27/19-386	INTERIOR/Hall Closet	Ceiling Beige Drywall	>1.00	
3/27/19-387	INTERIOR/Hall Closet	Shelf Beige Wood	0.08	
3/27/19-388	INTERIOR/Hall Closet	C Shelf Support Beige Wood	0.10	
3/27/19-389	INTERIOR/Hall Closet	A Baseboard Beige Wood	0.11	
3/27/19-390	INTERIOR/Hall Closet	B Baseboard Beige Wood	0.10	
3/27/19-391	INTERIOR/Hall Closet	C Baseboard Beige Wood	0.09	
3/27/19-392	INTERIOR/Hall Closet	D Baseboard Beige Wood	0.16	

6. DISCUSSION AND RECOMMENDATIONS

A total of 2,274 lead measurements were made with the XRF Analyzer, including both paint film locations and quality assurance samples. Of these, only 113 measurements indicated lead concentrations above 1 mg/cm², the HUD definition of Lead-Based Paint. A significant number of elevated lead levels were associated with white ceramic tiles above kitchen sinks and around bathtubs. Lead-Based Paint was measured in each apartment in one or more locations.

The relatively low number of Lead-Based Paint measurements is an indication that past efforts to reduce the number of identified Lead-Based Paint hazards in the building have been successful. Additional abatement, however, is still needed to ensure that all apartments are free from "Lead-Based Paint" hazards.

XRF measurements indicate that Lead-Based Paint is present on the following surfaces:

LOCATION	COMPONENT	CONDITION
INTERIOR/ Kitchen	B Wall Beige Drywall	FAIR
INTERIOR/ Kitchen	A Door Casing Beige Metal	FAIR
INTERIOR/ Kitchen	C Door Casing Beige Metal	FAIR
INTERIOR/ Living Room	B Door Beige Metal	FAIR
INTERIOR/ Bathroom	B Tub White Ceramic Tile	GOOD
INTERIOR/ Bathroom	C Tub White Ceramic Tile	GOOD
INTERIOR/ Bathroom	D Tub White Ceramic Tile	GOOD
INTERIOR/Bedroom 1 Closet	D Baseboard Beige Wood	FAIR
INTERIOR/Hall Closet	A Wall Beige Drywall	FAIR
EXTERIOR/ Rear C	C Lintel White Metal POOR	POOR
EXTERIOR/ Rear C	C Door Casing Beige Metal	GOOD
EXTERIOR/Porch	D Wall Painted Brick White	GOOD
EXTERIOR/Porch	Storm Door Casing Brown Metal	GOOD
EXTERIOR/Porch	Door White Metal	GOOD

9 Parnell Avenue, Apartment A

9 Parnell Avenue, Apartment B

LOCATION	COMPONENT	CONDITION
INTERIOR/ Bathroom	B Tub White Ceramic Tile	GOOD
INTERIOR/ Bathroom	C Tub White Ceramic Tile	GOOD
INTERIOR/ Bathroom	D Tub White Ceramic Tile	GOOD
EXTERIOR/Porch	A Wall White Brick	GOOD
EXTERIOR/Porch	B Wall White Brick	GOOD
EXTERIOR/Porch	C Wall White Brick	GOOD

LOCATION	COMPONENT	CONDITION
INTERIOR/ Kitchen	B Wall White Ceramic	FAIR
INTERIOR/ Living Room Closet	A Door Casing Beige Metal	FAIR
INTERIOR/ Basement	A Wall Beige Concrete	FAIR
INTERIOR/ Hall	A Door Casing Beige Metal	FAIR
INTERIOR/ Hall	D Door Casing Beige Metal	FAIR
INTERIOR/ Hall	Wall Cap Beige Wood	FAIR
INTERIOR/ Bathroom	B Tub White Ceramic Tile	GOOD
INTERIOR/ Bathroom	C Tub White Ceramic Tile	GOOD
INTERIOR/ Bathroom	D Tub White Ceramic Tile	GOOD
INTERIOR/Bedroom 1 Closet	C Door Casing Beige Metal	GOOD
EXTERIOR/Porch	C Wall White Brick	GOOD
EXTERIOR/Rear C	D Storm Door Casing White Metal	GOOD
EXTERIOR/Rear C	D Door White Metal	GOOD

11 Parnell Avenue, Apartment A

11 Parnell Avenue, Apartment B

LOCATION	COMPONENT	CONDITION
INTERIOR/ Kitchen	A Door Casing Beige Metal	FAIR
INTERIOR/ Living Room	C Baseboard Beige Wood	FAIR
INTERIOR/ Living Room Closet	B Wall Beige Drywall	FAIR
INTERIOR/ Living Room Closet	Ceiling Beige Drywall	FAIR
INTERIOR/ Basement	C Wall Beige Concrete	FAIR
INTERIOR/ Stairs	B Stringer Brown Wood	GOOD
INTERIOR/ Stairs	Riser Brown Wood	GOOD
INTERIOR/ Bathroom	B Tub White Ceramic Tile	GOOD
INTERIOR/ Bathroom	C Tub White Ceramic Tile	GOOD
INTERIOR/ Bathroom	D Tub White Ceramic Tile	GOOD
INTERIOR/Bedroom 1 SW	D Door Casing Beige Metal	FAIR
INTERIOR/Bedroom 1 Closet	A Wall Beige Plaster	FAIR
INTERIOR/Bedroom 1 Closet	B Wall Beige Plaster	FAIR
INTERIOR/Bedroom 1 Closet	C Wall Beige Plaster	FAIR
INTERIOR/Bedroom 1 Closet	Ceiling Beige Plaster	FAIR
INTERIOR/Hall Closet	C Wall Beige Plaster	FAIR

LOCATION	COMPONENT	CONDITION
INTERIOR/Kitchen	B Wall White Ceramic	GOOD
INTERIOR/Bathroom	C Wall White Ceramic	GOOD
INTERIOR/Bathroom	B Wall White Ceramic	GOOD
INTERIOR/Bathroom	D Wall White Ceramic	GOOD
EXTERIOR/Rear C	C Door Casing Beige Metal	FAIR
EXTERIOR/Rear C	Lintel White Metal POOR	POOR

1202 Huffman Avenue, Apartment A

1202 Huffman Avenue, Apartment B

LOCATION	COMPONENT	CONDITION
INTERIOR/Kitchen	A Wall Beige Drywall	GOOD
INTERIOR/Basement	A Wall Beige Concrete	GOOD
EXTERIOR/Rear C	C Door Casing Beige Wood	GOOD

1204 Huffman Avenue, Apartment A

LOCATION	COMPONENT	CONDITION
EXTERIOR/Front A	A Door Casing White Metal	FAIR
EXTERIOR/Front A	D Wall White Brick	FAIR
EXTERIOR/Front A	C Wall White Brick	FAIR

1204 Huffman Avenue, Apartment B

LOCATION	COMPONENT	CONDITION
INTERIOR/Kitchen	A Door Casing Beige Metal	FAIR
INTERIOR/Living Room	C Door Casing Beige Metal	FAIR
INTERIOR/Bathroom	B Tub White Ceramic Tile	GOOD
INTERIOR/Bathroom	C Tub White Ceramic Tile	GOOD
INTERIOR/Bathroom	D Tub White Ceramic Tile	GOOD
EXTERIOR/Front A	C Wall White Brick	GOOD
EXTERIOR/Front A	D Wall White Brick	GOOD
EXTERIOR/Front A	D Door Casing White Metal	FAIR
EXTERIOR/Front A	D Door Lintel Beige Steel	FAIR
EXTERIOR/Front A	Trim Tan Wood	FAIR
LOCATION	COMPONENT	CONDITION
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INTERIOR/Kitchen	B Wall White Ceramic	GOOD
INTERIOR/Basement	A Wall White Concrete	FAIR
INTERIOR/Basement	C Wall White Concrete	FAIR
INTERIOR/Bathroom	B Tub White Ceramic Tile	GOOD
INTERIOR/Bathroom	C Tub White Ceramic Tile	GOOD
INTERIOR/Bathroom	D Tub White Ceramic Tile	GOOD
INTERIOR/Bedroom Closet	A Wall Beige Drywall	FAIR
INTERIOR/Hall Closet	C Wall Beige Drywall	FAIR
INTERIOR/Hall Closet	D Wall Beige Drywall	FAIR
INTERIOR/Hall Closet	Ceiling Beige Drywall	FAIR
INTERIOR/Bedroom 2 N	C Door Casing Beige Metal	FAIR
INTERIOR/Bedroom Closet	A Wall Beige Drywall	FAIR
INTERIOR/Bedroom Closet	Ceiling Beige Drywall	FAIR
EXTERIOR/Rear C	C Door Casing Beige Metal	FAIR
EXTERIOR/Rear C	C Lintel White Steel	FAIR

1208 Huffman Avenue, Apartment A

1208 Huffman Avenue, Apartment B

LOCATION	COMPONENT	CONDITION
INTERIOR/Bathroom	B Tub White Ceramic Tile	GOOD
INTERIOR/Bathroom	C Tub White Ceramic Tile	GOOD
INTERIOR/Bathroom	D Tub White Ceramic Tile	GOOD
EXTERIOR/Rear C	C Lintel White Metal POOR	POOR
EXTERIOR/Rear C	C Door Beige Metal	FAIR

1210 Huffman Avenue, Common Areas

LOCATION	COMPONENT	CONDITION
INTERIOR/Basement	A Wall Beige Drywall	FAIR
INTERIOR/Basement	D Wall Beige Drywall	FAIR
INTERIOR/Stair Closet	D Wall Beige Drywall	FAIR
INTERIOR/Stair Closet	Ceiling Beige Drywall	FAIR
EXTERIOR/Front A	A Door Trim Tan Metal	FAIR

1210 Huffman Avenue, Apartment A

LOCATION	COMPONENT	CONDITION
INTERIOR/Hall NW Closet	A Wall Beige Drywall	FAIR

LOCATION	COMPONENT	CONDITION
INTERIOR/Hall	B Door Casing Beige Wood	FAIR
INTERIOR/Hall	D Door Casing Beige Wood	FAIR
INTERIOR/Bedroom 1 Closet	C Wall Beige Drywall	FAIR
INTERIOR/Bedroom 1 Closet	Ceiling Beige Drywall	FAIR
INTERIOR/Bedroom 2 Closet	D Wall Beige Drywall	FAIR
INTERIOR/Bedroom 2 Closet	Ceiling Beige Drywall	FAIR
INTERIOR/Bathroom	A Wall White Ceramic	GOOD
INTERIOR/Bathroom	C Wall White Ceramic	GOOD
INTERIOR/Bathroom	D Wall White Ceramic	GOOD
INTERIOR/Laundry	B Wall Beige Drywall	FAIR
INTERIOR/Laundry	D Wall Beige Drywall	FAIR
INTERIOR/Laundry	Ceiling Beige Drywall	FAIR
INTERIOR/Hall NW Closet	A Wall Beige Drywall	FAIR
INTERIOR/Hall NW Closet	C Wall Beige Drywall	FAIR
INTERIOR/Hall NW Closet	D Wall Beige Drywall	FAIR
INTERIOR/Hall Closet	Ceiling Beige Drywall	FAIR

1210 Huffman Avenue, Apartment B

Based on the sampling results, Helix Environmental, Inc. recommends:

- **5.** Schedule Lead-Based Paint abatement during upcoming renovations of the inspected apartments and common spaces. Lead-Based Paint abatement can reduce the potential for lead poisoning in children six years old and younger. Abatement can use several methods to achieve a "permanent" removal of a Lead-Based Paint hazard: paint removal, encapsulation, enclosure or replacement. It may be necessary to temporarily remove tenants from the apartment in order to perform abatement depending on the location of the lead abatement and the time needed to perform the abatement and cleaning of the work area.
- **6.** Consider airborne lead exposure monitoring whenever abatement is performed in an occupied unit. Measurements should be made using calibrated sampling equipment under the supervision of a Certified Industrial Hygienist. Laboratory analyses should be performed by an AIHA-accredited industrial hygiene laboratory to ensure valid measurement results.
- 7. Hire an independent licensed consultant to perform clearance inspections and surface sampling after abatement to document that the abatement was performed as designed, and that surface contamination levels are less than the clearance criteria before the contractor is allowed to remove engineering controls or containments. Lead clearance inspections and testing must be performed by an Ohio-licensed Lead Paint Inspector or Lead Risk Assessor.

8. Until the identified Lead-Based Paint hazards have been abated, maintain paint in an undamaged condition by painting damaged paint to stabilize it from further deterioration, and by correcting water intrusions where necessary. Paint in an intact or good condition presents little potential for lead poisoning in children six years and younger.

7. APPENDICES

APPENDIX A: MEASUREMENT RESULTS

Date	Reading	Mode	LiveTime	Match1	MN1		Pass/Fail	Pass Fail StaPb		Pb +/-	Time
25-Mar-19	1	Standardiza	26.38	0.019724		230	-0.033301	PASS			8:48:43
25-Mar-19	2	Lead Paint I	5.09	0		0		Negative	0	0	9:05:17
25-Mar-19	3	Lead Paint I	5.02	0		0		Negative	0	0	9:10:30
25-Mar-19	4	Lead Paint I	5.04	0		0		Negative	0	0	9:11:10
25-Mar-19	5	Lead Paint I	5.16	0.29		0.16	surface	Negative	0.29	0.08	9:17:30
25-Mar-19	6	Lead Paint I	5.22	0.29		0.24	surface	Negative	0.29	0.12	9:18:48
25-Mar-19	7	Lead Paint I	5.03	0		0		Negative	0	0	9:20:28
25-Mar-19	8	Lead Paint I	6.17	0.2		0.16	surface	Negative	0.2	0.08	9:22:35
25-Mar-19	9	Lead Paint I	61	0.05		0.11	0411400	Negative	0.05	0.05	9.24.24
25-Mar-19	10	Lead Paint I	5 42	0.05		0		Negative	0.05	0.05	9.25.06
25-Mar-19	11	Lead Paint I	2 42	> 2 72		0 73	surface	Positive	3 73	0 37	9.29.00
25 Mar 19	12	Lead Paint I	5 25	0 13		0.75	surface	Negative	0.13	0.57	9.20.30
25-Mar-19	12	Lead Paint I	5 38	0.13		0.1	Surface	Negative	0.15	0.05	0.30.41
25-Mar-19	1/	Lead Paint I	25.20	0.25		0 07	surface	Negative	0.25	0 02	0.24.10
25-Mar 10	14	Lead Paint I	ZJ.ZI E 12	0.25		0.07	Suilace	Negative	0.25	0.03	0.26.21
25-Ivial-19	15	Lead Paint I	5.15	0		0 01		Negative	0	0	9.30.31
25-IVIdI-19	10	Lead Paint I	24.04	0 00		0.01	aurfa a a	Negative	0 02	0 01	9.30.50
25-Iviar-19	1/	Lead Paint I	24.84	0.03		0.03	surface	Negative	0.03	0.01	9:40:52
25-IVIar-19	18	Lead Paint I	5.15	0.08		0.13		Negative	0.08	0.07	9:41:41
25-Mar-19	19	Lead Paint I	6.16	0.04		0.07		Negative	0.04	0.04	9:42:06
25-Mar-19	20	Lead Paint I	5.17	0		0		Negative	0	0	9:42:31
25-Mar-19	21	Lead Paint I	6.05	0.01		0.04		Negative	0.01	0.02	9:49:37
25-Mar-19	22	Lead Paint I	5.02	0		0		Negative	0	0	9:50:05
25-Mar-19	23	Lead Paint I	5.13	0		0		Negative	0	0	9:50:31
25-Mar-19	24	Lead Paint I	5.21	0		0		Negative	0	0	9:56:55
25-Mar-19	25	Lead Paint I	5.24	0		0		Negative	0	0	9:57:38
25-Mar-19	26	Lead Paint I	5.24	0		0		Negative	0	0	9:58:05
25-Mar-19	27	Lead Paint I	6.12	0.03		0.05		Negative	0.03	0.02	10:03:05
25-Mar-19	28	Lead Paint I	6.09	0.49		0.18	surface	Negative	0.49	0.09	10:03:44
25-Mar-19	29	Lead Paint I	5.97	0		0		Negative	0	0	10:04:12
25-Mar-19	30	Lead Paint I	5.25	0		0.01		Negative	0	0	10:04:34
25-Mar-19	31	Lead Paint I	5.13	0		0		Negative	0	0	10:11:13
25-Mar-19	32	Lead Paint I	6.08	0		0		Negative	0	0	10:11:35
25-Mar-19	33	Lead Paint I	5.09	0		0		Negative	0	0	10:11:57
25-Mar-19	34	Lead Paint I	5.2	0.14		0.17		Negative	0.14	0.09	10:18:32
25-Mar-19	35	Lead Paint I	5.42	0		0		Negative	0	0	10:19:25
25-Mar-19	36	Lead Paint I	6.05	0		0.02		Negative	0	0.01	10:19:44
25-Mar-19	37	Lead Paint I	5.1	0.01		0.03		Negative	0.01	0.02	10:20:21
25-Mar-19	38	Lead Paint I	5.34	0		0		Negative	0	0	10:21:08
25-Mar-19	39	Lead Paint I	5.14	0.09		0.08	surface	Negative	0.09	0.04	10:21:28
25-Mar-19	40	Lead Paint I	11.13	0.05		0.03	surface	Negative	0.05	0.02	10:28:52
25-Mar-19	41	Lead Paint I	5.27	0.07		0.06	surface	Negative	0.07	0.03	10:29:31
25-Mar-19	42	Lead Paint I	6.14	0.06		0.06	surface	Negative	0.06	0.03	10:29:50
25-Mar-19	43	Lead Paint I	5.17	0.08		0.07	surface	Negative	0.08	0.03	10:30:08
25-Mar-19	44	Lead Paint I	5.31	0.11		0.07	surface	Negative	0.11	0.03	10:30:39
25-Mar-19	45	Lead Paint I	6.04	0.05		0.08		Negative	0.05	0.04	10:31:02
25-Mar-19	46	Lead Paint I	6.13	0.38		0.13	surface	Negative	0.38	0.07	10:31:23
25-Mar-19	47	Lead Paint I	5.04	0.39		0.13	surface	Negative	0.39	0.07	10:32:02
25-Mar-19	48	Lead Paint I	6.11	0.44		0.13	surface	Negative	0.44	0.06	10:32:26
25-Mar-19	49	Lead Paint I	6.14	0.32		0.11	surface	Negative	0.32	0.06	10:32:54
25-Mar-19	50	Lead Paint I	5.83	0.4		0.15	surface	Negative	0.4	0.08	10:33:27
25-Mar-19	51	Lead Paint I	3.39	0		0		Insufficient	0	0.00	10:43:38
25-Mar-19	52	Lead Paint I	5.55 5.8	0.05		0.04	surface	Negative	0.05	0 02	10:44.34
25-Mar-19	52	Lead Paint I	5.0 5.73	0.00 N		0.07		Negative	0.05	0.02	10.42.22
25-Mar-19	53	Lead Paint I	5 96	0 14		20.02	surface	Negative	0 14	0.04	10.46.17
25-Mar-10	54	Lead Paint I	5.50	0.14		0.02		Negative	0.14	0.04	10.46.40
	55	2000 1 00001	5.50	0.02		2.02			0.02	0.01	-0.10.40

25-Mar-19	56 Lead Paint I	5.16	0.07	0.05 surface	Negative	0.07	0.02	10:47:02
25-Mar-19	57 Lead Paint I	6.05	0	0	Negative	0	0	10:47:39
25-Mar-19	58 Lead Paint I	5.17	0	0	Negative	0	0	10:48:13
25-Mar-19	59 Lead Paint I	5.17	0	0	Negative	0	0	10:48:37
25-Mar-19	60 Lead Paint I	5.1	0	0	Negative	0	0	10:48:57
25-Mar-19	61 Lead Paint I	5.15	0	0	Negative	0	0	10:49:16
25-Mar-19	62 Lead Paint I	5.71	0.06	0.13	Negative	0.06	0.06	10:49:40
25-Mar-19	63 Lead Paint I	5 31	0.13	0.09 surface	Negative	0.13	0.04	10.20.01
25-Mar-19	64 Lead Paint I	5.04	0.16	0.1 surface	Negative	0.16	0.05	10.50.01
25-Mar-19	65 Lead Paint I	6.08	0.10	0.03 surface	Negative	0.04	0.03	10.50.25
25 Mar 19	66 Lead Paint I	16.38	0.04	0.15	Negative	0.04	0.02	11.08.50
25-Mar-10	67 Load Paint I	5 20	0.05	0.15	Negative	0.05	0.07	11.00.30
25-Iviai-19 25 Mar 10	69 Load Daint I	10.05	0.14		Negative	0.14	0.1	11.09.33
25-Iviai-19 25 Mar 10	60 Lead Paint I	10.85 E 22	0.00		Negative	0.00	0.05	11.09.34
25-1VId1-19	70 Lead Paint I	5.22	0.07	0.09	Negative	0.07	0.05	11.10.55
25-IVIdI-19	70 Lead Paint I	5.90	0.09		Negative	0.09	0.05	11.11.07
25-IVIar-19	71 Lead Paint I	5.85	0.09	0.06 surface	Negative	0.09	0.03	11:11:39
25-IVIar-19	72 Lead Paint I	5.88	0.16		Negative	0.16	0.05	11:12:13
25-IVIar-19	73 Lead Paint I	5.5	0.05	0.22	Negative	0.05	0.11	11:12:35
25-Mar-19	74 Lead Paint I	5.73	0	0	Negative	0	0	11:12:55
25-Mar-19	75 Lead Paint I	5.65	0	0	Negative	0	0	11:13:26
25-Mar-19	76 Lead Paint I	5.01	0.69	0.27 surface	Negative	0.69	0.14	11:13:51
25-Mar-19	77 Lead Paint I	5.07	0.61	0.2 surface	Negative	0.61	0.1	11:14:13
25-Mar-19	78 Lead Paint I	6.09	0.53	0.19 surface	Negative	0.53	0.1	11:14:36
25-Mar-19	79 Lead Paint I	6.1	0.11	0.1 surface	Negative	0.11	0.05	11:15:22
25-Mar-19	80 Lead Paint I	24.6	0.11	0.04 surface	Negative	0.11	0.02	11:15:41
25-Mar-19	81 Lead Paint I	25.09	0.09	0.07 surface	Negative	0.09	0.04	11:16:22
25-Mar-19	82 Lead Paint I	5.25	0.11	0.17	Negative	0.11	0.09	11:17:05
25-Mar-19	83 Lead Paint I	5.01	0.03	0.05	Negative	0.03	0.02	11:17:23
25-Mar-19	84 Lead Paint I	5.99	0.02	0.07	Negative	0.02	0.04	11:17:58
25-Mar-19	85 Lead Paint I	5.3	0.13	0.1 surface	Negative	0.13	0.05	11:18:20
25-Mar-19	86 Lead Paint I	5.86	0.42	0.19 surface	Negative	0.42	0.1	11:18:59
25-Mar-19	87 Lead Paint I	5	0.57	0.21 surface	Negative	0.57	0.11	11:19:19
25-Mar-19	88 Lead Paint I	5.11	0.63	0.26 surface	Negative	0.63	0.13	11:19:43
25-Mar-19	89 Lead Paint I	5.98	0.58	0.2 surface	Negative	0.58	0.1	11:20:05
25-Mar-19	90 Lead Paint I	5	0.02	0.08	Negative	0.02	0.04	11:20:29
25-Mar-19	91 Lead Paint I	5.1	0.07	0.07 surface	Negative	0.07	0.03	11:20:47
25-Mar-19	92 Lead Paint I	5.84	0.01	0.04	Negative	0.01	0.02	11:21:09
25-Mar-19	93 Lead Paint I	5.42	0.17	0.1 surface	Negative	0.17	0.05	11:21:33
25-Mar-19	94 Lead Paint I	5.02	0.49	0.27 surface	Negative	0.49	0.13	11:22:05
25-Mar-19	95 Lead Paint I	8.76	0.44	0.46	Negative	0.44	0.23	11:22:33
25-Mar-19	96 Lead Paint I	5.22	0	0	Negative	0	0	11:22:54
25-Mar-19	97 Lead Paint I	24.91	0	0.01	Negative	0	0	11:23:22
25-Mar-19	98 Lead Paint I	5.29	0	0.01	Negative	0	0	11:24:05
25-Mar-19	99 Lead Paint I	6.04	0.01	0.04	Negative	0.01	0.02	11:24:25
25-Mar-19	100 Lead Paint I	5.33	0.19	0.11 surface	Negative	0.19	0.06	11:24:45
25-Mar-19	101 Lead Paint I	5.22	0	0	Negative	0	0	11:25:05
25-Mar-19	102 Lead Paint I	5.03	0	0	Negative	0	0	11:25:32
25-Mar-19	103 Lead Paint I	5.21	0	0	Negative	0	0	11:25:57
25-Mar-19	104 Lead Paint I	5.22	0	0	Negative	0	0	11:26:15
25-Mar-19	105 Lead Paint I	5 >	1.00	0.02	Positive	1	0.01	11:26:41
25-Mar-19	106 Lead Paint I	6.93 >	1.00	0.02	Positive	1	0.01	11:27:15
25-Mar-19	107 Lead Paint I	5.84 >	1.00	0.02	Positive	1	0.01	11:27:43
25-Mar-19	108 Lead Paint I	19.87	0.06	0.04 surface	Negative	0.06	0.02	11:42:12
25-Mar-19	109 Lead Paint I	5.14	0.02	0.04	Negative	0.02	0.02	11:42:49
25-Mar-19	110 Lead Paint I	24.93	0.06	0.04 surface	Negative	0.06	0.02	11:43:25
25-Mar-19	111 Lead Paint I	25.12	0.07	0.06 surface	Negative	0.07	0.03	11:44:12
					-0			

25-Mar-19	112 Lead Paint I	8.49	0.03	0.05	Negative	0.03	0.03	11:44:54
25-Mar-19	113 Lead Paint I	6.11	0.03	0.08	Negative	0.03	0.04	11:45:29
25-Mar-19	114 Lead Paint I	5.32	0.17	0.13 surface	Negative	0.17	0.07	11:45:51
25-Mar-19	115 Lead Paint I	5.84	0.01	0.04	Negative	0.01	0.02	11:46:17
25-Mar-19	116 Lead Paint I	5.16	0.16	0.1 surface	Negative	0.16	0.05	11:46:40
25-Mar-19	117 Lead Paint I	5.15	0	0	Negative	0	0.09	11.47.08
25-Mar-19	118 Lead Paint I	5.15	0	0	Negative	0	0	11.47.38
25 Mar 19	110 Lead Paint I	5.20	0	0	Negative	0	0	11.47.55
25-War 10	119 Lead Paint I	5.15	0	0	Negative	0	0	11.47.33
25-1viai-19 25 Mar 10	120 Lead Paint I	0.02 E 17	0	0	Negative	0	0	11.40.52
25-IVIdI-19	121 Ledu Pallit I	5.17	0	0	Negative	0	0	11.40.57
25-IVIal-19	122 Lead Paint I	5.22	0	0	Negative	0	0	11:49:15
25-Mar-19	123 Lead Paint I	6.13	0.13	0.09 surface	Negative	0.13	0.04	11:49:48
25-Mar-19	124 Lead Paint I	5.98	0.17	0.1 surface	Negative	0.17	0.05	11:50:43
25-Mar-19	125 Lead Paint I	6.05	0.11	0.08 surface	Negative	0.11	0.04	11:51:20
25-Mar-19	126 Lead Paint I	6.12	0.11	0.08 surface	Negative	0.11	0.04	11:51:56
25-Mar-19	127 Lead Paint I	5.17	0	0	Negative	0	0	11:52:34
25-Mar-19	128 Lead Paint I	5.16	0	0	Negative	0	0	11:53:17
25-Mar-19	129 Lead Paint I	6.13	0	0	Negative	0	0	11:53:43
25-Mar-19	130 Lead Paint I	5.1	0	0	Negative	0	0	11:54:12
25-Mar-19	131 Lead Paint I	6.09	0	0	Negative	0	0	11:54:42
25-Mar-19	132 Lead Paint I	5.99	0.03	0.08	Negative	0.03	0.04	11:55:06
25-Mar-19	133 Lead Paint I	5.32	0.26	0.12 surface	Negative	0.26	0.06	11:55:38
25-Mar-19	134 Lead Paint I	6.05	0.12	0.07 surface	Negative	0.12	0.04	11:56:22
25-Mar-19	135 Lead Paint I	5.89	0.24	0.11 surface	Negative	0.24	0.05	11:57:04
25-Mar-19	136 Lead Paint I	6.06	0.17	0.09 surface	Negative	0.17	0.05	11:57:29
25-Mar-19	137 Lead Paint I	5.08	0.19	0.11 surface	Negative	0.19	0.05	11:58:06
25-Mar-19	138 Lead Paint I	6.12	0.09	0.06 surface	Negative	0.09	0.03	11:58:55
25-Mar-19	139 Lead Paint I	5.95	0.12	0.06 surface	Negative	0.12	0.03	11:59:23
25-Mar-19	140 Lead Paint I	5.18	0	0	Negative	0	0	12:00:08
25-Mar-19	141 Lead Paint I	5 16	0	0	Negative	0	0	12.00.25
25-Mar-19	142 Lead Paint I	5.13	0	0	Negative	0	0	12:00:46
25-Mar-19	143 Lead Paint I	5.15	0	0	Negative	0	0	12.00.10
25 Mar 19	145 Lead Paint I	6.00	0.08	0 0.06 surface	Negative	0.08	0.03	12.01.03
25-Mar-10	144 Lead Paint I	0.05	0.08		Negative	0.08	0.05	12.01.20
25-War 10	145 Lead Paint I	5.42	0.79		Negative	0.79	0.03	12.01.47
25-1Vidi-19 25 Mar 10	140 Ledu Pallit I	5.04	0.02	0.07	Negative	0.02	0.04	12.02.10
25-IVIal-19	147 Lead Paint I	5.4	0.12		Negative	0.12	0.04	12:03:40
25-Mar-19	148 Lead Paint I	5.03	0.1	0.24	Negative	0.1	0.12	12:04:14
25-Mar-19	149 Lead Paint I	5.26	0.06	0.18	Negative	0.06	0.09	12:04:31
25-Mar-19	150 Lead Paint I	11.12	0.06	0.09	Negative	0.06	0.05	12:04:50
25-Mar-19	151 Lead Paint I	5.21	0.06	0.12	Negative	0.06	0.06	12:05:18
25-Mar-19	152 Lead Paint I	5.21	0.01	0.03	Negative	0.01	0.02	12:05:43
25-Mar-19	153 Lead Paint I	5.6	0.02	0.06	Negative	0.02	0.03	12:06:04
25-Mar-19	154 Lead Paint I	5.34	0.29	0.17 surface	Negative	0.29	0.09	12:06:25
25-Mar-19	155 Lead Paint I	5.87	0	0	Negative	0	0	12:06:50
25-Mar-19	156 Lead Paint I	5.33	0.15	0.11 surface	Negative	0.15	0.06	12:07:08
25-Mar-19	157 Lead Paint I	5.08	0	0	Negative	0	0	12:07:30
25-Mar-19	158 Lead Paint I	5.22	0	0	Negative	0	0	12:07:48
25-Mar-19	159 Lead Paint I	5.21	0	0	Negative	0	0	12:08:05
25-Mar-19	160 Lead Paint I	5.09	0	0	Negative	0	0	12:08:25
25-Mar-19	161 Lead Paint I	5.15	0	0	Negative	0	0	12:08:42
25-Mar-19	162 Lead Paint I	5.06	0	0	Negative	0	0	12:09:10
25-Mar-19	163 Lead Paint I	5.03	0.16	0.12 surface	Negative	0.16	0.06	12:09:41
25-Mar-19	164 Lead Paint I	5.94	0.12	0.1 surface	Negative	0.12	0.05	12:10:04
25-Mar-19	165 Lead Paint I	5.88	0.11	0.08 surface	Negative	0.11	0.04	12:10:30
25-Mar-19	166 Lead Paint I	6.13	0.05	0.05 surface	Negative	0.05	0.03	12:10:55
25-Mar-19	167 Lead Paint I	5.02	0	0	Negative	0	0	12:11:30
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25-Mar-19	168 Lead Paint I	5.17	0	0		Negative	0	0	12:11:47
25-Mar-19	169 Lead Paint I	6.11	0	0		Negative	0	0	12:12:04
25-Mar-19	170 Lead Paint I	5.11	0	0		Negative	0	0	12:12:22
25-Mar-19	171 Lead Paint I	5.15	0	0		Negative	0	0	12:12:40
25-Mar-19	172 Lead Paint I	6.02	0	0.03		Negative	0	0.01	12.13.01
25-Mar-19	172 Lead Paint I	5 33	013	0.05	surface	Negative	0 13	0.03	12.13.01
25 Mar-19	17/ Lead Paint I	5.84	0.13	0.07	surface	Negative	0.13	0.03	12.13.13
25 Mar 19	175 Load Paint I	5.0 4 6 1	0.12	0.00	surface	Negative	0.12	0.04	12.14.00
25-1viai-19 25 Mar 10	175 Lead Paint I	0.1 E 07	0.11	0.00	surface	Negative	0.11	0.03	12.14.30
25-Ividi-19 25 Mar 10	170 Ledu Pallit I	5.97	0.1	0.07	surface	Negative	0.1	0.04	12.15.11
25-IVIdI-19	177 Lead Paint I	5.04	0.05	0.05	Surface	Negative	0.05	0.02	12.15.50
25-IVIar-19	178 Lead Paint I	5.02	0.12	0.09	surface	Negative	0.12	0.04	12:15:59
25-Mar-19	179 Lead Paint I	5.9	0.15	0.07	surface	Negative	0.15	0.04	12:16:18
25-Mar-19	180 Lead Paint I	5.09	0	0		Negative	0	0	12:17:14
25-Mar-19	181 Lead Paint I	16.87	1.08	0.09	surface	Positive	1.08	0.04	12:17:36
25-Mar-19	182 Standardiza	26.33	0.019717	227	-0.010762	PASS			13:30:57
25-Mar-19	183 Lead Paint I	6.15	0	0		Negative	0	0	13:35:31
25-Mar-19	184 Lead Paint I	24.96	0.16	0.12		Insufficient	0.16	0.06	13:36:40
25-Mar-19	185 Lead Paint I	5.1	> 1.00	0.23		Positive	1	0.11	13:38:15
25-Mar-19	186 Lead Paint I	5.22	0	0		Negative	0	0	13:38:49
25-Mar-19	187 Lead Paint I	25.01	0.18	0.14		Negative	0.18	0.07	13:39:10
25-Mar-19	188 Lead Paint I	2.91	0.11	0.19		Negative	0.11	0.09	13:40:07
25-Mar-19	189 Lead Paint I	24.6	0.1	0.07	surface	Negative	0.1	0.04	13:40:35
25-Mar-19	190 Lead Paint I	5.27	0	0		Negative	0	0	13:41:24
25-Mar-19	191 Lead Paint I	5.04	0	0		Negative	0	0	13:41:53
25-Mar-19	192 Lead Paint I	7.69	0.06	0.06	surface	Negative	0.06	0.03	13:42:13
25-Mar-19	193 Lead Paint I	5.39	0	0		Negative	0	0	13:42:38
25-Mar-19	194 Lead Paint I	5.1	0	0		Negative	0	0	13:42:56
25-Mar-19	195 Lead Paint I	5.13	0	0		Negative	0	0	13:43:17
25-Mar-19	196 Lead Paint I	5	0	0.01		Negative	0	0	13.43.45
25-Mar-19	197 Lead Paint I	5.8	0	0.01		Negative	0	0	13.44.10
25 Mar 19	197 Lead Paint I	5 11	0	0		Negative	0	0	13.44.10
25-Mar-10	190 Lead Paint I	5.11	0	0		Negative	0	0	12.44.55
25-1viai-19 25 Mar 10	200 Load Paint I	J.23 E 14	0.24			Negative	0 24	0 20	12.45.04
25-IVIdI-19	200 Ledu Pallit I	5.14	0.24	0.55		Negative	0.24	0.20	13.45.24
25-IVIar-19	201 Lead Paint I	0.35	0.28	0.51		Negative	0.28	0.26	13:40:00
25-IVIar-19	202 Lead Paint I	5.25	0.01	0.01		Negative	0.01	0	13:40:25
25-IVIar-19	203 Lead Paint I	25.1	0.04	0.04		Negative	0.04	0.02	13:46:50
25-Mar-19	204 Lead Paint I	5.13	0	0		Negative	0	0	13:47:42
25-Mar-19	205 Lead Paint I	5.24	0	0		Negative	0	0	13:48:14
25-Mar-19	206 Lead Paint I	5.19	0	0		Negative	0	0	13:48:34
25-Mar-19	207 Lead Paint I	5.1	0	0		Negative	0	0	13:49:05
25-Mar-19	208 Lead Paint I	5.21	0	0		Negative	0	0	13:49:22
25-Mar-19	209 Lead Paint I	5.15	0	0		Negative	0	0	13:49:40
25-Mar-19	210 Lead Paint I	5.94	0	0.02		Negative	0	0.01	13:50:11
25-Mar-19	211 Lead Paint I	14.63	0.19	0.12	surface	Negative	0.19	0.06	13:50:32
25-Mar-19	212 Lead Paint I	5.4	0	0		Negative	0	0	13:51:07
25-Mar-19	213 Lead Paint I	5.08	0	0		Negative	0	0	13:51:28
25-Mar-19	214 Lead Paint I	8.59	0.07	0.05	surface	Negative	0.07	0.03	13:52:07
25-Mar-19	215 Lead Paint I	25.04	0.15	0.04	surface	Negative	0.15	0.02	13:52:48
25-Mar-19	216 Lead Paint I	15.57	0.09	0.04	surface	Negative	0.09	0.02	13:53:38
25-Mar-19	217 Lead Paint I	24.87	0.08	0.03	surface	Negative	0.08	0.02	13:54:16
25-Mar-19	218 Lead Paint I	6.1	0.01	0.03		Negative	0.01	0.01	13:55:07
25-Mar-19	219 Lead Paint I	6.04	0.06	0.07		Negative	0.06	0.03	13:55:29
25-Mar-19	220 Lead Paint I	5.18	0.04	0.08		Negative	0.04	0.04	13:56:29
25-Mar-19	221 Lead Paint I	5.25	0.01	0.02		Negative	0.01	0.01	13:56:52
25-Mar-19	222 Lead Paint I	5.14	0.02	0.04		Negative	0.02	0.02	13:57:13
25-Mar-19	223 Lead Paint I	5.16	0.05	0.08		Negative	0.05	0.04	13:57:35
		5.20	0.00	0.00			0.00	0.01	

25-Mar-19	224 Lead Paint I	5.14	0.03	0.06		Negative	0.03	0.03	13:57:52
25-Mar-19	225 Lead Paint I	6.05	0.06	0.06		Negative	0.06	0.03	13:58:23
25-Mar-19	226 Lead Paint I	6.1	0.06	0.08		Negative	0.06	0.04	13:58:42
25-Mar-19	227 Lead Paint I	6.04	0.03	0.04		Negative	0.03	0.02	13:59:02
25-Mar-19	228 Lead Paint I	5.86	0.12	0.09	surface	Negative	0.12	0.04	13:59:25
25-Mar-19	229 Lead Paint I	6.04	0.03	0.04		Negative	0.03	0.02	13:59:48
25-Mar-19	230 Lead Paint I	5.02	0.15	0.12	surface	Negative	0.15	0.06	14:00:08
25-Mar-19	231 Lead Paint I	5.37	0.02	0.04		Negative	0.02	0.02	14:02:30
25-Mar-19	232 Lead Paint I	5.45	0.01	0.02		Negative	0.01	0.01	14:02:56
25-Mar-19	233 Lead Paint I	5.43	0.06	0.06	surface	Negative	0.06	0.03	14:03:21
25-Mar-19	234 Lead Paint I	5.28	> 1.00	0.03		Positive	1	0.01	14:03:47
25-Mar-19	235 Lead Paint I	5.18	0	0		Negative	0	0	14:04:17
25-Mar-19	236 Standardiza	26.4	0.01972	227	-0.011934	PASS			14:08:34
25-Mar-19	237 Lead Paint I	5.9	0	0		Negative	0	0	14:09:56
25-Mar-19	238 Lead Paint I	5.06	0	0		Negative	0	0	14:10:33
25-Mar-19	239 Lead Paint I	5.97	1.18	0.16	surface	Positive	1.18	0.08	14:11:01
25-Mar-19	240 Lead Paint I	8.75	0	0.01		Negative	0	0.01	14:11:42
25-Mar-19	241 Lead Paint I	24.96	0.02	0.02		Negative	0.02	0.01	14:12:34
25-Mar-19	242 Lead Paint I	4.1	0.01	0.02		Negative	0.01	0.01	14:13:34
25-Mar-19	243 Lead Paint I	5.36	> 1.00	0.05		Positive	1	0.02	14:14:05
25-Mar-19	244 Lead Paint I	24.98	0.05	0.05		Negative	0.05	0.03	14:15:03
25-Mar-19	245 Lead Paint I	25.03	0.07	0.05	surface	Negative	0.07	0.03	14:15:49
25-Mar-19	246 Lead Paint I	15.62	0.05	0.08		Negative	0.05	0.04	14:16:39
25-Mar-19	247 Lead Paint I	24.79	0.05	0.03	surface	Negative	0.05	0.02	14:17:15
25-Mar-19	248 Lead Paint I	5.76	0	0		Negative	0	0	14:18:11
25-Mar-19	249 Lead Paint I	6.05	0.19	0.14	surface	Negative	0.19	0.07	14:18:36
25-Mar-19	250 Lead Paint I	5.01	0.21	0.18	surface	Negative	0.21	0.09	14:19:00
25-Mar-19	251 Lead Paint I	5.88	0.06	0.06		Negative	0.06	0.03	14:19:18
25-Mar-19	252 Lead Paint I	5.58	0	0.01		Negative	0	0	14:19:38
25-Mar-19	253 Lead Paint I	5.08	0.07	0.08		Negative	0.07	0.04	14:20:04
25-Mar-19	254 Lead Paint I	5.02	0.06	0.08		Negative	0.06	0.04	14:20:24
25-Mar-19	255 Lead Paint I	5.14	0.06	0.07		Negative	0.06	0.03	14:20:46
25-Mar-19	256 Lead Paint I	5.63	0	0.01		Negative	0	0	14:21:06
25-Mar-19	257 Lead Paint I	7.53	0.13	0.23		Negative	0.13	0.12	14:21:41
25-Mar-19	258 Lead Paint I	12.3	0.06	0.07		Negative	0.06	0.04	14:22:08
25-Mar-19	259 Lead Paint I	25.96	0.03	0.03	surface	Negative	0.03	0.01	14:22:34
25-Mar-19	260 Lead Paint I	5.2	0	0		Negative	0	0	14:23:21
25-Mar-19	261 Lead Paint I	5.24	0.02	0.04		Negative	0.02	0.02	14:23:38
25-Mar-19	262 Lead Paint I	6.17	0	0		Negative	0	0	14:24:15
25-Mar-19	263 Lead Paint I	5.42	0.12	0.1	surface	Negative	0.12	0.05	14:24:37
25-Mar-19	264 Lead Paint I	6.03	0	0		Negative	0	0	14:25:02
25-Mar-19	265 Lead Paint I	5.38	0.19	0.12	surface	Negative	0.19	0.06	14:25:24
25-Mar-19	266 Lead Paint I	6.12	0	0.01		Negative	0	0	14:25:54
25-Mar-19	267 Lead Paint I	5.33	0.07	0.08		Negative	0.07	0.04	14:26:19
25-Mar-19	268 Lead Paint I	5.26	0	0		Negative	0	0	14:26:49
25-Mar-19	269 Lead Paint I	5.18	0	0		Negative	0	0	14:27:09
25-Mar-19	270 Lead Paint I	5.27	0	0		Negative	0	0	14:28:00
25-Mar-19	271 Lead Paint I	5.22	0	0		Negative	0	0	14:28:22
25-Mar-19	272 Lead Paint I	5.31	0	0		Negative	0	0	14:28:47
25-Mar-19	273 Lead Paint I	5.06	0	0		Negative	0	0	14:29:10
25-Mar-19	274 Lead Paint I	25.42	0.06	0.04	surface	Negative	0.06	0.02	14:29:30
25-Mar-19	275 Lead Paint I	5.2	0.08	0.14		Negative	0.08	0.07	14:30:26
25-Mar-19	276 Lead Paint I	6.29	0.33	0.57		Negative	0.33	0.28	14:30:46
25-Mar-19	277 Lead Paint I	5.2	0.13	0.23		Negative	0.13	0.12	14:31:10
25-Mar-19	278 Lead Paint I	14.59	0.1	0.11		Negative	0.1	0.06	14:31:30
25-Mar-19	279 Lead Paint I	5.24	0.05	0.07		Negative	0.05	0.03	14:32:02

25-Mar-19	280 Lead Paint I	5.11	0	0.01	Negative	0	0	14:32:27
25-Mar-19	281 Lead Paint I	5.4	0.06	0.07	Negative	0.06	0.04	14:32:46
25-Mar-19	282 Lead Paint I	5.06	0	0	Negative	0	0	14:33:10
25-Mar-19	283 Lead Paint I	5.41	0.16	0.14 surface	Negative	0.16	0.07	14:33:29
25-Mar-19	284 Lead Paint I	5.11	0	0	Negative	0	0	14:33:49
25-Mar-19	285 Lead Paint I	5.25	0	0	Negative	0	0	14:34:09
25-Mar-19	286 Lead Paint I	5.1	0	0	Negative	0	0	14:34:56
25-Mar-19	287 Lead Paint I	5.13	0.12	0.11 surface	Negative	0.12	0.05	14:35:30
25-Mar-19	288 Lead Paint I	5.16	0.04	0.04	Negative	0.04	0.02	14:35:52
25-Mar-19	289 Lead Paint I	7.49	0.06	0.05 surface	Negative	0.06	0.02	14:36:15
25-Mar-19	290 Lead Paint I	8.73	0.02	0.02 surface	Negative	0.02	0.01	14:36:44
25-Mar-19	291 Lead Paint I	5.17	0.06	0.06 surface	Negative	0.06	0.03	14:37:07
25-Mar-19	292 Lead Paint I	5.02	0.01	0.01	Negative	0.01	0	14:37:31
25-Mar-19	293 Lead Paint I	5.32	0.12	0.08 surface	Negative	0.12	0.04	14:37:52
25-Mar-19	294 Lead Paint I	5.82	0.05	0.05	Negative	0.05	0.03	14:38:30
25-Mar-19	295 Lead Paint I	6.09	0.07	0.05 surface	Negative	0.07	0.02	14:38:55
25-Mar-19	296 Lead Paint I	5.08	0.02	0.1	Negative	0.02	0.05	14:40:03
25-Mar-19	297 Lead Paint I	5.4	0.22	0.13 surface	Negative	0.22	0.06	14:40:22
25-Mar-19	298 Lead Paint I	6.41	0.07	0.06 surface	Negative	0.07	0.03	14:40:51
25-Mar-19	299 Lead Paint I	11	0.12	0.07 surface	Negative	0.12	0.03	14:41:13
25-Mar-19	300 Lead Paint I	24.73	0.1	0.04 surface	Negative	0.1	0.02	14:41:46
25-Mar-19	301 Lead Paint I	5.21	0.07	0.05 surface	Negative	0.07	0.02	14:42:37
25-Mar-19	302 Lead Paint I	5.2	0.11	0.08 surface	Negative	0.11	0.04	14:43:03
25-Mar-19	303 Lead Paint I	6.07	0.07	0.09	Negative	0.07	0.05	14:43:27
25-Mar-19	304 Lead Paint I	6.03	0.04	0.05	Negative	0.04	0.03	14:43:49
25-Mar-19	305 Lead Paint I	6.16	0.06	0.07	Negative	0.06	0.04	14:44:15
25-Mar-19	306 Lead Paint I	11.04	0.31	0.2 surface	Negative	0.31	0.1	14:44:42
25-Mar-19	307 Lead Paint I	24.87	0.1	0.04 surface	Negative	0.1	0.02	14:45:12
25-Mar-19	308 Lead Paint I	11.05	0.1	0.08 surface	Negative	0.1	0.04	14:45:54
25-Mar-19	309 Lead Paint I	10.97	0.22	0.15 surface	Negative	0.22	0.07	14:46:21
25-Mar-19	310 Lead Paint I	13.08	0.06	0.04 surface	Negative	0.06	0.02	14:46:47
25-Mar-19	311 Lead Paint I	5.1	0	0	Negative	0	0	14:47:18
25-Mar-19	312 Lead Paint I	6.6	0.3	0.33	Negative	0.3	0.17	14:47:38
25-Mar-19	313 Lead Paint I	5.22	0	0	Negative	0	0	14:48:08
25-Mar-19	314 Lead Paint I	5.19	0	0	Negative	0	0	14:48:30
25-Mar-19	315 Lead Paint I	5.13	0	0	Negative	0	0	14:48:59
25-Mar-19	316 Lead Paint I	5.07	0	0.02	Negative	0	0.01	14:49:27
25-Mar-19	317 Lead Paint I	5.43	0.09	0.08 surface	Negative	0.09	0.04	14:49:44
25-Mar-19	318 Lead Paint I	5.14	0.15	0.09 surface	Negative	0.15	0.05	14:50:16
25-Mar-19	319 Lead Paint I	7.55	0.22	0.09 surface	Negative	0.22	0.05	14:50:36
25-Mar-19	320 Lead Paint I	13.36	0.14	0.05 surface	Negative	0.14	0.02	14:51:06
25-Mar-19	321 Lead Paint I	5.16	0.14	0.08 surface	Negative	0.14	0.04	14:51:40
25-Mar-19	322 Lead Paint I	5.07	0.09	0.05 surface	Negative	0.09	0.03	14:51:58
25-Mar-19	323 Lead Paint I	5.81	0.06	0.06	Negative	0.06	0.03	14:52:27
25-Mar-19	324 Lead Paint I	5.99	0.08	0.07 surface	Negative	0.08	0.03	14:52:56
25-Mar-19	325 Lead Paint I	8.28	1.13	0.13 surface	Positive	1.13	0.06	14:54:02
25-Mar-19	326 Lead Paint I	5.03	0	0	Negative	0	0	14:54:26
25-Mar-19	327 Lead Paint I	5.34	0	0	Negative	0	0	14:55:47
25-Mar-19	328 Lead Paint I	5.29	1.75	0.58 surface	Positive	1.75	0.29	14:56:09
25-Mar-19	329 Lead Paint I	24.85	0.97	0.13 surface	Negative	0.97	0.07	14:56:31
25-Mar-19	330 Lead Paint I	5.01	0	0	Negative	0	0	14:57:28
25-Mar-19	331 Lead Paint I	5.87	0	0.01	Negative	0	0	14:58:14
25-Mar-19	332 Lead Paint I	5.19	0	0	Negative	0	0	14:58:42
25-Mar-19	333 Lead Paint I	5.16	0	0	Negative	0	0	14:59:00
25-Mar-19	334 Lead Paint I	5.63	0	0.01	Negative	0	0	14:59:38
25-Mar-19	335 Lead Paint I	5.93	0	0	Negative	0	0	15:00:05

25-Mar-19	336 Lead Paint I	5.18	0	0	Negative	0	0	15:00:49
25-Mar-19	337 Lead Paint I	5.18	0	0	Negative	0	0	15:01:19
25-Mar-19	338 Lead Paint I	6.06	1.51	0.34 surface	Positive	1.51	0.17	15:01:48
25-Mar-19	339 Lead Paint I	25.46	1.12	0.13 surface	Positive	1.12	0.07	15:02:09
25-Mar-19	340 Lead Paint I	5.11	0	0	Negative	0	0	15:03:29
25-Mar-19	341 Lead Paint I	5.13	0	0	Negative	0	0	15:03:48
25-Mar-19	342 Lead Paint I	5.14	0	0	Negative	0	0	15:04:22
25-Mar-19	343 Lead Paint I	5.18	0	0	Negative	0	0	15:05:12
25-Mar-19	344 Lead Paint I	5.95	0	0	Negative	0	0	15:05:44
25-Mar-19	345 Lead Paint I	5.19	0	0	Negative	0	0	15:06:03
25-Mar-19	346 Lead Paint I	5.05	0	0	Negative	0	0	15:06:36
25-Mar-19	347 Lead Paint I	2.89	0.06	0.14	Negative	0.06	0.07	15:07:00
25-Mar-19	348 Lead Paint I	6.43	0.03	0.05	Negative	0.03	0.03	15:07:30
25-Mar-19	349 Lead Paint I	2.9	0.02	0.06	Negative	0.02	0.03	15:07:58
25-Mar-19	350 Lead Paint I	5.62	0	0	Negative	0	0	15:08:38
25-Mar-19	351 Lead Paint I	5.08	0	0	Negative	0	0	15:08:57
25-Mar-19	352 Lead Paint I	5.06	0	0	Negative	0	0	15:09:23
25-Mar-19	353 Lead Paint I	5.19	0	0	Negative	0	0	15:09:48
25-Mar-19	354 Lead Paint I	5.14	0	0	Negative	0	0	15:10:10
25-Mar-19	355 Lead Paint I	15.71	1.09	0.09 surface	Positive	1.09	0.04	15:11:43
25-Mar-19	356 Lead Paint I	5.1	0	0	Negative	0	0	15:12:46

Date	Reading	Mode	LiveTime	Match1	MN1	Pass/Fail	Pass Fail StaPb)	Pb +/-	Time
26-Mar-19	1	Standardiza	26.37	0.01972	229	-0.013409	PASS			8:46:51
26-Mar-19	2	Lead Paint I	5.13	0	0		Negative	0	0	8:52:07
26-Mar-19	3	Lead Paint I	5.27	0.01	0.01		Negative	0.01	0	8:53:00
26-Mar-19	4	Lead Paint I	7.59	0.01	0.01		Negative	0.01	0	8:53:30
26-Mar-19	5	Lead Paint I	19.19	0.12	0.21		Negative	0.12	0.11	8:53:50
26-Mar-19	6	Lead Paint I	5.22	0	0		Negative	0	0	8:54:25
26-Mar-19	7	Lead Paint I	5.25	0	0		Negative	0	0	8:54:42
26-Mar-19	8	Lead Paint I	5.14	0	0		Negative	0	0	8:55:05
26-Mar-19	9	Lead Paint I	6.43	0.22	0.39		Negative	0.22	0.2	8:55:22
26-Mar-19	10	Lead Paint I	5.2	0	0		Negative	0	0	8:55:44
26-Mar-19	11	Lead Paint I	5.01	0	0		Negative	0	0	8:56:08
26-Mar-19	12	Lead Paint I	5.15	0	0		Negative	0	0	8:56:33
26-Mar-19	13	Lead Paint I	5.87	0	0.01		Negative	0	0	8:56:57
26-Mar-19	14	Lead Paint I	5.52	0	0		Negative	0	0	8:57:16
26-Mar-19	15	Lead Paint I	5.59	0	0		Negative	0	0	8:57:37
26-Mar-19	16	Lead Paint I	5.79	0	0		Negative	0	0	8:58:06
26-Mar-19	17	Lead Paint I	5.99	0	0		Negative	0	0	8:58:29
26-Mar-19	18	Lead Paint I	5.73	0	0		Negative	0	0	8:58:59
26-Mar-19	19	Lead Paint I	6.04	0	0		Negative	0	0	8:59:24
26-Mar-19	20	Lead Paint I	25.04	0.04	0.04		Negative	0.04	0.02	8:59:57
26-Mar-19	21	Lead Paint I	5.25	0	0.01		Negative	0	0	9:00:48
26-Mar-19	22	Lead Paint I	24.87	0.11	0.07	surface	Negative	0.11	0.04	9:01:14
26-Mar-19	23	Lead Paint I	5.2	0	0		Negative	0	0	9:01:57
26-Mar-19	24	Lead Paint I	5.28	0.07	0.15		Negative	0.07	0.07	9:02:23
26-Mar-19	25	Lead Paint I	5.07	0.02	0.02	surface	Negative	0.02	0.01	9:02:52
26-Mar-19	26	Lead Paint I	5.25	0	0		Negative	0	0	9:03:19
26-Mar-19	27	Lead Paint I	5.2	0	0		Negative	0	0	9:03:42
26-Mar-19	28	Lead Paint I	5.03	0.01	0.02		Negative	0.01	0.01	9:04:10
26-Mar-19	29	Lead Paint I	5.24	0	0		Negative	0	0	9:04:38
26-Mar-19	30	Lead Paint I	5.17	0	0		Negative	0	0	9:04:59
26-Mar-19	31	Lead Paint I	5.41	0	0		Negative	0	0	9:05:29
26-Mar-19	32	Lead Paint I	5.22	0	0		Negative	0	0	9:05:47
26-Mar-19	33	Lead Paint I	5.06	0	0.01		Negative	0	0	9:06:08
26-Mar-19	34	Lead Paint I	7.77	0.13	0.1	surface	Negative	0.13	0.05	9:06:25
26-Mar-19	35	Lead Paint I	5.99	0	0		Negative	0	0	9:06:54
26-Mar-19	36	Lead Paint I	5.96	0	0		Negative	0	0	9:07:20
26-Mar-19	37	Lead Paint I	5.88	0	0		Negative	0	0	9:07:48
26-Mar-19	38	Lead Paint I	5.00	0	0		Negative	0	0	9.08.29
26-Mar-19	39	Lead Paint I	5 17	0 14	0.27		Negative	0 14	0.13	9.09.07
26-Mar-19	40	Lead Paint I	12.02	0.07	0.05	surface	Negative	0.07	0.02	9:09:32
26-Mar-19	41	Lead Paint I	5.2	0.06	0.07	04.1400	Negative	0.06	0.03	9.09.59
26-Mar-19	41	Lead Paint I	24.83	0.00	0.07	surface	Negative	0.06	0.05	9.10.25
26-Mar-19	43	Lead Paint I	5 16	0.07	0.09	Surrace	Negative	0.07	0.04	9.11.07
26-Mar-19	43	Lead Paint I	5.10	0.07	0.05		Negative	0.07	0.04 0	9.11.07
26-Mar-19	45	Lead Paint I	5 33	0 14	01	surface	Negative	0 14	0.05	9.11.25
26-Mar-19	45	Lead Paint I	6.08	0.14	0.1	Junuce	Negative	0.14	0.05	Q·12·/1
26 Mar 19	40	Lead Paint I	5.88	0	0		Negative	0	0	9.12.41
26 Mar 19	47	Load Daint I	5.00 6.02	0	0		Negative	0	0	0.11.12
26-Mar-10	40 70	Lead Paint I	5 96	0 17	0 1	surface	Negative	0 17	0	0.15.02
26-Mar-10	49 E0		5.90	0.17	0.1	Junale	Negative	0.17	0.05	0.12.20
20-ividi-19 26. Mar 10	50		5.04 E 1E	0.05	0.00		Negative	0.05	0.05	0.1E.JE
20-1vidi-19	51 En		C.10	0.01	0.02		Nogativo	0.01	0.01	9.10.20
20-ividi-19 26. Mar 10	52		5.ZI 0 E1	0.01	0.02		Negative	0.01	0.01	0.17.11
20-1vidi-19	55		0.54 E 06	0.04	0.06		Nogativo	0.04	0.03	J.17.11
20-ividi-19	54		5.00 F 1F	0	0		Nogative	0	0	9.17.52 0.17.E1
20-14191-13	55	Leau Paint I	5.15	0	0		wegative	0	0	9.11:21

26-Mar-19	56 Lead Paint I	6.04	0.02	0.04	Negative	0.02	0.02	9:18:16
26-Mar-19	57 Lead Paint I	5.07	0.03	0.05	Negative	0.03	0.03	9:18:37
26-Mar-19	58 Lead Paint L	5.02	0.07	0.13	Negative	0.07	0.06	9:18:59
26-Mar-19	59 Lead Paint I	5.85	0.05	0.15	Negative	0.05	0.07	9.19.39
26-Mar-19	60 Lead Paint I	10.26	0.23	0.14 surface	Negative	0.23	0.07	9.20.03
26-Mar-19	61 Lead Paint I	6.06	0.25	0.14 Surface	Negative	0.29	0.07	9.20.03
26-Mar-19	62 Load Paint I	6.00	0.07		Negative	0 07	0 03	0.20.51
20-1viai-19	62 Lead Paint I	6.01	0.07		Negative	0.07	0.05	0.20.37
20-IVIdI-19	05 Leau Pallit I	0.01	0.10		Negative	0.10	0.05	9.21.10
26-10181-19	64 Lead Paint I	0.00	0.16	0.09 surface	Negative	0.16	0.05	9:21:38
26-Mar-19	65 Lead Paint I	6.11	0.06	0.04 surface	Negative	0.06	0.02	9:22:05
26-Mar-19	66 Lead Paint I	5.3	0.01	0.02	Negative	0.01	0.01	9:22:37
26-Mar-19	67 Lead Paint I	5.21	0	0.01	Negative	0	0	9:22:59
26-Mar-19	68 Lead Paint I	5.17	0.03	0.07	Negative	0.03	0.03	9:23:35
26-Mar-19	69 Lead Paint I	5.13	0.25	0.54	Negative	0.25	0.27	9:23:52
26-Mar-19	70 Lead Paint I	5.26	0.09	0.15	Negative	0.09	0.08	9:24:16
26-Mar-19	71 Lead Paint I	22.78	0.16	0.1 surface	Negative	0.16	0.05	9:24:37
26-Mar-19	72 Lead Paint I	5.79	0	0	Negative	0	0	9:25:30
26-Mar-19	73 Lead Paint I	5.01	0.07	0.11	Negative	0.07	0.06	9:25:51
26-Mar-19	74 Lead Paint I	6.06	0.07	0.15	Negative	0.07	0.08	9:26:11
26-Mar-19	75 Lead Paint I	5.68	0	0	Negative	0	0	9:26:32
26-Mar-19	76 Lead Paint I	5.04	0	0	Negative	0	0	9:26:55
26-Mar-19	77 Lead Paint I	5.7	0	0.01	Negative	0	0	9:27:21
26-Mar-19	78 Lead Paint I	6.11	0.05	0.09	Negative	0.05	0.04	9:27:42
26-Mar-19	79 Lead Paint I	5.02	0.06	0.11	Negative	0.06	0.05	9:28:04
26-Mar-19	80 Lead Paint I	5.04	0.21	0.53	Negative	0.21	0.26	9.28.28
26-Mar-19	81 Lead Paint I	5.01	0.21	0	Negative	0.21	0.20	9.20.20
26-Mar-19	82 Load Paint I	7 58	03	051	Negative	03	0.26	0.20.21
20-Mar-10	82 Lead Paint I	F 02	0.5	0.51	Negative	0.5	0.20	0.20.42
20-IVIdI-19	05 Leau Pallit I	5.05	0	0	Negative	0	0	9.29.42
26-IVIar-19	84 Lead Paint I	5.2	0	0	Negative	0	0	9:30:01
26-Mar-19	85 Lead Paint I	5.15	0	0	Negative	0	0	9:30:20
26-Mar-19	86 Lead Paint I	5.94	0	0	Negative	0	0	9:30:44
26-Mar-19	87 Lead Paint I	5.05	0	0	Negative	0	0	9:31:03
26-Mar-19	88 Lead Paint I	5.06	0	0	Negative	0	0	9:31:25
26-Mar-19	89 Lead Paint I	5.37	0	0	Negative	0	0	9:31:42
26-Mar-19	90 Lead Paint I	5.08	0	0	Negative	0	0	9:32:01
26-Mar-19	91 Lead Paint I	5.29	0	0	Negative	0	0	9:32:18
26-Mar-19	92 Lead Paint I	6.11	0.06	0.16	Negative	0.06	0.08	9:32:37
26-Mar-19	93 Lead Paint I	5.14	0	0	Negative	0	0	9:33:02
26-Mar-19	94 Lead Paint I	5.16	0	0	Negative	0	0	9:33:25
26-Mar-19	95 Lead Paint I	6.05	0	0	Negative	0	0	9:33:49
26-Mar-19	96 Lead Paint I	5.14	0	0	Negative	0	0	9:34:11
26-Mar-19	97 Lead Paint I	5.17	0	0	Negative	0	0	9:34:28
26-Mar-19	98 Lead Paint I	5.17	0	0	Negative	0	0	9:34:58
26-Mar-19	99 Lead Paint I	5.14	0	0	Negative	0	0	9:35:17
26-Mar-19	100 Lead Paint I	5.12	0	0	Negative	0	0	9:35:38
26-Mar-19	101 Lead Paint I	5.29	0	0	Negative	0	0	9:35:56
26-Mar-19	102 Lead Paint I	5 25	0	0	Negative	0	0	9.36.12
26-Mar-19	103 Lead Paint I	5.46	0	0	Negative	0	0	0.36.33
26-Mar-19	104 Lead Paint I	5.40 5.40	0	0	Negative	0	0	0.36.52
26-Mar.10	105 Load Daint I	5.45	0	0	Negative	0	0	9.30.32
20-1VId1-13	105 Lead Paint I	J.34 E 10	0	0	Negative	0	0	0.27.70
20-1VId1-19	107 Lead Doint I	5.1ð	0	0	Negative	U	U	3.37:29
20-IVIAI-19		5.27	U	0	Negative	U	U	9:37:51
20-iviar-19	108 Lead Paint I	5.02	U	U	Negative	0	0	9:38:29
26-Mar-19	109 Lead Paint I	5.3	0	U	Negative	Ű	0	9:38:47
26-Mar-19	110 Lead Paint I	6.16	0	0	Negative	0	0	9:39:20
26-Mar-19	111 Lead Paint I	5.16	0.04	0.07	Negative	0.04	0.03	9:39:38

26-Mar-19	112 Lead Paint I	5.19	0	0	Negative	0	0	9:40:00
26-Mar-19	113 Lead Paint I	5.14	0	0	Negative	0	0	9:40:24
26-Mar-19	114 Lead Paint I	5.28	0	0	Negative	0	0	9:40:45
26-Mar-19	115 Lead Paint I	5.13	0	0	Negative	0	0	9:41:05
26-Mar-19	116 Lead Paint I	5 34	0	0	Negative	0	0	9.41.24
26-Mar-19	117 Lead Paint I	5.08	0	0	Negative	0	0	9.41.57
26-Mar-19	118 Load Paint I	5.00	0	0	Negative	0	0	0.41.37
20-Mar-10	110 Lead Paint I	5.17	0	0	Negative	0	0	0.42.20
20-1v1a1-19	119 Leau Paint I	5.17	0	0	Negative	0	0	0.42.40
20-IVId1-19	120 Lead Paint I	5.12	0	0	Negative	0	0	9.43.22
26-Mar 10	121 Lead Paint I	5.03	0	0	Negative	0	0	9:43:57
26-Mar-19	122 Lead Paint I	5.07	0	0	Negative	0	0	9:44:30
26-Mar-19	123 Lead Paint I	5.14	0	0	Negative	0	0	9:45:02
26-Mar-19	124 Lead Paint I	5.26	0	0	Negative	0	0	9:45:49
26-Mar-19	125 Lead Paint I	5.01	0	0	Negative	0	0	9:46:25
26-Mar-19	126 Lead Paint I	5.31	0	0	Negative	0	0	9:46:49
26-Mar-19	127 Lead Paint I	5.15	0	0	Negative	0	0	9:47:08
26-Mar-19	128 Lead Paint I	6.14	0.13	0.11 surface	Negative	0.13	0.06	9:47:31
26-Mar-19	129 Lead Paint I	5.1	0	0	Negative	0	0	9:47:52
26-Mar-19	130 Lead Paint I	5.15	0	0	Negative	0	0	9:48:09
26-Mar-19	131 Lead Paint I	5.25	0	0	Negative	0	0	9:48:27
26-Mar-19	132 Lead Paint I	5.65	0	0	Negative	0	0	9:48:50
26-Mar-19	133 Lead Paint I	5.07	0	0	Negative	0	0	9:49:20
26-Mar-19	134 Lead Paint I	5.23	0	0	Negative	0	0	9:50:53
26-Mar-19	135 Lead Paint I	5.24	0	0	Negative	0	0	9:51:20
26-Mar-19	136 Lead Paint I	5.12	0	0	Negative	0	0	9:51:39
26-Mar-19	137 Lead Paint I	5.11	0	0	Negative	0	0	9:52:06
26-Mar-19	138 Lead Paint I	5.19	0	0	Negative	0	0	9:52:34
26-Mar-19	139 Lead Paint I	5 29	0	0	Negative	0	0	9.52.53
26-Mar-19	140 Lead Paint I	5 17	0	0	Negative	0	0	9.53.09
26-Mar-19	141 Lead Paint I	5 23	0	0	Negative	0	0	9.53.44
26-Mar-19	1/12 Load Paint I	5.25	0	0	Negative	0	0	0.27.01
20-Mar-10	142 Lead Paint I	5 22	0	0	Negative	0	0	0.54.04
20-1v1a1-19	143 Lead Paint I	J.23 E E1	0	0	Negative	0	0	0.54.23
20-Iviai-19	144 Leau Pallit I	5.51	0	0	Negative	0	0	9.54.42
20-IVId1-19	145 Lead Paint I	5.05 F 10	0	0	Negative	0	0	9.55.10
26-Mar 10	146 Lead Paint I	5.13	0	0	Negative	0	0	9:55:45
26-Mar-19	147 Lead Paint I	5.13	0	0	Negative	0	0	9:56:14
26-Mar-19	148 Lead Paint I	6.09	0	0	Negative	0	0	9:56:38
26-Mar-19	149 Lead Paint I	5.19	0	0	Negative	0	0	9:57:18
26-Mar-19	150 Lead Paint I	5.19	0	0	Negative	0	0	9:57:38
26-Mar-19	151 Lead Paint I	5.27	0	0	Negative	0	0	9:57:58
26-Mar-19	152 Lead Paint I	7.55	0.1	0.33	Negative	0.1	0.16	9:58:18
26-Mar-19	153 Lead Paint I	5.15	0	0	Negative	0	0	9:58:41
26-Mar-19	154 Lead Paint I	5.4	0	0	Negative	0	0	9:59:15
26-Mar-19	155 Lead Paint I	5.31	0	0	Negative	0	0	9:59:34
26-Mar-19	156 Lead Paint I	5.26	0	0	Negative	0	0	9:59:51
26-Mar-19	157 Lead Paint I	5.05	0	0	Negative	0	0	10:00:11
26-Mar-19	158 Lead Paint I	5.33	0	0	Negative	0	0	10:00:28
26-Mar-19	159 Lead Paint I	5.01	0	0	Negative	0	0	10:00:48
26-Mar-19	160 Lead Paint I	5.28	0	0	Negative	0	0	10:01:06
26-Mar-19	161 Lead Paint I	6.06	0	0	Negative	0	0	10:01:40
26-Mar-19	162 Lead Paint I	6.07	0	0	Negative	0	0	10:02:01
26-Mar-19	163 Lead Paint I	6.12	0	0	Negative	0	0	10:02:29
26-Mar-19	164 Lead Paint I	5.99	0	0	Negative	0	0	10:02:58
26-Mar-19	165 Lead Paint I	6.18	0	0	Negative	0	0	10:03:34
26-Mar-19	166 Lead Paint I	5.29	0	0	Negative	0	0	10:03:54
26-Mar-19	167 Lead Paint I	5.2	0	0	Negative	0	0	10:04:19
		J	5	-		0	0	

26-Mar-19	168 Lead Paint I	5.27	0	0	Negative	0	0	10:04:51
26-Mar-19	169 Lead Paint I	5.27	0	0	Negative	0	0	10:05:13
26-Mar-19	170 Lead Paint I	5.03	0	0	Negative	0	0	10:05:34
26-Mar-19	171 Lead Paint I	5.28	0	0	Negative	0	0	10:05:53
26-Mar-19	172 Lead Paint I	5.7	0	0	Negative	0	0	10:06:24
26-Mar-19	173 Lead Paint I	5.13	0	0	Negative	0	0	10:06:49
26-Mar-19	174 Lead Paint I	5.17	0	0	Negative	0	0	10:07:51
26-Mar-19	175 Lead Paint I	5.07	0	0	Negative	0	0	10:08:25
26-Mar-19	176 Lead Paint I	6 11	0	0	Negative	0	0	10.08.52
26-Mar-19	177 Lead Paint I	5.06	0	0	Negative	0	0	10.00.52
26-Mar-19	178 Lead Paint I	23 71	1.06	0 07 surface	Positive	1.06	0.04	10.05.52
26 Mar 19	170 Lead Paint I	20.71	0.15	0.2	Negative	0.15	0.04	10.10.14
26-Mar-19	175 Lead Paint I	5 23	0.15	0.2	Negative	0.15	0.1	10.15.15
20-101d1-19 26 Mar 10	191 Load Paint I	6.20	0 22		Negative	0 22	0 16	10.10.21
20-1vidi-19 26 Mar 10	101 Leau Paint I	0.59	0.35		Negative	0.55	0.10	10.17.55
20-IVIdI-19	102 Ledu Pallit I	9.97	0.51	0.4	Negative	0.51	0.2	10.10.05
26-IVIal-19	183 Lead Paint I	5.17	0	0	Negative	0	0	10:18:28
26-IVIal-19	184 Lead Paint I	5.09	0	0	Negative	0	0	10:18:48
26-Mar-19	185 Lead Paint I	5.55	0.01	0.01	Negative	0.01	0.01	10:19:37
26-Mar-19	186 Lead Paint I	5.59	0	0	Negative	0	0	10:20:02
26-Mar-19	187 Lead Paint I	5.97	0	0	Negative	0	0	10:20:22
26-Mar-19	188 Lead Paint I	5.17	0.38	0.43	Negative	0.38	0.21	10:20:57
26-Mar-19	189 Lead Paint I	24.87	0.39	0.13 surface	Negative	0.39	0.06	10:21:22
26-Mar-19	190 Lead Paint I	5.11	0.19	0.19	Negative	0.19	0.1	10:22:15
26-Mar-19	191 Lead Paint I	6.35	0	0.01	Negative	0	0	10:22:33
26-Mar-19	192 Lead Paint I	5.16	0.06	0.16	Negative	0.06	0.08	10:22:57
26-Mar-19	193 Lead Paint I	5.04	0	0	Negative	0	0	10:23:24
26-Mar-19	194 Lead Paint I	5.14	0	0	Negative	0	0	10:23:45
26-Mar-19	195 Lead Paint I	5.2	0	0	Negative	0	0	10:24:02
26-Mar-19	196 Lead Paint I	5.11	0	0	Negative	0	0	10:24:29
26-Mar-19	197 Lead Paint I	5.18	0	0	Negative	0	0	10:24:48
26-Mar-19	198 Lead Paint I	5.1	0	0	Negative	0	0	10:25:04
26-Mar-19	199 Lead Paint I	5.82	0	0	Negative	0	0	10:25:36
26-Mar-19	200 Lead Paint I	15.95 >	> 1.00	0.1	Positive	1	0.05	10:26:01
26-Mar-19	201 Lead Paint I	5.2	0	0	Negative	0	0	10:26:53
26-Mar-19	202 Lead Paint I	5.35	0	0	Negative	0	0	10:27:10
26-Mar-19	203 Lead Paint I	6.06	0	0	Negative	0	0	10:27:40
26-Mar-19	204 Lead Paint I	8.9 >	> 1.00	0.25	Positive	1	0.12	10:27:56
26-Mar-19	205 Lead Paint I	5.06	0.18	0.23	Negative	0.18	0.12	10:28:55
26-Mar-19	206 Lead Paint I	5.11	0.04	0.13	Negative	0.04	0.06	10:30:04
26-Mar-19	207 Lead Paint I	6.04	0	0	Negative	0	0	10:30:40
26-Mar-19	208 Lead Paint I	5.97	0.03	0.05	Negative	0.03	0.03	10:31:22
26-Mar-19	209 Lead Paint I	13.16	0.51	0.12 surface	Negative	0.51	0.06	10:32:06
26-Mar-19	210 Lead Paint I	8.69	0.19	0.09 surface	Negative	0.19	0.04	10:32:36
26-Mar-19	211 Lead Paint I	13.34	0.13	0.06 surface	Negative	0.13	0.03	10:33:00
26-Mar-19	212 Lead Paint I	5.16	0.15	0.11 surface	Negative	0.15	0.05	10:33:30
26-Mar-19	213 Lead Paint I	24.98	0.26	0.06 surface	Negative	0.26	0.03	10:33:52
26-Mar-19	214 Lead Paint I	5.92	0.02	0.05	Negative	0.02	0.03	10:34:41
26-Mar-19	215 Lead Paint I	5.37	0.14	0.1 surface	Negative	0.14	0.05	10:35:00
26-Mar-19	216 Lead Paint I	5.03	0.07	0.07	Negative	0.07	0.04	10.32.50
26-Mar-19	217 Lead Paint I	5.11	0.13	0.11 surface	Negative	0.13	0.05	10:35:41
26-Mar-19	218 Lead Paint I	24 79	0.13	0.07 surface	Negative	0.13	0.03	10.32.31
26-Mar-19	219 Lead Paint I	<u>2</u> 4.75 24 75	0.33	0.06 surface	Negative	0.55	0.03	10.37.24
26-Mar-10	210 Load Paint I	5 24.75	0.24		Negative	0.24	0.03	10.32.02
26-Mar-10	220 Lead Daint I	6 27	0.17 0.10		Negative	0.17	0.03	10.28.25
26-Mar-19	221 Leau Paint I	17 51	0.10	0.07 surface	Negative	0.10	0.03	10.28.42
26-Mar.10	222 Leau raint 1	5 07	0.30 0.1 <i>1</i>		Negative	0.30	0.04	10.20.24
20-19101-13		5.07	0.14	0.00 suitate	regative	0.14	0.04	10.33.34

26-Mar-19	224 Lead Paint I	6.05	0.37	0.14 surface	Negative	0.37	0.07	10:39:53
26-Mar-19	225 Lead Paint I	5.09	0.29	0.13 surface	Negative	0.29	0.06	10:40:25
26-Mar-19	226 Lead Paint I	5.99	0.11	0.06 surface	Negative	0.11	0.03	10:41:19
26-Mar-19	227 Lead Paint I	5.82	0.04	0.03 surface	Negative	0.04	0.02	10:41:47
26-Mar-19	228 Lead Paint I	6.03	0.06	0.04 surface	Negative	0.06	0.02	10:42:10
26-Mar-19	229 Lead Paint I	5.95	0.08	0.05 surface	Negative	0.08	0.02	10:42:28
26-Mar-19	230 Lead Paint I	5.36	0.03	0.03 surface	Negative	0.03	0.01	10:42:52
26-Mar-19	231 Lead Paint I	5.36	0.05	0.05 surface	Negative	0.05	0.03	10:43:18
26-Mar-19	232 Lead Paint I	5 17	0	0	Negative	0	0	10.43.41
26-Mar-19	232 Lead Paint I	5.2	0	0	Negative	0	0 0	10.44.05
26-Mar-19	233 Lead Paint I	6 15	0	0	Negative	0	0	10.44.30
26-Mar-19	235 Lead Paint I	5 19	0	0	Negative	0	0	10.44.50
26 Mar-19	236 Lead Paint I	21.27	036	0 15 surface	Negative	0.36	0.07	10.45.00
26-Mar-10	230 Lead Paint I	21.27	0.30	0.12 surface	Negative	0.30	0.07	10.45.40
20-1viai-19 26 Mar 10	237 Lead Paint I	23.12	0.30		Negative	0.30	0.00	10.40.17
20-IVIdI-19 26 Mar 10	230 Lead Paint I	24.90 E 19	0.24		Negative	0.24	0.05	10.47.00
20-IVIdI-19	239 Ledu Pallit I	5.16	0.01	0.01	Negative	0.01	0	10.47.45
26-IVIal-19	240 Lead Paint I	5.78	0 00	0.01	Negative	0 03	0 00	10:48:02
26-Mar-19	241 Lead Paint I	6.08	0.03	0.05	Negative	0.03	0.02	10:48:24
26-Mar-19	242 Lead Paint I	5.01	0.06	0.1	Negative	0.06	0.05	10:48:45
26-Mar-19	243 Lead Paint I	5.7	0	0	Negative	0	0	10:49:04
26-Mar-19	244 Lead Paint I	5.04	0.44	0.17 surface	Negative	0.44	0.08	10:49:25
26-Mar-19	245 Lead Paint I	5.68	0	0	Negative	0	0	10:49:46
26-Mar-19	246 Lead Paint I	5.06	0.04	0.07	Negative	0.04	0.03	10:50:06
26-Mar-19	247 Lead Paint I	5.04	0	0.02	Negative	0	0.01	10:50:34
26-Mar-19	248 Lead Paint I	5.26	0.01	0.04	Negative	0.01	0.02	10:51:12
26-Mar-19	249 Lead Paint I	18.13	0.22	0.1 surface	Negative	0.22	0.05	10:51:56
26-Mar-19	250 Lead Paint I	8.45	0.43	0.24 surface	Negative	0.43	0.12	10:52:30
26-Mar-19	251 Lead Paint I	5.26	0.26	0.22 surface	Negative	0.26	0.11	10:52:53
26-Mar-19	252 Lead Paint I	25.92	0.43	0.11 surface	Negative	0.43	0.06	10:53:11
26-Mar-19	253 Lead Paint I	22.53	0.05	0.05 surface	Negative	0.05	0.03	10:53:53
26-Mar-19	254 Lead Paint I	5.93	0	0.01	Negative	0	0	10:54:39
26-Mar-19	255 Lead Paint I	5.34	0.1	0.12	Negative	0.1	0.06	10:54:57
26-Mar-19	256 Lead Paint I	5.01	0	0.02	Negative	0	0.01	10:55:16
26-Mar-19	257 Lead Paint I	5.32	0.02	0.04	Negative	0.02	0.02	10:55:32
26-Mar-19	258 Lead Paint I	5.56	0.02	0.06	Negative	0.02	0.03	10:55:52
26-Mar-19	259 Lead Paint I	5.37	0.06	0.1	Negative	0.06	0.05	10:56:10
26-Mar-19	260 Lead Paint I	6.05	0.06	0.15	Negative	0.06	0.08	10:56:27
26-Mar-19	261 Lead Paint I	6.17	0.31	0.51	Negative	0.31	0.25	10:57:26
26-Mar-19	262 Lead Paint I	6.13	0.11	0.13	Negative	0.11	0.06	10:57:55
26-Mar-19	263 Lead Paint I	6.12	0.06	0.08	Negative	0.06	0.04	10:58:25
26-Mar-19	264 Lead Paint I	24.65	0.05	0.05 surface	Negative	0.05	0.02	10:58:51
26-Mar-19	265 Lead Paint I	5.13	0.07	0.19	Negative	0.07	0.1	10:59:35
26-Mar-19	266 Lead Paint I	6.4	0.11	0.16	Negative	0.11	0.08	10:59:58
26-Mar-19	267 Lead Paint I	24.81	0.14	0.2	Negative	0.14	0.1	11:00:25
26-Mar-19	268 Lead Paint I	5.22	0.15	0.15	Negative	0.15	0.08	11:01:10
26-Mar-19	269 Lead Paint I	5.11	0.05	0.14	Negative	0.05	0.07	11:01:30
26-Mar-19	270 Lead Paint I	5.19	0	0	Negative	0	0	11:01:54
26-Mar-19	271 Lead Paint I	6.05	0	0	Negative	0	0	11:02:12
26-Mar-19	272 Lead Paint I	5.94	0	0.01	Negative	0	0.01	11:02:36
26-Mar-19	273 Lead Paint I	25.65	0.1	0.06 surface	Negative	0.1	0.03	11:02:57
26-Mar-19	274 Lead Paint I	14.54 >	1.00	0.01	Positive	1	0	11:03:39
26-Mar-19	275 Lead Paint I	6.83 >	1.00	0.01	Positive	1	0	11:04:21
26-Mar-19	276 Lead Paint I	5.86 >	1.00	0.01	Positive	1	0.01	11:04:54
26-Mar-19	277 Lead Paint I	25.9	0.39	0.1 surface	Negative	0.39	0.05	11:05:32
26-Mar-19	278 Lead Paint I	24.89	0.46	0.1 surface	Negative	0.46	0.05	11:06:19
26-Mar-19	279 Lead Paint I	5.12	0.23	0.13 surface	Negative	0.23	0.06	11:07:07
					0			

26-Mar-19	280 Lead Paint I	24.81	0.22	0.08 surface	Negative	0.22	0.04	11:07:29
26-Mar-19	281 Lead Paint I	24.9	0.02	0.02 surface	Negative	0.02	0.01	11:08:15
26-Mar-19	282 Lead Paint I	5.96	0	0	Negative	0	0	11:09:08
26-Mar-19	283 Lead Paint I	5.14	0	0	Negative	0	0	11:09:32
26-Mar-19	284 Lead Paint I	5.16	0	0	Negative	0	0	11:09:55
26-Mar-19	285 Lead Paint I	5.03	0.01	0.04	Negative	0.01	0.02	11:10:43
26-Mar-19	286 Lead Paint I	5 16	0.07	0.07 surface	Negative	0.07	0.03	11.11.04
26-Mar-19	287 Lead Paint I	5.09	0.06	0.07	Negative	0.06	0.04	11.11.57
26-Mar-19	288 Lead Paint I	25.64	0.09	0.04 surface	Negative	0.09	0.02	11.12.17
26-Mar-19	289 Lead Paint I	7 31	0.09	0.55	Negative	0.05	0.02	11.12.17
26-Mar-19	200 Lead Paint I	5.05	0.14	0.33	Negative	0.4	0.27	11.13.23
26-Mar-19	201 Load Paint I	5.05	0.14	0.14	Negative	0.14	0.07	11.14.15
26-Mar-19	202 Load Paint I	5.22	0.15	0.14	Negative	0.15	0.07	11.14.30
20-101d1-19 26 Mar 10	292 Lead Paint I	J.33 7 57	0.03	0.08 0.28 surface	Negative	0.05	0.04	11.10.23
20-IVIdI-19	295 Ledu Pallit I	7.57	0.08		Negative	0.08	0.14	11.10.50
26-IVIal-19	294 Lead Paint I	5.15	0.3	0.23 Surface	Negative	0.3	0.11	11:17:15
26-Mar-19	295 Lead Paint I	25.04	0.67	0.18 surface	Negative	0.67	0.09	11:17:41
26-Mar-19	296 Lead Paint I	13.41	0.33	0.16 surface	Negative	0.33	0.08	11:18:26
26-Mar-19	297 Lead Paint I	5.09	0	0.02	Negative	0	0.01	11:19:04
26-Mar-19	298 Lead Paint I	5.14	0.21	0.23	Negative	0.21	0.11	11:19:23
26-Mar-19	299 Lead Paint I	6.01	0.07	0.07 surface	Negative	0.07	0.03	11:20:27
26-Mar-19	300 Lead Paint I	12.1	0.06	0.05 surface	Negative	0.06	0.02	11:21:04
26-Mar-19	301 Lead Paint I	5.37	0.05	0.06	Negative	0.05	0.03	11:23:58
26-Mar-19	302 Lead Paint I	2.9	0.02	0.04	Negative	0.02	0.02	11:24:31
26-Mar-19	303 Lead Paint I	2.92	0.03	0.06	Negative	0.03	0.03	11:24:55
26-Mar-19	304 Lead Paint I	6.41	0.01	0.02	Negative	0.01	0.01	11:25:24
26-Mar-19	305 Lead Paint I	6.07	0.03	0.04	Negative	0.03	0.02	11:25:56
26-Mar-19	306 Lead Paint I	5.93	0.07	0.07 surface	Negative	0.07	0.03	11:26:17
26-Mar-19	307 Lead Paint I	5.1	0	0	Negative	0	0	11:26:42
26-Mar-19	308 Lead Paint I	5.35	0.06	0.07	Negative	0.06	0.03	11:26:59
26-Mar-19	309 Lead Paint I	11.08	0.57	0.24 surface	Negative	0.57	0.12	11:27:41
26-Mar-19	310 Lead Paint I	7.23	0.58	0.21 surface	Negative	0.58	0.11	11:28:13
26-Mar-19	311 Lead Paint I	6.34	0.68	0.3 surface	Negative	0.68	0.15	11:28:42
26-Mar-19	312 Lead Paint I	16.31	0.73	0.18 surface	Negative	0.73	0.09	11:29:00
26-Mar-19	313 Lead Paint I	12.09	0.09	0.07 surface	Negative	0.09	0.03	11:29:35
26-Mar-19	314 Lead Paint I	5.04	0.02	0.04	Negative	0.02	0.02	11:30:06
26-Mar-19	315 Lead Paint I	5.21	0	0	Negative	0	0	11:30:30
26-Mar-19	316 Lead Paint I	6.15	0	0	Negative	0	0	11:30:54
26-Mar-19	317 Lead Paint I	6.26	0.06	0.09	Negative	0.06	0.04	11:31:36
26-Mar-19	318 Lead Paint I	5.95	0.01	0.04	Negative	0.01	0.02	11:32:02
26-Mar-19	319 Lead Paint I	5.39	0.19	0.25	Negative	0.19	0.12	11:32:26
26-Mar-19	320 Lead Paint I	5.83	0	0	Negative	0	0	11:33:54
26-Mar-19	321 Lead Paint I	5.16	0	0	Negative	0	0	11:34:17
26-Mar-19	322 Lead Paint I	23.54	0.98	0.11 surface	Negative	0.98	0.06	11:34:59
26-Mar-19	323 Lead Paint I	6	0	0	Negative	0	0	11:35:52
26-Mar-19	324 Lead Paint I	5.34	0	0	Negative	0	0	11:36:17
26-Mar-19	325 Lead Paint I	5.12	0	0	Negative	0	0	11:37:04
26-Mar-19	326 Lead Paint I	5.29	0	0	Negative	0	0	11:37:22
26-Mar-19	327 Lead Paint I	5.09	0	0	Negative	0	0	11:37:53
26-Mar-19	328 Lead Paint I	5.17	0	0	Negative	0	0	11:38:12
26-Mar-19	329 Lead Paint I	6.11	0	0	Negative	0	0	11:38:32
26-Mar-19	330 Lead Paint I	5 66	0 0	0	Negative	0	0	11:38:50
26-Mar-19	331 ead Paint	5 13	n	0 0	Negative	0	n	11.39.20
26-Mar-19	332 ead Paint	5 18	n	0 0	Negative	0	0	11.39.20
26-Mar-19	333 Lead Paint I	5.10	0 55	0 13 surface	Negative		0 07	11.20.02
26-Mar-10	334 Load Daint I	5.04	0.55		Negative	0.55	0.07	11.40.02
26-Mar-10	335 Load Daint I	5 22	0	0	Negative	0	0	11.42.07
20 10101-13		5.25	0	0	regative	U	0	11.42.07

26-Mar-19	336 Lead Paint I	5.74	0	0		Negative	0	0	11:42:31
26-Mar-19	337 Lead Paint I	6.09	0	0		Negative	0	0	11:42:50
26-Mar-19	338 Lead Paint I	5.35	0	0		Negative	0	0	11:43:11
26-Mar-19	339 Lead Paint I	5.13	1.61	0.43	surface	Positive	1.61	0.21	11:43:30
26-Mar-19	340 Lead Paint I	5.27	0	0		Negative	0	0	11:43:57
26-Mar-19	341 Lead Paint I	9.95	> 1.43	0.43	surface	Positive	1.43	0.22	11:44:18
26-Mar-19	342 Lead Paint I	7.5	> 1.52	0.51	surface	Positive	1.52	0.26	11:44:45
26-Mar-19	343 Lead Paint I	17.92	> 1.31	0.31	surface	Positive	1.31	0.16	11:45:07
26-Mar-19	344 Lead Paint I	7.49	> 1.56	0.55	surface	Positive	1.56	0.28	11:45:39
26-Mar-19	345 Lead Paint I	5.7	0	0		Negative	0	0	11:45:58
26-Mar-19	346 Lead Paint I	5.17	0	0		Negative	0	0	11:46:16
26-Mar-19	347 Lead Paint I	5.39	0	0		Negative	0	0	11:46:43
26-Mar-19	348 Lead Paint I	5.14	1.61	0.44	surface	Positive	1.61	0.22	11:47:10
26-Mar-19	349 Lead Paint I	5.13	1.75	0.72	surface	Positive	1.75	0.36	11:47:35
26-Mar-19	350 Lead Paint I	5.21	2.52	1.04	surface	Positive	2.52	0.52	11:47:55
26-Mar-19	351 Lead Paint I	5.09	0	0		Negative	0	0	11:48:13
26-Mar-19	352 Lead Paint I	5.1	0	0		Negative	0	0	11:48:44
26-Mar-19	353 Lead Paint I	5.22	0	0		Negative	0	0	11:49:08
26-Mar-19	354 Lead Paint I	16.9	> 1.69	0.67	surface	Positive	1.69	0.34	11:49:37
26-Mar-19	355 Lead Paint I	5.41	0	0		Negative	0	0	11:50:13
26-Mar-19	356 Lead Paint I	5.31	0	0		Negative	0	0	11:50:44
26-Mar-19	357 Lead Paint I	6.12	0	0		Negative	0	0	11:51:49
26-Mar-19	358 Lead Paint I	23.8	1.05	0.07	surface	Positive	1.05	0.03	11:52:09
26-Mar-19	359 Standardiza	26.9	0.019716	227	-0.030843	PASS			12:50:01
26-Mar-19	360 Lead Paint I	5.09	0	0		Negative	0	0	12:55:36
26-Mar-19	361 Lead Paint I	6.04	0	0		Negative	0	0	12:58:01
26-Mar-19	362 Lead Paint I	5.22	0	0		Negative	0	0	12:58:20
26-Mar-19	363 Lead Paint I	5.11	0	0		Negative	0	0	12:58:45
26-Mar-19	364 Lead Paint I	5.33	0	0.01		Negative	0	0	12:59:18
26-Mar-19	365 Lead Paint I	5.23	1.46	0.43	surface	Positive	1.46	0.21	12:59:54
26-Mar-19	366 Lead Paint I	22.32	1.14	0.14	surface	Positive	1.14	0.07	13:03:00
26-Mar-19	367 Lead Paint I	5.17	0	0		Negative	0	0	13:03:44
26-Mar-19	368 Lead Paint I	12.2	0.04	0.11		Negative	0.04	0.06	13:06:01
26-Mar-19	369 Lead Paint I	23.45	0.21	0.22		Negative	0.21	0.11	13:06:40
26-Mar-19	370 Lead Paint I	24.84	0.13	0.2		Negative	0.13	0.1	13:07:28
26-Mar-19	371 Lead Paint I	5.21	0	0		Negative	0	0	13:08:12
26-Mar-19	372 Lead Paint I	5.23	0	0		Negative	0	0	13:08:30
26-Mar-19	373 Lead Paint I	5.03	0	0		Negative	0	0	13:08:57
26-Mar-19	374 Lead Paint I	5.26	0.21	0.5		Negative	0.21	0.25	13:09:14
26-Mar-19	375 Lead Paint I	5.27	0	0		Negative	0	0	13:09:36
26-Mar-19	376 Lead Paint I	5.28	0	0		Negative	0	0	13:09:54
26-Mar-19	377 Lead Paint I	5.24	> 1.00	0.04		Positive	1	0.02	13:10:14
26-Mar-19	378 Lead Paint I	5.73	0	0		Negative	0	0	13:10:43
26-Mar-19	379 Lead Paint I	5.8	0	0		Negative	0	0	13:11:03
26-Mar-19	380 Lead Paint I	5.55	0	0		Negative	0	0	13:11:22
26-Mar-19	381 Lead Paint I	13.41	0.08	0.07	surface	Negative	0.08	0.03	13:11:57
26-Mar-19	382 Lead Paint I	6.57	0.12	0.26		Negative	0.12	0.13	13:12:29
26-Mar-19	383 Lead Paint I	16.85	0.13	0.21		Negative	0.13	0.1	13:12:55
26-Mar-19	384 Lead Paint I	25.22	0.38	0.33		Negative	0.38	0.16	13:13:30
26-Mar-19	385 Lead Paint I	20.16	0.09	0.07	surface	Negative	0.09	0.03	13:14:16
26-Mar-19	386 Lead Paint I	5.1	0	0		Negative	0	0	13:15:05
26-Mar-19	387 Lead Paint I	5.21	0	0		Negative	0	0	13:15:23
26-Mar-19	388 Lead Paint I	5.2	0	0		Negative	0	0	13:16:02
26-Mar-19	389 Lead Paint I	5.06	0	0		Negative	0	0	13:16:28
26-Mar-19	390 Lead Paint I	5.18	0	0		Negative	0	0	13:16:49
26-Mar-19	391 Lead Paint I	5.19	0	0		Negative	0	0	13:17:08

26-Mar-19	392 Lead Paint I	5.36	0	0	Negative	0	0	13:17:35
26-Mar-19	393 Lead Paint I	5.3	0	0	Negative	0	0	13:17:51
26-Mar-19	394 Lead Paint I	5.07	0	0	Negative	0	0	13:18:12
26-Mar-19	395 Lead Paint I	5.28	0.09	0.18	Negative	0.09	0.09	13:18:30
26-Mar-19	396 Lead Paint I	5.03	0.26	0.58	Negative	0.26	0.29	13:18:57
26-Mar-19	397 Lead Paint I	5	0.01	0.03	Negative	0.01	0.01	13:19:26
26-Mar-19	398 Lead Paint I	6.03	0	0	Negative	0	0	13:19:54
26-Mar-19	399 Lead Paint I	6.05	0.09	0.32	Negative	0.09	0.16	13:20:17
26-Mar-19	400 Lead Paint I	15.65	0.17	0.07 surface	Negative	0.17	0.03	13:20:54
26-Mar-19	401 Lead Paint I	5.16	0.15	0.14 surface	Negative	0.15	0.07	13:21:30
26-Mar-19	402 Lead Paint I	9.86	0.24	0.16 surface	Negative	0.24	0.08	13:21:47
26-Mar-19	403 Lead Paint I	12.12	0.17	0.11	Negative	0.17	0.05	13:22:17
26-Mar-19	404 Lead Paint I	7.53	0.11	0.07 surface	Negative	0.11	0.03	13:22:52
26-Mar-19	405 Lead Paint I	6.07	0.07	0.07	Negative	0.07	0.04	13:23:21
26-Mar-19	406 Lead Paint I	6.12	0.01	0.03	Negative	0.01	0.01	13:23:45
26-Mar-19	407 Lead Paint I	5.92	0	0	Negative	0	0	13:24:06
26-Mar-19	408 Lead Paint I	5.44	0.09	0.08 surface	Negative	0.09	0.04	13:24:24
26-Mar-19	409 Lead Paint I	5.06	0.01	0.03	Negative	0.01	0.02	13:25:22
26-Mar-19	410 Lead Paint I	5.02	0.03	0.07	Negative	0.03	0.03	13:26:03
26-Mar-19	411 Lead Paint I	5.06	0.03	0.05	Negative	0.03	0.02	13:27:02
26-Mar-19	412 Lead Paint I	5.13	0	0	Negative	0	0	13:27:54
26-Mar-19	413 Lead Paint I	5.14	0	0	Negative	0	0	13:28:14
26-Mar-19	414 Lead Paint I	7.56	0.01	0.03	Negative	0.01	0.01	13:28:34
26-Mar-19	415 Lead Paint I	11.01	0	0.02	Negative	0	0.01	13:28:56
26-Mar-19	416 Lead Paint I	5.16	0.01	0.05	Negative	0.01	0.02	13:29:20
26-Mar-19	417 Lead Paint I	6.07	0.05	0.06	Negative	0.05	0.03	13:29:49
26-Mar-19	418 Lead Paint I	5.05	0.04	0.07	Negative	0.04	0.03	13:30:09
26-Mar-19	419 Lead Paint I	6	0.05	0.04 surface	Negative	0.05	0.02	13:30:32
26-Mar-19	420 Lead Paint I	5.9	0.02	0.03	Negative	0.02	0.01	13:30:51
26-Mar-19	421 Lead Paint I	5.75	0.03	0.03 surface	Negative	0.03	0.02	13:31:12
26-Mar-19	422 Lead Paint I	5.91	0.07	0.07 surface	Negative	0.07	0.03	13:31:30
26-Mar-19	423 Lead Paint I	5.4	0.03	0.02 surface	Negative	0.03	0.01	13:31:51
26-Mar-19	424 Lead Paint I	5.41	0.1	0.08 surface	Negative	0.1	0.04	13:32:32
26-Mar-19	425 Lead Paint I	25 > 3	1.00	0.04	Positive	1	0.02	13:33:00
26-Mar-19	426 Lead Paint I	6.06	0.02	0.03	Negative	0.02	0.02	13:33:51
26-Mar-19	427 Lead Paint I	4.06 > 3	1.00	0.15	Positive	1	0.08	13:34:19
26-Mar-19	428 Lead Paint I	5.21	0.05	0.08	Negative	0.05	0.04	13:34:46
26-Mar-19	429 Lead Paint I	5.98	0.04	0.03 surface	Negative	0.04	0.01	13:35:08
26-Mar-19	430 Lead Paint I	5.29	0.02	0.02	Negative	0.02	0.01	13:35:31
26-Mar-19	431 Lead Paint I	5.6	0.01	0.02	Negative	0.01	0.01	13:35:59
26-Mar-19	432 Lead Paint I	5.22	0.01	0.01	Negative	0.01	0	13:36:49
26-Mar-19	433 Lead Paint I	8.73	0.27	0.42	Negative	0.27	0.21	13:37:09
26-Mar-19	434 Lead Paint I	24.83	0.16	0.16 surface	Negative	0.16	0.08	13:37:31
26-Mar-19	435 Lead Paint I	5.19	0.15	0.28	Negative	0.15	0.14	13:38:17
26-Mar-19	436 Lead Paint I	5.01	0.03	0.08	Negative	0.03	0.04	13:38:51
26-Mar-19	437 Lead Paint I	5.02	0.05	0.11	Negative	0.05	0.06	13:39:09
26-Mar-19	438 Lead Paint I	5.63	0	0	Negative	0	0	13:39:27
26-Mar-19	439 Lead Paint I	5.02	0.23	0.24	Negative	0.23	0.12	13:39:46
26-Mar-19	440 Lead Paint I	5.7	0	0	Negative	0	0	13:40:08
26-Mar-19	441 Lead Paint I	5.63	0	0	Negative	0	0	13:40:34
26-Mar-19	442 Lead Paint I	5.05	0.02	0.04	Negative	0.02	0.02	13:40:58
26-Mar-19	443 Lead Paint I	5.07	0.01	0.04	Negative	0.01	0.02	13:41:21
26-Mar-19	444 Lead Paint I	5.02	0.13	0.28	Negative	0.13	0.14	13:41:43
26-Mar-19	445 Lead Paint I	25.15	0.12	0.06 surface	Negative	0.12	0.03	13:42:18
26-Mar-19	446 Lead Paint I	5.21	0.08	0.24	Negative	0.08	0.12	13:42:59
26-Mar-19	447 Lead Paint I	7.45	0.12	0.22	Negative	0.12	0.11	13:43:16
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26-Mar-19	448 Lead Paint I	19.92	0.19	0.23	Negative	0.19	0.12	13:43:35
26-Mar-19	449 Lead Paint I	5.16	0.18	0.24	Negative	0.18	0.12	13:44:10
26-Mar-19	450 Lead Paint I	5.91	0	0	Negative	0	0	13:44:34
26-Mar-19	451 Lead Paint I	5.4	0.14	0.18	Negative	0.14	0.09	13:44:53
26-Mar-19	452 Lead Paint I	5.16	0	0	Negative	0	0	13:45:16
26-Mar-19	453 Lead Paint I	6.51	0.12	0.28	Negative	0.12	0.14	13:45:32
26-Mar-19	454 Lead Paint I	5	0	0	Negative	0	0	13:45:57
26-Mar-19	455 Lead Paint I	5.32	0.12	0.36	Negative	0.12	0.18	13:46:14
26-Mar-19	456 Lead Paint I	6.01	0.01	0.04	Negative	0.01	0.02	13:46:33
26-Mar-19	457 Lead Paint I	5.06	0.02	0.05	Negative	0.02	0.02	13:47:03
26-Mar-19	458 Lead Paint I	5.04	0.11	0.16	Negative	0.11	0.08	13:47:26
26-Mar-19	459 Lead Paint I	5.12	0.1	0.15	Negative	0.1	0.08	13:47:50
26-Mar-19	460 Lead Paint I	25.13	0.2	0.2 surface	Negative	0.2	0.1	13:48:16
26-Mar-19	461 Lead Paint I	5.23	0.14	0.4	Negative	0.14	0.2	13:48:58
26-Mar-19	462 Lead Paint I	25.12	0.14	0.1 surface	Negative	0.14	0.05	13:49:18
26-Mar-19	463 Lead Paint I	5.26	0	0	Negative	0	0	13:49:59
26-Mar-19	464 Lead Paint I	25.03	0.22	0.13 surface	Negative	0.22	0.06	13:50:16
26-Mar-19	465 Lead Paint I	5.87	0	0	Negative	0	0	13:51:04
26-Mar-19	466 Lead Paint I	25.42	0.06	0.03	Negative	0.06	0.02	13.51.23
26-Mar-19	467 Lead Paint I	5 78	0.00	0	Negative	0.00	0.02	13.52.21
26-Mar-19	468 Lead Paint I	5.78	0	0 0	Negative	0	0	13.52.21
26-Mar-19	469 Lead Paint I	5 22	0	0 0	Negative	0	0	13.53.02
26-Mar-19	470 Lead Paint I	12 07	> 1 00	0.01	Positive	1	0.01	13.53.02
26-Mar-19	470 Lead Paint I	18.96	> 1.00	0.01	Positive	1	0.01	13.554.08
26 Mar-19	472 Lead Paint I	15.50	> 1.00	0.01	Positive	1	0.01	13.54.00
26 Mar-19	473 Lead Paint I	11 32	> 1.00	0.01	Positive	1	0.01	13.55.48
26 Mar-19	473 Lead Paint I	1/ 13	0.08	0.05 0.07 surface	Negative	0.08	0.04	13.55.50
20-Mar-19	474 Lead Paint I	5 1/	0.00	0.07 Surface	Negative	0.08	0.04	13.50.55
20-Mar-19	475 Lead Paint I	5.14	0.1	0.53	Negative	0.1	0.15	13.57.20
20-Mar-19	470 Lead Paint I	24 54	0.55	0.55	Negative	0.55	0.27	13.57.40
20-Mar-19	477 Lead Paint I	24.54	0.15	0.15 0.16 surface	Negative	0.15	0.1	13.58.52
20-Mar-19	478 Lead Paint I	5 15	0.17	0.10 3011800	Negative	0.17	0.00	13.50.52
26 Mar-19	475 Lead Paint I	5.15	0 15	0.01	Negative	0.15	01	13.50.33
20-Mar-19	480 Lead Paint I	5.40	0.15	0.2	Negative	0.15	0.1	13.50.53
26 Mar-19	481 Lead Paint I	12 /	0 12	0 1 2	Negative	0.12	0.06	11.00.11
20-Mar-19	482 Lead Paint I	5 00	0.12	0.12	Negative	0.12	0.00	14.00.11
20-Mar-19	485 Lead Paint I	5.55	0	0	Negative	0	0	11.00.00
20-Mar-19	484 Lead Paint I	5.21	0	0	Negative	0	0	14.01.09
20-Mar-19	485 Lead Paint I	5.01	0 20	0.38	Negative	0 20	0 10	14.01.20
26-Mar-19	480 Lead Paint I	5.01	0.25	0.58	Negative	0.23	0.15	14.02.07
20-Mar-19	487 Lead Paint I	5.03	0.07	0.15	Negative	0.07	0.07	14.02.29
26-Mar-19	480 Lead Paint I	5.07 6.11	0.1	0.11	Negative	0.1	0.00	14.02.32
20-Mar-19	489 Lead Paint I	10.00	0.09 \ 1.00	0.1	Positivo	0.03	0.05	14.03.37
20-Mar-19	490 Lead Paint I	264	0.00	0.04 0.06 surface	Nogativo	0.00	0.02	14.04.10
20-1Vlat-19	491 Leau Paint I	24.00	0.09		Negative	0.09	0.05	14.05.05
20-1Vlat-19	492 Lead Paint I	24.99 E 10	0.17	0.05 0.14 surface	Negative	0.17	0.02	14.05.51
20-1viai-19	495 Leau Paint I	5.19	0.10		Negative	0.10	0.07	14.00.20
20-1VId1-19	494 Leau Paint I	5.01	0.15	0.1	Negative	0.13	0.05	14.00.40
20-1Vlat-19	495 Leau Paint I	5.11	0 00	0.01 0.08 curface	Negative	0 00	0.04	14.07.25
20-1VId1-19	490 Leau Paint I	5.42	0.09		Negative	0.09	0.04	14.07.45
20-1VId1-19	437 Ledu Pallit	5.UZ	0.05	0.07	Nogotive	0.05	0.03	14.00.05
20-1VId1-19	450 Ledu Paliil I	5.09	0.01	0.03	Nogotive	0.01	0.01	14.00.43
20-1VId1-19	477 Ledu Paliti	5.99		0.07	Nogotive		0.03	14.09:29
20-1VId1-19		5.05	0.07		Nogative	0.07	0.03	14.10:04
20-1VId1-19		10.0 סיבר בר	0.02		Negative	0.02	0.01	14:10:31
20-ivid[-19		23.05	0.1/		Decitive	0.17	0.02	14:11:44
zo-iviar-19	503 Lead Paint I	8.63	> 1.00	0.1	POSITIVE	1	0.05	14:12:26

26-Mar-19	504 Lead Paint I	6.12	> 1.00	0.15		Positive	1	0.08	14:13:06
26-Mar-19	505 Lead Paint I	2.89	> 1.00	0.07		Positive	1	0.03	14:14:03
26-Mar-19	506 Lead Paint I	5.11	0.02	0.06		Negative	0.02	0.03	14:14:30
26-Mar-19	507 Lead Paint I	6	0.06	0.06		Negative	0.06	0.03	14:14:57
26-Mar-19	508 Standardiza	26.97	0.019723	227	-0.031735	PASS			14:19:14
26-Mar-19	509 Lead Paint I	5.03	0	0		Negative	0	0	14:23:13
26-Mar-19	510 Lead Paint I	5.02	0.09	0.09	surface	Negative	0.09	0.04	14:26:17
26-Mar-19	511 Lead Paint I	5.77	0.12	0.08	surface	Negative	0.12	0.04	14:26:36
26-Mar-19	512 Lead Paint I	5.02	0.07	0.1		Negative	0.07	0.05	14:26:55
26-Mar-19	513 Lead Paint I	6.01	0.01	0.04		Negative	0.01	0.02	14:27:32
26-Mar-19	514 Lead Paint I	5.46	0.09	0.08	surface	Negative	0.09	0.04	14:27:51
26-Mar-19	515 Lead Paint I	14.49	0.09	0.06	surface	Negative	0.09	0.03	14:28:15
26-Mar-19	516 Lead Paint I	24.77	0.12	0.09	surface	Negative	0.12	0.04	14:28:46
26-Mar-19	517 Lead Paint I	23.96	0.07	0.13		Negative	0.07	0.07	14:29:31
26-Mar-19	518 Lead Paint L	25.96	0.09	0.07	surface	Negative	0.09	0.03	14:30:12
26-Mar-19	519 Lead Paint I	5 28	0.03	0.07	Surface	Negative	0.03	0.09	14.30.56
26-Mar-19	520 Lead Paint I	5.20	0.19	0.19		Negative	0.15	0.05	14.31.25
26-Mar-19	520 Lead Paint I	5.13	0	0		Negative	0	0	14.31.54
26-Mar-19	521 Lead Paint I	5.10	0	0		Negative	0	0	14.32.15
26-Mar-19	522 Lead Paint I	5.24	0.01	0.04		Negative	0.01	0.02	14.32.13
26-Mar-19	525 Lead Paint I	11 41	0.01	0.04	surface	Negative	0.01	0.02	14.32.34
26-Mar-19	524 Lead Paint I	5.85	0.07	0.00	Junuce	Negative	0.07	0.05	14.33.72
26-Mar-19	526 Lead Paint I	7 73	> 1 00	0.44		Positive	1	0.22	14.33.22
26-Mar-19	520 Lead Paint I	5	0.02 ×	0.44		Negative	0.08	0.22	14.33.42
26 Mar 19	527 Lead Paint I	5.04	0.00	0.12		Negative	0.05	0.00	1/.2/.20
20-Mar-19	520 Lead Paint I	5.04 6.09	0.05	0.07		Negative	0.05	0.04	14.34.33
20-Mar-19	520 Lead Paint I	5.07	0.01	0.04		Negative	0.01	0.02	14.35.01
20-Mar-19	531 Lead Paint I	5.07	0.02	0.05		Negative	0.02	0.05	14.35.31
26-Mar-19	531 Lead Paint I	7 35	> 1 00	0.11		Positive	0.14	0.00	14.36.30
26-Mar-19	532 Lead Paint I	7.53	0.19	0.07	surface	Negative	0 19	0.04	14.30.30
26-Mar-19	534 Lead Paint I	7.55	0.15	0.1	surface	Negative	0.15	0.03	14.37.34
26-Mar-19	535 Lead Paint I	14 54	0.05	0.00	surface	Negative	0.05	0.03	14.37.50
26-Mar-19	536 Lead Paint I	7 55	> 1 00	0.00	Junuce	Positive	1	0.05	14.38.20
26-Mar-19	537 Lead Paint I	5.87	0	0.05		Negative	1	0.05	14.38.50
26-Mar-19	538 Lead Paint I	5.07	0.05	0.06		Negative	0.05	0.03	14.30.30
26-Mar-19	539 Lead Paint I	5.05	0.09	0.00		Negative	0.05	0.05	14.39.43
26-Mar-19	540 Lead Paint I	5 38	0 08	0.01	surface	Negative	0 08	0.03	14.35.45
26-Mar-19	540 Lead Paint I	5.00	0.00	0.07	surface	Negative	0.00	0.05	14.40.02
26-Mar-19	541 Lead Paint I	6.06	0.10	0.11	Surface	Negative	0.10	0.00	14.40.40
26-Mar-19	542 Lead Paint I	5.02	0.05	0.05	surface	Negative	0.05	0.02	11.41.40
26-Mar-19	544 Lead Paint I	5.02	0.00	0.00	surface	Negative	0.00	0.05	14.42.15
26-Mar-19	545 Lead Paint I	5 27	0.15	0.05	Junuce	Negative	0.15	0.05	14.44.55
26-Mar-19	546 Lead Paint I	5.27	0	0		Negative	0	0	14.45.17
26-Mar-19	547 Lead Paint I	24 54	0.26	0 23	surface	Negative	0.26	0 12	11.45.38
20-Mar-19	547 Lead Paint I	24.J4 5 12	0.20	0.23	Sunace	Negative	0.20	0.12	14.45.50
20-Mar-19	540 Lead Paint I	25.00	0.04	0.00	surface	Negative	0.04	0.04	14.40.24
20-Mar-19	550 Lead Paint I	5.06	0.23	0.2	Sunace	Negative	0.25	0.1	14.40.45
20-Mar-19	551 Lead Paint I	5.00	0 08	0 16		Negative	0 08	0 08	14.40.40
20-Mar-19	552 Lead Paint I	5.0	0.00	0.10		Negative	0.08	0.08	14.45.04
20-Mar-19	552 Lead Paint I	5 37	0	0		Negative	0	0	14.45.25
20-10101-19 26-Mar-10	554 Lead Daint I	5.57	0	0		Negative	0	0	11.42.44
26-Mar-19	555 Lead Daint 1	5.71	0	0 01		Negative	0	0	14.50.10
26-Mar-19	556 Lead Daint I	5.07	0	0.01		Negativo	0	0	14.50.45
26-Mar-19	557 Lead Daint I	5 10	0	0		Negative	0	0	14.51.05
26-Mar-19	558 Lead Paint I	7 51	0	0 0 2 2		Negative	01	0 1/	14.51.56
26-Mar-19	559 Lead Paint I	5 22	0.1	0.20 0.19		Negative	0.1	0.14	14.57.10
		5.22	0.00	0.10		- CButive	0.00	0.05	14.72.17

26-Mar-19	560 Lead Paint I	5.22	0.13	0.3	Negative	0.13	0.15	14:52:50
26-Mar-19	561 Lead Paint I	5.2	0.05	0.19	Negative	0.05	0.1	14:53:24
26-Mar-19	562 Lead Paint I	25.04	0.08	0.07 surface	Negative	0.08	0.03	14:53:45
26-Mar-19	563 Lead Paint I	5.18	0.02	0.05	Negative	0.02	0.03	14:54:41
26-Mar-19	564 Lead Paint I	5.18	0	0	Negative	0	0	14:55:12
26-Mar-19	565 Lead Paint I	5.12	0	0	Negative	0	0	14:55:28
26-Mar-19	566 Lead Paint I	5.04	0	0	Negative	0	0	14:56:09
26-Mar-19	567 Lead Paint I	5.03	0	0	Negative	0	0	14:56:26
26-Mar-19	568 Lead Paint I	5.23	0	0	Negative	0	0	14:56:48
26-Mar-19	569 Lead Paint I	61	0	0.02	Negative	0	0.01	14.57.23
26-Mar-19	570 Lead Paint I	5.04	0 17	0.46	Negative	0 17	0.01	14.57.42
26-Mar-19	570 Lead Paint I	6 1 2	0.17	0.40	Negative	0.17	0.23	11.58.06
20-Mar-10	572 Lead Paint I	5.02	0.07	0.15	Negative	0.07	0.1	14.50.00
20-Iviai-19	572 Lead Paint I	5.05 6.01	0.21	0.37	Negative	0.21	0.18	14.59.07
20-IVIAI-19	575 Ledu Pallit I	6.05	0 11	0 17	Negative	0 11	0 00	14.59.41
20-IVId1-19	574 Ledu Pallit I	0.00	0.11	0.17	Negative	0.11	0.09	15.00.11
26-Mar 19	575 Lead Paint I	25.09	0.19		Negative	0.19	0.03	15:00:45
26-Mar-19	576 Lead Paint I	24.78	0.16	0.06 surface	Negative	0.16	0.03	15:01:26
26-Mar-19	577 Lead Paint I	8.68	0.12	0.07 surface	Negative	0.12	0.04	15:02:07
26-Mar-19	578 Lead Paint I	5.24	0.15	0.12 surface	Negative	0.15	0.06	15:02:33
26-Mar-19	579 Lead Paint I	5.17	0.16	0.12 surface	Negative	0.16	0.06	15:02:58
26-Mar-19	580 Lead Paint I	5.95	0.01	0.02	Negative	0.01	0.01	15:03:22
26-Mar-19	581 Lead Paint I	5.91	0	0.02	Negative	0	0.01	15:03:42
26-Mar-19	582 Lead Paint I	5.07	0.04	0.06	Negative	0.04	0.03	15:04:23
26-Mar-19	583 Lead Paint I	5.06	0.03	0.05	Negative	0.03	0.02	15:04:46
26-Mar-19	584 Lead Paint I	5.08	0.12	0.11 surface	Negative	0.12	0.06	15:05:04
26-Mar-19	585 Lead Paint I	5.9	0.01	0.03	Negative	0.01	0.02	15:05:34
26-Mar-19	586 Lead Paint I	6.06	0.03	0.07	Negative	0.03	0.03	15:06:03
26-Mar-19	587 Lead Paint I	5.24	0.06	0.08	Negative	0.06	0.04	15:06:23
26-Mar-19	588 Lead Paint I	6.27	0.02	0.04	Negative	0.02	0.02	15:07:15
26-Mar-19	589 Lead Paint I	5.18	0	0	Negative	0	0	15:07:39
26-Mar-19	590 Lead Paint I	5.14	0.02	0.05	Negative	0.02	0.02	15:08:02
26-Mar-19	591 Lead Paint I	5.24	0	0.01	Negative	0	0.01	15:08:21
26-Mar-19	592 Lead Paint I	5.16	0	0.02	Negative	0	0.01	15:08:39
26-Mar-19	593 Lead Paint I	5.07	0	0	Negative	0	0	15:09:04
26-Mar-19	594 Lead Paint I	6.56	0.06	0.09	Negative	0.06	0.05	15:09:21
26-Mar-19	595 Lead Paint I	6.12	0.13	0.11 surface	Negative	0.13	0.05	15:09:54
26-Mar-19	596 Lead Paint I	5.98	0.16	0.08 surface	Negative	0.16	0.04	15:10:20
26-Mar-19	597 Lead Paint I	5.02	0.11	0.1 surface	Negative	0.11	0.05	15:10:41
26-Mar-19	598 Lead Paint I	5.01	0.11	0.08 surface	Negative	0.11	0.04	15:11:01
26-Mar-19	599 Lead Paint I	5.95	0.06	0.05 surface	Negative	0.06	0.03	15:11:20
26-Mar-19	600 Lead Paint I	5.95	0.12	0.06 surface	Negative	0.12	0.03	15:11:40
26-Mar-19	601 Lead Paint I	5.76	0.06	0.06 surface	Negative	0.06	0.03	15:11:59
26-Mar-19	602 Lead Paint I	5 25	0.05	0.05 surface	Negative	0.05	0.02	15.12.28
26-Mar-19	603 Lead Paint I	5.25	0.02	0.02	Negative	0.02	0.01	15.12.54
26-Mar-19	604 Lead Paint I	24.95	0.02	0.05	Negative	0.02	0.01	15.12.54
20-Mar-19	605 Lead Paint I	5 25	0.04	0.05	Negative	0.04	0.02	15.13.34
20-Mar-10	606 Load Paint I	5.25	0.00	0.13	Negative	0.00	0.00	15.14.45
20-Iviai-19	607 Load Paint I	J.24 E 1/	0.08	0.14	Negative	0.08	0.07	15.15.02
20-1V1d1-19	609 Load Daint !	5.14	0.05	0.07	Negative	0.05	0.05	15.15.27
20-1VId1-19	600 Lead Paint I	5./9	0	0.01	Negative	0.04	0	15.15:57
20-IVIar-19		b.U9 с.оо	0.04	0.06	Negative	0.04	0.03	15:16:21
26-Mar-19	610 Lead Paint I	6.09	0.01	0.03	Negative	0.01	0.01	15:16:49
26-Mar-19	611 Lead Paint I	5.73	0.03	0.12	Negative	0.03	0.06	15:17:08
26-Mar-19	612 Lead Paint I	5.06	0.21	0.24	Negative	0.21	0.12	15:17:30
26-Mar-19	613 Lead Paint I	5.66	0.03	0.11	Negative	0.03	0.05	15:18:00
26-Mar-19	614 Lead Paint I	5.06	0.09	0.1	Negative	0.09	0.05	15:18:23
26-Mar-19	615 Lead Paint I	5.06	0.14	0.2	Negative	0.14	0.1	15:18:45

26-Mar-19	616 Lead Paint I	5.02	0.23	0.33	Negative	0.23	0.17	15:19:14
26-Mar-19	617 Lead Paint I	6.08	0.23	0.49	Negative	0.23	0.25	15:20:24
26-Mar-19	618 Lead Paint I	5.88	0.08	0.15	Negative	0.08	0.08	15:20:50
26-Mar-19	619 Lead Paint I	11.07	0.06	0.05 surface	Negative	0.06	0.03	15:21:08
26-Mar-19	620 Lead Paint I	11.03	0.04	0.04 surface	Negative	0.04	0.02	15:21:32
26-Mar-19	621 Lead Paint I	6.37	0.2	0.28	Negative	0.2	0.14	15:21:58
26-Mar-19	622 Lead Paint I	5 92	0	0	Negative	0	0	15.22.22
26-Mar-19	623 Lead Paint I	12 47	0 09	0 09 surface	Negative	0.09	0.04	15.22.22
26-Mar-19	624 Lead Paint I	5.01	0.05	0	Negative	0.05	0.01	15.23.26
26-Mar-19	625 Lead Paint I	5 29	0.28	0.4	Negative	0.28	0.2	15.23.20
26-Mar-19	626 Lead Paint I	5.08	0.20	0.4	Negative	0.20	0.2	15.20.45
20-Mar-10	627 Load Paint I	11.06	0.07		Negative	0.07	0.03	15.24.05
20-1viai-19 26 Mar 10	629 Load Daint L	E 04	0.07		Negative	0.07	0.03	15.24.22
20-1v1a1-19	620 Lead Paint I	5.04	0.01	0.07	Negative	0.01	0.05	15.24.55
20-IVId1-19	629 Lead Paint I	0 F 11	0.1	0.11	Negative	0.1	0.00	15.25.19
26-Mar 19	630 Lead Paint I	5.11	0.26	0.5	Negative	0.26	0.25	15:25:45
26-Mar-19	631 Lead Paint I	5.12	0.2	0.28	Negative	0.2	0.14	15:26:11
26-Mar-19	632 Lead Paint I	18.88	0.11	0.13	Negative	0.11	0.07	15:27:21
26-Mar-19	633 Lead Paint I	5.14	0	0	Negative	0	0	15:27:55
26-Mar-19	634 Lead Paint I	5.21	0.08	0.08 surface	Negative	0.08	0.04	15:28:19
26-Mar-19	635 Lead Paint I	5.19	0	0	Negative	0	0	15:28:40
26-Mar-19	636 Lead Paint I	5.24	0	0	Negative	0	0	15:29:01
26-Mar-19	637 Lead Paint I	5.12	0	0	Negative	0	0	15:29:21
26-Mar-19	638 Lead Paint I	8.86	0.08	0.07 surface	Negative	0.08	0.03	15:29:38
26-Mar-19	639 Lead Paint I	5.05	0	0	Negative	0	0	15:30:07
26-Mar-19	640 Lead Paint I	5.17	0	0	Negative	0	0	15:30:26
26-Mar-19	641 Lead Paint I	5.2	0	0	Negative	0	0	15:30:50
26-Mar-19	642 Lead Paint I	19.93 >	> 1.00	0.01	Positive	1	0	15:31:11
26-Mar-19	643 Lead Paint I	5.81 >	> 1.00	0.02	Positive	1	0.01	15:32:07
26-Mar-19	644 Lead Paint I	19.28 >	> 1.00	0.01	Positive	1	0.01	15:32:37
26-Mar-19	645 Lead Paint I	5.21	0.05	0.07	Negative	0.05	0.04	15:33:41
26-Mar-19	646 Lead Paint I	6.27	0.05	0.08	Negative	0.05	0.04	15:34:03
26-Mar-19	647 Lead Paint I	24.98	0.13	0.1 surface	Negative	0.13	0.05	15:34:30
26-Mar-19	648 Lead Paint I	5.24	0.09	0.13	Negative	0.09	0.06	15:35:14
26-Mar-19	649 Lead Paint I	5.11	0.02	0.04	Negative	0.02	0.02	15:35:32
26-Mar-19	650 Lead Paint I	6.15	0.02	0.04	Negative	0.02	0.02	15:35:57
26-Mar-19	651 Lead Paint I	20.34	0.05	0.05 surface	Negative	0.05	0.02	15:36:15
26-Mar-19	652 Lead Paint I	6.1	0	0	Negative	0	0	15:36:52
26-Mar-19	653 Lead Paint I	5.33	0.04	0.06	Negative	0.04	0.03	15:37:12
26-Mar-19	654 Lead Paint I	5.09	0	0	Negative	0	0	15:37:48
26-Mar-19	655 Lead Paint I	5.25	0	0	Negative	0	0	15:38:08
26-Mar-19	656 Lead Paint I	5.15	0	0	Negative	0	0	15:38:29
26-Mar-19	657 Lead Paint I	5.05	0.15	0.18	Negative	0.15	0.09	15:38:57
26-Mar-19	658 Lead Paint I	5.08	0.31	0.39	Negative	0.31	0.19	15:39:22
26-Mar-19	659 Lead Paint I	5.05	0.14	0.16	Negative	0.14	0.08	15:39:52
26-Mar-19	660 Lead Paint I	5.1	0.25	0.3	Negative	0.25	0.15	15:40:12
26-Mar-19	661 Lead Paint I	5 18	0.03	0.04	Negative	0.03	0.02	15.40.38
26-Mar-19	662 Lead Paint I	24 96	0.08	0.04 surface	Negative	0.08	0.02	15.40.56
26-Mar-19	663 Lead Paint I	8 48	0.08	0.06	Negative	0.08	0.03	15.41.30
26-Mar-19	664 Lead Paint I	11 03	0.00	0.06 surface	Negative	0.08	0.03	15.42.11
26-Mar-19	665 Lead Paint I	5 1/	0.00 0 1	0.00 surface	Negative	0.00 0.1	0.03	15.42.11
26-Mar-19	666 Lead Paint I	5 02	0.1		Negative	0.1	0.04	15.42.05
26-Mar-10	667 Lead Daint I	5.30	0.03	0.05	Negative	0.03	0.03	15.43.03
20-ividi-19 26-Mar-10	668 Load Daint	5.52	0.04	0.05	Negative	0.04 A	0.05	15.43.27
20-1viai-19 26-Mar-10	660 Load Daint L	5.50 E 00	0 01	0.02	Nogative	0 01	0	15.43.47
20-ivid1-13 26_Mar 10	670 Load Daint	5.00 £ 17	0.01		Negative	0.01	0.01	15.44.09
20-1V1d1-19		0.12	0.12		Negative	0.12	0.05	15.44:43
20-10191-12	o/i Lead Paint I	5.08	0.09	U.U8 SUITACE	ivegative	0.09	0.04	15:45:21

26-Mar-19	672 Lead Paint I	5.07	0.15	0.1 surface	Negative	0.15	0.05	15:45:52
26-Mar-19	673 Lead Paint I	6.05	0.09	0.07 surface	Negative	0.09	0.04	15:46:15
26-Mar-19	674 Lead Paint I	5.16	0	0	Negative	0	0	15:46:58
26-Mar-19	675 Lead Paint I	5.2	0	0	Negative	0	0	15:47:18
26-Mar-19	676 Lead Paint I	5.21	0	0	Negative	0	0	15:47:41
26-Mar-19	677 Lead Paint I	5.21	0	0	Negative	0	0	15:48:00
26-Mar-19	678 Lead Paint I	5.26	0	0	Negative	0	0	15.48.20
26-Mar-19	679 Lead Paint I	5 37	0.02	0.03	Negative	0.02	0.02	15.48.37
26-Mar-19	680 Lead Paint I	5.97	0.02	0	Negative	0.02	0.02	15.48.57
26-Mar-19	681 Lead Paint I	5.98	0.01	0.03	Negative	0.01	0.02	15.40.37
26-Mar-19	682 Lead Paint I	6.1	0.01	0.05 0.12 surface	Negative	0.01	0.02	15.49.17
26-Mar-10	682 Load Paint I	5.00	0.17		Negative	0.17	0.00	15.50.06
20-1v1a1-19 26 Mar 10	684 Load Daint L	5.05	0.13		Negative	0.13	0.05	15.50.00
20-1Vial-19	695 Load Daint I	5.01	0.02	0.04	Negative	0.02	0.02	15.50.25
20-IVId1-19	665 Lead Paint I	5.17	0.07	0.13	Negative	0.07	0.00	15.50.55
26-IVIAI-19	686 Lead Paint I	5.25	0.1	0.18	Negative	0.1	0.09	15:51:17
26-Mar-19	687 Lead Paint I	24.91	0.09	0.06 surface	Negative	0.09	0.03	15:51:37
26-Mar-19	688 Lead Paint I	24.96	0.2	0.16 surface	Negative	0.2	0.08	15:52:30
26-Mar-19	689 Lead Paint I	24.96	0.09	0.06 surface	Negative	0.09	0.03	15:53:17
26-Mar-19	690 Lead Paint I	5.03	0	0.01	Negative	0	0	15:54:08
26-Mar-19	691 Lead Paint I	5.19	0	0	Negative	0	0	15:54:26
26-Mar-19	692 Lead Paint I	5.18	0	0	Negative	0	0	15:54:47
26-Mar-19	693 Lead Paint I	6.06	0	0	Negative	0	0	15:55:16
26-Mar-19	694 Lead Paint I	5.31	0.02	0.05	Negative	0.02	0.02	15:55:31
26-Mar-19	695 Lead Paint I	5.8	0	0.02	Negative	0	0.01	15:55:50
26-Mar-19	696 Lead Paint I	5.37	0.05	0.06	Negative	0.05	0.03	15:56:09
26-Mar-19	697 Lead Paint I	5.04	0.1	0.12	Negative	0.1	0.06	15:56:28
26-Mar-19	698 Lead Paint I	5	0.03	0.05	Negative	0.03	0.03	15:56:53
26-Mar-19	699 Lead Paint I	5.05	0.06	0.08	Negative	0.06	0.04	15:57:10
26-Mar-19	700 Lead Paint I	5.12	0.06	0.09	Negative	0.06	0.05	15:57:34
26-Mar-19	701 Lead Paint I	5.14	0.11	0.1 surface	Negative	0.11	0.05	15:58:06
26-Mar-19	702 Lead Paint I	6.24	0.08	0.06 surface	Negative	0.08	0.03	15:58:23
26-Mar-19	703 Lead Paint I	8.41	0.1	0.06 surface	Negative	0.1	0.03	15:58:46
26-Mar-19	704 Lead Paint I	6.35	0.09	0.08 surface	Negative	0.09	0.04	15:59:09
26-Mar-19	705 Lead Paint I	10.98	0.07	0.05 surface	Negative	0.07	0.03	15:59:28
26-Mar-19	706 Lead Paint I	5.96	0.01	0.03	Negative	0.01	0.02	15:59:55
26-Mar-19	707 Lead Paint I	5.46	0.04	0.05	Negative	0.04	0.02	16:00:14
26-Mar-19	708 Lead Paint I	6.09	0	0	Negative	0	0	16:00:35
26-Mar-19	709 Lead Paint I	6.06	0.01	0.03	Negative	0.01	0.01	16:01:22
26-Mar-19	710 Lead Paint I	5.07	0.11	0.11	Negative	0.11	0.06	16:02:05
26-Mar-19	711 Lead Paint I	5.06	0.03	0.06	Negative	0.03	0.03	16:02:25
26-Mar-19	712 Lead Paint I	5.14	0.1	0.08 surface	Negative	0.1	0.04	16:03:06
26-Mar-19	713 Lead Paint I	5.09	0.09	0.09	Negative	0.09	0.05	16:03:23
26-Mar-19	714 Lead Paint I	5.7	0	0	Negative	0	0	16:04:55
26-Mar-19	715 Lead Paint I	5.08	0	0	Negative	0	0	16:05:10
26-Mar-19	716 Lead Paint I	7.48	1.3	0.3 surface	Positive	1.3	0.15	16:05:31
26-Mar-19	717 Lead Paint I	5.31	1.43	0.41 surface	Positive	1.43	0.21	16:06:11
26-Mar-19	718 Lead Paint I	5.48	0	0	Negative	0	0	16:06:32
26-Mar-19	719 Lead Paint I	6.13	0	0	Negative	0	0	16:06:57
26-Mar-19	720 Lead Paint I	5.15	0	0	Negative	0	0	16:07:29
26-Mar-19	721 Lead Paint I	7 25	0 13	0.11 surface	Negative	0 13	0 06	16:09:34
26-Mar-19	722 Lead Paint I	13 18	0.15	0.05 surface	Negative	0.15	0.00	16.09.54
26-Mar-19	722 Lead Paint I	9 95	0.00		Negative	0.00 0.18	0.02	16.10.26
26-Mar-10	724 Load Daint I	6 38	0.10	0.12 surface	Negative	0.10 0.1 <i>1</i>	0.1	16.10.20
26-Mar-10	724 Leau Faille	5 12	0.14	0.13 Surface	Negative	0.14	0.07	16.11.07
20-10101-19 26_Mar_10	725 Leau Pallit	2.12	0.12	0.10	Negative	0.12	0.09	16.11.07
20-1V1d1-19	720 Ledu Polint I	5.09	0.05	0.00	Negative	0.05	0.04	10.11.52
20-INI91-12	121 Ledu Pallit I	5.50	0.04	0.17	ivegative	0.04	0.09	10.11:22

26-Mar-19	728 Lead Paint I	5.09	0	0	Negative	0	0	16:12:16
26-Mar-19	729 Lead Paint I	5.2	0	0	Negative	0	0	16:12:34
26-Mar-19	730 Lead Paint I	5.84	0	0	Negative	0	0	16:13:00
26-Mar-19	731 Lead Paint I	5.47	0	0	Negative	0	0	16:13:20
26-Mar-19	732 Lead Paint I	5.5	0	0	Negative	0	0	16:13:47
26-Mar-19	733 Lead Paint I	5.34	0	0	Negative	0	0	16:14:05
26-Mar-19	734 Lead Paint I	6.05	0	0.01	Negative	0	0	16:15:24
26-Mar-19	735 Lead Paint I	6.09	0.04	0.05	Negative	0.04	0.03	16:15:50
26-Mar-19	736 Lead Paint I	5.88	0.06	0.06	Negative	0.06	0.03	16:16:09
26-Mar-19	737 Lead Paint I	5.84	0.04	0.15	Negative	0.04	0.07	16:16:29
26-Mar-19	738 Lead Paint I	24.36	0.98	0.21 surface	Negative	0.98	0.11	16:16:47
26-Mar-19	739 Lead Paint I	5.08	0.14	0.44	Negative	0.14	0.22	16:17:34
26-Mar-19	740 Lead Paint I	5.63	0	0	Negative	0	0	16:18:04
26-Mar-19	741 Lead Paint I	5.11 > 2	2.30	1.19 surface	Positive	2.3	0.6	16:18:26
26-Mar-19	742 Lead Paint I	5.21	0	0	Negative	0	0	16:19:06
26-Mar-19	743 Lead Paint I	5.18	0	0	Negative	0	0	16:19:23
26-Mar-19	744 Lead Paint I	5.41	0	0	Negative	0	0	16:20:04
26-Mar-19	745 Lead Paint I	24.17	1.06	0.07 surface	Positive	1.06	0.03	16:22:10
26-Mar-19	746 Lead Paint I	5.06	0	0	Negative	0	0	16:22:52

Date	Reading	Mode	LiveTime	Match1	MN1		Pass/Fail	Pass Fail StaP	b	Pb +/-	Time
27-Mar-19	1	Standardiza	26.08	0.019721		227	-0.012383	PASS			8:43:14
27-Mar-19	2	Lead Paint I	5.34	0		0		Negative	0	0	8:47:48
27-Mar-19	3	Lead Paint I	5.17	> 1.00		0.15		Positive	1	0.07	8:49:11
27-Mar-19	4	Lead Paint I	5.1	0.66		0.19		Negative	0.66	0.09	8:49:41
27-Mar-19	5	Lead Paint I	5.19	0.63		0.18		Negative	0.63	0.09	8:50:10
27-Mar-19	6	Lead Paint I	5.08	> 1.00		0.2		Positive	1	0.1	8:50:39
27-Mar-19	7	Lead Paint I	3.72	0.59		0.2		Negative	0.59	0.1	8:51:10
27-Mar-19	8	Lead Paint I	5.95	0.64		0.14	surface	Negative	0.64	0.07	8:51:53
27-Mar-19	9	Lead Paint I	5.03	0.35		0.11	surface	Negative	0.35	0.06	8:52:17
27-Mar-19	10	Lead Paint I	5 79	0.25		0.09	surface	Negative	0.25	0.05	8.52.36
27-Mar-19	11	Lead Paint I	5.88	0.49		0.1	surface	Negative	0.49	0.05	8.53.01
27-Mar-19	12	Lead Paint I	5 84	0.44		0.1	surface	Negative	0 44	0.05	8.53.26
27-Mar-19	13	Lead Paint I	5.67	0.8		0 14	surface	Negative	0.0	0.05	8.53.20
27-Mar-19	14	Lead Paint I	8 9/	0.0		0.17	surface	Negative	0.0	0.07	8.54.07
27 Mar 19	15	Load Daint I	6.08	0.04		0.12	surface	Negative	0.04	0.00	8.54.55
27-Mar-19	15	Lead Paint I	24.21	0.05		0.13	surface	Negative	0.05	0.00	8.55.20
27-Iviai-19	10	Lead Paint I	24.21 6.02	0.92		0.08	surface	Negative	0.92	0.04	0.55.20
27-Iviai-19	10	Lead Paint I	E 02	0.45		0.09	surface	Negative	0.45	0.05	0.50.10
27-Iviai-19	10	Lead Daint I	5.05	0.57		0.09	surface	Negative	0.57	0.04	0.50.41
27-Mar 10	19	Lead Paint I	5.94	0.05		0.03	surface	Negative	0.05	0.01	8:57:05
27-Mar-19	20	Lead Paint I	9.92	0.05		0.07		Negative	0.05	0.04	8:59:17
27-Mar-19	21	Lead Paint I	26.01	0.11		0.17		Negative	0.11	0.09	9:00:34
27-Mar-19	22	Lead Paint I	9.77	0.36		0.45		Negative	0.36	0.22	9:01:18
27-Mar-19	23	Lead Paint I	5.01	0		0.01		Negative	0	0	9:01:43
27-Mar-19	24	Lead Paint I	5.16	0.02		0.06		Negative	0.02	0.03	9:02:01
27-Mar-19	25	Lead Paint I	6.1	0		0		Negative	0	0	9:02:34
27-Mar-19	26	Lead Paint I	5.24	0		0		Negative	0	0	9:02:52
27-Mar-19	27	Lead Paint I	5.12	0		0		Negative	0	0	9:03:12
27-Mar-19	28	Lead Paint I	5.42	0		0		Negative	0	0	9:03:41
27-Mar-19	29	Lead Paint I	5.8	0		0		Negative	0	0	9:04:06
27-Mar-19	30	Lead Paint I	5.12	0.04		0.07		Negative	0.04	0.03	9:04:41
27-Mar-19	31	Lead Paint I	5.14	0.12		0.41		Negative	0.12	0.21	9:05:14
27-Mar-19	32	Lead Paint I	5.09	0.06		0.1		Negative	0.06	0.05	9:05:41
27-Mar-19	33	Lead Paint I	5.11	0.17		0.47		Negative	0.17	0.23	9:06:06
27-Mar-19	34	Lead Paint I	25.09	0.26		0.3		Negative	0.26	0.15	9:06:30
27-Mar-19	35	Lead Paint I	7.61	0.09		0.13		Negative	0.09	0.07	9:07:14
27-Mar-19	36	Lead Paint I	19.36	0.14		0.19		Negative	0.14	0.1	9:07:37
27-Mar-19	37	Lead Paint I	25.06	0.09		0.15		Negative	0.09	0.07	9:08:13
27-Mar-19	38	Lead Paint I	15.85	0.13		0.24		Negative	0.13	0.12	9:08:56
27-Mar-19	39	Lead Paint I	5.14	0		0		Negative	0	0	9:09:28
27-Mar-19	40	Lead Paint I	5.16	0		0		Negative	0	0	9:09:45
27-Mar-19	41	Lead Paint I	5.13	0		0		Negative	0	0	9:10:02
27-Mar-19	42	Lead Paint I	5.15	0		0		Negative	0	0	9:10:36
27-Mar-19	43	Lead Paint I	5.16	0		0		Negative	0	0	9:10:54
27-Mar-19	44	Lead Paint I	5.29	0		0		Negative	0	0	9:11:10
27-Mar-19	45	Lead Paint I	6.36	0.34		0.57		Negative	0.34	0.29	9:11:38
27-Mar-19	46	Lead Paint I	6.11	0.1		0.21		Negative	0.1	0.1	9:12:01
27-Mar-19	47	Lead Paint I	5.16	0.1		0.21		Negative	0.1	0.1	9:12:51
27-Mar-19	48	Lead Paint I	5.19	0.01		0.01		Negative	0.01	0	9:13:15
27-Mar-19	49	Lead Paint I	5.25	0.12		0.4		Negative	0.12	0.2	9:13:58
27-Mar-19	50	Lead Paint I	5.09	0.01		0.01		Negative	0.01	0	9:14:15
27-Mar-19	51	Lead Paint I	20.46	0.1		0.14		Negative	0.1	0.07	9:14:34
27-Mar-19	52	Lead Paint I	5.29	0.1		0.24		Negative	0.1	0.12	9:15:10
27-Mar-19	53	Lead Paint I	5.22	0		0		Negative	0	0	9:15:27
27-Mar-19	54	Lead Paint I	24.87	0.22		0.23		Negative	0.22	0.12	9:15:44
27-Mar-19	55	Lead Paint I	25.1	0.34		0.34		Negative	0.34	0.17	9:16:27
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27-Mar-19	56 Lead Paint I	5.15	0	0	Negative	0	0	9:17:16
27-Mar-19	57 Lead Paint I	5.21	0	0.01	Negative	0	0	9:17:36
27-Mar-19	58 Lead Paint I	5.09	0	0	Negative	0	0	9:17:59
27-Mar-19	59 Lead Paint I	5.14	0	0	Negative	0	0	9:18:17
27-Mar-19	60 Lead Paint I	5.15	0	0	Negative	0	0	9:18:34
27-Mar-19	61 Lead Paint I	5.88	0	0	Negative	0	0	9:18:57
27-Mar-19	62 Lead Paint I	11.06	0.13	0.28	Negative	0.13	0.14	9:19:27
27-Mar-19	63 Lead Paint I	5.26	0.05	0.12	Negative	0.05	0.06	9:19:53
27-Mar-19	64 Lead Paint I	6.33	0.05	0.08	Negative	0.05	0.04	9:20:12
27-Mar-19	65 Lead Paint I	5.12	0	0.01	Negative	0	0	9:20:42
27-Mar-19	66 Lead Paint I	7.59	0.09	0.13	Negative	0.09	0.06	9:20:59
27-Mar-19	67 Lead Paint I	5.05	0	0	Negative	0	0	9.21.49
27-Mar-19	68 Lead Paint I	5 31	0.07	0 14	Negative	0.07	0.07	9.22.06
27-Mar-19	69 Lead Paint I	5 91	0.07	0.31	Negative	0.07	0.07	9.22.00
27 Mar 19	70 Lead Paint I	25 71	0.07		Negative	0.07	0.15	0.22.23
27-Mar-19	70 Lead Paint I	5 1/	0.10	0.05 3011800	Negative	0.10	0.03	0.72.27
27-Mar-19	71 Lead Paint I	9.14 8.66	0.04	0.00	Negative	0.04	0.03	9.23.32
27-IVIdI-19	72 Lead Paint I	0.00 7 E 1	0.20	0.5	Negative	0.28	0.25	9.25.50
27-IVIdI-19	75 Leau Pallit I	7.51 C 11	0.1	0.24	Negative	0.1	0.12	9.24.11
27-IVIdI-19	74 Ledu Pallit I	0.11	0.11	0.16	Negative	0.11	0.08	9.24.33
27-IVIar-19	75 Lead Paint I	5.12	0.06	0.11	Negative	0.06	0.05	9:26:57
27-IVIar-19	76 Lead Paint I	5.16	0.06	0.09	Negative	0.06	0.04	9:27:20
27-IVIar-19	77 Lead Paint I	8.66	0.05	0.09	Negative	0.05	0.04	9:27:48
27-Mar-19	78 Lead Paint I	5.2	0.06	0.25	Negative	0.06	0.12	9:28:11
27-Mar-19	79 Lead Paint I	25.08	0.06	0.07	Negative	0.06	0.03	9:28:27
27-Mar-19	80 Lead Paint I	5.18	0.01	0.04	Negative	0.01	0.02	9:29:10
27-Mar-19	81 Lead Paint I	14.49	0.09	0.09	Negative	0.09	0.04	9:29:27
27-Mar-19	82 Lead Paint I	6.09	0	0.01	Negative	0	0	9:30:01
27-Mar-19	83 Lead Paint I	5.06	0	0	Negative	0	0	9:30:21
27-Mar-19	84 Lead Paint I	5.27	0	0	Negative	0	0	9:30:38
27-Mar-19	85 Lead Paint I	5.07	0	0.01	Negative	0	0	9:31:01
27-Mar-19	86 Lead Paint I	14.97	0.07	0.08	Negative	0.07	0.04	9:31:18
27-Mar-19	87 Lead Paint I	5.12	0.22	0.53	Negative	0.22	0.27	9:31:50
27-Mar-19	88 Lead Paint I	5.09	0.04	0.09	Negative	0.04	0.04	9:32:14
27-Mar-19	89 Lead Paint I	5.05	0.09	0.18	Negative	0.09	0.09	9:32:38
27-Mar-19	90 Lead Paint I	5.1	0.09	0.36	Negative	0.09	0.18	9:32:59
27-Mar-19	91 Lead Paint I	16.8	0.09	0.04 surface	Negative	0.09	0.02	9:33:33
27-Mar-19	92 Lead Paint I	5.24	0.12	0.1 surface	Negative	0.12	0.05	9:34:04
27-Mar-19	93 Lead Paint I	11.68	0.09	0.08 surface	Negative	0.09	0.04	9:34:25
27-Mar-19	94 Lead Paint I	5.22	0.09	0.12	Negative	0.09	0.06	9:34:50
27-Mar-19	95 Lead Paint I	21.55	0.07	0.03 surface	Negative	0.07	0.02	9:35:08
27-Mar-19	96 Lead Paint I	5.05	0.04	0.11	Negative	0.04	0.06	9:35:44
27-Mar-19	97 Lead Paint I	5.37	0.06	0.06	Negative	0.06	0.03	9:36:02
27-Mar-19	98 Lead Paint I	5.91	0.57	0.13 surface	Negative	0.57	0.06	9:36:20
27-Mar-19	99 Lead Paint I	6.09	0.03	0.05	Negative	0.03	0.03	9:36:41
27-Mar-19	100 Lead Paint I	5.02	0.06	0.07	Negative	0.06	0.03	9:37:09
27-Mar-19	101 Lead Paint I	6.11	0.07	0.06 surface	Negative	0.07	0.03	9:37:31
27-Mar-19	102 Lead Paint I	6.06	0.1	0.08 surface	Negative	0.1	0.04	9:37:51
27-Mar-19	103 Lead Paint I	5.03	0.01	0.02	Negative	0.01	0.01	9:38:11
27-Mar-19	104 Lead Paint I	6.38	0.01	0.01	Negative	0.01	0	9:38:42
27-Mar-19	105 Lead Paint I	5.23	0.08	0.22	Negative	0.08	0.11	9:39:01
27-Mar-19	106 Lead Paint I	5.21	0.08	0.17	Negative	0.08	0.09	9:39:23
27-Mar-19	107 Lead Paint I	6.35	0.07	0.16	Negative	0.07	0.08	9:39:40
27-Mar-19	108 Lead Paint I	19.05	0.05	0.05 surface	Negative	0.05	0.02	9:40:02
27-Mar-19	109 Lead Paint I	5.19	0	0	Negative	0	0	9:40:55
27-Mar-19	110 Lead Paint I	5.22	0	0	Negative	0	0	9:41:13
27-Mar-19	111 Lead Paint I	5.15	0	0	Negative	0	0	9:41:30

27-Mar-19	112 Lead Paint I	5.11	0	0.01	Neg	gative 0	0	9:42:06
27-Mar-19	113 Lead Paint I	5.31	0.14	0.21	Neg	ative 0.14	0.1	9:42:29
27-Mar-19	114 Lead Paint I	12.05	0.07	0.05	surface Neg	gative 0.07	0.02	9:43:09
27-Mar-19	115 Lead Paint I	22.57	0.19	0.06	surface Neg	gative 0.19	0.03	9:43:41
27-Mar-19	116 Lead Paint I	6.31	0.05	0.05	surface Neg	ative 0.05	0.02	9:44:26
27-Mar-19	117 Lead Paint I	10.01	0.04	0.04	Neg	zative 0.04	0.02	9:44:48
27-Mar-19	118 Lead Paint I	5.2	0.03	0.05	Neg	zative 0.03	0.02	9:45:20
27-Mar-19	119 Lead Paint I	5.99	0.05	0.14	Nea	zative 0.05	0.07	9:45:38
27-Mar-19	120 Lead Paint I	5.36	0.07	0.08	Ne	ative 0.07	0.04	9:45:57
27-Mar-19	121 Standardiza	26.71	0.019721	227	-0.031856 PAS	S		9:50:43
27-Mar-19	122 Lead Paint I	6.02	0	0	Nea	ative 0	0	9:52:04
27-Mar-19	123 Lead Paint I	6.02	0	0	Ne	ative 0	0	9:52:52
27-Mar-19	124 Lead Paint I	6.12	0	0	Nea	ative 0	0	9:53:27
27-Mar-19	125 Lead Paint I	16.82	1.08	0.08	surface Pos	itive 1.08	0.04	9:54:01
27-Mar-19	126 Lead Paint I	5.27	0	0.00	Neg	vative 0	0	9:55:01
27-Mar-19	127 Lead Paint I	5.92	0.02	0.04	Nea	vative 0.02	0.02	9:57:01
27-Mar-19	128 Lead Paint I	5 99	0.05	0.07	Nea	vative 0.05	0.03	9.57.20
27-Mar-19	129 Lead Paint I	5.01	0.03	0.05	Neg	vative 0.03	0.02	9.57.43
27 Mar-19	130 Lead Paint I	5 11	0.05	0.05	Neg	vative 0.05	0.02	9.58.06
27 Mar-19	131 Lead Paint I	5 97	0.05	0.00	Nee	vative 0.03	0.03	9.58.29
27 Mar-19	132 Lead Paint I	5 12	0.07	0.07	Neg	vative 0.01	0.04	9.58.49
27 Mar-19	132 Lead Paint I	24 78	0.01	0.03	surface Neg	vative 0.01	0.01	9.59.36
27 Mar 19	134 Load Paint I	5 27.70	0.00	0.04	Nor	0.00	0.02	10.00.17
27-Mar-19	135 Lead Paint I	25.16	0.02	0.04	surface Neg	0.02	0.02	10.00.17
27-Mar-19	135 Lead Paint I	6 22	0.07	0.03	Surface Neg	0.07	0.02	10.00.33
27-Mar-19	130 Lead Paint I	5.24	0.02	0.04	surface Neg	0.02	0.02	10.01.21
27-Mar-19	137 Lead Paint I	5.02	0.11	0.03	Surface Neg	ative 0.11	0.03	10.01.41
27-Iviai-19	130 Leau Paint I	5.05	0.01	0.05	Neg	$\frac{1}{2}$	0.01	10.02.00
27-Iviai-19	139 Leau Paint I	5.52	0.24	0.55	Neg	0.24	0.17	10.02.25
27-Iviai-19	140 Leau Paint I	5.05	0.04	0.00	Neg	sative 0.04	0.05	10.02.41
27-Iviai-19	141 Leau Paint I	5.07	0.04	0.02	Neg	sative 0.04	0.01	10.03.00
27-Iviai-19	142 Leau Paint I	5.05	0.04	0.00	Neg	0.04	0.05	10.03.21
27-Iviai-19	145 Ledu Pallit I	5.00	0.08	0.11	Neg	0.00	0.03	10.03.41
27-IVId1-19	144 Ledu Pallit I	0.10	0.05	0.04	Net	sative 0.03	0.02	10.04.00
27-IVId1-19	145 Ledu Pallit I	5.00	0.04	0.00	Neg	sative 0.04	0.05	10.04.20
27-Mar 10	140 Lead Paint I	5.22	0	0 01	Neg	gative 0	0	10:04:49
27-Mar 19	147 Lead Paint I	7.02	0	0.01	Neg	gative 0	0	10:05:03
27-Mar-19	148 Lead Paint I	13.15	0.07	0.2	Neg	ative 0.07	0.1	10:05:26
27-Mar-19	149 Lead Paint I	5.23	0	0	Neg	gative 0	0	10:05:53
27-Mar-19	150 Lead Paint I	24.96	0.02	0.04	Neg	ative 0.02	0.02	10:06:13
27-Mar-19	151 Lead Paint I	5.06	0	0	Neg	gative 0	0	10:06:59
27-Mar-19	152 Lead Paint I	5.07	0.03	0.05	Neg	gative 0.03	0.03	10:07:17
27-Mar-19	153 Lead Paint I	5.1	0	0	Neg	gative 0	0	10:07:41
27-Mar-19	154 Lead Paint I	5.17	0	0	Neg	gative 0	0	10:07:59
27-Mar-19	155 Lead Paint I	5.21	0	0	Neg	gative 0	0	10:08:15
27-Mar-19	156 Lead Paint I	12.79	0.01	0.01	Neg	gative 0.01	0.01	10:08:33
27-Mar-19	157 Lead Paint I	9.7	0.01	0.02	Neg	gative 0.01	0.01	10:09:05
27-Mar-19	158 Lead Paint I	11.06	0.01	0.01	Ne	ative 0.01	0.01	10:09:45
27-Mar-19	159 Lead Paint I	5.19	0	0	Ne	gative 0	0	10:10:40
27-Mar-19	160 Lead Paint I	5.24	0	0	Ne	gative 0	0	10:10:59
27-Mar-19	161 Lead Paint I	5.34	0.01	0.04	Ne	gative 0.01	0.02	10:11:27
27-Mar-19	162 Lead Paint I	5.17	0	0.01	Ne	gative 0	0	10:11:45
27-Mar-19	163 Lead Paint I	5.3	0	0	Ne	gative 0	0	10:12:27
27-Mar-19	164 Lead Paint I	5.37	0.01	0.02	Neg	gative 0.01	0.01	10:12:49
27-Mar-19	165 Lead Paint I	5.07	0.03	0.07	Ne	ative 0.03	0.04	10:13:16
27-Mar-19	166 Lead Paint I	5.02	0.02	0.06	Ne	ative 0.02	0.03	10:13:38
27-Mar-19	167 Lead Paint I	5	0.04	0.05	Neg	gative 0.04	0.02	10:14:05

27-Mar-19	168 Lead Paint I	5.16	0.01	0.03	Negative	0.01	0.01	10:14:22
27-Mar-19	169 Lead Paint I	5.06	0.06	0.08	Negative	0.06	0.04	10:14:55
27-Mar-19	170 Lead Paint I	5.25	0.11	0.14	Negative	0.11	0.07	10:15:48
27-Mar-19	171 Lead Paint I	12.68	0.1	0.07 surface	Negative	0.1	0.04	10:16:05
27-Mar-19	172 Lead Paint I	25.13	0.11	0.04	Negative	0.11	0.02	10:16:31
27-Mar-19	173 Lead Paint I	15.59	0.09	0.06 surface	Negative	0.09	0.03	10:17:23
27-Mar-19	174 Lead Paint I	5.24	0.14	0.13	Negative	0.14	0.07	10:17:53
27-Mar-19	175 Lead Paint I	6.08	0.01	0.03	Negative	0.01	0.02	10:18:26
27-Mar-19	176 Lead Paint I	5.36	0.08	0.08	Negative	0.08	0.04	10:18:48
27-Mar-19	177 Lead Paint I	5.99	0.19	0.47	Negative	0.19	0.24	10:19:05
27-Mar-19	178 Lead Paint I	5.02	0.01	0.05	Negative	0.01	0.02	10:19:26
27-Mar-19	179 Lead Paint I	5.06	0.07	0.07 surface	Negative	0.07	0.04	10:19:51
27-Mar-19	180 Lead Paint I	5.01	0.1	0.16	Negative	0.1	0.08	10:20:11
27-Mar-19	181 Lead Paint I	6.1	0.07	0.07 surface	Negative	0.07	0.03	10:20:28
27-Mar-19	182 Lead Paint I	5.73	0.07	0.07 surface	Negative	0.07	0.03	10:20:49
27-Mar-19	183 Lead Paint I	5 18 > 1	1.00	0.07	Positive	1	0.04	10.21.25
27-Mar-19	184 Lead Paint I	7.63	0.06	0.06 surface	Negative	0.06	0.03	10.21.48
27-Mar-19	185 Lead Paint I	24.72	0.09	0.04 surface	Negative	0.09	0.02	10:22:14
27-Mar-19	186 Lead Paint I	24.61	0.05	0.03 surface	Negative	0.05	0.01	10.22.56
27-Mar-19	187 Lead Paint I	5.2	0.04	0.06	Negative	0.03	0.03	10.23.37
27-Mar-19	188 Lead Paint I	5.03	0.01	0.05	Negative	0.01	0.03	10.24.03
27-Mar-19	189 Lead Paint I	8.66	0.01	0.05	Negative	0.01	0.05	10.24.03
27-Mar-19	190 Lead Paint I	6.00	0.07	0.04	Negative	0.03	0.03	10.24.22
27-Mar-19	190 Lead Paint I	5.05	0.05	0.04	Negative	0.03	0.02	10.24.45
27-Mar-19	191 Lead Paint I	6.07	0.04	0.04	Negative	0.03	0.03	10.25.02
27-Mar-19	192 Lead Paint I	5.03	0.05	0.22	Negative	0.05	0.02	10.25.50
27-Mar-19	194 Lead Paint I	6.12	0.14	0.08	Negative	0.14	0.11	10.26.01
27-Mar-19	195 Lead Paint I	5 1	0.00	0.00	Negative	0.00	0.04	10.26.20
27-Mar-19	196 Lead Paint I	6 34	0.05	0.15	Negative	0.05	0.05	10.20.51
27-Mar-19	197 Lead Paint I	5 24	0.13	0.15	Negative	0.13	0.00	10.27.30
27-Mar-19	197 Lead Paint I	5.24	0.12	0.61	Negative	0.12	0.13	10.20.21
27-Mar-19	199 Lead Paint I	25.02	0.31	0.01 0.08 surface	Negative	0.51	0.01	10.20.50
27-Mar-19	200 Lead Paint I	5.61	0	0	Negative	0.10	0.01	10.30.26
27-Mar-19	200 Lead Paint I	5.81	0.02	0.07	Negative	0.02	0.04	10.30.20
27-Mar-19	201 Lead Paint I	5 35	0.02	0.09	Negative	0.02	0.04	10.31.04
27-Mar-19	202 Lead Paint I	5.07	0.07	0.05	Negative	0.07	0.03	10.32.03
27-Mar-19	203 Lead Paint I	15 73	0.02	0.22 surface	Negative	0.02	0.05	10.32.40
27-Mar-19	205 Lead Paint I	5	0.25	0.01	Negative	0.29	0.11	10.33.10
27-Mar-19	205 Lead Paint I	4 07	0.06	0.01	Negative	0.06	0.04	10.33.40
27-Mar-19	200 Lead Paint I	7 56 > 1		0.03	Positive	0.00	0.04	10.34.05
27-Mar-19	208 Lead Paint I	5 23 >	00	0.07	Positive	1	0.04	10.35.14
27-Mar-19	200 Lead Paint I	5.23 / .	0.01	0.03	Negative	0.01	0.04	10.35.14
27-Mar-19	200 Lead Paint I	5 38	0.01	0.03 0.07 surface	Negative	0.09	0.02	10.35.45
27 Mar-19	210 Lead Paint I	5.50	0.05	0.07 surface	Negative	0.05	0.04	10.30.00
27 Mar-19	211 Lead Paint I	6.11	0.07	0.05 surface	Negative	0.07	0.03	10.30.27
27 Mar-19	212 Lead Paint I	5 18	0.12	0.07 Surface	Negative	0.12	0.04	10.30.47
27 Mar-19	213 Lead Paint I	5.10	0.00	0.05 surface	Negative	0.00	0.04	10.37.50
27 Mar-19	214 Lead Paint I	5.09	0.1	0.05 301000	Negative	0.1	0.02	10.37.37
27 Mar-19	215 Lead Paint I	5.05	0.07	0.07 0.1 surface	Negative	0.07	0.04	10.30.30
27-Mar-19	217 Lead Paint I	6 45	0 32	0.26 surface	Negative	0.32	0.05	10.39.53
27-Mar-19	217 Lead Paint I	13 17	0.32 በ <u>4</u> ዩ	0.45 surface	Negative	0.52 በ <u>/</u> ጸ	0.13	10.20.10
27-Mar-19	219 Lead Paint I	10.17	0.40	0.46	Negative	0.⊒0 0 37	0.22	10.40.51
27-Mar-19	220 Lead Paint I	8 73	0.57	0.40	Negative	0.27	0.25	10.41.17
27-Mar-19	220 Lead Paint	5 26	0.44	0.06	Negative	0.44	0.23	10.41.30
27-Mar-19	222 Lead Paint I	5 12	0.04	0	Negative	0.04	0.05	10:42.06
27-Mar-19	223 Lead Paint I	6.13	n	0	Negative	0 0	0	10:42.27
		0.20	-	-		-	•	/

27-Mar-19	224 Lead Paint I	5.16	0	0		Negative	0	0	10:42:47
27-Mar-19	225 Lead Paint I	5.9	0	0		Negative	0	0	10:43:41
27-Mar-19	226 Lead Paint I	25.33	0.2	0.1	surface	Negative	0.2	0.05	10:43:59
27-Mar-19	227 Lead Paint I	5.99	0.15	0.18		Negative	0.15	0.09	10:44:49
27-Mar-19	228 Lead Paint I	6.24	0.47	0.39	surface	Negative	0.47	0.19	10:45:12
27-Mar-19	229 Lead Paint I	5.97	0.04	0.05		Negative	0.04	0.02	10:45:35
27-Mar-19	230 Lead Paint I	6.05	0.04	0.05		Negative	0.04	0.02	10:46:05
27-Mar-19	231 Lead Paint I	5.09	0.17	0.23		Negative	0.17	0.12	10.46.37
27-Mar-19	232 Lead Paint I	5.08	0.04	0.06		Negative	0.04	0.03	10.47.07
27-Mar-19	233 Lead Paint I	5.00	0.01	0.00		Negative	0.01	0.05	10.47.35
27 Mar-19	234 Lead Paint I	5 18	0.01	0.01		Negative	0.01	0.21	10:47:56
27 Mar 19	235 Load Paint I	5 13	0.14	0.42		Negative	0.14	0.21	10.47.30
27-Mar-19	235 Lead Paint I	5.15	0.02	0.04		Negative	0.02	0.02	10.40.10
27-War 10	230 Leau Paint I	0.01	0.14	0.42	curfaco	Negative	0.14	0.21	10.40.44
27-IVIdI-19	237 Leau Pallit I	0.01	0.55	0.45	surface	Negative	0.55	0.22	10.49.07
27-IVIdI-19	230 Lead Paint I	0.15	0.5	0.35	surface	Negative	0.5	0.17	10.49.29
27-IVIar-19	239 Lead Paint I	5.01	0.45	0.42	surface	Negative	0.45	0.21	10:49:48
27-Mar-19	240 Lead Paint I	5.18	0.42	0.47		Negative	0.42	0.24	10:50:06
27-Mar-19	241 Lead Paint I	5.17	0.06	0.11		Negative	0.06	0.06	10:50:23
27-Mar-19	242 Lead Paint I	6.08	0	0		Negative	0	0	10:50:44
27-Mar-19	243 Lead Paint I	5.19	0	0		Negative	0	0	10:51:03
27-Mar-19	244 Lead Paint I	5.16	0	0		Negative	0	0	10:51:20
27-Mar-19	245 Lead Paint I	5.06	0	0		Negative	0	0	10:51:42
27-Mar-19	246 Lead Paint I	6.17	0	0		Negative	0	0	10:52:15
27-Mar-19	247 Lead Paint I	5.17	0	0		Negative	0	0	10:52:33
27-Mar-19	248 Lead Paint I	5.13	0.03	0.05		Negative	0.03	0.03	10:53:02
27-Mar-19	249 Lead Paint I	6.09	0.32	0.23	surface	Negative	0.32	0.12	10:53:19
27-Mar-19	250 Lead Paint I	5.15	0.13	0.16		Negative	0.13	0.08	10:53:41
27-Mar-19	251 Lead Paint I	5.04	0.07	0.15		Negative	0.07	0.07	10:54:03
27-Mar-19	252 Lead Paint I	5.16	0.07	0.15		Negative	0.07	0.07	10:54:25
27-Mar-19	253 Lead Paint I	5.13	0.15	0.44		Negative	0.15	0.22	10:54:48
27-Mar-19	254 Lead Paint I	5.13	0.07	0.11		Negative	0.07	0.06	10:55:07
27-Mar-19	255 Lead Paint I	5.18	0.09	0.16		Negative	0.09	0.08	10:55:24
27-Mar-19	256 Lead Paint I	5.13	0.27	0.59		Negative	0.27	0.29	10:55:41
27-Mar-19	257 Lead Paint I	6.41	0.2	0.34		Negative	0.2	0.17	10:57:02
27-Mar-19	258 Lead Paint I	12.22	0.16	0.12	surface	Negative	0.16	0.06	10:57:22
27-Mar-19	259 Lead Paint I	5.23	0	0		Negative	0	0	10:57:50
27-Mar-19	260 Lead Paint I	5.19	0.28	0.3		Negative	0.28	0.15	10:58:10
27-Mar-19	261 Lead Paint I	5.2	0.07	0.08		Negative	0.07	0.04	10:58:30
27-Mar-19	262 Lead Paint I	5.06	0.32	0.35		Negative	0.32	0.18	10:58:49
27-Mar-19	263 Lead Paint I	5.03	0.23	0.31		Negative	0.23	0.16	10:59:11
27-Mar-19	264 Lead Paint I	5.07	0	0		Negative	0	0	10:59:40
27-Mar-19	265 Lead Paint I	5.16	0	0		Negative	0	0	11:00:00
27-Mar-19	266 Lead Paint I	5.15	0	0		Negative	0	0	11:00:17
27-Mar-19	267 Lead Paint I	5.68	0	0		Negative	0	0	11:00:47
27-Mar-19	268 Lead Paint I	5.71	0	0.01		Negative	0	0	11:01:06
27-Mar-19	269 Lead Paint I	5.2	0.43	0.49		Negative	0.43	0.24	11.01.36
27-Mar-19	270 Lead Paint I	12.23	0.47	0.44	surface	Negative	0.47	0.22	11.02.24
27-Mar-19	271 Lead Paint I	8 71	0.33	0.11	surface	Negative	0.33	0.11	11.02.53
27-Mar-19	272 Lead Paint I	5 22	0.21	0.21	Surrace	Negative	0.33	0.12	11.02.03
27-Mar-19	273 Lead Paint I	5 92	0.21	0.07		Negative	0.21	0.10	11.03.17
27-Mar-19	274 Lead Daint I	5.50 25 72	>100	0.02		Positiva	1	0.01	11.02.44
27 Mar-10	275 Load Daint I	25.75	Λ 1.00	0.00		Negative	1	0.03	11.04.02
27-101-13 27-Mar-10	275 Lead Paint I	0 2 = = 1	V N 1 00	0.03		Docitivo	1	0.01	11.05.05
27-11/101-13	270 Ledu Palill	20.01 E 00	^ 1.00 0 10	0.1		Nogative	L 0.10	0.05	11.05.22
27-1VId1-13	277 Leau Pallill	5.02 6.02	0.19	0.5		Nogative	0.19	0.20	11.00.15
27-1VId1-19	270 Leau Paint I	0.02	0.07	0.11		Nocotive	0.07	0.05	11.07.00
27-IVIdI-19	279 Lead Paint I	5.09	0.07	0.17		ivegative	0.07	0.08	11:01:00

27-Mar-19	280 Lead Paint I	5.12	0.09	0.19	Negative	0.09	0.1	11:07:36
27-Mar-19	281 Lead Paint I	5.24	0.12	0.32	Negative	0.12	0.16	11:07:54
27-Mar-19	282 Lead Paint I	5.05	0.24	0.55	Negative	0.24	0.28	11:08:12
27-Mar-19	283 Lead Paint I	15.82	0.11	0.1 surface	Negative	0.11	0.05	11:09:01
27-Mar-19	284 Lead Paint I	13.41	0.49	0.49	Negative	0.49	0.25	11:09:36
27-Mar-19	285 Lead Paint I	24 91	0.23	0.17 surface	Negative	0.23	0.08	11.10.02
27-Mar-19	286 Lead Paint I	7.61	0.02	0.04	Negative	0.02	0.02	11.10.02
27 Mar-19	287 Lead Paint I	9.97	0.02	0.1	Negative	0.02	0.02	11.10.47
27 Mar 19	287 Lead Paint I	6.1	0.1	0.1	Negative	0.1	0.05	11.11.07
27-Mar-10	200 Lead Paint I	5 1 2	0	0	Negative	0	0	11.11.30
27-Iviai-19 27 Mar 10	209 Lead Paint I	5.10	0	0	Negative	0	0	11.12.21
27-Ividi-19	290 Ledu Palifit I	5.2	0	0.01	Negative	0	0	11.12.45
27-Ividi-19	291 Ledu Pallit I	5.05	0 11	0.01	Negative	0 11		11.13.10
27-IVId1-19	292 Ledu Pallit I	5.52	0.11		Negative	0.11	0.05	11.13.33
27-IVIar-19	293 Lead Paint I	5.12	0.05	0.06	Negative	0.05	0.03	11:13:57
27-Mar-19	294 Lead Paint I	5.03	0.16	0.19	Negative	0.16	0.1	11:14:24
27-Mar-19	295 Lead Paint I	5.1	0.05	0.06	Negative	0.05	0.03	11:14:52
27-Mar-19	296 Lead Paint I	6.1	0.11	0.14	Negative	0.11	0.07	11:15:19
27-Mar-19	297 Lead Paint I	11.05	0.14	0.11	Negative	0.14	0.05	11:15:57
27-Mar-19	298 Lead Paint I	4.03	0.15	0.17	Negative	0.15	0.08	11:16:31
27-Mar-19	299 Lead Paint I	8.7 >	1.00	0.09	Positive	1	0.04	11:16:59
27-Mar-19	300 Lead Paint I	24.76	0.05	0.03	Negative	0.05	0.01	11:17:35
27-Mar-19	301 Lead Paint I	3.85 >	1.00	0.1	Positive	1	0.05	11:18:26
27-Mar-19	302 Lead Paint I	5.11	0	0.01	Negative	0	0	11:18:57
27-Mar-19	303 Lead Paint I	5.39	0.12	0.08 surface	Negative	0.12	0.04	11:19:16
27-Mar-19	304 Lead Paint I	6.1	0.09	0.07 surface	Negative	0.09	0.04	11:19:34
27-Mar-19	305 Lead Paint I	5.03	0.07	0.05 surface	Negative	0.07	0.03	11:19:54
27-Mar-19	306 Lead Paint I	5.02	0.09	0.08 surface	Negative	0.09	0.04	11:20:37
27-Mar-19	307 Lead Paint I	5.09	0.14	0.12 surface	Negative	0.14	0.06	11:20:59
27-Mar-19	308 Lead Paint I	5.11	0.12	0.1 surface	Negative	0.12	0.05	11:21:18
27-Mar-19	309 Lead Paint I	5.14	0.13	0.1 surface	Negative	0.13	0.05	11:21:36
27-Mar-19	310 Lead Paint I	24.56	0.38	0.11 surface	Negative	0.38	0.06	11:22:22
27-Mar-19	311 Lead Paint I	14.65	0.65	0.34 surface	Negative	0.65	0.17	11:23:07
27-Mar-19	312 Lead Paint I	21.52	0.5	0.17 surface	Negative	0.5	0.09	11:23:37
27-Mar-19	313 Lead Paint I	24.88	0.41	0.14 surface	Negative	0.41	0.07	11:24:20
27-Mar-19	314 Lead Paint I	5.23	0.1	0.15	Negative	0.1	0.07	11:25:01
27-Mar-19	315 Lead Paint I	5.11	0	0	Negative	0	0	11:25:40
27-Mar-19	316 Lead Paint I	5.18	0	0	Negative	0	0	11:25:58
27-Mar-19	317 Lead Paint I	5.18	0	0	Negative	0	0	11:26:15
27-Mar-19	318 Lead Paint I	5.9	0.05	0.11	Negative	0.05	0.05	11:26:49
27-Mar-19	319 Lead Paint I	5.09	0.12	0.17	Negative	0.12	0.09	11:27:10
27-Mar-19	320 Lead Paint I	5.07	0.13	0.1 surface	Negative	0.13	0.05	11:27:28
27-Mar-19	321 Lead Paint I	5.11	0.02	0.07	Negative	0.02	0.04	11:27:49
27-Mar-19	322 Lead Paint I	23.06	0.02	0.09 surface	Negative	0.2	0.04	11.28.06
27-Mar-19	323 Lead Paint I	5.03	0.05	0.06	Negative	0.05	0.03	11.20.00
27-Mar-19	324 Lead Paint I	5.03	0.05	0.22	Negative	0.16	0.03	11.20.17
27 Mar-19	325 Lead Paint I	5.04	0.10	0.22	Negative	0.10	0.11	11.29.07
27-Mar-10	325 Lead Paint I	5.00	0.00	0.1	Negative	0.00	0.03	11.20.52
27-Mar-10	227 Load Paint I	5.05	0.04	0.00	Negative	0.04	0.05	11.20.17
27-Mar-10	327 Leau Faint I	5.05	0.41	0.21	Negative	0.41	0.11	11.20.57
27-Mar-10	320 Leau Pallit	ر 2/ 2/ 20	0.21	0.11 0.07 surface	Negative	0.21	0.00	11.22.00
27-IVIdI-19	323 Ledu Pallil I	24.30 E 01 V	0.20		Docitivo	0.20	0.05	11.32.30
27-1VId1-19	221 Lood Doint	5.21 >	1.00	0.15	Positive	1	0.07	11.23.00
27-1VId1-19		2.94 >	1.00	0.00	Nogetice	1	0.03	11.34:00
27-IVId[-19	552 Lead Paint I	5.01	0.02	0.05	Negative	0.02	0.03	11.34:20
27-iviar-19	333 Lead Paint I	5	0.2	0.14 SUITACE	Negative	0.2	0.07	11:34:45
27-IVIar-19	334 Lead Paint I	5.04	0.14	0.1 surface	Negative	0.14	0.05	11:35:03
27-Mar-19	335 Lead Paint I	5.96	0.11	0.07 surface	Negative	0.11	0.03	11:35:22

27-Mar-19	336 Lead Paint I	5.08	0.13	0.11 surface	Negative	0.13	0.05	11:35:47
27-Mar-19	337 Lead Paint I	5.04	0.06	0.06	Negative	0.06	0.03	11:36:18
27-Mar-19	338 Lead Paint I	5.06	0.06	0.07	Negative	0.06	0.03	11:36:36
27-Mar-19	339 Lead Paint I	5.04	0.05	0.06	Negative	0.05	0.03	11:37:10
27-Mar-19	340 Lead Paint I	6.12	0.14	0.09 surface	Negative	0.14	0.05	11:39:38
27-Mar-19	341 Lead Paint I	5 22	0.05	0.13	Negative	0.05	0.07	11.40.24
27 Mar-19	342 Lead Paint I	24.4	0.05	0.13	Negative	0.03	0.07	11.40.24
27 Mar 19	3/13 Load Paint I	2 7.7 8 2 5	0.07	0.07	Negative	0.07	0.03	11.40.44
27-Mar-10	343 Lead Paint I	5 17	0.05	0.04	Negative	0.03	0.02	11.41.24
27-Iviai-19 27 Mar 10	245 Load Daint L	10 02	0.04	0.04	Negative	0.04	0 02	11.41.40
27-Ividi-19	345 Ledu Pallit I	6.02	0.04	0.04	Negative	0.04	0.02	11.42.05
27-IVId1-19	340 Ledu Pallit I	0.0Z	0 1 2	0 12	Negative	0 12	0 07	11.42.50
27-IVIar-19	347 Lead Paint I	5.12	0.12	0.13	Negative	0.12	0.07	11:43:11
27-IVIar-19	348 Lead Paint I	5.83	0.01	0.05	Negative	0.01	0.03	11:43:33
27-Mar-19	349 Lead Paint I	14.94	0.12	0.08 surface	Negative	0.12	0.04	11:43:51
27-Mar-19	350 Lead Paint I	5.11	0	0	Negative	0	0	11:44:24
27-Mar-19	351 Lead Paint I	5.18	0	0	Negative	0	0	11:44:41
27-Mar-19	352 Lead Paint I	6.09	0	0	Negative	0	0	11:44:58
27-Mar-19	353 Lead Paint I	5.89 >	1.00	0.02	Positive	1	0.01	11:45:22
27-Mar-19	354 Lead Paint I	16.42	0	0.01	Negative	0	0.01	11:45:48
27-Mar-19	355 Lead Paint I	13.02 >	1.00	0.01	Positive	1	0	11:46:38
27-Mar-19	356 Lead Paint I	7.51 >	1.00	0.02	Positive	1	0.01	11:47:19
27-Mar-19	357 Lead Paint I	5.23	0	0.02	Negative	0	0.01	11:48:08
27-Mar-19	358 Lead Paint I	15.68	0.01	0.02	Negative	0.01	0.01	11:48:29
27-Mar-19	359 Lead Paint I	9.9	0.02	0.04	Negative	0.02	0.02	11:49:01
27-Mar-19	360 Lead Paint I	5.23	0.02	0.05	Negative	0.02	0.03	11:49:28
27-Mar-19	361 Lead Paint I	6.14	0	0.01	Negative	0	0	11:49:47
27-Mar-19	362 Lead Paint I	5.35	0.13	0.11 surface	Negative	0.13	0.06	11:50:08
27-Mar-19	363 Lead Paint I	5.82	0.06	0.07	Negative	0.06	0.03	11:50:26
27-Mar-19	364 Lead Paint I	6.09	0.03	0.03	Negative	0.03	0.02	11:50:46
27-Mar-19	365 Lead Paint I	20.45	0.1	0.05	Negative	0.1	0.02	11:51:17
27-Mar-19	366 Lead Paint I	7.37 >	1.00	0.08	Positive	1	0.04	11:52:14
27-Mar-19	367 Lead Paint I	5.18	0.32	0.27 surface	Negative	0.32	0.13	11:52:44
27-Mar-19	368 Lead Paint I	7.63 >	1.00	0.14	Positive	1	0.07	11:53:08
27-Mar-19	369 Lead Paint I	5.16	0.05	0.06	Negative	0.05	0.03	11:53:37
27-Mar-19	370 Lead Paint I	5.22 >	1.00	0.12	Positive	1	0.06	11:54:06
27-Mar-19	371 Lead Paint I	5.18	0.09	0.14	Negative	0.09	0.07	11:54:50
27-Mar-19	372 Lead Paint I	5.02	0.06	0.08	Negative	0.06	0.04	11:55:08
27-Mar-19	373 Lead Paint I	6.1	0	0.01	Negative	0	0	11:55:42
27-Mar-19	374 Lead Paint I	25.6	0.11	0.06 surface	Negative	0.11	0.03	11:56:00
27-Mar-19	375 Lead Paint I	5.97	0.01	0.03	Negative	0.01	0.01	11:56:52
27-Mar-19	376 Lead Paint I	5.12	0.16	0.17	Negative	0.16	0.09	11:57:11
27-Mar-19	377 Lead Paint I	5.11	0.12	0.15	Negative	0.12	0.07	11:57:39
27-Mar-19	378 Lead Paint I	5.03	0.21	0.22	Negative	0.21	0.11	11.58.00
27 Mar-19	379 Lead Paint I	5.09	0.03	0.04	Negative	0.03	0.11	11.50.00
27 Mar-19	380 Lead Paint I	2.88 >	1 00	0.04	Positive	0.05	0.02	11.50.10
27 Mar 19	381 Load Paint I	5.03	0 17	0.15	Negative	0 17	0.03	11.50.50
27-Mar-19	382 Lead Paint I	2.05	1 00	0.08	Positivo	0.17	0.04	11.59.15
27-Iviai-19 27 Mar 10	202 Lead Paint I	2.54 /	1.00	0.19	Positive	1	0.1	12.00.05
27-Iviai-19 27 Mar 10	204 Load Daint L	2.07 Z	1.00	0.3	Nogativo	1	0.15	12.00.03
27-War 10	205 Load Daint L	0.14	02		Negative	0	0.05	12.00.52
27-1VId1-19	205 Ledu Palint I	0.ð 4 00 × 1	0.2		Docitivo	0.2	0.05	12.00:54
27-IVId[-19		4.09 >	1.00	0.07	North	1	0.03	12:01:24
27-IVId1-19		0.Ub	0.08		Negative	0.08	0.03	12:02:28
27-IVIar-19		5.96	0.1		Negative	0.1	0.04	12:02:52
27-iviar-19		6.1 F 4 C	0.11		Negative	0.11	0.05	12:03:43
27-IVIar-19	390 Lead Paint I	5.16	0.1	U.UX surface	Negative	0.1	0.04	12:04:13
27-Mar-19	391 Lead Paint I	5.06	0.09	0.07 surface	Negative	0.09	0.04	12:04:51

27-Mar-19	392 Lead Paint I	5.1	0.16	0.13 surface	Negative	0.16	0.07	12:05:18
27-Mar-19	393 Lead Paint I	5.11	0	0	Negative	0	0	12:06:52
27-Mar-19	394 Lead Paint I	5.17	0	0	Negative	0	0	12:07:10
27-Mar-19	395 Lead Paint I	5.18	0	0	Negative	0	0	12:07:36
27-Mar-19	396 Lead Paint I	5.22	0	0	Negative	0	0	12:07:53
27-Mar-19	397 Lead Paint I	5.24	1.18	0.17 surface	Positive	1.18	0.08	12:09:36
27-Mar-19	398 Lead Paint I	5.33	0	0	Negative	0	0	12:10:06

Date	Reading	Mode	LiveTime	Match1	MN1	Pass/Fail	Pass Fail StaPb)	Pb +/-	Time
28-Mar-19	1	Standardiza	26.87	0.019716	228	-0.012032	PASS			8:34:42
28-Mar-19	2	Lead Paint I	5.34	0	0		Negative	0	0	8:39:57
28-Mar-19	3	Lead Paint I	5.15	0	0		Negative	0	0	8:44:27
28-Mar-19	4	Lead Paint I	5.24	0	0		Negative	0	0	8:44:40
28-Mar-19	5	Lead Paint I	5.21	1.32	0.31	surface	Positive	1.32	0.15	8:44:57
28-Mar-19	6	Lead Paint I	5.19	0	0		Negative	0	0	8:47:47
28-Mar-19	7	Lead Paint I	5.37	0	0		Negative	0	0	8:48:03
28-Mar-19	8	Lead Paint I	5.36	0	0		Negative	0	0	8:49:57
28-Mar-19	9	Lead Paint I	25.26	> 1.00	0.46		Positive	1	0.23	8:50:11
28-Mar-19	10	Lead Paint I	25.33	0.12	0.18		Negative	0.12	0.09	8:51:06
28-Mar-19	11	Lead Paint I	5.18	0	0		Negative	0	0	8:51:55
28-Mar-19	12	Lead Paint I	5.26	0	0		Negative	0	0	8:52:12
28-Mar-19	13	Lead Paint I	5.18	0	0		Negative	0	0	8:52:33
28-Mar-19	14	Lead Paint I	18.57	> 1.00	0.07		Positive	1	0.03	8:52:46
28-Mar-19	15	Lead Paint I	5.36	0	0		Negative	0	0	8:55:08
28-Mar-19	16	Lead Paint I	25.76	> 1.04	0.42		Positive	1.04	0.21	8:55:22
28-Mar-19	17	Lead Paint I	5.87	0	0		Negative	0	0	8:56:46
28-Mar-19	18	Lead Paint I	5.75	0	0		Negative	0	0	8:57:04
28-Mar-19	19	Lead Paint I	5.82	0	0		Negative	0	0	8:57:22
28-Mar-19	20	Lead Paint I	5.36	0	0		Negative	0	0	8:59:16
28-Mar-19	21	Lead Paint I	8.77	1.44	0.42	surface	Positive	1.44	0.21	8:59:32
28-Mar-19	22	Lead Paint I	5.23	0.11	0.37		Negative	0.11	0.19	9:01:11
28-Mar-19	23	Lead Paint I	19.98	0.05	0.06		Negative	0.05	0.03	9:02:14
28-Mar-19	24	Lead Paint I	24.45	0.39	0.39		Negative	0.39	0.19	9:02:59
28-Mar-19	25	Lead Paint I	14.56	0.49	0.43		Negative	0.49	0.22	9:03:55
28-Mar-19	26	Lead Paint I	5.24	0	0		Negative	0	0	9:04:25
28-Mar-19	27	Lead Paint I	5.15	0	0		Negative	0	0	9:05:42
28-Mar-19	28	Lead Paint I	5 24	0	0		Negative	0	0	9.06.13
28-Mar-19	29	Lead Paint I	5 21	0	0		Negative	0	0	9.06.29
28 Mar-19	30	Lead Paint I	6.13	0	0		Negative	0	0	9.09.44
28 Mar-19	30	Lead Paint I	5 17	0	0		Negative	0	0	9.00.44
28 Mar-19	32	Lead Paint I	5 22	0	0		Negative	0	0	9.10.02
28 Mar-19	32	Lead Paint I	10.69	1 98	0 80 0		Positive	1 98	0.49	9.13.15
28 Mar-19	3/	Lead Paint I	25.61	1.50	0.50	surface	Negative	1.50	0.45	9.13.13
28 Mar-19	35	Lead Paint I	5.01	0.7	0.50	Surface	Negative	0.7	0.10	9.15.33
28 Mar-19	36	Lead Paint I	20 q	0.21	0 11	surface	Negative	0.21	0.06	9.16.47
28 Mar-19	37	Lead Paint I	5 05	0.21	0.11	Surface	Negative	0.21	0.00	9.10.47
28 Mar-19	38	Lead Paint I	5.05	0.23	0.04		Negative	0.23	0.27	9.18.34
28 Mar-19	30	Lead Paint I	5.07	0.04	0.04		Negative	0.04	0.02	9.10.34
28 Mar-19	40	Lead Paint I	6.12	0.00	0.05		Negative	0.00	0.05	9.10.40
28 Mar-19	40 //1	Lead Paint I	5 13	0.14	0.20		Negative	0.14	0.14	9.26.56
28 Mar-19	12	Load Daint I	5.15 6.16	0	0		Negative	0	0	Q.20.30
28 Mar-19	13	Lead Paint I	5 19	0	0		Negative	0	0	9·27·22
28 Mar-19	45 11	Load Daint I	5 12	0	0		Negative	0	0	0·28·01
28-Mar-19	44	Lead Paint I	5.00	0	0		Negative	0	0	0.20.01
28-Iviai-19	45	Leau Faint I	21 01	0 22	01	surfaco	Negative	0 22	0.05	0.21.05
28-Iviai-19	40	Lead Paint I	21.01	0.22	0.1	Suilace	Negative	0.22	0.03	9.31.03
28-Iviai-19	47	Leau Faint I	0.04 6.09	0.00	0.00		Negative	0.00	0.03	0.22.55
28-Iviai-19	40	Leau Faint I	0.08 6.06	0.02	0.03		Negative	0.02	0.02	0.22.12
20-1VId1-19	49		0.00 E 16	0.04	0.00		Negative	0.04	0.03	0.33.30
20-1VId1-19	50		E 01		0 11	surface	Negative			J.33.30
20-1VId1-19	51		5.91	0.51	0.11	surface	Negativo	0.51	0.05	9.33.38
20-IVIdI-19	52		5.00 E 00	0.08	0.15	Surface	Nogative		0.07	9.57.50
20-11101-19	53		5.89 11.00	0.43	0.11	surface	Nogative	0.43	0.00	9.36:42
20-11101-19	54		±1.09	0.8/	0.11	surface	Nogative	0.8/	0.00	9.59:41
20-IVIAI-19	55		0.07	0.38	0.08	surface	Negative	0.38	0.04	9.41:05
28-IVIAr-19	56	Lead Paint I	5.02	0.41	0.1	surrace	Negative	0.41	0.05	9:43:22
zs-iviar-19	57	Lead Paint I	5.03	0	0		медатие	0	0	9:44:46

28-Mar-19	58	Lead Paint I	5.26	0	0		Negative	0	0	9:45:10
28-Mar-19	59	Lead Paint I	5.24	0	0		Negative	0	0	9:45:31
28-Mar-19	60	Lead Paint I	5.22	0	0		Negative	0	0	9:45:49
28-Mar-19	61	Lead Paint I	12.15	0.17	0.19		Negative	0.17	0.09	9:50:11
28-Mar-19	62	Lead Paint I	20.1	0.11	0.18		Negative	0.11	0.09	9:51:14
28-Mar-19	63	Lead Paint I	25.04	0.06	0.05	surface	Negative	0.06	0.03	9.51.49
28-Mar-19	64	Lead Paint I	20.04	0.00	0.05	Junuce	Negative	0.00	0.05	0.51.45
20-Mar 10	65	Lead Paint I	22.40 د م	0.55	0.5		Negative	0.55	0.15	0.55.14
20-IVIdI-19	05		5.62	0	0		Negative	0	0	9.55.14
28-IVIar-19	66	Lead Paint I	5.23	0.08	0.13		Negative	0.08	0.06	9:57:22
28-Mar-19	67	Lead Paint I	5.05	0.04	0.05		Negative	0.04	0.02	9:58:25
28-Mar-19	68	Lead Paint I	5.62	0	0		Negative	0	0	9:58:56
28-Mar-19	69	Lead Paint I	6.16	0.14	0.13	surface	Negative	0.14	0.06	10:02:53
28-Mar-19	70	Lead Paint I	5.04	0.08	0.08	surface	Negative	0.08	0.04	10:03:26
28-Mar-19	71	Lead Paint I	5.97	0.13	0.16		Negative	0.13	0.08	10:03:45
28-Mar-19	72	Lead Paint I	24.88	0.07	0.06	surface	Negative	0.07	0.03	10:05:29
28-Mar-19	73	Lead Paint I	25.15	0.1	0.14		Negative	0.1	0.07	10:06:42
28-Mar-19	74	Lead Paint I	9.95	0.15	0.2		Negative	0.15	0.1	10:07:37
28-Mar-19	75	Lead Paint I	5.21	0	0		Negative	0	0	10:08:00
28-Mar-19	76	Lead Paint I	5.05	0.02	0.06		Negative	0.02	0.03	10:08:22
28-Mar-19	77	Lead Paint I	26.86	0.16	0.05	surface	Negative	0.16	0.03	10.08.41
20 Mar 10	70	Load Paint I	6.05	0.10	0.03	Junace	Nogative	0.10	0.03	10:00:71
20-Mar 10	70	Lead Paint I	0.05 E 2	0.02	0.04		Negative	0.02	0.02	10:00:49
20-IVIdI-19	79		5.5	0.13	0.17		Negative	0.15	0.08	10.09.46
28-IVIar-19	80	Lead Paint I	6.08	0	0		Negative	0	0	10:10:15
28-Mar-19	81	Lead Paint I	7.73	0.14	0.13	surface	Negative	0.14	0.07	10:10:30
28-Mar-19	82	Lead Paint I	5.12	0.36	0.52		Negative	0.36	0.26	10:10:50
28-Mar-19	83	Lead Paint I	5.04	0.03	0.06		Negative	0.03	0.03	10:11:14
28-Mar-19	84	Lead Paint I	5.07	0.03	0.05		Negative	0.03	0.03	10:11:42
28-Mar-19	85	Lead Paint I	5.14	0.16	0.38		Negative	0.16	0.19	10:12:02
28-Mar-19	86	Lead Paint I	6.37	0	0.01		Negative	0	0	10:12:30
28-Mar-19	87	Lead Paint I	5.21	0.03	0.06		Negative	0.03	0.03	10:12:48
28-Mar-19	88	Lead Paint I	25.04	0.04	0.09		Negative	0.04	0.04	10:13:07
28-Mar-19	89	Lead Paint I	5.04	0.05	0.13		Negative	0.05	0.06	10:13:47
28-Mar-19	90	Lead Paint I	5.26	0.15	0.21		Negative	0.15	0.1	10:14:04
28-Mar-19	91	Lead Paint I	5.91	0	0.02		Negative	0	0.01	10:14:23
28-Mar-19	92	Lead Paint I	17 21	0.21	0.11	surface	Negative	0.21	0.06	10.14.43
28-Mar-19	92	Lead Paint I	5 1	0.21	0.11	Surrace	Negative	0.21	0.00	10:15:22
20 Mar 10	04	Load Paint I	5.1	0	0		Nogative	0	0	10.15.22
20-1VId1-19	94	Lead Paint I	J.I E 19	0	0		Negative	0	0	10.15.45
20-IVIdI-19	95		5.16	. 1 00	0		Negative	0	0	10.15.59
28-IVIar-19	96	Lead Paint I	19.66	> 1.00	0.01		Positive	1	0.01	10:16:31
28-Mar-19	97	Lead Paint I	5.81	> 1.00	0.02		Positive	1	0.01	10:17:19
28-Mar-19	98	Lead Paint I	19.51	> 1.00	0.01		Positive	1	0	10:17:50
28-Mar-19	99	Lead Paint I	5.2	0.01	0.01		Negative	0.01	0	10:18:44
28-Mar-19	100	Lead Paint I	24.71	0.06	0.04	surface	Negative	0.06	0.02	10:19:20
28-Mar-19	101	Lead Paint I	6.3	0	0.01		Negative	0	0	10:20:08
28-Mar-19	102	Lead Paint I	24.7	0.03	0.09		Negative	0.03	0.05	10:20:35
28-Mar-19	103	Lead Paint I	12.27	0.11	0.25		Negative	0.11	0.12	10:21:35
28-Mar-19	104	Lead Paint I	5.91	0	0		Negative	0	0	10:26:00
28-Mar-19	105	Lead Paint I	25.53	0.06	0.03	surface	Negative	0.06	0.01	10:26:18
28-Mar-19	106	Lead Paint I	5.79	0	0		Negative	0	0	10:27:01
28-Mar-19	107	Lead Paint I	9.89	0.17	0.13	surface	Negative	0.17	0.07	10:27:25
28-Mar-19	102	Lead Paint I	5.05	0.17	0.10		Negative	0.17	0.07	10.27.52
28_Mar_10	100	Lead Daint I	5.14	0	0		Negative	0	0	10.29.17
20-1viai-13	110	Load Paint L	J.14 6 1 F	0	0		Nogative	0	0	10.20.17
20-1VId1-19	110		0.13	0	0		Negative	0	0	10.20.14
28-IVIAI-19	111	Leau Paint I	5.08	0.02	0.04		ivegative	0.02	0.02	10:29:14
28-Mar-19	112	Lead Paint I	5.08	0.16	0.49		Negative	0.16	0.24	10:29:50
28-Mar-19	113	Lead Paint I	5.07	0.09	0.16		Negative	0.09	0.08	10:30:14
28-Mar-19	114	Lead Paint I	5.13	0.09	0.19		Negative	0.09	0.09	10:30:45
28-Mar-19	115	Lead Paint I	6.19	0.08	0.06	surface	Negative	0.08	0.03	10:31:18
28-Mar-19	116 Lead Paint	l 24.95	0.07	0.03	surface	Negative	0.07	0.02	10:31:49	
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28-Mar-19	117 Lead Paint	I 25.06	0.1	0.04	surface	Negative	0.1	0.02	10:32:35	
28-Mar-19	118 Lead Paint	14.42	0.13	0.06	surface	Negative	0.13	0.03	10:33:24	
28-Mar-19	119 Lead Paint	1 5.22	0.06	0.05	surface	Negative	0.06	0.03	10.33.53	
28-Mar-19	120 Lead Paint	I 5.04	0.00	0.03	Surrace	Negative	0.00	0.05	10.34.12	
20 Mar 10	120 Lead Paint	I 5.04	0.06	0.01	surfaco	Nogativo	0.06	0.02	10:24:20	
20-Iviai-19	121 Lead Paint	I 5.49	0.00	0.04	surface	Negative	0.00	0.02	10.34.29	
28-IVIdI-19	122 Lead Paint	1 5.72	0.05	0.04	surface	Negative	0.05	0.02	10.34.40	
28-Mar-19	123 Lead Paint	6.09	0.04	0.03	surface	Negative	0.04	0.02	10:35:07	
28-Mar-19	124 Lead Paint	l 6.07	0.11	0.08	surface	Negative	0.11	0.04	10:35:34	
28-Mar-19	125 Lead Paint	I 6.09	0.08	0.06	surface	Negative	0.08	0.03	10:35:56	
28-Mar-19	126 Lead Paint	I 5.03	0.06	0.05	surface	Negative	0.06	0.03	10:36:15	
28-Mar-19	127 Lead Paint	I 3.89 3	> 1.00	0.18		Positive	1	0.09	10:36:32	
28-Mar-19	128 Lead Paint	l 6.45 :	> 1.00	0.08		Positive	1	0.04	10:37:16	
28-Mar-19	129 Lead Paint	I 9.74	0.11	0.06		Negative	0.11	0.03	10:37:48	
28-Mar-19	130 Lead Paint	l 2.95	0.13	0.14		Negative	0.13	0.07	10:38:20	
28-Mar-19	131 Lead Paint	I 2.9	0.07	0.09		Negative	0.07	0.05	10:38:45	
28-Mar-19	132 Lead Paint	I 5.02	0.01	0.06		Negative	0.01	0.03	10:39:08	
28-Mar-19	133 Lead Paint	5.37	0.13	0.09	surface	Negative	0.13	0.05	10:39:25	
28-Mar-19	134 Lead Paint	I 5.95	0.13	0.03	surface	Negative	0.13	0.02	10.39.48	
28 Mar 19	125 Load Paint	i 5.55	0.08	0.04	surface	Nogativo	0.04	0.02	10:40:00	
20-Iviai-19	135 Lead Paint		0.08	0.05	surface	Negative	0.08	0.02	10.40.05	
28-IVIdI-19	130 Leau Paint	1 5.02	0.12	0.08	surface	Negative	0.12	0.04	10.40.35	
28-IVIar-19	137 Lead Paint	I 6.1	80.0	0.05	surface	Negative	80.0	0.02	10:41:15	
28-Mar-19	138 Lead Paint	6.08	0.07	0.04	surface	Negative	0.07	0.02	10:41:40	
28-Mar-19	139 Lead Paint	I 5.14	0	0.01		Negative	0	0	10:43:18	
28-Mar-19	140 Lead Paint	I 5.25	0.15	0.39		Negative	0.15	0.19	10:43:36	
28-Mar-19	141 Lead Paint	l 21.19	0.04	0.05		Negative	0.04	0.03	10:43:55	
28-Mar-19	142 Lead Paint	l 24.59	0.05	0.05		Negative	0.05	0.02	10:45:56	
28-Mar-19	143 Lead Paint	l 5.31	0	0		Negative	0	0	10:46:48	
28-Mar-19	144 Lead Paint	I 5.06	0	0		Negative	0	0	10:47:17	
28-Mar-19	145 Lead Paint	I 5.14	0	0		Negative	0	0	10:47:34	
28-Mar-19	146 Lead Paint	I 5.21	0	0		Negative	0	0	10:47:48	
28-Mar-19	147 Lead Paint	1 5.78	0	0		Negative	0	0	10:48:10	
28-Mar-19	148 Lead Paint	I 5.41	0 09	0 08	surface	Negative	0.09	0.04	10:48:26	
28 Mar 19	140 Lead Paint	, 5.41 I 5.82	0.03	0.00	Junuce	Negative	0.03	0.04	10.40.20	
20-Mar 10	149 Lead Paint	I 5.02	0.04	0.15	curfaco	Negative	0.04	0.00	10:40:40	
20-1VId1-19	150 Leau Paint	I 5.11	0.11	0.1	surface	Negative	0.11	0.03	10.49.07	
28-10101-19	151 Leau Paint	1 5.94	0.14	0.13	surface	Negative	0.14	0.06	10.49.41	
28-Mar-19	152 Lead Paint	I 5.07	80.0	0.09		Negative	0.08	0.05	10:50:11	
28-Mar-19	153 Standardiza	26.45	0.019717	228	-0.03	O7 PASS	_	_	10:53:54	
28-Mar-19	154 Lead Paint	I 5.37	0	0		Negative	0	0	10:58:25	
28-Mar-19	155 Lead Paint	I 5.09	0.05	0.08		Negative	0.05	0.04	11:01:02	
28-Mar-19	156 Lead Paint	I 5.05	0.07	0.1		Negative	0.07	0.05	11:01:25	
28-Mar-19	157 Lead Paint	l 19.1	0.1	0.04	surface	Negative	0.1	0.02	11:01:54	
28-Mar-19	158 Lead Paint	l 5.19	0.19	0.12	surface	Negative	0.19	0.06	11:02:28	
28-Mar-19	159 Lead Paint	I 6.06	0	0		Negative	0	0	11:02:56	
28-Mar-19	160 Lead Paint	I 5.15	0.28	0.25	surface	Negative	0.28	0.12	11:03:13	
28-Mar-19	161 Lead Paint	I 5.3	0.11	0.08		Negative	0.11	0.04	11:03:35	
28-Mar-19	162 Lead Paint	6.1	0	0		Negative	0	0	11:04:07	
28-Mar-19	163 Lead Paint	1 537	0 11	0.09	surface	Negative	0.11	0.05	11.04.25	
28-Mar-19	164 Lead Paint	6.05	0.11	0.05	surface	Negative	0.11	0.03	11.05.00	
28 Mar_19	165 Load Paint	I 5.03	0.1	0.07	Junace	Negative	0.1	0.03	11.05.00	
20 Mar 10		, J.UJ	0.00	0.00	curface	Nogotive	0.00	0.03	11.06.02	
20-1VId1-19			0.07	0.06	surface	Negative	0.07	0.03	11.00.02	
20-IVI01-19	107 Lead Paint	i 5.01	0.06	0.05	surface	Negative	0.06	0.03	11:00:30	
zð-Mar-19	168 Lead Paint	i 5.07	0.05	0.04	surrace	Negative	0.05	0.02	11:07:16	
28-Mar-19	169 Lead Paint	I 5.92	0.03	0.03		Negative	0.03	0.01	11:07:37	
28-Mar-19	170 Lead Paint	I 5.77	0	0		Negative	0	0	11:08:52	
28-Mar-19	171 Lead Paint	l 5.17	0	0		Negative	0	0	11:09:13	
28-Mar-19	172 Lead Paint	I 5.93	0	0.01		Negative	0	0	11:09:34	
28-Mar-19	173 Lead Paint	l 5.16	0	0		Negative	0	0	11:10:03	

28-Mar-19	174 Lead Paint I	5.15	0	0	Negative	0	0	11:10:20
28-Mar-19	175 Lead Paint I	5.16	0	0	Negative	0	0	11:11:38
28-Mar-19	176 Lead Paint I	5.19	0	0	Negative	0	0	11:11:57
28-Mar-19	177 Lead Paint I	25.07	> 1.00	0.19	Positive	1	0.1	11:12:15
28-Mar-19	178 Lead Paint I	5.23	> 1.68	0.62 su	rface Positive	1.68	0.31	11:13:13
28-Mar-19	179 Lead Paint I	12.2	> 1.90	0.86 su	rface Positive	1.9	0.43	11:13:38
28-Mar-19	180 Lead Paint I	7.51	> 1.44	0.42 su	rface Positive	1.44	0.21	11:14:14
28-Mar-19	181 Lead Paint I	5.27	0	0.02	Negative	0	0.01	11:14:36
28-Mar-19	182 Lead Paint I	5.14	2.25	0.71 su	rface Positive	2.25	0.35	11:15:01
28-Mar-19	183 Lead Paint I	6.35	2.28	1.09 su	rface Positive	2.28	0.54	11:15:18
28-Mar-19	184 Lead Paint I	6.03	0	0.01	Negative	0	0	11:15:44
28-Mar-19	185 Lead Paint I	7 57	> 1 91	0.85 50	rface Positive	1 91	0 43	11.16.13
28-Mar-19	186 Lead Paint I	15.81	> 1 31	0.29 su	rface Positive	1 31	0.15	11.16.33
28-Mar-19	187 Lead Paint I	5 2	> 2 07	0.95 su	rface Positive	2.07	0.19	11.10.00
28-Mar-19	188 Lead Paint I	5.84	, <u>2.0,</u> 0	0.55 50	Negative	2.07	0.40	11.17.13
28 Mar_19	180 Lead Paint I	5.05	0	0	Negative	0	0	11.17.57
28-Mar-19	100 Lead Paint I	5.05	0	0.01	Negative	0	0	11.17.34
20-1viai-15	101 Load Paint I	0.02 E 1E	0	0.01	Negative	0	0	11.10.14
20-IVIdI-19	191 Leau Paint I	5.15	0	0	Negative	0	0	11.10.54
20-IVId1-19	192 Lead Paint I	5.19	0	0	Negative	0	0	11.10.52
28-IVIar-19	193 Lead Paint I	5.17	0	0	Negative	0	0	11:19:10
28-Mar-19	194 Lead Paint I	5.18	0	0	Negative	0	0	11:19:34
28-Mar-19	195 Lead Paint I	5.17	0	0	Negative	0	0	11:19:54
28-Mar-19	196 Lead Paint I	5.11	0	0	Negative	0	0	11:20:15
28-Mar-19	197 Lead Paint I	20.36	0.02	0.03	Negative	0.02	0.02	11:20:33
28-Mar-19	198 Lead Paint I	8.77	0.09	0.11	Negative	0.09	0.06	11:21:20
28-Mar-19	199 Lead Paint I	24.56	> 1.00	0.01	Positive	1	0.01	11:21:53
28-Mar-19	200 Lead Paint I	17.69	0.03	0.03	Negative	0.03	0.01	11:22:51
28-Mar-19	201 Lead Paint I	5.9	0	0.02	Negative	0	0.01	11:23:34
28-Mar-19	202 Lead Paint I	8.52	1.34	0.34 su	rface Positive	1.34	0.17	11:23:50
28-Mar-19	203 Lead Paint I	6.28	1.88	0.76 su	rface Positive	1.88	0.38	11:24:25
28-Mar-19	204 Lead Paint I	9.41	0.44	0.51	Negative	0.44	0.26	11:24:50
28-Mar-19	205 Lead Paint I	5.15	0.24	0.54	Negative	0.24	0.27	11:28:08
28-Mar-19	206 Lead Paint I	7.62	0.27	0.44	Negative	0.27	0.22	11:29:22
28-Mar-19	207 Lead Paint I	20.23	0.38	0.37	Negative	0.38	0.19	11:29:46
28-Mar-19	208 Lead Paint I	5.19	0	0	Negative	0	0	11:30:22
28-Mar-19	209 Lead Paint I	5.26	0	0	Negative	0	0	11:30:39
28-Mar-19	210 Lead Paint I	5.06	0	0	Negative	0	0	11:30:56
28-Mar-19	211 Lead Paint I	10.81	0.09	0.08 su	rface Negative	0.09	0.04	11:31:13
28-Mar-19	212 Lead Paint I	5.36	0	0	Negative	0	0	11:31:42
28-Mar-19	213 Lead Paint I	25.35	0.87	0.43 su	rface Negative	0.87	0.21	11:32:03
28-Mar-19	214 Lead Paint I	5.66	0	0	Negative	0	0	11:33:10
28-Mar-19	215 Lead Paint I	5.82	0	0	Negative	0	0	11:33:28
28-Mar-19	216 Lead Paint I	5.69	0	0.01	Negative	0	0	11:33:49
28-Mar-19	217 Lead Paint I	5.34	> 1.00	0.02	Positive	1	0.01	11:34:11
28-Mar-19	218 Lead Paint I	5 28	0.18	0.47	Negative	0.18	0.24	11.34.44
28-Mar-19	210 Lead Paint I	24.09	0.10	0.47	rface Negative	0.10	0.24	11.34.44
28 Mar_19	210 Lead Paint I	24.05	0.4	0.25 30	Negative	0.4	0.14	11.35.02
20 Mar 10	220 Lead Paint I	0.96	0.05	0.45	Nogativo	0.05	0.24	11.26.27
20-1vidi-19	221 Leau Paint I	5.00	0.49	0.49	Negative	0.49	0.25	11.30.32
20-ividi-19	222 Lead Paint I	J.10 E 10	0.1	0.15	Negative	0.1	0.08	11.30.33
20-1VId1-19		5.18	0	0	Negative	0	0	11.37:19
20-1VIdf-19	224 Lead Paint I	5.23	0	U	Negative	U	0	11.37:50
28-IVIAr-19	225 Lead Paint I	6.11	0	0	Negative	0	0	11:37:53
28-Mar-19	226 Lead Paint I	5.06	0	0.01	Negative	0	0	11:38:28
28-Mar-19	227 Lead Paint I	5.17	0	0	Negative	0	0	11:38:45
28-Mar-19	228 Lead Paint I	5.12	0	0	Negative	0	0	11:39:02
28-Mar-19	229 Lead Paint I	24.39	0.75	0.37 su	rtace Negative	0.75	0.19	11:39:36
28-Mar-19	230 Lead Paint I	5.23	0.13	0.4	Negative	0.13	0.2	11:40:19
28-Mar-19	231 Lead Paint I	5.99	0	0	Negative	0	0	11:40:38

28-Mar-19	232 Lead Paint I	5.28	0.11	0.3	Negative	0.11	0.15	11:40:56
28-Mar-19	233 Lead Paint I	5.15	0.05	0.12	Negative	0.05	0.06	11:41:21
28-Mar-19	234 Lead Paint I	5.02	0.3	0.62	Negative	0.3	0.31	11:41:40
28-Mar-19	235 Lead Paint I	5.1	0.03	0.07	Negative	0.03	0.03	11:42:05
28-Mar-19	236 Lead Paint I	7.46	0.27	0.47	Negative	0.27	0.24	11:42:22
28-Mar-19	237 Lead Paint I	5.25	0.08	0.07 surface	Negative	0.08	0.04	11:42:52
28-Mar-19	238 Lead Paint I	5.23	0.42	0.35 surface	Negative	0.42	0.18	11:43:10
28-Mar-19	239 Lead Paint I	24.96	0.21	0.07 surface	Negative	0.21	0.03	11:43:26
28-Mar-19	240 Lead Paint I	6.42	0.22	0.12 surface	Negative	0.22	0.06	11:44:10
28-Mar-19	241 Lead Paint I	24.45	0.28	0.08 surface	Negative	0.28	0.04	11:44:37
28-Mar-19	242 Lead Paint I	5.17	0.01	0.03	Negative	0.01	0.02	11:45:23
28-Mar-19	243 Lead Paint I	17.3 >	1.00	0.11	Positive	1	0.05	11:45:40
28-Mar-19	244 Lead Paint I	5.94	0	0	Negative	0	0	11:46:16
28-Mar-19	245 Lead Paint I	5.13	0.09	0.15	Negative	0.09	0.07	11:46:37
28-Mar-19	246 Lead Paint I	5.03	0.07	0.07 surface	Negative	0.07	0.04	11:47:15
28-Mar-19	247 Lead Paint I	5.08	0.17	0.13 surface	Negative	0.17	0.06	11.48.38
28-Mar-19	248 Lead Paint I	6.09	0.16	0.37	Negative	0.16	0.18	11:49:07
28-Mar-19	249 Lead Paint I	5.08	0.2	0.12 surface	Negative	0.2	0.06	11.49.41
28-Mar-19	250 Lead Paint I	5.00	0.2	0	Negative	0	0.00	11.50.26
28-Mar-19	250 Lead Paint I	25.03	0.02	0.03	Negative	0.02	0.02	11.50.20
28 Mar-19	251 Lead Paint I	5 16	0.02	0.03	Negative	0.02	0.02	11.50.42
28 Mar-19	252 Lead Paint I	5.10	0	0.01	Negative	0	0.01	11.51.20
28 Mar 19	255 Lead Paint I	5.15	0	0.05	Negative	0	0.01	11.51.52
28-Mar-19	254 Lead Paint I	5.06	0	0 02	Negative	0	0.01	11.51.57
28-Mar-19	255 Lead Paint I	5.00 7 77	0 11		Negative	0 11	0.01	11.52.17
28-Mar 10	250 Lead Paint I	5.01	0.11		Negative	0.11	0.04	11.52.55
20-1viai-19 28 Mar 10	257 Lead Paint I	5.02	0.03	0.10 Suitace	Negative	0.53	0.08	11.52.55
20-1viai-19 28 Mar 10	258 Lead Paint I	5.50	0.08	0.08	Negative	0.08	0.04	11.53.55
20-1viai-19	259 Lead Paint I	5.01	01	0.02	Negative	01	0.01	11.55.51
20-1VId1-19	200 Leau Paint I	5.05	0.1	0.1 0.07 curfaca	Negative	0.1	0.05	11.54.10
20-IVId1-19	201 Lead Paint I	5.92	0.25	0.07 surface	Negative	0.23	0.04	11.54.27
20-IVIdI-19	202 Lead Paint I	С Г 01	0.5		Negative	0.5	0.00	11.54.47
20-IVId1-19	203 Lead Paint I	5.91	0.57		Negative	0.37	0.05	11.55.05
20-IVId1-19	204 Lead Paint I	5.14	0.05		Negative	0.63	0.09	11.55.40
28-IVIal-19	265 Lead Paint I	5.17	0.64	0.17 surface	Negative	0.64	0.09	11:50:20
28-IVIar-19	266 Lead Paint I	5.2 >	1.00	0.07	Positive	1	0.03	11:56:44
28-IVIar-19	267 Lead Paint I	12.21	0.11	0.04 surface	Negative	0.11	0.02	11:57:07
28-IVIar-19	268 Lead Paint I	5.19	0	0	Negative	0	0	11:57:40
28-IVIar-19	269 Lead Paint I	5.10	0	0	Negative	0	0	11:57:58
28-Mar-19	270 Lead Paint I	5.18	0	0	Negative	0	0	11:58:18
28-Mar-19	271 Lead Paint I	25.03	0.32	0.25 surface	Negative	0.32	0.12	11:59:09
28-Mar-19	272 Lead Paint I	7.06	0	0.01	Negative	0	0	11:59:54
28-Mar-19	273 Lead Paint I	18.17	0.05	0.06	Negative	0.05	0.03	12:00:14
28-Mar-19	274 Lead Paint I	25.01	0.15	0.11 surface	Negative	0.15	0.06	12:00:46
28-Mar-19	275 Lead Paint I	5.//	0.02	0.04	Negative	0.02	0.02	12:01:27
28-Mar-19	276 Lead Paint I	5.08	0.13	0.21	Negative	0.13	0.1	12:01:48
28-Mar-19	277 Lead Paint I	5.13	0.06	0.08	Negative	0.06	0.04	12:02:07
28-Mar-19	278 Lead Paint I	5.76	0	0	Negative	0	0	12:02:25
28-Mar-19	279 Lead Paint I	5.06	0.11	0.15	Negative	0.11	0.08	12:02:45
28-Mar-19	280 Lead Paint I	5.51	0	0	Negative	0	0	12:03:07
28-Mar-19	281 Lead Paint I	5.15	0.11	0.14	Negative	0.11	0.07	12:03:26
28-Mar-19	282 Lead Paint I	5.03	0.16	0.19	Negative	0.16	0.1	12:03:45
28-Mar-19	283 Lead Paint I	5.09	0.04	0.06	Negative	0.04	0.03	12:04:04
28-Mar-19	284 Lead Paint I	10.98	0.05	0.19	Negative	0.05	0.1	12:04:30
28-Mar-19	285 Lead Paint I	5.05	0	0.01	Negative	0	0	12:04:53
28-Mar-19	286 Lead Paint I	21.75	0.07	0.07	Negative	0.07	0.04	12:05:09
28-Mar-19	287 Lead Paint I	25.11	0.07	0.07	Negative	0.07	0.03	12:05:45
28-Mar-19	288 Lead Paint I	5.04	0	0	Negative	0	0	12:06:26
28-Mar-19	289 Lead Paint I	7.45 >	1.00	0.16	Positive	1	0.08	12:06:43

28-Mar-19	290 Lead Paint I	5.16	0	0	Negative	0	0	12:07:09
28-Mar-19	291 Lead Paint I	8.93	0.11	0.13	Negative	0.11	0.07	12:07:26
28-Mar-19	292 Lead Paint I	5.96	0	0	Negative	0	0	12:07:50
28-Mar-19	293 Lead Paint I	12.18 >	> 1.00	0.11	Positive	1	0.05	12:08:06
28-Mar-19	294 Lead Paint I	24.44	1.27	0.7	Positive	1.27	0.35	12:08:36
28-Mar-19	295 Lead Paint I	5.09	0.09	0.12	Negative	0.09	0.06	12.09.21
28-Mar-19	295 Lead Paint I	5.05	0.05	0.12	Negative	0.05	0.09	12.00.21
20 Mar 10	207 Load Paint I	5 15	0.11	0.17	Nogativo	0.11	0.05	12:00:50
20-1viai-19	209 Lead Paint I	5.15	0.05	0.11	Negative	0.03	0.05	12.09.39
28-IVIdI-19	298 Lead Paint I	5.19	0.01	0.01	Negative	0.01	0	12.10.20
28-IVIar-19	299 Lead Paint I	25	0.18	0.2	Negative	0.18	0.1	12:10:36
28-Mar-19	300 Lead Paint I	5.25	0	0	Negative	0	0	12:11:21
28-Mar-19	301 Lead Paint I	25.01	0.23	0.23 9	surface Negative	0.23	0.11	12:11:40
28-Mar-19	302 Lead Paint I	5.2	0	0	Negative	0	0	12:12:22
28-Mar-19	303 Lead Paint I	5.94	0	0	Negative	0	0	12:12:41
28-Mar-19	304 Lead Paint I	5.37	0.17	0.28	Negative	0.17	0.14	12:13:00
28-Mar-19	305 Lead Paint I	5.08	0	0	Negative	0	0	12:13:20
28-Mar-19	306 Lead Paint I	5.15	0	0	Negative	0	0	12:13:37
28-Mar-19	307 Lead Paint I	5.14	0	0	Negative	0	0	12:13:54
28-Mar-19	308 Lead Paint I	5.65 >	> 1.00	0.04	Positive	1	0.02	12:14:11
28-Mar-19	309 Lead Paint I	15.29 >	> 1.00	0.01	Positive	1	0.01	12:14:35
28-Mar-19	310 Lead Paint I	20.11 >	> 1.00	0.01	Positive	1	0	12:15:18
28-Mar-19	311 Lead Paint I	25.12	0.1	0.08	surface Negative	0.1	0.04	12:16:11
28-Mar-19	312 Lead Paint I	25.16	0.09	0.1	Negative	0.09	0.05	12.16.53
28-Mar-19	313 Lead Paint I	1/ 15	0.05	0.09	Negative	0.09	0.03	12.10.33
20 Mar 19	31/ Lead Paint I	5 10	0.00	0.05	Negative	0.00	0.03	12.17.33
20-101a1-15	215 Load Paint I	11.07	0.04	0.00	Negative	0.04	0.05	12.10.11
28-1vidi-19	315 Lead Paint I	11.07	0.55	0.45	Negative	0.55	0.22	12.10.20
28-Iviar-19	316 Lead Paint I	0.01	0	0	Negative	0	0	12:18:54
28-IVIar-19	317 Lead Paint I	11.26	0.05	0.05 9	surface Negative	0.05	0.02	12:19:13
28-Mar-19	318 Lead Paint I	5.77	0.01	0.06	Negative	0.01	0.03	12:19:41
28-Mar-19	319 Lead Paint I	5.33	0.13	0.21	Negative	0.13	0.1	12:20:02
28-Mar-19	320 Lead Paint I	5.12	0	0.01	Negative	0	0	12:20:37
28-Mar-19	321 Lead Paint I	5.21	0	0	Negative	0	0	12:21:00
28-Mar-19	322 Lead Paint I	5.15	0	0	Negative	0	0	12:21:20
28-Mar-19	323 Lead Paint I	5.12	0.1	0.16	Negative	0.1	0.08	12:21:45
28-Mar-19	324 Lead Paint I	8.52	0.25	0.43	Negative	0.25	0.21	12:22:08
28-Mar-19	325 Lead Paint I	5.13	0.1	0.14	Negative	0.1	0.07	12:23:03
28-Mar-19	326 Lead Paint I	5.09	0.12	0.18	Negative	0.12	0.09	12:23:27
28-Mar-19	327 Lead Paint I	24.94	0.11	0.05 s	surface Negative	0.11	0.03	12:23:45
28-Mar-19	328 Lead Paint I	24.98	0.21	0.09 s	surface Negative	0.21	0.04	12:24:28
28-Mar-19	329 Lead Paint I	24.69	0.12	0.04 s	surface Negative	0.12	0.02	12:25:10
28-Mar-19	330 Lead Paint I	10.75	0.11	0.1 9	surface Negative	0.11	0.05	12:25:53
28-Mar-19	331 Lead Paint I	5 16	0.16	0.13 9	surface Negative	0.16	0.06	12.26.17
28-Mar-19	332 Lead Paint I	5.10	0.10	0.15	Negative	0.10	0.00	12.20.17
20 Mar 10	222 Load Paint I	5.00	1 00	0 08	Positivo	1	0.04	12:20:57
20-1viai-15	224 Load Paint I	5.20 2	0.06	0.08	Norativo	0.06	0.04	12.20.34
28-1vidi-19	334 Lead Paint I	5.95	0.00	0.08	Negative	0.00	0.04	12.27.10
28-IVIar-19	335 Lead Paint I	5.9	0.03	0.07	Negative	0.03	0.03	12:27:35
28-Mar-19	336 Lead Paint I	6.07	0.03	0.04	Negative	0.03	0.02	12:28:05
28-Mar-19	337 Lead Paint I	5.1	0.03	0.04	Negative	0.03	0.02	12:28:33
28-Mar-19	338 Lead Paint I	6.08	0.07	0.07 s	surface Negative	0.07	0.03	12:28:57
28-Mar-19	339 Lead Paint I	5.05	0.08	0.08	Negative	0.08	0.04	12:30:23
28-Mar-19	340 Lead Paint I	6.11	0	0	Negative	0	0	12:30:55
28-Mar-19	341 Lead Paint I	5.06	0	0	Negative	0	0	12:31:16
28-Mar-19	342 Lead Paint I	5.14	0	0	Negative	0	0	12:31:32
28-Mar-19	343 Lead Paint I	5.15	0	0	Negative	0	0	12:31:56
28-Mar-19	344 Lead Paint I	5	0	0	Negative	0	0	12:32:17
28-Mar-19	345 Lead Paint I	6.1	0	0	Negative	0	0	12:32:34
28-Mar-19	346 Lead Paint I	5.17	0.19	0.2	Negative	0.19	0.1	12:32:52
28-Mar-19	347 Lead Paint I	5	0.01	0.03	Negative	0.01	0.01	12:33:11
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28-Mar-19	348 Lead Paint I	6.05	0.09	0.08 surface	Negative	0.09	0.04	12:33:37
28-Mar-19	349 Lead Paint I	6.09	0.04	0.03 surface	Negative	0.04	0.02	12:33:55
28-Mar-19	350 Lead Paint I	6.12	0.08	0.08 surface	Negative	0.08	0.04	12:34:13
28-Mar-19	351 Lead Paint I	6.33	0.33	0.56	Negative	0.33	0.28	12:34:42
28-Mar-19	352 Lead Paint I	13.45	0.26	0.4	Negative	0.26	0.2	12:35:03
28-Mar-19	353 Lead Paint I	18 12	0.1	0.09 surface	Negative	0.1	0.05	12.35.30
28 Mar-19	354 Load Paint I	6 21	0.1	0.03 501000	Negative	0.1	0.05	12:35:50
28-Mar 10	255 Load Paint I	5.24	0.21	0.41	Negative	0.21	0.21	12.30.03
20-IVIdI-19	355 Leau Pallit I	5.24	0.08	0.28	Negative	0.08	0.14	12.30.21
28-Mar-19	356 Lead Paint I	5.1	0.02	0.04	Negative	0.02	0.02	12:30:42
28-Mar-19	357 Lead Paint I	5.01	0	0	Negative	0	0	12:36:59
28-Mar-19	358 Lead Paint I	5.19	0	0	Negative	0	0	12:37:17
28-Mar-19	359 Lead Paint I	6.08	0	0.02	Negative	0	0.01	12:37:33
28-Mar-19	360 Lead Paint I	25.37	0.1	0.05 surface	Negative	0.1	0.03	12:37:51
28-Mar-19	361 Lead Paint I	5.96	0.09	0.29	Negative	0.09	0.14	12:38:35
28-Mar-19	362 Lead Paint I	6.54	0.08	0.1	Negative	0.08	0.05	12:38:54
28-Mar-19	363 Lead Paint I	5.07	0.08	0.16	Negative	0.08	0.08	12:39:17
28-Mar-19	364 Lead Paint I	6.04	0.05	0.06	Negative	0.05	0.03	12:39:37
28-Mar-19	365 Lead Paint I	5.1	0.08	0.12	Negative	0.08	0.06	12:39:57
28-Mar-19	366 Lead Paint I	5.06	0.11	0.1 surface	Negative	0.11	0.05	12:40:16
28-Mar-19	367 Lead Paint I	5.21	0.08	0.07 surface	Negative	0.08	0.04	12:40:39
28-Mar-19	368 Lead Paint I	11.04	0.09	0.05 surface	Negative	0.09	0.03	12:40:56
28-Mar-19	369 Lead Paint I	24.9	0.16	0.05 surface	Negative	0.16	0.03	12:41:21
28-Mar-19	370 Lead Paint I	25 71	0.18	0.05 surface	Negative	0.18	0.03	12.42.02
20 Mar 19	370 Lead Paint I	23.71	0.10		Negative	0.10	0.03	12.42.02
28-Mar 10	272 Load Paint I	6 12	0.15		Negative	0.15	0.02	12.42.44
20-IVIdI-19	372 Lead Paint I	0.15	0 12	0 12	Negative	0 12	0 07	12.45.50
28-Mar 10	373 Lead Paint I	5.14	0.12	0.13	Negative	0.12	0.07	12:43:40
28-Mar-19	374 Lead Paint I	6.05	0.01	0.04	Negative	0.01	0.02	12:44:03
28-Mar-19	375 Lead Paint I	5.06	0.04	0.07	Negative	0.04	0.03	12:44:22
28-Mar-19	376 Lead Paint I	5.13	0.06	0.07	Negative	0.06	0.03	12:44:54
28-Mar-19	377 Lead Paint I	6.09	0.01	0.02	Negative	0.01	0.01	12:45:21
28-Mar-19	378 Lead Paint I	5.92	0.05	0.06	Negative	0.05	0.03	12:45:48
28-Mar-19	379 Lead Paint I	5.02	0.04	0.05	Negative	0.04	0.02	12:46:09
28-Mar-19	380 Lead Paint I	6.39	1.15	0.15 surface	Positive	1.15	0.07	12:48:15
28-Mar-19	381 Lead Paint I	5.26	0	0	Negative	0	0	12:48:40
28-Mar-19	382 Lead Paint I	7.5	1.14	0.14 surface	Positive	1.14	0.07	13:48:46
28-Mar-19	383 Lead Paint I	5.22	0	0	Negative	0	0	13:49:10
28-Mar-19	384 Lead Paint I	5.76	0	0	Negative	0	0	13:54:41
28-Mar-19	385 Lead Paint I	5.83	0	0	Negative	0	0	13:55:03
28-Mar-19	386 Lead Paint I	21.46	0.13	0.06 surface	Negative	0.13	0.03	13:55:41
28-Mar-19	387 Lead Paint I	5.24	0.2	0.21	Negative	0.2	0.11	13:56:19
28-Mar-19	388 Lead Paint I	16 78	0.31	0.16 surface	Negative	0 31	0.08	13.26.36
28-Mar-19	389 Lead Paint I	5 18	0.32	0.66	Negative	0.32	0.33	13.50.50
20 Mar 10	300 Load Paint I	5.10	0.02	0.14	Nogativo	0.52	0.55	12.57.07
28-Mar 10	201 Load Paint I	5.51	0.07	0.14	Negative	0.07	0.07	12.57.49
20-IVIdI-19	391 Lead Paint I	с 24	0.01	0.04	Negative	0.01	0.02	12.57.40
28-Mar 10	392 Lead Paint I	5.34	0.1	0.08 surface	Negative	0.1	0.04	13:58:07
28-Mar-19	393 Lead Paint I	5.9	0	0	Negative	0	0	13:58:27
28-Mar-19	394 Lead Paint I	5.94	0	0	Negative	0	0	13:58:44
28-Mar-19	395 Lead Paint I	5.7	0	0	Negative	0	0	13:59:02
28-Mar-19	396 Lead Paint I	5.8	0	0	Negative	0	0	13:59:20
28-Mar-19	397 Lead Paint I	5.85	0	0	Negative	0	0	13:59:39
28-Mar-19	398 Lead Paint I	5.15	0	0	Negative	0	0	13:59:58
28-Mar-19	399 Lead Paint I	25.09	0.01	0.03	Negative	0.01	0.02	14:00:30
28-Mar-19	400 Lead Paint I	24.43	0.02	0.04	Negative	0.02	0.02	14:01:14
28-Mar-19	401 Lead Paint I	5.14	0	0	Negative	0	0	14:02:11
28-Mar-19	402 Lead Paint I	5.22	0	0	Negative	0	0	14:02:30
28-Mar-19	403 Lead Paint I	26.06	0	0.01	Negative	0	0.01	14:02:47
28-Mar-19	404 Lead Paint I	5.16	0	0.01	Negative	0	0	14:03:35
28-Mar-19	405 Lead Paint I	5.16	0	0	Negative	0	0	14:03:52
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28-Mar-19	406 Lead Paint I	6.1	0	0	Negative	0	0	14:04:11
28-Mar-19	407 Lead Paint I	5.2	0	0	Negative	0	0	14:04:38
28-Mar-19	408 Lead Paint I	5	0	0	Negative	0	0	14:04:52
28-Mar-19	409 Lead Paint I	5.15	0	0	Negative	0	0	14:05:06
28-Mar-19	410 Lead Paint I	5.73	0.01	0.05	Negative	0.01	0.02	14:05:32
28-Mar-19	411 Lead Paint I	5 42	0.16	0.13 surface	Negative	0.16	0.06	14.05.50
28-Mar-19	112 Lead Paint I	5.88	0.10	0	Negative	0.10	0.00	1/1.06.00
20 Mar 10	412 Load Paint I	5.86	0	0	Nogativo	0	0	14.00.05
20-1viai-19	413 Lead Paint I	5.80	0 08	0 00	Negative	0 08	0.05	14.00.20
20-IVId1-19	414 Lead Paint I	5.04	0.08	0.09	Negative	0.08	0.05	14.00.49
28-IVIar-19	415 Lead Paint I	5.1	0.06	0.07	Negative	0.06	0.04	14:07:12
28-IVIar-19	416 Lead Paint I	5.11	0.15	0.24	Negative	0.15	0.12	14:07:40
28-Mar-19	417 Lead Paint I	5.12	0.09	0.1	Negative	0.09	0.05	14:08:06
28-Mar-19	418 Lead Paint I	16.78	0	0.02	Negative	0	0.01	14:09:00
28-Mar-19	419 Lead Paint I	13.3	0.02	0.06	Negative	0.02	0.03	14:09:37
28-Mar-19	420 Lead Paint I	5.19	0	0	Negative	0	0	14:10:04
28-Mar-19	421 Lead Paint I	3.99	0.01	0.05	Negative	0.01	0.02	14:10:23
28-Mar-19	422 Lead Paint I	5.14	0	0	Negative	0	0	14:10:50
28-Mar-19	423 Lead Paint I	5.08	0.04	0.16	Negative	0.04	0.08	14:11:09
28-Mar-19	424 Lead Paint I	5.47	0.1	0.08 surface	Negative	0.1	0.04	14:11:26
28-Mar-19	425 Lead Paint I	5.99	0.02	0.03	Negative	0.02	0.01	14:11:43
28-Mar-19	426 Lead Paint I	6	0.05	0.06	Negative	0.05	0.03	14:12:05
28-Mar-19	427 Lead Paint I	5.12	0	0	Negative	0	0	14:12:56
28-Mar-19	428 Lead Paint I	5.08	0	0	Negative	0	0	14.13.14
28-Mar-19	420 Lead Paint I	5.00	0	0	Negative	0	0	1/12.23
20 Mar 19	420 Lead Paint I	5 16	0	0	Negative	0	0	1/12.50
20-1viai-15	430 Lead Paint I	5.10	0	0	Negative	0	0	14.13.30
28-1VId1-19	431 Ledu Pallit I	5.1	0		Negative	0	0	14.14.07
28-Iviar-19	432 Lead Paint I	5.97	0.09	0.07 surface	Negative	0.09	0.03	14:14:28
28-Mar-19	433 Lead Paint I	5.01	0.12	0.09 surface	Negative	0.12	0.05	14:14:47
28-Mar-19	434 Lead Paint I	5.79	0.08	0.07 surface	Negative	0.08	0.04	14:15:06
28-Mar-19	435 Lead Paint I	5.05	0	0.01	Negative	0	0	14:15:41
28-Mar-19	436 Lead Paint I	5.35	0.07	0.05 surface	Negative	0.07	0.03	14:15:58
28-Mar-19	437 Lead Paint I	5.91	0	0	Negative	0	0	14:16:15
28-Mar-19	438 Lead Paint I	5.83	0	0	Negative	0	0	14:16:41
28-Mar-19	439 Lead Paint I	5.7	0	0	Negative	0	0	14:17:01
28-Mar-19	440 Lead Paint I	5.74	0	0	Negative	0	0	14:17:19
28-Mar-19	441 Lead Paint I	6.07	0.59	0.11 surface	Negative	0.59	0.05	14:17:38
28-Mar-19	442 Lead Paint I	6.14	0.39	0.08 surface	Negative	0.39	0.04	14:18:03
28-Mar-19	443 Lead Paint I	5.24	0	0	Negative	0	0	14:18:23
28-Mar-19	444 Lead Paint I	5.15	0	0	Negative	0	0	14:18:40
28-Mar-19	445 Lead Paint I	5.15	0	0	Negative	0	0	14:18:58
28-Mar-19	446 Lead Paint I	5.13	0	0.01	Negative	0	0	14:19:58
28-Mar-19	447 Lead Paint I	5.24	0	0	Negative	0	0	14:20:23
28-Mar-19	448 Lead Paint I	5 24	0	0	Negative	0	0	14.20.40
28-Mar-19	119 Lead Paint I	6.18	0	0	Negative	0	0	14.20.40
20 Mar 10	440 Load Paint I	5.10 E 64	0	0	Negative	0	0	14.20.30
20-1VIdI-19	450 Leau Paint I	5.04	0		Negative	0.06	0	14.21.10
28-1VId1-19	451 Ledu Pallit I	0.12	0.08		Negative	0.06	0.03	14.21.42
28-Iviar-19	452 Lead Paint I	6.13	0.17	0.14 surface	Negative	0.17	0.07	14:22:04
28-Mar-19	453 Lead Paint I	5.62	0	0	Negative	0	0	14:22:22
28-Mar-19	454 Lead Paint I	6.04	0.04	0.05	Negative	0.04	0.03	14:22:41
28-Mar-19	455 Lead Paint I	5.07	0.11	0.09 surface	Negative	0.11	0.04	14:23:00
28-Mar-19	456 Lead Paint I	5.98	0.15	0.11 surface	Negative	0.15	0.05	14:23:22
28-Mar-19	457 Lead Paint I	5.06	0.11	0.1 surface	Negative	0.11	0.05	14:24:54
28-Mar-19	458 Lead Paint I	5.62	0	0	Negative	0	0	14:25:22
28-Mar-19	459 Lead Paint I	5.19	0	0	Negative	0	0	14:25:51
28-Mar-19	460 Lead Paint I	5.2	0	0	Negative	0	0	14:26:08
28-Mar-19	461 Lead Paint I	5.18	0	0	Negative	0	0	14:26:25
28-Mar-19	462 Lead Paint I	5.18	0	0	Negative	0	0	14:26:43
28-Mar-19	463 Lead Paint I	5	0	0	Negative	0	0	14:26:59

28-Mar-19	464 Lead Paint I	6.14	0.09	0.32	Negative	0.09	0.16	14:27:21
28-Mar-19	465 Lead Paint I	5.33	0.08	0.07 surfa	ce Negative	0.08	0.03	14:27:39
28-Mar-19	466 Lead Paint I	5.74	0.03	0.09	Negative	0.03	0.05	14:27:56
28-Mar-19	467 Lead Paint L	5 39	0.1	0.09 surfa	re Negative	0.1	0.04	14.28.13
28-Mar-19	468 Lead Paint L	5.02	0.03	0.11	Negative	0.03	0.05	14.28.31
28 Mar-19	460 Lead Paint I	5.02	0.05	0.06	Negative	0.05	0.03	14.20.01
20-1v1a1-19	405 Lead Paint I	5.57	0.05	0.00	Negative	0.05	0.05	14.20.47
20-IVIdI-19	470 Lead Paint I	5.04	0.09	0.12	Negative Negative	0.09	0.00	14.29.05
28-Mar-19	471 Lead Paint I	6.09	0.08	0.07 Suria	le Negative	0.08	0.04	14:29:25
28-Mar-19	4/2 Lead Paint I	5.01	0.07	0.08	Negative	0.07	0.04	14:29:47
28-Mar-19	4/3 Lead Paint I	6.1	0.11	0.08 surfac	ce Negative	0.11	0.04	14:30:06
28-Mar-19	474 Lead Paint I	13.16	0.14	0.26	Negative	0.14	0.13	14:30:31
28-Mar-19	475 Lead Paint I	5.01	0.05	0.2	Negative	0.05	0.1	14:30:58
28-Mar-19	476 Lead Paint I	5.25	0	0.01	Negative	0	0	14:31:16
28-Mar-19	477 Lead Paint I	11.07	0.16	0.31	Negative	0.16	0.15	14:31:33
28-Mar-19	478 Lead Paint I	5.27	0.05	0.07	Negative	0.05	0.04	14:31:58
28-Mar-19	479 Lead Paint I	5.61	0.02	0.07	Negative	0.02	0.04	14:32:18
28-Mar-19	480 Lead Paint I	5.34	0.14	0.23	Negative	0.14	0.12	14:32:36
28-Mar-19	481 Lead Paint I	5.11	0	0	Negative	0	0	14:32:55
28-Mar-19	482 Lead Paint I	5.16	0	0	Negative	0	0	14:33:14
28-Mar-19	483 Lead Paint L	5 18	0	0	Negative	0	0	14.33.28
28-Mar-19	485 Lead Paint I	19 37	> 1 00	0.01	Positive	1	0	1/.33.20
20 Mar 15	485 Load Paint L	5.88	> 1.00	0.01	Positive	1	0.01	1/-2/-22
20-1v1a1-19	405 Lead Paint I	J.00	> 1.00	0.02	Positive	1	0.01	14.34.33
28-War 10	400 Lead Paint I	7.47 5.22	> 1.00	0.04	Positive	1	0.02	14.35.05
28-Mar-19	487 Lead Paint I	5.22	0	0	Negative	0	0	14:35:38
28-Mar-19	488 Lead Paint I	5.31	0	0	Negative	0	0	14:35:54
28-Mar-19	489 Lead Paint I	5.18	0	0	Negative	0	0	14:36:13
28-Mar-19	490 Lead Paint I	5.16	0	0	Negative	0	0	14:36:34
28-Mar-19	491 Lead Paint I	5.18	0	0	Negative	0	0	14:36:50
28-Mar-19	492 Lead Paint I	5.94	0.02	0.06	Negative	0.02	0.03	14:37:09
28-Mar-19	493 Lead Paint I	5.41	0.05	0.09	Negative	0.05	0.04	14:37:26
28-Mar-19	494 Lead Paint I	6.1	0.03	0.09	Negative	0.03	0.05	14:37:44
28-Mar-19	495 Lead Paint I	5.39	0.03	0.04	Negative	0.03	0.02	14:38:03
28-Mar-19	496 Lead Paint I	5.1	0	0.01	Negative	0	0	14:38:22
28-Mar-19	497 Lead Paint I	5.19	0	0	Negative	0	0	14:38:40
28-Mar-19	498 Lead Paint I	5.08	0	0	Negative	0	0	14:38:54
28-Mar-19	499 Lead Paint L	5.05	0.04	0.08	Negative	0.04	0.04	14:39:13
28-Mar-19	500 Lead Paint L	6 1 4	0.13	0.17	Negative	0.13	0.08	14.30.35
20 Mar 15	500 Lead Paint I	5.02	0.13	0.15	Negative	0.13	0.00	1/-30-50
20-1v1a1-19	501 Lead Paint I	5.02	0.12	0.15	Negative	0.12	0.07	14.39.39
20-IVIdI-19	502 Lead Paint I	5.05	0.07	0.1	Negative	0.07	0.05	14.40.22
28-Mar-19	503 Lead Paint I	5.19	0	0	Negative	0	0	14:40:48
28-Mar-19	504 Lead Paint I	5.16	0	0	Negative	0	0	14:41:15
28-Mar-19	505 Lead Paint I	5.87	0	0	Negative	0	0	14:41:34
28-Mar-19	506 Lead Paint I	5.16	0	0	Negative	0	0	14:41:55
28-Mar-19	507 Lead Paint I	5.12	0	0	Negative	0	0	14:42:14
28-Mar-19	508 Lead Paint I	6.09	0	0.01	Negative	0	0	14:42:31
28-Mar-19	509 Lead Paint I	5.43	0.05	0.04 surfa	ce Negative	0.05	0.02	14:42:49
28-Mar-19	510 Lead Paint I	5.84	0.01	0.03	Negative	0.01	0.02	14:43:09
28-Mar-19	511 Lead Paint I	6.07	0.02	0.02	Negative	0.02	0.01	14:43:27
28-Mar-19	512 Lead Paint I	5.24	0	0	Negative	0	0	14:44:00
28-Mar-19	513 Lead Paint I	5.22	0	0	Negative	0	0	14:44:21
28-Mar-19	514 Lead Paint I	5.11	0	0	Negative	0	0	14:44:40
28-Mar-19	515 Lead Paint I	5.15	0	0	Negative	0	0	14:44:57
28-Mar-19	516 Lead Paint I	5 96	0.01	0.03	Negative	0.01	0.01	14:45:16
28-Mar-19	517 Lead Paint I	5.50	0.01	0.05 surfa	re Negative	0.01	0.01	14.42.36
28-Mar-10	518 Load Daint I	5.45 5.90	0.07			0.07	0.03	11.42.20
20-1viai-13 28-Mar 10	510 Leau Faint	J.00 E 17	0.07		A Nogative	0.07	0.05	1/1.45.12
20-1VId1-13		0.12	0.00			0.00	0.03	14.40.13
20-IVId1-19	520 Lead Paint I	6.03	0.03	0.03	Negative	0.03	0.02	14:40:37
zs-Iviar-19	521 Lead Paint I	6.06	0.03	0.03	Negative	0.03	0.01	14:46:58

28-Mar-19	522 Lead Paint I	6.12	0.05	0.04	surface	Negative	0.05	0.02	14:47:23
28-Mar-19	523 Lead Paint I	5.15	0	0		Negative	0	0	14:47:48
28-Mar-19	524 Lead Paint I	5.07	0	0		Negative	0	0	14:48:08
28-Mar-19	525 Lead Paint L	5 13	0	0		Negative	0	0	14.48.35
28-Mar-19	526 Lead Paint I	6.21	0	0		Negative	0	0	1/1.10.55
20 Mar 10	520 Lead Paint I	5.21	0	0		Nogativo	0	0	11.10.37
20-Iviai-19	527 Lead Paint I	5.24	0	0		Negative	0	0	14.49.13
28-Mar-19	528 Lead Paint I	5.19	0	0		Negative	0	0	14:49:41
28-Mar-19	529 Lead Paint I	5.17	0	0		Negative	0	0	14:50:11
28-Mar-19	530 Lead Paint I	5.14	0	0		Negative	0	0	14:50:38
28-Mar-19	531 Lead Paint I	5.92	0.05	0.19		Negative	0.05	0.09	14:51:00
28-Mar-19	532 Lead Paint I	5.31	0.13	0.09	surface	Negative	0.13	0.04	14:51:18
28-Mar-19	533 Lead Paint I	5.05	0	0		Negative	0	0	14:51:38
28-Mar-19	534 Lead Paint I	5.39	0.02	0.02		Negative	0.02	0.01	14:51:52
28-Mar-19	535 Lead Paint I	5.9	0.04	0.03	surface	Negative	0.04	0.02	14:52:10
28-Mar-19	536 Lead Paint I	5.87	0.15	0.15	surface	Negative	0.15	0.08	14:52:30
28-Mar-19	537 Lead Paint I	6.09	0.03	0.04		Negative	0.03	0.02	14:52:54
28-Mar-19	538 Lead Paint I	6.13	0.1	0.09	surface	Negative	0.1	0.04	14:53:17
28-Mar-19	539 Lead Paint L	5.11	0	0		Negative	0	0	14:53:45
28-Mar-19	540 Lead Paint I	5.2	0	0		Negative	0	0	14.24.03
20 Mar 19	540 Lead Paint I	5.2	0	0		Nogativo	0	0	11.51.00
20-1v1a1-19	541 Lead Paint I	5.23	0	0		Negative	0	0	14.54.22
28-IVId1-19	542 Lead Paint I	5.08	0	0		Negative	0	0	14.54.40
28-Mar-19	543 Lead Paint I	5.27	0	0		Negative	0	0	14:55:00
28-Mar-19	544 Standardiza	26.98	0.019/14	224	-0.030007	PASS			14:58:22
28-Mar-19	545 Lead Paint I	5.06	0.02	0.09		Negative	0.02	0.05	14:59:59
28-Mar-19	546 Lead Paint I	5.45	0.04	0.03	surface	Negative	0.04	0.02	15:00:17
28-Mar-19	547 Lead Paint I	5.74	0.01	0.02		Negative	0.01	0.01	15:00:34
28-Mar-19	548 Lead Paint I	6.02	0.05	0.05		Negative	0.05	0.03	15:00:52
28-Mar-19	549 Lead Paint I	5.98	0	0		Negative	0	0	15:01:47
28-Mar-19	550 Lead Paint I	5.71	0	0		Negative	0	0	15:02:46
28-Mar-19	551 Lead Paint I	5.12	0	0		Negative	0	0	15:03:05
28-Mar-19	552 Lead Paint I	5.98	0	0		Negative	0	0	15:03:22
28-Mar-19	553 Lead Paint I	6.05	0	0		Negative	0	0	15:03:43
28-Mar-19	554 Lead Paint L	5 67	0	0		Negative	0	0	15.04.02
28-Mar-19	555 Lead Paint I	5 16	0	0		Negative	0	0	15.04.20
20 Mar 19	556 Lead Paint I	5.10	0.07	0.04	surface	Negative	0.07	0.02	15.04.25
20-Iviai-15	550 Lead Paint I	5.5 E 69	0.07	0.04	Sunace	Negative	0.07	0.02	15.04.52
20-IVIdI-19	557 Leau Pallit	5.00	0	0		Negative	0	0	15.05.50
28-Mar-19	558 Lead Paint I	5.10	0	0		Negative	0	0	15:06:36
28-Mar-19	559 Lead Paint I	5.23	0	0		Negative	0	0	15:06:58
28-Mar-19	560 Lead Paint I	5.93	0	0		Negative	0	0	15:07:14
28-Mar-19	561 Lead Paint I	5.79	0.01	0.01		Negative	0.01	0	15:07:38
28-Mar-19	562 Lead Paint I	5.15	0	0		Negative	0	0	15:08:02
28-Mar-19	563 Lead Paint I	5.1	0	0		Negative	0	0	15:08:19
28-Mar-19	564 Lead Paint I	5.14	0.07	0.04	surface	Negative	0.07	0.02	15:08:38
28-Mar-19	565 Lead Paint I	6.09	0	0		Negative	0	0	15:09:03
28-Mar-19	566 Lead Paint I	5.18	0	0		Negative	0	0	15:09:22
28-Mar-19	567 Lead Paint I	5.17	0.17	0.08	surface	Negative	0.17	0.04	15:09:39
28-Mar-19	568 Lead Paint I	5.12	0	0		Negative	0	0	15:10:03
28-Mar-19	569 Lead Paint L	5 14	0	0		Negative	0	0	15.10.20
28-Mar-19	570 Lead Paint I	5 34	0 14	0.07	surface	Negative	0 14	0.03	15.10.20
28-Mar-19	570 Lead Paint I	5.54	0.14	0.07	Junuce	Negative	0.14	0.05	15.10.45
20-Iviai-15	571 Lead Paint I	9.10	0.04	0 07		Negative	0.04	0 02	15.11.05
20-1VId1-19	572 Ledu Palill	0.09 16.00	0.04	0.07		Nogotive	0.04	0.03	15.11.22
28-IVIAI-19	573 Lead Paint I	10.80	0.03	0.03		ivegative	0.03	0.01	15:11:56
28-IVIar-19	574 Lead Paint I	b.44	0.2	0.43		Negative	0.2	0.22	15:12:34
28-Mar-19	575 Lead Paint I	5.02	0.01	0.01		Negative	0.01	0	15:13:01
28-Mar-19	576 Lead Paint I	5.23	0.04	0.05		Negative	0.04	0.03	15:13:21
28-Mar-19	577 Lead Paint I	5.84	0	0.02		Negative	0	0.01	15:13:51
28-Mar-19	578 Lead Paint I	5.7	0	0		Negative	0	0	15:14:16
28-Mar-19	579 Lead Paint I	5.26	0	0		Negative	0	0	15:14:34

28-Mar-19	580 Lead Paint I	5.89	0	0	Negative	0	0	15:14:51
28-Mar-19	581 Lead Paint I	6.05	0	0	Negative	0	0	15:15:13
28-Mar-19	582 Lead Paint I	5.2	0	0	Negative	0	0	15:17:07
28-Mar-19	583 Lead Paint I	7.5	1.15	0.14 surface	Positive	1.15	0.07	15:17:38

Date		Reading	Mode	LiveTime	Match1	MN1	Pass/Fail	Pass Fail StaPb		Pb +/-	Time
	29-Mar-19	1	Standardization	26	0.01972	227	-0.01424	PASS			8:36:50
	29-Mar-19	2	Lead Paint Inspection	5.31	0	()	Negative	0	0	8:41:10
	29-Mar-19	3	Lead Paint Inspection	8.79	0.17	0.15	5 surface	Negative	0.17	0.08	8:47:36
	29-Mar-19	4	Lead Paint Inspection	5.03	0	C)	Negative	0	0	8:48:05
	29-Mar-19	5	Lead Paint Inspection	6.44	0.23	0.15	5 surface	Negative	0.23	0.08	8:48:30
	29-Mar-19	6	Lead Paint Inspection	24.87	0.1	0.07	7 surface	Negative	0.1	0.03	8:48:52
	29-Mar-19	7	Lead Paint Inspection	5.11	0	()	Negative	0	0	8:49:34
	29-Mar-19	8	Lead Paint Inspection	25.21	> 1.00	0.09	9	Positive	1	0.05	8:49:48
	29-Mar-19	9	Lead Paint Inspection	5.28	0	()	Negative	0	0.00	8:50:35
	29-Mar-19	10	Lead Paint Inspection	5.20	0	()	Negative	0	0	8.50.52
	29-Mar-19	11	Lead Paint Inspection	5.03	0	()	Negative	0	0	8.51.11
	20 Mar_10	12	Lead Paint Inspection	5.05	0	(,)	Negative	0	0	8.51.20
	20-Mar-10	12	Lead Paint Inspection	5.07	0	0.01	,	Negative	0	0	8.51.48
	20-Mar-10	14	Lead Paint Inspection	5.92	0	0.01	1	Negative	0	0	0.51.40
	20-Mar-10	14	Lead Paint Inspection	5.01	0	((,)	Negative	0	0	8.52.10
	29-IVIdI-19	15		5.06	0 0 0 0	0.00	-	Negative	0 02	0 02	0.52.29
	29-IVId1-19	10	Lead Paint Inspection	19.98	0.02	0.05	7	Negative	0.02	0.02	0.52.55
	29-IVId1-19	1/	Lead Paint Inspection	25.39	0.04	0.07	,	Negative	0.04	0.03	0.55.51
	29-IVIar-19	18	Lead Paint Inspection	5.22	0	()	Negative	0	0	8:54:17
	29-IVIar-19	19	Lead Paint Inspection	5.31	0	()	Negative	0	0	8:54:38
	29-Mar-19	20	Lead Paint Inspection	5.17	0	()	Negative	0	0	8:54:56
	29-Mar-19	21	Lead Paint Inspection	5.21	0	()	Negative	0	0	8:55:14
	29-Mar-19	22	Lead Paint Inspection	5.25	0	()	Negative	0	0	8:55:48
	29-Mar-19	23	Lead Paint Inspection	5.18	0.03	0.06	^b	Negative	0.03	0.03	8:56:12
	29-Mar-19	24	Lead Paint Inspection	5.21	0	()	Negative	0	0	8:56:55
	29-Mar-19	25	Lead Paint Inspection	5.16	0	()	Negative	0	0	8:57:17
	29-Mar-19	26	Lead Paint Inspection	5.22	0.07	0.25	5	Negative	0.07	0.12	8:57:48
	29-Mar-19	27	Lead Paint Inspection	5.18	0	()	Negative	0	0	8:58:06
	29-Mar-19	28	Lead Paint Inspection	5.24	0	()	Negative	0	0	8:58:26
	29-Mar-19	29	Lead Paint Inspection	5.06	0	0.01	L	Negative	0	0	8:58:55
	29-Mar-19	30	Lead Paint Inspection	5.28	0.15	0.28	3	Negative	0.15	0.14	8:59:11
	29-Mar-19	31	Lead Paint Inspection	5.16	0	()	Negative	0	0	8:59:33
	29-Mar-19	32	Lead Paint Inspection	5.02	0	()	Negative	0	0	8:59:51
	29-Mar-19	33	Lead Paint Inspection	5.11	0.4	0.28	3 surface	Negative	0.4	0.14	9:00:14
	29-Mar-19	34	Lead Paint Inspection	5.13	0.45	0.31	L surface	Negative	0.45	0.16	9:00:44
	29-Mar-19	35	Lead Paint Inspection	24.64	1.02	0.25	5 surface	Positive	1.02	0.12	9:01:17
	29-Mar-19	36	Lead Paint Inspection	5.98	0.34	0.18	3 surface	Negative	0.34	0.09	9:02:11
	29-Mar-19	37	Lead Paint Inspection	25.12	0.08	0.07	7 surface	Negative	0.08	0.03	9:02:31
	29-Mar-19	38	Lead Paint Inspection	24.36	0.04	0.02	2 surface	Negative	0.04	0.01	9:03:22
	29-Mar-19	39	Lead Paint Inspection	8.56	> 1.00	0.08	3	Positive	1	0.04	9:04:03
	29-Mar-19	40	Lead Paint Inspection	16.93	0.03	0.03	3	Negative	0.03	0.02	9:04:31
	29-Mar-19	41	Lead Paint Inspection	5.29	0.02	0.03	3	Negative	0.02	0.02	9:05:05
	29-Mar-19	42	Lead Paint Inspection	5.28	> 1.00	0.11	L	Positive	1	0.05	9:05:27
	29-Mar-19	43	Lead Paint Inspection	5.97	0	()	Negative	0	0	9:05:57
	29-Mar-19	44	Lead Paint Inspection	5.37	0.17	0.1	L surface	Negative	0.17	0.05	9:06:16
	29-Mar-19	45	Lead Paint Inspection	5.09	0.21	0.17	7 surface	Negative	0.21	0.08	9:06:34
	29-Mar-19	46	Lead Paint Inspection	5.09	0.12	0.09	surface	Negative	0.12	0.05	9:06:51
	29-Mar-19	47	Lead Paint Inspection	5.05	0.13	0.02	surface	Negative	0.13	0.04	9.07.17
	29-Mar-19	48	Lead Paint Inspection	5.98	0.13	0.00	surface	Negative	0.13	0.07	9.07.46
	20 Mar_10	-0- /0	Lead Paint Inspection	5.05	0.41	0.10	surface	Negative	0.41	0.07	0.08.12
	20-Mar-10	4J 50	Lead Paint Inspection	5.05	0.15	0.0	Surface	Negative	0.15	0.05	0.00.12
	20-Mar-10	51	Lead Paint Inspection	5.00	0.30	0.1.		Negative	0.30	0.08	0.00.52
	29-IVIdI-19	51		5.19	0)	Negative	0	0	9.09.55
	29-IVIar-19	52	Lead Paint Inspection	5.16	0	()	Negative	0	0	9:10:10
	29-IVIAI-19	53	Lead Paint Inspection	5.19	0	()	Negative	0	0	9:10:31
	29-IVIar-19	54	Lead Paint Inspection	5.12	0	()	Negative	0	0	9:10:48
	29-Iviar-19	55	Lead Paint Inspection	5.23	0		-	Negative	0	0	9:11:05
	29-IVIAr-19	56	Lead Paint Inspection	6.02	0.02	0.05) 7. av. urf	Negative	0.02	0.02	9:11:23
	29-IVIAr-19	57	Lead Paint Inspection	5.35	0.1	0.07	surrace	Negative	0.1	0.03	9:11:42
	29-Mar-19	58	Lead Paint Inspection	5.9	0	(J	Negative	0	0	9:12:02
	29-Mar-19	59	Lead Paint Inspection	5.83	0	()	Negative	0	0	9:12:31
	29-Mar-19	60	Lead Paint Inspection	5.85	0	()	Negative	0	0	9:12:52
	29-Mar-19	61	Lead Paint Inspection	5.57	0	()	Negative	0	0	9:13:10
	29-Mar-19	62	Lead Paint Inspection	6.06	0.13	0.08	3 surface	Negative	0.13	0.04	9:13:33
	29-Mar-19	63	Lead Paint Inspection	5	0.01	0.02	2	Negative	0.01	0.01	9:13:51
	29-Mar-19	64	Lead Paint Inspection	5.03	0.06	0.07	7	Negative	0.06	0.03	9:14:13
	29-Mar-19	65	Lead Paint Inspection	6.09	0.58	0.11	L surface	Negative	0.58	0.06	9:14:37

29-Mar-19	66 Lead Paint Inspe	ection 6.16	0.6	0.11	surface	Negative	0.6	0.06	9:15:02
29-Mar-19	67 Lead Paint Inspe	ection 7.52	0.11	0.07	surface	Negative	0.11	0.04	9:15:24
29-Mar-19	68 Lead Paint Inspe	ection 5.23	0	0		Negative	0	0	9:15:45
29-Mar-19	69 Lead Paint Inspe	ection 5.27	> 1.00	0.19		Positive	1	0.09	9:16:10
29-Mar-19	70 Lead Paint Inspe	ection 5.27	0	0		Negative	0	0	9:16:40
29-Mar-19	71 Lead Paint Inspe	ection 5.14	0.04	0.04	surface	Negative	0.04	0.02	9:16:59
29-Mar-19	72 Lead Paint Inspe	ection 8.74	0.06	0.2		Negative	0.06	0.1	9:17:38
29-Mar-19	73 Lead Paint Inspe	ection 7.59	0.02	0.04		Negative	0.02	0.02	9:18:04
29-Mar-19	74 Lead Paint Inspe	ection 5.22	0.03	0.11		Negative	0.03	0.05	9:18:25
29-Mar-19	75 Lead Paint Inspe	ection 5.05	0.07	0.14		Negative	0.07	0.07	9:18:45
29-Mar-19	76 Lead Paint Inspe	ection 5.81	0.02	0.05		Negative	0.02	0.03	9:19:01
29-Mar-19	77 Lead Paint Inspe	ection 23.87	1.02	0.05	surface	Positive	1 02	0.07	9.19.24
29-Mar-19	78 Lead Paint Inspe	ection 5.85	0.74	0.13	surface	Negative	0.74	0.07	9.20.11
29-Mar-19	70 Lead Paint Inspe	oction 5.69	0.74	0.21	Surface	Negative	0.74	0.11	9.20.11
29 Mar 19	80 Load Paint Inspe	oction 22.26	1 07	0 12	surface	Positivo	1 07	0.07	0.20.57
20-Mar-10	81 Load Paint Inspe	ction 5.02	1.07	0.13	Surface	Nogativo	1.07	0.07	0.20.50
29-IVIdI-19	01 Leau Paint Inspe	sction 5.95	0	0.05	curface	Negative	0	0.01	9.21.39
29-IVId1-19	82 Lead Paint Inspe	5.04 Stien	0.5	0.22	surface	Negative	0.5	0.11	9.22.21
29-IVIAI-19	83 Lead Paint Inspe	sction 5.08	0.45	0.22	surrace	Negative	0.45	0.11	9:22:41
29-Mar-19	84 Lead Paint Inspe	2CTION 5.03	0.61	0.22	surrace	Negative	0.61	0.11	9:23:07
29-Mar-19	85 Lead Paint Inspe	ection 5.29	0.05	0.17		Negative	0.05	0.08	9:24:01
29-Mar-19	86 Lead Paint Inspe	ection 14.67	0.03	0.06		Negative	0.03	0.03	9:24:18
29-Mar-19	87 Lead Paint Inspe	ection 5.21	0	0		Negative	0	0	9:24:45
29-Mar-19	88 Lead Paint Inspe	ection 5.25	0	0		Negative	0	0	9:25:04
29-Mar-19	89 Lead Paint Inspe	ection 25.05	0.07	0.15		Negative	0.07	0.07	9:25:21
29-Mar-19	90 Lead Paint Inspe	ection 5.18	0.02	0.07		Negative	0.02	0.03	9:26:05
29-Mar-19	91 Lead Paint Inspe	ection 6.58	0.23	0.17	surface	Negative	0.23	0.09	9:26:22
29-Mar-19	92 Lead Paint Inspe	ection 5.93	0	0		Negative	0	0	9:26:40
29-Mar-19	93 Lead Paint Inspe	ection 8.98	0.22	0.15	surface	Negative	0.22	0.08	9:26:59
29-Mar-19	94 Lead Paint Inspe	ection 6	0	0		Negative	0	0	9:27:22
29-Mar-19	95 Lead Paint Inspe	ection 5.42	0.19	0.16	surface	Negative	0.19	0.08	9:27:39
29-Mar-19	96 Lead Paint Inspe	ection 5.91	0.2	0.16	surface	Negative	0.2	0.08	9:28:01
29-Mar-19	97 Lead Paint Inspe	ection 5.05	0.07	0.06	surface	Negative	0.07	0.03	9:28:21
29-Mar-19	98 Lead Paint Inspe	ection 5.04	0.4	0.19	surface	Negative	0.4	0.09	9:28:46
29-Mar-19	99 Lead Paint Inspe	ection 6.21	0.58	03	surface	Negative	0.58	0.15	9.29.11
29-Mar-19	100 Lead Paint Inspe	ection 5.3	0.02	0.05	Surrace	Negative	0.02	0.13	9.29.36
29 Mar-19	100 Lead Paint Inspe	action 5.26	0.02	0.03		Negative	0.02	0.05	9.29.50
20-Mar-10	102 Load Paint Inspe	oction 5.20	0.00	0.14		Negative	0.00	0.07	0.20.1/
29-Ivial-19	102 Lead Paint Inspe	Stion 5.24	0.05	0.01		Negative	0.05	0.05	0.20.21
29-IVIdI-19	103 Leau Paint Inspe	stion 5.25	0.03	0.11		Negative	0.03	0.05	9.50.51
29-IVIdI-19	104 Lead Paint Inspe	5.10 S.10	0	0.01		Negative	0	0	9.50.40
29-Iviar-19	105 Lead Paint Inspe	20100 5.04	0	0	f a a a	Negative	0	0 05	9:31:10
29-IVIAI-19	106 Lead Paint Inspe	ction 7.75	0.15	0.1	surrace	Negative	0.15	0.05	9:31:30
29-Mar-19	107 Lead Paint Inspe	ection 5.1	0	0		Negative	0	0	9:31:57
29-Mar-19	108 Lead Paint Inspe	ection 5.18	0	0		Negative	0	0	9:32:15
29-Mar-19	109 Lead Paint Inspe	ection 5.17	0	0		Negative	0	0	9:32:32
29-Mar-19	110 Lead Paint Inspe	ection 14.97	> 1.00	0.01		Positive	1	0.01	9:32:51
29-Mar-19	111 Lead Paint Inspe	ection 18.03	> 1.00	0.01		Positive	1	0	9:33:30
29-Mar-19	112 Lead Paint Inspe	ection 6.56	> 1.00	0.02		Positive	1	0.01	9:34:24
29-Mar-19	113 Lead Paint Inspe	ection 15.6	0.24	0.24	surface	Negative	0.24	0.12	9:34:59
29-Mar-19	114 Lead Paint Inspe	ection 6.45	0.28	0.21	surface	Negative	0.28	0.11	9:35:28
29-Mar-19	115 Lead Paint Inspe	ection 5.19	0.42	0.2	surface	Negative	0.42	0.1	9:35:48
29-Mar-19	116 Lead Paint Inspe	ection 5.21	0.39	0.25	surface	Negative	0.39	0.12	9:36:05
29-Mar-19	117 Lead Paint Inspe	ection 5.25	0	0.01		Negative	0	0	9:36:22
29-Mar-19	118 Lead Paint Inspe	ection 5.93	0	0		Negative	0	0	9:36:52
29-Mar-19	119 Lead Paint Inspe	ection 25.57	0.09	0.04	surface	Negative	0.09	0.02	9:37:13
29-Mar-19	120 Lead Paint Inspe	ection 6	0.04	0.17		Negative	0.04	0.09	9:38:00
29-Mar-19	121 Lead Paint Inspe	ection 25.49	> 1.00	0.09		Positive	1	0.04	9:38:22
29-Mar-19	122 Lead Paint Inspe	ection 6.12	0.32	0.15	surface	Negative	0.32	0.08	9:39:17
29-Mar-19	123 Lead Paint Inspe	ection 5.19	0	0		Negative	0	0	9:39:35
29-Mar-19	124 Lead Paint Inspe	ection 515	ů N	n N		Negative	n	n N	9:39:52
29-Mar-10	125 Lead Paint Inche	oction 19.75	05	0 12	surface	Negative	05	0 06	9.40.11
29_Mar_10	126 Load Paint Incore	ection 5 17	0.5	0.12	Junute	Negative	0.5	0.00	9.40.50
29_Mar_10	127 Lead Paint Inspe	action 5.17	0	0		Negative	0	0	9.40.30
20-Mar 10	120 Load Paint Inspe	oction 3.12	V N 1 00	0 1 2		Docitivo	0	0.00	5.41.0/ 0·/1·20
29-IVI81-19		scuoli 4	1.00	0.12		Positive	1	0.06	9:41:39
29-IVI81-19		24.81	1.00	0.06		POSITIVE	1	0.03	9:42:09
29-IVIar-19	130 Lead Paint Inspe	scuon 5.22	> 1.00	0.17		Positive	1	0.09	9:43:03
29-Mar-19	131 Lead Paint Inspe	εcπon 5.26	0.36	0.13	surface	Negative	0.36	0.07	9:43:30

29-Mar-19	132 Lead Paint Inspection	5.22 > 1	L.00	0.14	Positive	1	0.07	9:43:50
29-Mar-19	133 Lead Paint Inspection	5.05	0.34	0.21 surface	Negative	0.34	0.11	9:44:21
29-Mar-19	134 Lead Paint Inspection	5.06	0.42	0.3 surface	Negative	0.42	0.15	9.44.44
29-Mar-19	135 Lead Paint Inspection	5.00	0.48	0.21 surface	Negative	0.48	0.13	9.45.09
20 Mar 10	136 Load Paint Inspection	5.07	0.40	0.25 surface	Negative	0.40	0.11	0.45.25
29-Iviai-19	130 Lead Paint Inspection	5.07	0.32		Negative	0.32	0.12	0.45.01
29-Iviai-19	137 Lead Paint Inspection	5.04	0.02	0.07	Negative	0.02	0.05	9.40.01
29-IVIar-19	138 Lead Paint Inspection	5.14	0.15	0.12 surface	Negative	0.15	0.06	9:46:18
29-IVIar-19	139 Lead Paint Inspection	6	0.39	0.11 surface	Negative	0.39	0.05	9:46:37
29-Mar-19	140 Lead Paint Inspection	6.07	0.37	0.14 surface	Negative	0.37	0.07	9:47:01
29-Mar-19	141 Lead Paint Inspection	5.03	0.49	0.19 surface	Negative	0.49	0.1	9:47:25
29-Mar-19	142 Lead Paint Inspection	5.06	0.39	0.16 surface	Negative	0.39	0.08	9:47:45
29-Mar-19	143 Lead Paint Inspection	5.86	0.23	0.09 surface	Negative	0.23	0.05	9:48:15
29-Mar-19	144 Lead Paint Inspection	5.07	0.3	0.14 surface	Negative	0.3	0.07	9:48:41
29-Mar-19	145 Lead Paint Inspection	13.27	0.05	0.04 surface	Negative	0.05	0.02	9:49:26
29-Mar-19	146 Lead Paint Inspection	5.14	0.06	0.07	Negative	0.06	0.03	9:49:54
29-Mar-19	147 Lead Paint Inspection	5.2 > 1	L.00	0.11	Positive	1	0.06	9:50:12
29-Mar-19	148 Lead Paint Inspection	6.1	0.13	0.14	Negative	0.13	0.07	9:50:38
29-Mar-19	149 Lead Paint Inspection	6.12	0	0.01	Negative	0	0	9:51:08
29-Mar-19	150 Lead Paint Inspection	5.39	0.05	0.04 surface	Negative	0.05	0.02	9:51:43
29-Mar-19	151 Lead Paint Inspection	5.9	0.03	0.03	Negative	0.03	0.02	9:52:03
29-Mar-19	152 Lead Paint Inspection	5.05	0.05	0.06	Negative	0.05	0.03	9:52:34
29-Mar-19	153 Lead Paint Inspection	5.96	0.35	0.13 surface	Negative	0.35	0.06	9.53.09
29 Mar-19	154 Lead Paint Inspection	5.06	0.33	0.14 surface	Negative	0.33	0.00	0.53.20
20-Mar-10	154 Lead Paint Inspection	5.00	0.55	0.14 surface	Negative	0.55	0.07	0.52.47
29-Iviai-19	155 Lead Paint Inspection	5.14	0.4		Negative	0.4	0.08	0.54.10
29-IVId1-19	150 Lead Paint Inspection	5.25	0.01	0.04	Negative	0.01	0.02	9.54.18
29-Mar-19	157 Lead Paint Inspection	5.2	0	0	Negative	0	0	9:54:36
29-Mar-19	158 Lead Paint Inspection	5.23	0	0	Negative	0	0	9:54:58
29-Mar-19	159 Lead Paint Inspection	24.97	0.13	0.13	Negative	0.13	0.06	9:55:16
29-Mar-19	160 Lead Paint Inspection	5.21	0	0	Negative	0	0	9:55:59
29-Mar-19	161 Lead Paint Inspection	6.14	0.01	0.03	Negative	0.01	0.01	9:56:21
29-Mar-19	162 Lead Paint Inspection	5.14	0	0	Negative	0	0	9:56:39
29-Mar-19	163 Lead Paint Inspection	5.17	0	0	Negative	0	0	9:56:57
29-Mar-19	164 Lead Paint Inspection	5.17	0	0.02	Negative	0	0.01	9:57:52
29-Mar-19	165 Lead Paint Inspection	6.19	0	0	Negative	0	0	9:58:27
29-Mar-19	166 Lead Paint Inspection	5.21	0	0	Negative	0	0	9:58:45
29-Mar-19	167 Lead Paint Inspection	5.06	0.02	0.06	Negative	0.02	0.03	9:59:10
29-Mar-19	168 Lead Paint Inspection	5.4	0.1	0.08 surface	Negative	0.1	0.04	9:59:27
29-Mar-19	169 Lead Paint Inspection	5.77	0	0	Negative	0	0	9:59:48
29-Mar-19	170 Lead Paint Inspection	6.56	0.08	0.07 surface	Negative	0.08	0.03	10:00:06
29-Mar-19	171 Lead Paint Inspection	5.06	0.36	0.17 surface	Negative	0.36	0.09	10:00:25
29-Mar-19	172 Lead Paint Inspection	5.1	0.31	0.15 surface	Negative	0.31	0.07	10:00:44
29-Mar-19	173 Lead Paint Inspection	5.03	0.36	0.18 surface	Negative	0.36	0.09	10.01.09
29-Mar-19	174 Lead Paint Inspection	5.05	0.30	0.10 surface	Negative	0.35	0.05	10.01.03
20-Mar-10	174 Lead Paint Inspection	7 57	0.35	0.17 surface	Negative	0.55	0.1	10.01.34
29-Iviai-19	175 Lead Paint Inspection	7.57	0.29		Negative	0.29	0.08	10.02.03
29-Iviai-19	170 Lead Paint Inspection	25.02	0.2		Negative	0.2	0.05	10.02.22
29-Mar-19	177 Lead Paint Inspection	5.19	0.35	0.23 surface	Negative	0.35	0.11	10:03:05
29-Mar-19	178 Lead Paint Inspection	5.31	0.02	0.03	Negative	0.02	0.01	10:03:23
29-Mar-19	179 Lead Paint Inspection	20.37	0.13	0.07 surface	Negative	0.13	0.03	10:03:45
29-Mar-19	180 Lead Paint Inspection	5.13	0	0.01	Negative	0	0	10:04:23
29-Mar-19	181 Lead Paint Inspection	5.37	0.12	0.09 surface	Negative	0.12	0.05	10:04:40
29-Mar-19	182 Lead Paint Inspection	5.01	0.07	0.09	Negative	0.07	0.05	10:04:56
29-Mar-19	183 Lead Paint Inspection	5.09	0.09	0.11	Negative	0.09	0.06	10:05:13
29-Mar-19	184 Lead Paint Inspection	5.09	0.29	0.13 surface	Negative	0.29	0.07	10:05:39
29-Mar-19	185 Lead Paint Inspection	5.01	0.36	0.15 surface	Negative	0.36	0.08	10:05:57
29-Mar-19	186 Lead Paint Inspection	5.12	0.52	0.2 surface	Negative	0.52	0.1	10:06:23
29-Mar-19	187 Lead Paint Inspection	5.04	0.36	0.16 surface	Negative	0.36	0.08	10:06:53
29-Mar-19	188 Lead Paint Inspection	5.3	0	0	Negative	0	0	10:07:17
29-Mar-19	189 Lead Paint Inspection	5.18	1.17	0.17 surface	Positive	1.17	0.08	10:09:13
29-Mar-19	190 Lead Paint Inspection	5.32	0	0	Negative	0	0	10:09:36

LEAD-BASED PAINT INSPECTION, 21 PARNELL BUILDING, DAYTON, OHIO MARCH 2019

APPENDIX B: PERFORMANCE CHARACTERISTIC SHEET

INNOV-X LBP4000 PCS, December 1, 2006, Edition 1

Performance Characteristic Sheet

EFFECTIVE DATE: December 1, 2006

EDITION NO.: 1

MANUFACTURER AND MODEL:

Make:	Innov-X Systems, Inc.
Models:	LBP4000 with software version 1.4 and higher
Source:	X-ray tube

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Inspection mode, variable reading time.

XRF CALIBRATION CHECK LIMITS:

1.0 to 1.1 mg/cm² (inclusive)

SUBSTRATE CORRECTION:

Not applicable

INCONCLUSIVE RANGE OR THRESHOLD:

INSPECTION MODE READING DESCRIPTION	SUBSTRATE	INCONCLUSIVE RANGE (mg/cm ²)
Results not corrected for substrate bias on any	Brick	0.6 to 1.1
substrate	Concrete	0.6 to 1.1
	Drywall	0.6 to 1.1
	Metal	0.6 to 1.1
	Plaster	0.6 to 1.1
	Wood	0.6 to 1.1

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on 146 test locations, with two separate instruments, in December 2005.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm² in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm² film).

If the average (rounded to 1 decimal place) of three readings is outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instrument into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION:

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm² for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm² at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

Using the same XRF instrument, take three readings on a <u>bare</u> substrate area covered with the NIST SRM paint film nearest 1 mg/cm². Repeat this procedure by taking three more readings on a second <u>bare</u> substrate area of the same substrate covered with the NIST SRM.

Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.

<u>For each substrate type</u> (the 1.02 mg/cm² NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):

Correction value = (1st + 2nd + 3rd + 4th + 5th + 6th Reading) / 6 - 1.02 mg/cm²

Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and the retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF readings.

Compute the average of all ten re-test XRF readings.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

TESTING TIMES:

For the variable-time inspection paint test mode, the instrument continues to read until it has determined whether the result is positive or negative (with respect to the 1.0 mg/cm² Federal standard), with 95% confidence. The following table provides testing time information for this testing mode.

Testing Times Using Variable Reading Time Inspection Mode (Seconds)						
	All Data		Median for la	boratory-measure (mg/cm ²)	d lead levels	
Substrate	25 th Percentile	Median	75 th Percentile	Pb < 0.25	0.25 <u><</u> Pb < 1.0	<u>1.0 ≤ Pb</u>
Wood, D rywall	2.1	2.3	5.4	2.2	5.4	2.2
Metal	2.6	3.2	5.3	2.7	5.1	5.1
Brick, Concrete, Plaster	3.1	4.0	5.7	3.2	4.0	5.9

CLASSIFICATION OF RESULTS:

When an inconclusive range is specified on the *Performance Characteristic Sheet*, XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. If the instrument reads "> x mg/cm²", the value "x" should be used for classification purposes, ignoring the ">". For example, a reading reported as ">1.0 mg/cm²" is classified as 1.0 mg/cm², or inconclusive. When the inconclusive range reported in this PCS is used to classify the readings obtained in the EPA/HUD evaluation, the following False Positive, False Negative and Inconclusive rates are obtained:

FALSE POSITIVE RATE:	2.5% (2/80)
FALSE NEGATIVE RATE:	1.9% (4/212)
INCONCLUSIVE RATE:	16.4% (48/212)

DOCUMENTATION:

A document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD.

This XRF Performance Characteristic Sheet was developed by the Midwest Research Institute (MRI) and QuanTech, Inc., under a contract between MRI and the XRF manufacturer. XRF Performance Characteristic Sheets were originally developed by the MRI under a grant from the U. S. Environmental Protection Agency and the U.S. Department of Housing and Urban Development. HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

LEAD-BASED PAINT INSPECTION, 21 PARNELL BUILDING, DAYTON, OHIO MARCH 2019

APPENDIX C: NIST CERTIFICATE OF ANALYSIS FOR SRM STANDARDS

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 2573

Lead Paint Film for Building Surfaces (Nominal Pb 1.0 mg/cm²) (Color: Red)

This Standard Reference Material (SRM) is intended for validation of results from portable, hand-held, X-ray fluorescence analyzers, when testing for lead in paint coatings on interior and exterior building surfaces. A unit of SRM 2573 consists of a white polyester sheet, approximately 7.6 cm wide, 10.2 cm long, and 0.2 mm thick, coated with a single, red-colored paint layer, approximately 0.04 mm thick. Included is one unit of SRM 2570, which is coated with a lead-free, lacquer layer of the same thickness as a lead paint layer and is intended as a blank. All sheets are over-coated with a clear, thin, plastic laminate to protect the surface from abrasion.

Certified Values: The measurand is the total lead areic mass in cured paint for each level listed below [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy, in that all known or suspected sources of bias have been investigated or taken into account [2]. Value assignment categories are based on the definitions of terms and modes used at NIST for certification of chemical reference materials [2]. The certified value is based on measurements by isotope dilution inductively coupled plasma mass spectrometry (ID-ICP-MS).

Level	Color	Lead Areic Mass (mg/cm ²)
SRM 2570	White (blank)	< 0.001
SRM 2573	Red	1.040 ± 0.064

The uncertainty associated with each certified value is an expanded uncertainty, U, and was evaluated in accordance with the ISO/JCGM Guides [3,4]. Because of variability in the paint film between different sheets of each SRM, the uncertainties are 95 % prediction intervals. The expanded uncertainty is calculated as $U = ku_c$, where u_c is intended to represent, at the level of one standard deviation, the combined uncertainty due to material variability and measurement uncertainty. The coverage factor, k, is determined from the Student's *t*-distribution corresponding to the calculated effective degrees of freedom and 95 % level of confidence. Metrological traceability is to the SI units for mass and length (expressed as milligrams per centimeter-squared).

Expiration of Certification: The certification of SRM 2573 is valid, within the measurement uncertainty specified, until 01 July 2026, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Use"). The certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet or register) will facilitate notification.

Coordination of technical measurements for the certification of this SRM was performed by G.C. Turk and J.D. Fassett of the NIST Chemical Sciences Division.

Measurements for value assignments of this SRM were performed by K.E. Murphy, J.R. Sieber, A.F. Marlow, L.J. Wood, P.R. Seo, and M. Lankosz of the NIST Chemical Sciences Division.

Carlos A. Gonzalez, Chief Chemical Sciences Division

Steven J. Choquette, Acting Director Office of Reference Materials

Gaithersburg, MD 20899 Certificate Issue Date: 14 April 2016 Certificate Revision History on Last Page

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APPENDIX D: OHIO DEPARTMENT OF HEALTH LICENSE



OHIO DEPARTMENT OF HEALTH

246 North High Street Columbus, Ohio 43215 614/466-3543 www.odh.ohio.gov

John R. Kasich/Governor

Richard Hodges/Director of Health

March 31, 2017

Ralph A Froehlich Helix Environmental Inc 1 Elizabeth Place Suite 160H Dayton OH 45417

RE: Lead Risk Assessor License Number: LA000559 Expiration Date: 03/30/2019

Dear Ralph A Froehlich:

This letter and enclosed license approves your request to be licensed as a Lead Lead Risk Assessor. You must present your license upon request at any project site while performing duties. A copy of your license is not acceptable as proof of licensure.

Please be aware of the rules and regulations governing your discipline for Ohio. If you choose to renew this license, you must take an Ohio approved refresher course appropriate for the discipline within 2 years of your previous training course. Please visit our website at www.odh.ohio.gov for information.

This license may be revoked by the Director of Health for violation of any of the requirements of 3701-32 of the Ohio Administrative Code.

If you have any questions, please call the Ohio Department of Health, Lead Poisoning Prevention Program at 1-877-668-5323.

Sincerely,

lake & Needla

Mark Needham, Supervisor Lead Program Bureau of Environmental Health and Radiation Protection Office of Health Assurance and Licensing

Enclosure







Department of Health

Mike DeWine, Governor Jon Husted, Lt. Governor Amy Acton, MD, MPH, Director

April 03, 2019

Ralph A Froehlich Helix Environmental Inc I Elizabeth Place Suite 160H Dayton OH 45417

RE: Lead Risk Assessor License Number: LA000559 Expiration Date: 04/01/2021

Dear Ralph A Froehlich:

This letter and enclosed license approves your request to be licensed as a Lead Risk Assessor. You must present your license upon request at any project site while performing duties. A copy of your license is not acceptable as proof of licensure.

Please be aware of the rules and regulations governing your discipline for Ohio. If you choose to renew this license, you must take an Ohio approved refresher course appropriate for the discipline within 2 years of your previous training course. Please visit our website at www.odh.ohio.gov for information.

This license may be revoked by the Director of Health for violation of any of the requirements of 3701-32 of the Ohio Administrative Code.

If you have any questions, please call the Ohio Department of Health, Lead Poisoning Prevention Program at (614) 466-1450.

Sincerely,

Shamus Estep, R.S. Program Administrator Bureau of Environmental Health and Radiation Protection



246 North High Street Columbus, Ohio 43215 U.S.A. 614 | 466-3543 www.odh.ohio.gov



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ASBESTOS INSPECTION REPORT

For

Huffman/Parnell Apartment Building 21 Parnell Avenue Dayton, Ohio

Project Number: 18460-4

Prepared for:

Greater Dayton Premier Management 400 Wayne Avenue Dayton, Ohio 45401

BY

TURN-KEY ENVIRONMENTAL CONSULTANTS, INC. 714 East Monument Avenue Dayton, Ohio 45402 (937) 335-8807

> Inspection Conducted: March 25, 2019 Report Date: April 16, 2019

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- Appendix C Asbestos Bulk Sample Log
- Appendix D Asbestos Inspection and Assessment Summary
- Appendix E Analytical Laboratory Reports
- Appendix F Sample Location Sketches
- $Appendix \; G-Photographs$
- Appendix H 10-Day Notification Form and Instructions

<u>1.0 SCOPE OF SERVICES</u>

In March 2019, Greater Dayton Premier Management (GDPM) contracted with **Turn-Key Environmental Consultants, Inc.** (**TKEC**) to conduct a comprehensive building inspection for asbestos-containing materials (ACM) at the Huffman/Parnell Apartment Building located at 21 Parnell Ave., Dayton, Montgomery County, Ohio.

TKEC was authorized to conduct this assessment under the Notice to Proceed #1 under RFP #4, Phase I ESA, ACM-LBP Testing at the Huffman/Parnell – OH005-015A Property located at 21 Parnell Ave., Dayton, OH 45403, dated March 13, 2019. According to the Montgomery County Auditor, the building is owned by the Dayton Metropolitan Housing Authority, 400 Wayne Ave., Dayton, OH 45410-1110, phone no. 937-910-7637.

Our investigation was conducted in accordance with the Site-Specific Work Plan dated March 12, 2019 (See APPENDIX A - SITE SPECIFIC WORK PLAN), and by standard scientific, environmental and engineering practices. Asbestos sampling and assessment were performed by Ohio Certified Asbestos Hazard Evaluation Specialists. **TKEC's** Scope of Services included the following:

1. Perform asbestos sampling and assessment of building materials to be impacted by demolition/renovation activities by physically collecting a representative amount of homogeneous samples and having the samples analyzed by a certified laboratory. The samples will be analyzed using the polarized light microscopy (PLM) bulk method. Samples will be obtained from representative surfaces based on color, texture, date of installation and location. Destructive sampling methods were **not** employed to access behind walls and above ceilings. All waste generated during sampling activities (disposal of PPE, etc.) will be properly disposed of by TKEC.

- 2. Label each sample location in the field with a unique sample number to allow for easy identification of the ACM by the abatement contractor.
- 3. Provide an asbestos survey report to the Client, which will include a brief discussion of the inspection, sampling methodology, type and extent of ACM, mapping, sampling locations, analytical test results and recommendations.

The purpose of the inspection was to identify those accessible building materials that may contain asbestos, collect and analyze bulk samples in accordance with EPA-recommended guidelines, and report the types, locations, and quantities of ACM present in the building that require abatement prior to their demolition/renovation.

Two (2) **TKEC** Ohio Environmental Protection Agency (OEPA) Certified Asbestos Hazard Evaluation Specialists conducted a detailed inspection of the Huffman/Parnell Ave. Apartment Building on March 25, 2019. They also collected representative bulk samples of suspect asbestos containing materials, documented the locations of those suspect materials, and quantified the materials in question. This report documents conditions of the Property as observed on that date.

2.0 EXECUTIVE SUMMARY

A total of fifty-five (55) bulk samples were collected from the Huffman/Parnell Apartment Building, all of which were analyzed for asbestos fiber content by Polarized Light Microscopy (PLM). Some of the samples were comprised of layers which resulted in a total of ninety-six (96) PLM analyses.

A two (2) story building with a full basement contains twelve (12) apartments and occupies approximately 15,672 SF is located on the property. Accessible areas of each apartment were inspected; however, samples were not collected from each apartment. Instead, materials were sampled that differed from previously sampled building components. The addresses of the apartments that comprise the subject property are as follows:

1202 Huffman Ave., Apt. A	1202 Huffman Ave., Apt B
1204 Huffman Ave., Apt, A	1204 Huffman Ave., Apt, B*
1208 Huffman Ave., Apt. A	1208 Huffman Ave., Apt. B
1210 Huffman Ave., Apt. A	1210 Huffman Ave., Apt. B
9 Parnell Ave., Apt. A*	9 Parnell Ave., Apt. B*
11 Parnell Ave., Apt A*	11 Parnell Ave., Apt. B

*Apartment units not sampled

A General Floor Plan that illustrates the building areas, the approximate sample locations, and locations of identified ACM, are included in Appendix F.

Asbestos Inspection Report Huffman/Parnell Apartment Building 21 Parnell Ave. Dayton, Ohio

For sampling purposes, these areas were further divided into a total of ten (10) homogeneous areas. A Homogeneous Area is defined as "an area of asbestos containing building material (ACBM) or suspect ACBM which appears similar throughout in terms of color, texture, and date of application". Seven (7) of the samples analyzed contained one percent (1%), or greater than one percent (>1%) asbestos, causing the materials to be classified as asbestos containing materials (ACM). The asbestos containing materials by Building Area are:

Basement

• Asbestos Millboard (Approximately 132 SF)

Inaccessible Areas

Efforts were made to quantify ACM which may be located behind walls, above hard plaster ceiling, etc.; however, since additional ACM could be in inaccessible areas of the building, **TKEC** cannot guarantee that additional ACM will not be found during the course of abatement or demolition/renovation activities.

Electrical wiring, cable boxes, panels, transformers, and underground piping may contain asbestos. These materials were not included in this investigation. An asbestos inspection should be performed on these materials during demolition to determine if these materials are ACM.

3.0 METHODOLOGY

Turn-Key Environmental Consultants, Inc. (TKEC) entered into an agreement with Greater Dayton Premier Management (GDPM), to conduct an asbestos inspection of the Huffman/Parnell Apartment Building located at 21 Parnell Ave., Dayton, Montgomery County, Ohio.

The National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR61 subpart M) requires notification for all demolition or major renovation projects. Prior to demolition or major renovation activities, the facility must be inspected for all friable and non-friable ACM. This inspection must be performed by Ohio Certified Asbestos Hazard Evaluation Specialists.

Joseph Saunders (OEPA Certification #ES34837) and Derrek Mallery (OEPA Certification #ES36194) Ohio Certified Asbestos Hazard Evaluation Specialists conducted a detailed inspection of the Huffman/Parnell Apartment Building on March 25, 2019. A copy of Mr. Saunders' and Mr. Mallery's Training Certifications and Licenses are included in Appendix B.

The inspection of the Huffman/Parnell Apartment Building included a room-by-room walk-through investigation of the building, during which time the accessible areas were visually checked for the presence of suspect ACM. During the building evaluation, the inspector looked for suspect materials on building components such as walls, floors, ceilings, etc. that could contain asbestos. Sampling areas containing homogeneous

materials were identified and suspect materials were touched to determine their degree of friability.

Materials suspected of containing ACM were sampled during the asbestos inspection. Fifty-five (55) samples were collected from the Huffman/Parnell Apartment Building during the inspection. Some of the samples were comprised of layers which resulted in the analysis of a total of ninety-six (96) samples. These samples were collected in areas that gave an accurate representation of the type of ACM present.

The samples were transported, under chain of custody to Hayes Microbial Consulting, LLC (Hayes Microbial) in Midlothian, Virginia, where they were analyzed using polarized light microscopy (PLM) (EPA 600/R-93, M-4/82-020). Hayes Microbial is a National Voluntary Laboratory Accredited Program (NVLAP) accredited laboratory for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) asbestos testing (NVLAP Lab Code 500096-0).

METHOD OF SAMPLING AND ANALYSIS

BACKGROUND

Asbestos is the name of a class of magnesium-silicate minerals that occur in fibrous form. Minerals that are included in this group are chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite. Asbestos is, and was, used in the manufacture of a variety of products where heat resistance and durability were important.

Asbestos Inspection Report Huffman/Parnell Apartment Building 21 Parnell Ave. Dayton, Ohio

Asbestos is a known human carcinogen. The inhalation of asbestos fibers has been clearly associated with three clinical manifestations: asbestosis, mesothelioma (a cancer of the lining of the chest or abdomen), and lung cancer. These epidemiological investigations were based on occupational exposures to asbestos. Accordingly, governmental regulations were promulgated by OSHA to establish a Permissible Exposure Limit (PEL) for asbestos fibers per cubic centimeter (f/cc) for workplace exposure for workers, based on an eight (8) hour Time-Weighted Average (TWA). At this time, the current PEL of 0.1 f/cc based on an eight (8) hour TWA has been established for workplace exposure.

The potential for an asbestos-containing product to release breathable fibers depends largely on its degree of friability. Friable means that the material can be crumbled with hand pressure and is therefore likely to emit fibers. The sprayed-on materials used for fireproofing, insulation, or soundproofing are considered to be friable, and they readily release airborne fibers if disturbed. Similarly, insulation used on piping systems and power-generating devices are generally considered friable and can readily release fibers when disturbed.

Nonfriable materials can be broken down into two categories as specified in 40 CFR Part 61 Subpart M. Category I nonfriable ACMs such as packings, gaskets, resilient floor coverings, and asphalt roofing products generally do not emit airborne fibers unless subjected to sanding, grinding, cutting, or abrading activities. Category II nonfriable

ACMs, such as cement sheets or pipes, also do not generally emit airborne fibers unless subjected to aggressive activities. However, Category II nonfriable ACMs have a higher probability of becoming friable than Category I nonfriable ACMs due to their less resilient qualities. Construction projects, which may involve disturbance of asbestos, such as demolition or renovation, may result in the release of microscopic asbestos fibers into the environment.

During the inspection all building materials that are suspect as Asbestos-Containing Materials were delineated. The following table lists materials that are not suspect as Asbestos-Containing Materials (ACM). All other suspect materials, with the potential of being disturbed or becoming friable during construction or demolition activity, were inspected. The suspect materials were then assessed as to friability or potential friability.

Concrete	Brick (except fire brick)
Concrete Block	Wood
Glazed Block	Plastic
Ceramic Tile	Fiberglass Insulation
Metal	Foam Rubber Insulation
Glass	Styrofoam Insulation
Carpet	

 Table I. EPA Excluded Building Materials, by Definition and Visualization:

Following the assessment, the suspect materials were placed in homogeneous areas. A homogeneous area contains material that is uniform in texture, appearance, installed at the same time, and is unlikely to contain more than one type or formulation of material.

The homogeneous areas were then placed into one of the following three groups of

building materials:

- 1. **Thermal System Insulation** (TSI) consists of the coverings of pipes, pipefittings, boilers, hot water storage tanks, etc. This insulation may or may not contain asbestos, however, when asbestos is present in TSI, it usually comprises a high percentage of the insulating material. Consequently, the potential for damage and friability is of increased concern.
- 2. **Surfacing Material** is a material that is sprayed or troweled onto a structure, such as plaster. The asbestos content varies but is usually relatively low. Three (3) bulk samples were collected for each homogeneous area less than or equal to 1,000 square feet. If the homogeneous area is greater than 1,000 square feet but less than 5,000 square feet, five (5) bulk samples were collected. For homogeneous areas greater than 5,000 square feet at least seven (7) bulk samples were collected. Random sample locations in each homogeneous area of suspect surfacing materials were determined by the inspector during the initial inspection.
- 3. **Miscellaneous Materials** are those which are added to the completed structure, such as ceiling tile, floor tile, drywall, transite panels, duct tape, etc. The asbestos content varies from low to high, dependent upon the materials. These materials were sampled "in a manner sufficient to determine" whether the material in question contained asbestos.

BULK SAMPLE COLLECTION PROTOCOL

To limit disturbance and to prevent the release of asbestos fibers, the inspector performed bulk sampling of suspect materials in accordance with generally accepted procedures outlined in the current EPA Guidance Document and in accordance with the Asbestos Hazard Emergency Response Act (AHERA – Section 763.86) protocol. Each sample was collected and placed in a clean, sealable vial or plastic bag and labeled with a unique sample number. This sample number was recorded on a Bulk Sample Log. Supplemental information was also recorded on the Bulk Sample Log, including date of inspection, name of inspector, the building name (or number), a brief description and location of the sample, and the type of material sampled (e.g. thermal insulation, fireproofing, or plaster). The Bulk Sample Logs for this project are included in Appendix C.

ANALYSIS OF BULK SAMPLES

The samples were transported, under chain of custody, to the Hayes Microbial Consulting, LLC. (Hayes Microbial) in Midlothian, Virginia, for analysis. Bulk samples were analyzed for asbestos content using EPA Method 600/R-93/116, M-4/82-020, which incorporates the use of stereoscopic microscopy and polarized-light microscopy (PLM) coupled with dispersion staining. This analytical method, which the EPA currently recommends for the determination of asbestos in bulk samples of friable insulation materials, can be used for qualitative identification of six (6) morphologically different types of asbestos fibers: chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite.

This method specifies that the asbestos content in a bulk sample shall be estimated and reported as a finite percentage (rounded to the nearest percent) within the range of 0 to 100. Minute quantities of asbestos in bulk samples may be reported as "trace" or less than one-percent (<1%). The analytical method determined the "*area percent*" asbestos or the percentage of the area of a microscopic field of view that is occupied by asbestos fibers. Samples were determined to be Asbestos-Containing Materials when the asbestos
content was **greater** than one-percent (>1%). A building material that contains onepercent asbestos or less (\leq 1%) is not considered to be an Asbestos-Containing Material by USEPA. If friable ACM samples contained greater than one-percent (>1%) asbestos, but less than ten-percent (<10%) asbestos, those samples were further analyzed by PLM EPA 400 Point Count which is a more definitive test for the presence of asbestos.

The results of bulk sample analyses were reported in a standard laboratory report. This written report includes the client name, the laboratory identification numbers assigned to each bulk sample upon receipt by the laboratory custodian, and the field number assigned to each bulk sample during the building inspection. The composition of the bulk sample is reported in percentages of asbestos (i.e., chrysotile, amosite, crocidolite, or other) and non-asbestos (i.e., cellulose, fiberglass, synthetic, or other) components.

Hayes Microbial Consulting, LLC. Analytical laboratory is fully accredited by the National Voluntary Laboratory Accreditation Program (NVLAP #500096-0). NVLAP is the agency sponsored by the National Institute of Standards and Technology providing EPA accreditation of laboratories analyzing bulk samples for asbestos content by PLM under AHERA.

SUMMARY OF ANALYTICAL RESULTS

The analytical results of the samples collected during the ACM inspection are summarized on the Inspection and Assessment Summary Table in Appendix D. The table provides the following information:

- A description of the material sampled.
- The location from where the sample was collected.
- The percentage and type of asbestos present.
- The identification number assigned to the sample by the evaluation specialist in the field.

Copies of the Analytical Laboratory Reports are included in Appendix E.

The building contained approximately 15,500 SF of plaster/skim coat. This Category II Friable material was represented by fifteen (15) randomly located samples. None of these samples contained asbestos. Asbestos abatement is not required if this material is disturbed or removed.

Seven (7) samples contained greater than one-percent (>1%) asbestos. Three (3) samples of asbestos millboard contained 40% - 55% chrysotile asbestos. Eleven apartments had approximately 12 SF of asbestos millboard installed over the furnace in the basement. If this material is to be removed, it must be done by a certified asbestos hazard abatement contractor.

Two (2) window caulk samples contained 2% chrysotile asbestos. These samples were further analyzed by PLM EPA 400 Point Count to more accurately determine their asbestos content. The point count analytical results indicate that the samples contained 0.25% and <0.25\% chrysotile asbestos, respectively. The windows caulk on the building does not have to be abated.

Two (2) door caulk samples contained 5% chrysotile asbestos. These samples were further analyzed by PLM EPA 400 Point Count to more accurately determine their asbestos content. The point count analytical results indicate that the samples contained 0.75% and 0.5% chrysotile asbestos respectively. The door caulk on the building does not have to be abated.

<u>4.0 MATERIAL QUANTITIES OF ACBM</u>

Per protocol outlined in AHERA, the inspector must state how the quantities of asbestos containing building materials (ACBM) were determined. For the Huffman/Parnell Apartment Building, these quantities were estimated by using the physical dimensions determined from drawings provided by GDPM, and then verifying these dimensions with actual measurements in the building itself. Sketches of the building are included in Appendix F.

A brief summary of the estimated quantities of asbestos containing materials that require abatement prior to demolition is provided below. These quantities are for informational purposes only and are based on the best information available at the time of the asbestos survey. <u>The Asbestos Abatement Contractor shall be responsible for confirming the</u> <u>actual quantities of all materials that require abatement</u>. Nothing in this section may be interpreted as limiting the extent of work otherwise required by this contract and related documents. The quantities of ACBM for each Homogeneous Area can be found in the Inspection and Assessment Summary in Appendix C.

Estimated Quantities of Identified Asbestos

Basement

• Asbestos Millboard – 132 SF

5.0 ESTIMATED ABATEMENT COSTS

The estimated costs for abating the identified materials in the Huffman/Parnell Apartment Building are summarized below:

Material	Estimated	Estimated	Estimated
	<u>Quantity</u>	<u>Unit Costs</u>	<u>Costs</u>
Asbestos Millboard	132 SF	\$10.00/SF	\$1,320.00

Estimated costs are based on prevailing costs in the Midwest for 2019, and do not include costs for planning, permitting, contractor oversight or air monitoring. Actual costs may vary from estimated costs due to contractor workloads, season, or changes in regulatory requirements.

6.0 CONCLUSIONS AND SUMMARY OF FINDINGS

TKEC performed an asbestos inspection of the Huffman/Parnell Apartment Building located at 21 Parnell Ave., Dayton, Montgomery County, Ohio. The Inspection and Assessment Summary (Appendix D) provides an inventory of ACM identified at the facility and includes the location, material description, homogeneous area number, type of ACM, and estimated quantity of each ACBM sampled. A total of fifty-five (55) bulk samples were collected from the Huffman/Parnell Apartment Building, all of which were analyzed for asbestos fiber content by Polarized Light Microscopy (PLM). Some of the samples were in layers which resulted in a total of ninety-six (96) PLM analyses. The bulk samples were collected from a total of ten (10) different homogeneous areas.

The building contained approximately 15,500 SF of plaster/skim coat. This Category II Friable material was represented by fifteen (15) randomly located samples. None of these samples contained asbestos. Asbestos abatement is not required if this material is disturbed or removed.

Seven (7) samples contained greater than one-percent (>1%) asbestos. Three (3) samples of asbestos millboard contained 40% - 55% chrysotile asbestos. Eleven apartments had approximately 12 SF of asbestos millboard installed over the furnace in the basement. If this material is to be removed, it must be done by a certified asbestos hazard abatement contractor.

Two (2) window caulk samples contained 2% chrysotile asbestos. These samples were further analyzed by PLM EPA 400 Point Count to more accurately determine their asbestos content. The point count analytical results indicate that the samples contained 0.25% and <0.25\% chrysotile asbestos, respectively. The windows caulk on the building does not have to be abated.

Two (2) door caulk samples contained 5% chrysotile asbestos. These samples were further analyzed by PLM EPA 400 Point Count to more accurately determine their asbestos content. The point count analytical results indicate that the samples contained 0.75% and 0.5% chrysotile asbestos respectively. The door caulk on the building does not have to be abated.

If you desire to remove the millboard from the eleven apartments, the estimated cost for removing the material from the building prior to renovation/demolition is **\$1,320.00**.

Current asbestos laws and regulations require the removal of asbestos-containing materials (ACM) prior to initiation of renovation/demolition activities of those materials in affected areas. To meet this requirement, an Ohio Environmental Protection Agency licensed asbestos hazard abatement contractor must be contracted to perform the removal work and submit the necessary notifications. For your convenience, a copy of the notification form and instructions are attached to this report. It is also recommended that a professional third-party environmental consultant provide oversight during asbestos

abatement and to provide post abatement visual and/or air clearances to confirm adequate completion of abatement activities prior to proceeding with renovation/demolition.

TKEC makes no warranty, either expressed or implied, that this site is free from other Asbestos-Containing Materials, which could be buried or concealed between building structures. Our investigation was conducted in accordance with standard scientific, environmental, and engineering practices.

Turn-Key Environmental Consultants, Inc. is not responsible for conclusions, recommendations, determinations, or data interpretations that may be made by other parties, based on the information provided in this report.

Respectfully submitted, TURN-KEY ENVIRONMENTAL CONSULTANTS, INC.

Derch Mally

Derrek Mallery, Field Technician OEPA Asbestos Hazard Evaluation Specialist No. ES36194, Exp. Date 09/05/2019

Joseph Saunders

Joseph Saunders, Senior Project Manager ODH Asbestos Hazard Evaluation Specialist No. ES34837, Exp. Date 06/10/2019

Hellian m. Trasun

William Treasure Vice President

APPENDIX A

Site Specific Work Plan



Turn-Key Environmental Consultants, Inc.

790 Barnhart Rd. Troy, OH 45373 Phone: 937-335-8807 Fax: 937-339-4882

March 12, 2019

Mr. Kevin Arnold Greater Dayton Premier Management 400 Wayne Avenue Dayton, Ohio 45401

RE: Site Specific Work Plan and Cost Estimate Task Assignment RFP 4, Phase I ESA, ACM-LBP Testing at 21 Parnell Avenue.

Dear Mr. Arnold:

In response to **Task Assignment RFP 4, Phase I ESA, ACM-LBP Testing**, Turn-Key Environmental Consultants, Inc. (TKEC) has prepared this Site Specific Work Plan (SSWP) and cost estimate to complete a Phase I Environmental Site Assessment (ESA), and ACM-LBP Testing of the Property identified as Huffman/Parnell- OH005-015A, located at the corner of Parnell and Huffman, Dayton, OH 45403.

Scope of Work - Phase I ESA

Prepare a Phase I ESA in accordance with the *American Society for Testing and Materials' (ASTM)* E1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Specific activities will include the following:

- 1. Conduct a historical land use search to identify past operational practices at the property that have the potential of latent environmental liability.
- 2. Conduct a search for the existence of environmental cleanup liens against the subject property that are filed or recorded under local, state, tribal or federal law.
- 3. Review and evaluate applicable environmental records from local, state, tribal and/or federal environmental regulatory authorities (i.e. Superfund, Hazardous Waste Site List and others as deemed necessary).

- 4. Contact local regulatory agencies and health authorities to determine if any environmental issues have been identified concerning the property. Review existing surrounding property land uses to determine the likelihood of potential migrating contaminants.
- 5. Compile a general site area review of hydrological (ground & surface water) and geological conditions using existing data.
- 6. Conduct a site evaluation and a property walkover to determine any physical characteristics that may indicate past, existing or potential environmental contamination.
- 7. Determine the level of environmental risks associated with the property.
- 8. Provide a written report indicating resources that were reviewed, summarizing pertinent information that was collected, and identifying environmental risks. The report will comply with requirements established by the referenced standards.

ASSUMPTIONS

- The User/Owners will provide timely access to the Property and will complete a *User Questionnaire* (which will be provided by TKEC).
- Only one trip to the Subject Property will be required to obtain full access.

COST

TKEC has estimated the total cost to complete the <u>Phase I activities</u>, as described herein, at **\$2,100.00**.

Scope of Work – <u>Asbestos Containing Materials Survey</u>

- 1. Provide asbestos bulk sampling to include typical suspect materials in each building, as specified by 40 CFR Part 61 NESHAP, amended November 20, 1990, and all applicable rules pertaining to Ohio.
- 2. A state accredited asbestos building inspector will collect sufficient bulk samples of suspect asbestos containing materials to characterize the suspect material.

- 3. Bulk samples will be analyzed for asbestos content by the Polarized Light Microscopy Method (PLM) as prescribed in the Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763.87. The sample will be determined positive when the asbestos content is greater than one percent (>1%). The analytical method used for analysis will be the "Method for the Determination of Asbestos in Bulk Samples" found in Appendix A to Subpart F in 40 CFR Part 763. The analytical laboratory is participating in the EPA Interim Asbestos Sample Analysis Quality Assurance Program.
- 4. Category 2 Friable materials that are determined to contain $\leq 10\%$ asbestos will be further analyzed by PLM EPA 400 Point Count to more accurately determine the asbestos content.
- 5. Provide a written inspection report to document the location, condition, analytical results, and related quantities of asbestos containing materials evidenced as a result of the sampling, conforming to the Final Report section of the RFP.

COST

TKEC has estimated a total cost to complete <u>Asbestos</u> activities as **\$1,800.00**.

Scope of Work - Lead Based Paint Assessment

Based on the request for proposal, Helix Environmental, Inc. proposes to provide all necessary labor, materials, analyses, recordkeeping, and insurance in order to perform lead-based paint inspection services at one occupied, twelve-unit apartment building (Huffman/Parnell Apartment Building located at 21 Parnell Ave., Dayton, Ohio) for Greater Dayton Premier Management in Dayton, Ohio. The services will be performed or directed by a Certified Industrial Hygienist, Certified Safety Professional and Qualified Environmental Professional who is certified by the Ohio Department of Health as a Lead Risk Assessor.

1) START-UP MEETING/CONFERENCE CALL - A start-up meeting or conference call will be held to discuss project scheduling, logistics, and to review available plans for the project. Facility access will be coordinated by Turn-Key Environmental Consultants, Inc. with the occupants of the rental units.

2) LEAD-BASED PAINT INSPECTION – Helix Environmental, Inc. will inspect each housing unit for Lead-Based Paint using a calibrated X-Ray Fluorescence Analyzer (XRF) to measure lead-content of inspection locations on a room-by-room, surface-by surface basis in accordance with current EPA and HUD requirements. Deteriorated paint will be sampled if observed (up to 10 representative locations per housing unit for lead determination analyses). Paint film samples will be collected, placed in labeled leak tight containers, and shipped by courier to an Environmental Lead analytical lab for analysis. Please note: the RFP specifies the use of an RMD

Model LPA-1 X-Ray Fluorescence (XRF) Lead in Paint Spectrum Analyzer, but Helix Environmental, Inc. proposes to use a more recent, HUD approved Innov-X Alpha Series XRF Spectrum Analyzer for this project.

4) PROJECT DOCUMENTATION - Helix Environmental, Inc. will document the lead paint inspections performed by Helix Environmental, Inc., including sampling locations, analytical results and recommendations for additional actions if needed.

5) PROJECT SCHEDULE - The project work will be performed during approximately 1 working day on site and work will be started within 5 calendar days after Notice To Proceed (NTP).

COST

TKEC has estimated a total cost to complete <u>the Lead-Based Paint Inspection</u> of one, twelve-unit building as **\$5,100.00**.

Helix Environmental, Inc. proposes to perform any requested additional work using the following TIME-AND-MATERIAL rates:

Certified Industrial Hygienist \$165.00/hr. Industrial Hygienist/Industrial Hygiene Technician \$95.00/hr. Clerical \$40.00/hr. Analytical Invoice + 15% Mileage \$0.56/mile Miscellaneous Expenses Invoice + 15%

Total Statement of Work Cost Table

	Phase I Cost	ACM Inspection	Lead Assessment
Total	\$2,100	\$1,800	\$5,100
	Grand Total	\$9,000	

PROJECT SCHEDULE

TKEC will initiate the project planning within five days of receiving approval for this Task Assignment. The completed report will be submitted within thirty (30) days after the issuance of the Notice to Proceed.

PERSONNEL

The following provides a description of key TKEC personnel and their role in this project:

- Senior Environmental Consultant (William Treasure) will supervise and schedule field staff; provide oversight of project activities including correspondence, communication, scheduling; completion of monthly progress reports; ensure that the project is completed in accordance with project scope and contract agreement; review of data and report(s) to ensure compliance with ASTM guidelines, and assist with data evaluation.
- **Project Manager** (Amy Watt) will complete the Phase I project tasks including site reconnaissance, data collection and review, and report preparation.
- Asbestos Inspector (Joe Saunders, Jon Treasure, Derek Mallery) will complete the project tasks including inspection, sampling, and sample submittal, review of results, and report preparation.
- Lead Based Paint Sample Testing (Helix Environmental, Inc.) services will be performed or directed by a Certified Industrial Hygienist, Certified Safety Professional and Qualified Environmental Professional who is certified by the Ohio Department of Health as a Lead Risk Assessor.

Respectfully submitted,

TURN-KEY ENVIRONMENTAL CONSULTANTS, INC.

Linda Trasur

Linda Treasure

President

APPENDIX B

Inspectors' Certifications



John R. Kasich, Governor Mary Taylor, Lt. Governor Craig W. Butler, Director

June 19, 2018

Joseph D Saunders Turn Key Environmental Consultants, Inc 790 Barnhart Rd Troy OH 45373

RE: Asbestos Hazard Evaluation Specialist Certification Number: ES34837 Expiration Date: 06/10/2019

Dear Joseph D Saunders:

This letter and enclosed certification card approves your request to be certified as an Asbestos Hazard Evaluation Specialist. You must present your card upon request at any project site while performing duties. Copies of cards are not acceptable as proof of certification.

8

This certification may be revoked by the Director of the Environmental Protection Agency for violation of any of the requirements of 3745-22 or 3745-20 of the Ohio Administrative Code.

If you have any questions, please call 614-644-0226.

Sincerely,

Mark JS Needhan

Mark Needham Manager, Asbestos Program Division of Air Pollution Control



50 West Town Street • Suite 700 • P.O. Box 1049 • Colum epa.ohio.gov • (614) 644-3020 • (614) 644-31

This certification is issued pursuant to Revised Code Chapter 3710 and Administrative Code Chapter 3745-22.

This card is not valid if altered.



TRAINING SERVICES INTERNATIONAL

Asbestos Building Inspector Refresher

	¢	. Saunders	
Certificate	1 his is to certify	Joseph L	XXX-XX-6484

(AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Building Inspector Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 Indiana requirements under 326 IAC 18-2 and Chapter 3745-22 Ohio Administrative Code.

Cincinnati, OH	Course Location
5/16/18	Examination Date
5/16/18	Date(s) of Course
5/16/19	Expiration Date
N add Hollo	Training Manager

The second

33150 Lakeland Blvd. Cleveland, OH 44095 www.TSltraining.com

Course Certificate No. 18 TSI 72766 ir



TRAINING SERVICES INTERNATIONAL

Asbestos Management Planner Refresher

^{tify} Cph D. Saunders XX-6484		
^{ate} cph D. Saunders XX-6484		
^{ate} cph D. Sat XX-6484		Inders
	ate	cph D. Sau XX-6484

(AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Indiana requirements under 326 IAC 18-2 and Chapter 3745-22 Ohio Administrative Code. Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Management Planner

Cincinnati, OH	Course Location
5/16/18	Examination Date
5/16/18	Date(s) of Course
5/16/19	Expiration Date
N som Parte	Training Manager

11

33150 Lakeland Blvd. Cleveland, OH 44095 www.TSltraining.com

Course Certificate No. 18 TSI 72773 mpr



John R. Kasich, Governor Mary Taylor, Lt. Governor Craig W. Butler, Director

September 05, 2018

Derek J Mallery Turn Key Environmental Consultants, Inc 790 Barnhart Rd Troy OH 45373

RE: Asbestos Hazard Evaluation Specialist Certification Number: ES36194 Expiration Date: 09/05/2019

Dear Derek J Mallery:

This letter and enclosed certification card approves your request to be certified as an Asbestos Hazard Evaluation Specialist. You must present your card upon request at any project site while performing duties. Copies of cards are not acceptable as proof of certification.

This certification may be revoked by the Director of the Environmental Protection Agency for violation of any of the requirements of 3745-22 or 3745-20 of the Ohio Administrative Code.

If you have any questions, please call 614-644-0226.

Sincerely,

Mark JS Needha

Mark Needham Manager, Asbestos Program Division of Air Pollution Control



50 West Town Street • Suite 700 • P.O. Box 1049 • Columbus, OH 43216-1049 epa.ohio.gov • (614) 644-3020 • (614) 644-3184 (fax)



TRAINING SERVICES INTERNATIONAL

Asbestos Building Inspector Refresher

Certificate

86 Derek Mallery XXX-XX-3558 This is to certify

(AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Building Inspector Indiana requirements under 326 IAC 18-2 and Chapter 3745-22 Ohio Administrative Code.

Cincinnati, OH	Course Location
7/18/18	Examination Date
7/18/18	Date(s) of Course
7/18/19	Expiration Date
North Heller	Training Manager

33150 Lakeland Blvd. Cleveland, OH 44095 www.TSltraining.com

Course Certificate No. 18 TSI 73398 if



TRAINING SERVICES INTERNATIONAL

Asbestos Management Planner Refresher

Certificate

70 Derek Mallery XXX-XX-3558 This is to certify

(AHERA). The above student received the requisite training for asbestos accreditation under Title II of the Toxic Substances Control Act and State of Refresher and has passed an examination in that course with a minimum score of 70% or better. Training was in accordance with 40 CFR Part 763 has attended and successfully completed the Asbestos Hazard Emergency Response Act mandatory course for the Asbestos Management Planner Indiana requirements under 326 IAC 18-2 and Chapter 3745-22 Ohio Administrative Code.

Cincinnati, OH	Course Location
7/18/18	Examination Date
7/18/18	Date(s) of Course
7/18/19	Expiration Date
North Patter	Training Manager

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Course Certificate No. 18 TSI 73404 mpr

APPENDIX C

Asbestos Bulk Sample Logs

ASBESTOS BULK SAMPLE LOG Project - 9 Parnell Ave., Apt. A

Sample #	Date	Color	Type	Location	Collected By
1-1	3/25/19	White	Plaster/Skim Coat	Kitchen	SQL/MLQ
1-2	3/25/19	White	Plaster/Skim Coat	Living Room	SQL/MLQ
1-3	3/25/19	White	Plaster/Skim Coat	Hallway	SQL/MLQ
2-1	3/25/19	Tan	12" Floor Tile/Adhesive	Bathroom	SQL/MLQ
2-2	3/25/19	Tan	12" Floor Tile/Adhesive	Bathroom	SQL/MLQ

ASBESTOS BULK SAMPLE LOG Project - 11 Parnell Ave., Apt. A

Sample #	Date	Color	Type	Location	Collected By
1-1	3/25/19	White	Texture/Drywall-Ceiling	Bathroom	SUL/MLD
1-2	3/25/19	White	Texture/Drywall-Ceiling	Bathroom	SQL/MLQ

ASBESTOS BULK SAMPLE LOG Project - 11 Parnell Ave., Apt. B

Color
White Texture/Plas
White Texture/Plas
White Texture/Plas
Brown 12" Flo
Brown 12" Flo

ASBESTOS BULK SAMPLE LOG Project - 1202-A Huffman .

Sample #	Date	Color	Type	Location	Collected By
1-1	3/25/19	White	Plaster/Skim Coat	Dining Room/Living Room	SQL/MLQ
1-2	3/25/19	White	Plaster/Skim Coat	Bedroom 1	SUL/MLD
1-3	3/25/19	White	Plaster/Skim Coat	Bedroom 2	SQL/MLQ
2-1	3/25/19	Gray	12" Floor Tile	Hall Closet	SQL/MLQ
2-2	3/25/19	Gray	12" Floor Tile	Bedroom 1	SUL/MLD
3-1	3/25/19	Brown	12" Floor Tile/Mastic	Bathroom	SUL/MLD
3-2	3/25/19	Brown	12" Floor Tile/Mastic	Bathroom	SUL/MLD
4-1	3/25/19	Brown	12" Floor Tile (2 Layers)	Dining Room	SQL/MLQ
4-2	3/25/19	Brown	12" Floor Tile (2 Layers)	Living Room	SUL/MLD
5-1	3/25/19	Gray	Millboard	Basement	SUL/MLD
6-1	3/25/19	White	Sink Undercoating	Kitchen	SUL/MLD
7-1	3/25/19	White	Window Caulk	Exterior	DJM/JDS
7-2	3/25/19	White	Window Caulk	Exterior	SQL/MLQ

ASBESTOS BULK SAMPLE LOG Project - 1202 Huffman Ave., Apt. B

ollected By	DJM/JDS	DJM/JDS	DJM/JDS	DJM/JDS	DJM/JDS	DJM/JDS	DJM/JDS	DJM/JDS	DJM/JDS					
0											 			
Location	Kitchen	Kitchen	Bathroom	Kitchen	Kitchen	Bathroom	Basement	Exterior (A)	Exterior (B)					
Type	Texture/Drywall - Ceiling	Texture/Drywall - Ceiling	Texture/Drywall - Ceiling	18" Floor Tile/Adhesive	18" Floor Tile/Adhesive	18" Floor Tile/Adhesive	Millboard	Door Caulk	Door Caulk					
Color	White	White	White	Brown	Brown	Brown	Grey	Grey	Grey					
Date	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19					
Sample #	1-1	1-2	1-3	2-1	2-2	2-3	3-1	4-1	4-2					

ASBESTOS BULK SAMPLE LOG Project - 1204 Huffman Ave., Apt. A

Sample #	Date	Color	Type	Location	Collected By
1-1	3/25/19	White	Drywall/Joint Compound-Ceiling	Kitchen	SQL/MLQ
1-2	3/25/19	White	Drywall/Joint Compound-Ceiling	Kitchen	SQL/MLQ
2-1	3/25/19	White	Plaster/Skim Coat -Ceiling	Living Room	SQL/MLQ
2-2	3/25/19	White	Plaster/Skim Coat -Wall	Bedroom 2	SQL/MLQ
2-3	3/25/19	White	Plaster/Skim Coat -Wall	Bedroom 1	SQL/MLQ
3-1	3/25/19	White	Sink Undercoating	Kitchen	SQL/MLQ
4-1	3/25/19	Grey	Millboard	Basement	Sal/MLa

ASBESTOS BULK SAMPLE LOG Project - 1208 Huffman Ave., Apt. A

	- · · ·											
Collected By	SQL/MLQ	SQL/MLQ	SQL/MLQ	SQL/MLQ								
Location	Kitchen	Kitchen	Bathroom	Bathroom								
Type	18" Floor Tile/Adhesive	18" Floor Tile/Adhesive	12" Floor Tile/Adhesive	12" Floor Tile/Adhesive								
Color	Brown/Grey	Brown/Grey	Blue	Blue								
Date	3/25/19	3/25/19	3/25/19	3/25/19								
Sample #	1-1	1-2	2-1	2-2								

ASBESTOS BULK SAMPLE LOG Project - 1208 Huffman Ave., Apt. B

ASBESTOS BULK SAMPLE LOG Project - 1210 Huffman Ave., Apt. A/B

Sample #	Date	Color	Type	Location	Collected By
1-1	3/25/19	Tan	TSI	Basement	SQL/MLQ
1-2	3/25/19	Tan	TSI	Basement	SQL/MLQ
1-3	3/25/19	Tan	TSI	Basement	SQL/MLQ
2-1	3/25/19	Brown	12" Floor Tile/Adhesive	Hallway	SDH/MLD
2-2	3/25/19	Brown	12" Floor Tile/Adhesive	Hallway	Sar/Mra

APPENDIX D

Asbestos Inspection and Assessment Summary 9 Parnell Ave., Apt. A Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

		Homogeneous Area				Quanti	ity & Condit	tion	
Sample Description		Sample	NSHAP	ACM	Bulk Sample				Asbestos
(Material Type)	Color	Location	Category	Type	No.	Good	Fair	Poor	Content
Plaster/Skim Coat - Skim	· +: -1/ //				,				
LOAT	wnite	kitchen			Т-Т				NAU
Plaster/Skim Coat - Plaster	White	Living Room			1-2				NAD
Plaster/Skim Coat - Skim Coat	Grey	Living Room			1-2				NAD
Plaster/Skim Coat - Plaster	White	Hallway			1-3				NAD
Plaster/Skim Coat - Skim									
Coat	Grey	Hallway			1-3				NAD
Tile/Adhesive - Floor									
Tile	Tan	Bathroom			2-1				NAD
Tile/Adhesive -									
Adhesive	Yellow	Bathroom			2-1				NAD
Tile/Adhesive - Floor									
Tile	Tan	Bathroom			2-2				NAD
Tile/Adhesive -									
Adhesive	Yellow	Bathroom			2-2				NAD

11 Parnell Ave., Apt. A Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

	Asbestos	Content	NAD	NAD	NAD	NAD					
tion		Poor									
ity & Condii		Fair									
Quanti		Good									
	Bulk Sample	No.	1-1	1-1	1-2	1-2					
	ACM	Type									
	NSHAP	Category									
Homogeneous Area	Sample	Location	Bathroom Ceiling	Bathroom Ceiling	Bathroom Ceiling	Bathroom Ceiling					
		Color	White	White	White	White					
	Sample Description	(Material Type)	Texture/Drywall - Drywall	Texture/Drywall - Texture	Texture/Drywall - Drywall	Texture/Drywall - Texture					

11 Parnell Ave., Apt. B Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

		Homogeneous Area				Quanti	ity & Condit	tion	
Sample Description		Sample	NSHAP	ACM	Bulk Sample				Asbestos
(Material Type)	Color	Location	Category	Type	No.	Good	Fair	Poor	Content
Texture/Plaster/Skim Coat - Skim Coat	White	Kitchen Ceiling			1-1				NAD
Texture/Plaster/Skim Coat - Plaster	Grey	Kitchen Ceiling			1-1				NAD
Texture/Plaster/Skim Coat - Texture	White	Kitchen Ceiling			1-1				NAD
Texture/Plaster/Skim Coat - Skim Coat	White	Dining Room Ceiling			1-2				NAD
Texture/Plaster/Skim Coat - Plaster	Grey	Dining Room Ceiling			1-2				NAD
Texture/Plaster/Skim Coat - Texture	White	Dining Room Ceiling			1-2				NAD
Texture/Plaster/Skim Coat - Skim Coat	White	Living Room Ceiling			1-3				NAD
Texture/Plaster/Skim Coat - Plaster	Grey	Living Room Ceiling			1-3				NAD
Texture/Plaster/Skim Coat - Texture	White	Living Room Ceiling			1-3				NAD
Tile/Adhesive - Floor Tile	Brown	Bathroom			2-1				NAD
Tile/Adhesive - Adhesive	Yellow	Bathroom			2-1				NAD
Tile/Adhesive - Floor Tile	Brown	Bathroom			2-2				NAD
Tile/Adhesive - Adhesive	Yellow	Bathroom			2-2				NAD

1202 Huffman Ave., Apt. A Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

		Homogeneous Area				Quanti	ity & Condii	tion	
					Bulk				
Sample Description		Sample	NSHAP	ACM	Sample				Asbestos
(Material Type)	Color	Location	Category	Type	No.	Good	Fair	Poor	Content
Plaster/Skim Coat - Skim									
Coat	White	Dining/Living Room	Cat 2 Friable	Surfacing	1-1				NAD
Plaster/Skim Coat -									
Plaster	Grey	Dining/Living Room			1-1				NAD
Plaster/Skim Coat - Skim									
Coat	White	Bedroom 1			1-2				NAD
Plaster/Skim Coat - Skim									
Coat	White	Bedroom 2			1-3				NAD
Tile/Adhesive - Floor									
Tile	Grey	Hall Closet			2-1				NAD
Tile/Adhesive -									
Adhesive	Yellow	Hall Closet			2-1				NAD
Tile/Adhesive - Floor									
Tile	Grey	Bedroom 1			2-2				NAD
Tile/Adhesive - Floor									
Tile	Brown	Bathroom			3-1				NAD
Tile/Adhesive -									
Adhesive	Yellow	Bathroom			3-1				NAD
Tile/Adhesive - Floor									
Tile	Brown	Bathroom			3-2				NAD
Tile/Adhesive -									
Adhesive	Yellow	Bathroom			3-2				NAD
Tile/Adhesive - Floor									
Tile	Brown	Dining Room - 2 layers			4-1				NAD
Tile/Adhesive -									
Adhesive	Yellow	Dining Room - 2 layers			4-1				NAD
1202 Huffman Ave., Apt. A Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

		Homogeneous Area				Quanti	ity & Condit	tion	
Samula Description		Samolo	avnsn	VUV	Bulk Sample				Achactac
Jainple Description		andinoc		ACIVI	aidilipc				Asuestus
(Material Type)	Color	Location	Category	Type	No.	Good	Fair	Poor	Content
Tile/Adhesive - Floor									
Tile	White	Dining Room - 2 layers			4-1				
Tile/Adhesive - Floor									
Tile	Brown	Dining Room - 2 layers			4-2				
Tile/Adhesive -									
Adhesive	Yellow	Dining Room - 2 layers			4-2				
Tile/Adhesive - Floor									
Tile	White	Dining Room - 2 layers			4-2				
									40%
Millboard	Grey	Basement	Cat 2 Friable	Misc	5-1	12 SF			Chrysotile
Sink Undercoating	White	Kitchen			6-1				
						96			2%
Window Caulk	Grey	Exterior	Cat 2 Friable	Misc	7-1	Windows			Chrysotile
									2%
Window Caulk	Grey	Exterior			7-2				Chrysotile

1202 Huffman Ave., Apt. A Pre-Demolition Asbestos Survey Table 2 - Point Count Sample Data Summary

Project: 18460-4

		Homogeneous Area				Quantit	y & Conditi	on	
					Bulk				
Sample Description		Sample	NSHAP		Sample				Asbestos
(Material Type)	Color	Location	Category	ACM Type	No.	Good	Fair	Poor	Content
			Cat 2			96			0.25%
Window Caulk	Grey	Exterior	Friable	Misc	7-1	Windows			Chrysotile
									<0.25%
Window Caulk	Grey	Exterior			7-2				Chrysotile

1202 Huffman Ave., Apt. B Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

		Homogeneous Area				Quanti	ity & Condit	tion	
					Bulk				
escription		Sample	NSHAP	ACM	Sample				Asbestos
ial Type)	Color	Location	Category	Type	No.	Good	Fair	Poor	Content
wall - Drywall	White	Kitchen			1-1				NAD
	, , , , , , , , , , , , , , , , , , ,	1. 1			7 7				
wall - Lexture	write	NICTIET			Т-Т				INAU
wall - Drywall	White	Kitchen			1-2				NAD
ywall -Texture	White	Kitchen			1-2				NAD
ywall - Drywall	White	Bathroom			1-3				NAD
ywall -Texture '	White	Bathroom			1-3				NAD
sive - Floor	Brown	Kitchen			2-1				NAD
sive -	Yellow	Kitchen			2-1				NAD
sive - Floor	Brown	Kitchen			2-2				NAD
sive -	Yellow	Kitchen			2-2				NAD
									55%
1	Grey	Basement	Cat 2 Friable	Misc.	3-1	12 SF			Chrysotile
									%5
<u>×</u>	Grey	Exterior	Cat 2 Friable	Misc.	4-1		22 Doors		Chrysotile
									5%
×	Grey	Exterior			4-2				Chrysotile

1202 Huffman Ave., Apt. B Pre-Demolition Asbestos Survey Table 2 - Point Count Sample Data Summary

Project: 18460-4

		Homogeneous Area				Quanti	ty & Conditi	on	
					Bulk				
Sample Description		Sample	NSHAP	ACM	Sample				Asbestos
(Material Type)	Color	Location	Category	Type	No.	Good	Fair	Poor	Content
			Cat 2						0.75%
Door Caulk	Grey	Exterior	Friable	Misc.	4-1		22 Doors		Chrysotile
									0.5%
Door Caulk	Grey	Exterior			4-2				Chrysotile

1204 Huffman Ave., Apt. A Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

		Homogeneous Area				Quanti	ity & Condit	tion	
					Bulk				
sample Description		sample	NSHAP	ACM	sample				Aspestos
(Material Type)	Color	Location	Category	Type	No.	Good	Fair	Poor	Content
Drywall/Joint Compound - Drywall	White	Kitchen Ceiling			1-1				NAD
Drywall/Joint Compound - Joint Comppound	White	Kitchen Ceiling			1-1				NAD
Drywall/Joint Compound - Drywall	White	Kitchen Ceiling			1-1				NAD
Drywall/Joint Compound - Joint Comppound	White	Kitchen Ceiling			1-2				NAD
Plaster/Skim Coat - Skim Coat	White	Living Room			2-1				NAD
Plaster/Skim Coat - Plaster	Grey	Living Room			2-1				NAD
Plaster/Skim Coat - Skim Coat	White	Bedroom 2			2-2				NAD
Plaster/Skim Coat - Plaster	Grey	Bedroom 2			2-2				NAD
Plaster/Skim Coat - Skim Coat	White	Bedroom 1			2-3				NAD
Plaster/Skim Coat - Plaster	Grey	Bedroom 1			2-3				NAD
Sink Undercoat	White	Kitchen			3-1				NAD
Millboard	Grey	Basement	Cat 2 Friable	Misc.	4-1	12 SF			45% Chrysotile

1208 Huffman Ave., Apt. A Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

		Homogeneous Area				Quanti	ity & Condit	tion	
				A (184	Bulk				A choose
cription	-	Sample	NSHAP	ACM	sample				Aspestos
rype)	Color	Location	Category	Type	No.	Good	Fair	Poor	Content
Adhesive -									
ł	Brown	Kitchen			1-1				NAD
Adhesive -									
	Yellow	Kitchen			1-1				NAD
Adhesive -									
<u> </u>	Brown	Kitchen			1-2				NAD
Adhesive -									
	Yellow	Kitchen			1-2				NAD
- Floor									
	Blue	Bathroom			2-1				NAD
/Adhesive									
1	Yellow	Bathroom			2-1				NAD
: - Floor									
ł	Blue	Bathroom			2-2				NAD
/Adhesive									
1	Yellow	Bathroom			2-2				NAD

1208 Huffman Ave., Apt. B Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

-		_	1		r			-					-	
	Asbestos	Content	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD		
tion		Poor												
ty & Condit		Fair												
Quanti		Good												
	Bulk Sample	No.	1-1	1-1	1-2	1-2	1-3	1-3	2-1	2-1	2-2	2-2		
	ACM	Type												
	NSHAP	Category												
Homogeneous Area	Sample	Location	Kitchen	Kitchen	Dining/Living Room	Dining/Living Room	Landing	Landing	Bathroom	Bathroom	Bathroom	Bathroom		
		Color	Grey	White	Grey	White	Grey	White	White	White	White	White		
	Sample Description	(Material Type)	Plaster/Skim Coat - Plaster	Plaster/Skim Coat - Skim Coat	Plaster/Skim Coat - Plaster	Plaster/Skim Coat - Skim Coat	Plaster/Skim Coat - Plaster	Plaster/Skim Coat - Skim Coat	Textured Drywall/Joint Compound - Drywall	Textured Drywall/Joint Compound - Joint Compound	Textured Drywall/Joint Compound - Drywall	Textured Drywall/Joint Compound - Joint Compound		

1210 Huffman Ave., Apts. A B Pre-Renovation Asbestos Survey Table 2 - Bulk Sample PLM Data Summary

_												
	Asbestos	Content	NAD	NAD	NAD	NAD	NAD	NAD				
tion		Poor										
ty & Condit		Fair										
Quanti		Good										
	Bulk Sample	No.	1-1	1-2	1-3	2-1	2-1	2-2				
	ACM	Type	TSI									
	NSHAP	Category	Cat 2 Friable									
Homogeneous Area	Sample	Location	Basement	Basement	Basement	Hallway	Hallway	Hallway				
		Color	Yellow/White	Yellow/White	Yellow/White	Brown	Yellow	Brown				
	Sample Description	(Material Type)	TSI	TSI	TSI	12" Floor Tile/Adhesive - Floor Tile	Tile/Adhesive - Adhesive	12" Floor Tile/Adhesive - Floor Tile				

APPENDIX E

Analytical Laboratory Results





April 5, 2019

Client Job Number: 18460-4 Client Job Name: 9-A Parnell Ave.

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 5 samples by FedEx for the job referenced above. 5 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC. This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and Consulting. In no event, shall Hayes Microbial Consulting or any of its employees be liable for lost profits or any special, incidental or consequential use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial damages arising out of your use of the test results.

Stephen n. Ha

Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LLC

HAYES	MICROBIAL CONSULTING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562
E	

Turn-Key Environmental Consultants 790 Barnhart Road Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882

EPA 600/R-93, M-4/82-020 (PLM)

HMC #19012568

/2019 /2019 /2019	Non-Fibers	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Date Collected: 03/25 Date Received: 03/29 Date Reported: 04/05	Other Fibers	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)
	Asbestos Fibers	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)
Vame: 9-A Parnell Ave.	Description	Bulk Material / White	Skim Coat / White	Rough Coat / Gray	Skim Coat / White	Rough Coat / Gray	Vinyl / Cream	Adhesive / Yellow	Vinyl / Tan	Adhesive / Yellow
4 Job 1 h Saunders turn-keyenvironmental.com	Name	White- Plaster- Skim Coat- Kitchen	White- Plaster- Skim Coat- Living Room	White- Plaster- Skim Coat- Living Room	White- Plaster- Skim Coat- Hallway	White- Plaster- Skim Coat- Hallway	Tan- 12 in. Floor Tile- Adhesive- Bathroom			
mber: 18460- ed by: Josepl tkec@	Sample	۲- ۲	1-2	Layer 2	1-3	Layer 2	2-1	Layer 2	2-2	Layer 2
Job Nu Collect Email:	#	~	7	<u> </u>	e		4	<u> </u>	2	

04/05/2019 Date:

Reviewed by: Steplan N. Hayes

04/05/2019

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MICROBIAL COI 3005 East Boundary Midlothian, VA 231 804.562.3435 Fax: 8	NSULTING Y Terrace, #F 112, USA 804.447.5562	Turn-Key Environmental Consultants 790 Barnhart Road Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	Asbestos - Additional Information PHMC #19012568
All samples were received in acce endorsement by AIHA, NIST, NVL/ after a period of 60 days in complia	eptable condition AP, NY ELAP, or a	i unless otherwise noted on the report. This report must i any agency. The results relate only to the items tested. Hi d federal guidelines.	not be used by the client to claim product certification, approval, or layes Microbial Consulting reserves the right to dispose of all samples
All Polarized Light Microscopy (PLN provided when requested.	M) results include	e an inherent uncertainty of measurement associated with e	sstimating percentages by PLM. Measurement uncertainty data can be
'None Detected' - Below the detecte Per NY ELAP198.6 (NOB), TEM is i	ed reporting limit of the only reliable m	of 1% unless point counting is performed, then the detected method to declare an NOB material as Non-Asbestos Contai	reporting limit is .25%. ining.
Any NY ELAP samples that are su original report provided to Hayes Mi	ubcontracted to an licrobial Consulting	another laboratory will display the name and ELAP Lab lde g is available upon request.	entification number in the report page heading of those samples. The
Signature:	اط	Date: 04/05/2019 Reviewed by:	talen 1. Koyus Date: 04/05/2019

Page 4 of 4

	MICR 3005 E Midloth 804:56	DBIAL CONSULTING ast Boundary Terrace, #F iian, VA 23112, USA 2.3435 Fax: 804.447.5562	Turn-Key Environme T(4 Manument & Duyten, Of 45402	atal Cowsultants	Tavic			orm v.101302 HMC # 12568
ate Colle	ər. <i>184</i> (:0-4 Job Name: 5/19 9-A	Parnell Ave.	Collector; Jos + 20	Saunders	Enail	turn-keyenu	introis cutal
Sample	#	Sam	ple Name	Analvsis Tvpe	Volume	TAT	Group #	Pos. Ston
		see Attached Bu	ik Sample Lag	PLIN		5 Day		
						1		
	-							
Analys	sis Type		Description		Availab	le Turn-Around T	imes	
PLM	PLM	EPA 600/R-93/116, M-4/82-020		3 Hour, Same Day, 1 D	ay, 2 Day, 3 Day, 5 Da	ty.		
	PC	EPA Point Count		3 Hour, Same Day, 1 D	ay, 2 Day, 3 Day, 5 Da	A		
	NΥ	NYSDOH ELAP 198.1, 198.6		1 Day, 2 Day, 3 Day, 5	Day			
PCM	PCM	NIOSH 7400		Same Day, 1 Day, 2 Da	y, 3 Day, 5 Day			
TEM	TEM-A	TEM Air (AHERA)		1 Day, 2 Day, 3 Day, 5	Day			
	TEM-C	TEM Bulk (Chatfield)		1 pay 2 Day, 3 Day, 5	Day			
Relinquishe	V traps	WALM NAA	Date: 3/2 8/19 Rovd	By/10 25	1 9190	late:	Time:	

H224	Collected By	SGR/WRG	Sdr/Wrd	SOLIMLO	SQL/MLQ	Sar/Mra								
LE LOG Ave.	Location	Kitchen	Living Room	Hallway	Bathroom	Bathroom								
ASBESTOS BULK SAMP Project - 9-A Parnell / TKEC Project: 18460-4	Type	Plaster/Skim Coat	Plaster/Skim Coat	Plaster/Skim Coat	12" Floor Tile/Adhesive	12" Floor Tite/Adhesive								
	Color	White	White	White	Tan	Tan								
	Date	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19			-					
	Sample #		1-2	1-3	2-1	2-2								

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April 5, 2019

Client Job Number: 18460-4 Client Job Name: 11-A Parnell Ave .

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 2 samples by FedEx for the job referenced above. 2 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC. This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and Consulting. In no event, shall Hayes Microbial Consulting or any of its employees be liable for lost profits or any special, incidental or consequential use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial damages arising out of your use of the test results.

Stephen n. Ha

Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LLC



Email: #

~

Phone: (937) 335-8807 Fax: (937) 339-4882 **Turn-Key Environmental Consultants** 790 Barnhart Road Troy, OH 45373

HMC #19012561

Non-Fibers 100 % 88 % 03/29/2019 04/05/2019 03/28/2019 12 % Cellulose fibers 12 % Cellulose fibers (None Detected) **Other Fibers** Date Received: Date Collected: Date Reported: **Asbestos Fibers** (None Detected) (None Detected) **11-A Parnell Ave** Drywall / White/Brown Texture / White Description Job Name: White- Texture- Drywall- Ceiling- Bathroom White- Texture- Drywall- Ceiling- Bathroom tkec@turn-keyenvironmental.com Name **Joseph Saunders** 18460-4 Sample Layer 2 Job Number: Collected by:

100 %

(None Detected)

(None Detected)

Texture / White

White- Texture- Drywall- Ceiling- Bathroom

Layer 2

88 %

(None Detected)

Drywall / White/Brown

White- Texture- Drywall- Ceiling- Bathroom

1-2

2

Signature:

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		Turn-Key Environmental Consultants	Asbestos - Additional Information
	MICROBIAL CONSULTING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562	790 Barnhart Road Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	HMC #19012561
	i bootiooor	o the second	int to chim and ut contification and ar
endorsement after a period	were received in acceptable contained to by AIHA, NIST, NVLAP, NY ELAP, o l of 60 days in compliance with state an	or any agency. The results relate only to the items tested. Hayes Microbial Consu and federal guidelines.	ting reserves the right to dispose of all samples
All Polarized provided whe	Light Microscopy (PLM) results includ in requested.	de an inherent uncertainty of measurement associated with estimating percentage:	by PLM. Measurement uncertainty data can be
'None Detect	ed' - Below the detected reporting limit	it of 1% unless point counting is performed, then the detected reporting limit is .25%.	
Per NY ELAF	2198.6 (NOB), TEM is the only reliable	e method to declare an NOB material as Non-Asbestos Containing.	
Any NY ELA original repor	P samples that are subcontracted to the provided to Hayes Microbial Consultir) another laboratory will display the name and ELAP Lab Identification number in ting is available upon request.	the report page heading of those samples. The
Signature:	Rept	Date: 04/05/2019 Reviewed by:	Date: 04/05/2019 Page 4 of 4

3005 804.	ROBIAL CONSULTING FIGUNDARY Terrace, #F 552.3435 Fax: 804.447.5562	umental Consultants of Ave.	X Inc	Asu		Tor Custody Form v.101302.5 HMC #
mber: /%4 ollected: 3/	25/19 11-A PANNEll Ave.	Collector Jes Aph	Saunders	FRAUCOH	turn-keyen	intrat cortal .
# #	See Attach ed Build Sample Log	Analysis Type	Volume	S Day	Group #	Pos. Stop
alysis Type	Description		Availahla	Turn-Around Ti		
PLM	EPA 600/R-93/116, M-4/82-020	3 Hour, Same Day, 1 Da	ay, 2 Day, 3 Day, 5 Day		6011	
PC	EPA Point Count	3 Hour, Same Day, 1 D	ay, 2 Day, 3 Day, 5 Day			
λλ	NYSDOH ELAP 198.1, 198.6	1 Day, 2 Day, 3 Day, 5	Dav			
PCM	NIOSH 7400	Same Day, 1 Day, 2 Da	v. 3 Dav. 5 Dav			
TEM-A	TEM Air (AHERA)	1 Day, 2 Day, 3 Day, 5	Dav			
TEM-C	J TEM Bulk (Chatfield)	1 Day, 2 Pay, 3 Day, 5	Day			
thed by:	augh 22 8/19	Revd By: M 3	-29-19 Date	.9	Time:	

LE LOG	Ave.
JLK SAMP	-A Parnell
BESTOS BI	Project - 11
ASBE	Pr

TKEC Project: 18460-4

Collected By	SQL/MLQ	SUL/MLD									
Location	Bathroom	Bathroom									
Type	Texture/Drywall-Ceiling	Texture/Drywall-Ceiling									
Color	White	White									
Date	3/25/19	3/25/19									
Sample #	1-1	1-2									

12561





April 5, 2019

Client Job Number: 18460-4 Client Job Name: 11-B Parnell Ave.

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 5 samples by FedEx for the job referenced above. 5 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC. This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and Consulting. In no event, shall Hayes Microbial Consulting or any of its employees be liable for lost profits or any special, incidental or consequential use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial damages arising out of your use of the test results.

Stephen n. Ha

Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LLC

HAYES	MICROBIAL CONSULTING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562
E	

Turn-Key Environmental Consultants 790 Barnhart Road Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882

HMC #19012558

N dol	umber: 1846(b Name: 11-B Parnell Ave.		Date Collected: 03/25/	2019
Collec Email	ted by: Jose tkec@	oh Saunders ≬turn-keyenvironmental.com			Date Received:03/29/Date Reported:04/05/	2019 2019
#	Sample	Name	Description	Asbestos Fibers	Other Fibers	Non- Fibers
-	1-1	White- Texture- Plaster- Skim Coat- Ceiling- Kitche	n Skim Coat / Tan/White	(None Detected)	(None Detected)	100 %
	Layer 2	White- Texture- Plaster- Skim Coat- Ceiling- Kitche	n Rough Coat / Gray	(None Detected)	(None Detected)	100 %
	Layer 3	White- Texture- Plaster- Skim Coat- Ceiling- Kitche	n Texture / White	(None Detected)	(None Detected)	100 %
N	1-2	White- Texture- Plaster- Skim Coat- Ceiling- Dining.	Skim Coat / Tan	(None Detected)	(None Detected)	100 %
	Layer 2	White- Texture- Plaster- Skim Coat- Ceiling- Dining.	 Rough Coat / Gray	(None Detected)	(None Detected)	100 %
	Layer 3	White- Texture- Plaster- Skim Coat- Ceiling- Dining.	Texture / White	(None Detected)	(None Detected)	100 %
с	1-3	White- Texture- Plaster- Skim Coat- Ceiling- Living.	Skim Coat / Tan	(None Detected)	(None Detected)	100 %
	Layer 2	White- Texture- Plaster- Skim Coat- Ceiling- Living.	Rough Coat / Gray	(None Detected)	(None Detected)	100 %
	Layer 3	White- Texture- Plaster- Skim Coat- Ceiling- Living.	Texture / White	(None Detected)	(None Detected)	100 %
4	2-1	Brown- 12 in. Floor Tile- Adhesive- Bathroom	Floor Tile / Black	(None Detected)	(None Detected)	100 %
	Layer 2	Brown- 12 in. Floor Tile- Adhesive- Bathroom	Adhesive / Yellow	(None Detected)	(None Detected)	100 %
Sign	ature:	Date: 0	4/05/2019 Reviewed by:	Relat	Date: 04/0)5/2019

Page 3 of 5



Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882

HMC #19012558

-4 Job Name: 11-B Parnell Ave. Date Collected: 03/25/20 In Saunders Date Received: 03/25/20 Nume Date Received: 03/25/20 Brown- 12 in. Floor Tile- Adhesive- Bathroom Floor Tile / Black (None Detected) Brown- 12 in. Floor Tile- Adhesive- Bathroom Adhesive / Yellow (None Detected)	19 19	on-Fibers	100 %	100 %
-4 Job Name: 11-B Parnell Ave. Date Collected In Saunders Date Received Iturn-keyenvironmental.com Date Received Iturn-keyenvironmental.com Description Asbestos Fibers Other I Brown- 12 in. Floor Tile- Adhesive- Bathroom Floor Tile / Black (None Detected) (None Detected)	1: 03/25/20 1: 03/29/20 1: 04/05/20	-ibers N	etected)	etected)
-4 Job Name: 11-B Parnell Ave. In Saunders Job Name: 11-B Parnell Ave. Iturn-keyenvironmental.com Description Asbestos Fibers Brown- 12 in. Floor Tile- Adhesive- Bathroom Floor Tile / Black (None Detected)	Date Collected Date Received Date Reported	Other F	(None De	(None De
-4 Job Name: 11-B Parnell Ave. h Saunders turn-keyenvironmental.com Brown- 12 in. Floor Tile- Adhesive- Bathroom Brown- 12 in. Floor Tile- Adhesive- Bathroom Brown- 12 in. Floor Tile- Adhesive- Bathroom Brown- 12 in. Floor Tile- Adhesive- Bathroom		Asbestos Fibers	(None Detected)	(None Detected)
-4 Job N bh Saunders 2turn-keyenvironmental.com Brown- 12 in. Floor Tile- Adhesive- Bathroom Brown- 12 in. Floor Tile- Adhesive- Bathroom	Jame: 11-B Parnell Ave.	Description	Floor Tile / Black	Adhesive / Yellow
	0-4 Job № ph Saunders @turn-keyenvironmental.com	Name	Brown- 12 in. Floor Tile- Adhesive- Bathroom	Brown- 12 in. Floor Tile- Adhesive- Bathroom
	Job Nurr Collectec Email:	#	£	

31

04/05/2019

Date:

04/05/2019

Date:

HAYES MICROBIAL CONSLITING	Turn-Key Environmental Consultants 790 Barnhart Road	Asbestos - Additional Information
3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562	Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	HMC #19012558
All samples were received in acceptable conditic endorsement by AIHA, NIST, NVLAP, NY ELAP,	on unless otherwise noted on the report. This report must not be used by th or any agency. The results relate only to the items tested. Hayes Microbial Cor	e client to claim product certification, approval, or nsulting reserves the right to dispose of all samples
after a period of 60 days in compliance with state a All Polarized Light Microscopy (PLM) results inclu provided when requested.	and federal guidelines. de an inherent uncertainty of measurement associated with estimating percenta	ges by PLM. Measurement uncertainty data can be
'None Detected' - Below the detected reporting limi	it of 1% unless point counting is performed, then the detected reporting limit is .2	5%.
Per NY ELAP198.6 (NOB), TEM is the only reliable	e method to declare an NOB material as Non-Asbestos Containing.	
Any NY ELAP samples that are subcontracted to original report provided to Hayes Microbial Consult) another laboratory will display the name and ELAP Lab Identification number ting is available upon request.	in the report page heading of those samples. The
Signature:	Date: 04/05/2019 Reviewed by:	Date: 04/05/2019
		Page 5 of 5

in of Custody Form v.101302.5 HMC #	Witeroon calal, car	Pos. Stop									
estos - Cha	un-keyen	Group #			SS						Time:
Asb	Email	TAT S Duy			le Turn-Around Time	A	A				ate:
Take	Saunders	Volume			2 Dou 2 Dou 7 Dou 7 D	2 Dav 3 Dav 5 Dav	iy	3 Day, 5 Day	ly .	A	5-29-19
tal Consultants	Collector Ses 40h	Analysis Type			3 Hour. Same Day 1 Day	3 Hour, Same Day, 1 Day	1 Day, 2 Day, 3 Day, 5 Da	Same Day, 1 Day, 2 Day,	1 Day, 2 Day, 3 Day, 5 Da	1 Day, 2 Day, 3 Day, 5 Da	an VA 23115 - 115A - 1000
Y: VENINENTA	lve,	Teg								David Dur	tce, Suite F :: Midlothi
Compan Jury-Kee Daupter	ParNell A	uple Name UK Sample.		Description						Date: 7 / - 1 / - 1	3005 East Boundary Terra
AL CONSULTING oundary Terrace, #F VA 23112, USA 5 Fax: 804.447.5562	- 4 Job Name:	PHAched Bu			A 600/R-93/116, M-4/82-020	A Point Count	SDOH ELAP 198.1, 198.6 SU 7400	Air (AHERA)	A Bulk (Chatfield)	(and	ayes Microbial Consulting ::
MICROBIJ 3005 East B Midlothian, 804.562.343	ed: 3/25/	566		Type	M EPA	EPA	MU WI	EM-A TEM	EM-C TEM	T American	HMMA /
2	Job Number. Date Collect Mobile:	Sample #		Analysis	PLM PL	<u>т ч</u>	PCM PC	TEM TE	H	Relinquished by	

Collected By DLM/JDS SUN/JDS SOL/MUC SUL/MLD SUL/MLD 2,2 Dining Room Living Room Location Bathroom Bathroom Kitchen **ASBESTOS BULK SAMPLE LOG** Project - 11-B Parnell Ave. TKEC Project: 18460-4 Texture/Plaster/SkimCoat-Ceiling Texture/Plaster/SkimCoat-Ceiling Texture/Plaster/SkimCoat-Ceiling 12" Floor Tile/Adhesive 12" Floor Tile/Adhesive Type Brown Brown White White White Color 3/25/19 3/25/19 3/25/19 3/25/19 3/25/19 Date Sample # 1-2 1-3 2-2 ŗ 2-1

35521





April 5, 2019

Client Job Number: 18460-4 Client Job Name: 1202-A Huffman Ave.

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 13 samples by FedEx for the job referenced above. 13 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC. This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and Consulting. In no event, shall Hayes Microbial Consulting or any of its employees be liable for lost profits or any special, incidental or consequential use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial damages arising out of your use of the test results.

Stephen n. Ha

Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LLC

MICROBIAL CONSULTING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562

Turn-Key Environmental Consultants 790 Barnhart Road Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882

HMC #19012557

Job 1 Colle	Number: 1846)-4 Job oh Saunders	Name: 1202-A Huffman Ave.		Date Collected: 03/25 Date Received: 03/29	/2019 /2019
Emai	l: tkec(@turn-keyenvironmental.com			Date Reported: 04/05	/2019
#	Sample	Name	Description	Asbestos Fibers	Other Fibers	Non- Fibers
-	1-1	White- Plaster- Skim Coat- Dining Room- Living	Skim Coat / Lt Tan	(None Detected)	(None Detected)	100 %
	Layer 2	White- Plaster- Skim Coat- Dining Room- Living	Rough Coat / Light Gray	(None Detected)	(None Detected)	100 %
7	1-2	White- Plaster- Skim Coat- Bedroom 1	Skim Coat / Tan	(None Detected)	(None Detected)	100 %
с	1-3	White- Plaster- Skim Coat- Bedroom 2	Skim Coat / Tan	(None Detected)	(None Detected)	100 %
4	2-1	Gray- 12 in. Floor Tile- Hall Closet	Floor Tile / Gray	(None Detected)	(None Detected)	100 %
	Layer 2	Gray- 12 in. Floor Tile- Hall Closet	Adhesive / Yellow	(None Detected)	3 % Cellulose fibers	% 26
5	2-2	Gray- 12 in. Floor Tile- Bedroom 1	Floor Tile / Gray	(None Detected)	(None Detected)	100 %
و	3-1	Brown- 12 in. Floor Tile- Mastic- Bathroom	Floor Tile / Brown	(None Detected)	(None Detected)	100 %
	Layer 2	Brown- 12 in. Floor Tile- Mastic- Bathroom	Adhesive / Yellow	(None Detected)	3 % Cellulose fibers	% 26
7	3-2	Brown- 12 in. Floor Tile- Mastic- Bathroom	Floor Tile / Brown	(None Detected)	(None Detected)	100 %
	Layer 2	Brown- 12 in. Floor Tile- Mastic- Bathroom	Adhesive / Yellow	(None Detected)	(None Detected)	100 %
Sigr	nature:	Date: 04	(05/2019 Reviewed by:	2126	Date: 04	05/2019

Page 3 of 5

Turn-Key Environmental Consultants 790 Barnhart Road Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882

HMC #19012557

5/2019 9/2019 5/2019	Non- Fibers	100 %	86	100 %	100 %	88 %	100 %	30 %	85 %	88 %	86
Date Collected:03/2Date Received:03/2Date Reported:04/0	Other Fibers	(None Detected)	2 % Cellulose fibers	(None Detected)	(None Detected)	2 % Cellulose fibers	(None Detected)	30 % Cellulose fibers	15 % Cellulose fibers	(None Detected)	(None Detected)
	Asbestos Fibers	(None Detected)	40 % Chrysotile	(None Detected)	2 % Chrysotile	2 % Chrysotile					
Name: 1202-A Huffman Ave.	Description	Floor Tile / Black	Adhesive / Yellow	Floor Tile / White	Floor Tile / Brown	Adhesive / Yellow	Floor Tile / White	Fibrous / Gray	Debris / Tan	Caulk / Dark Gray	Caulk / Dark Gray
l-4 Job∣ bh Saunders ≬turn-keyenvironmental.com	Name	Brown- 12 in. Floor Tile- 2 Layers- Dining Room	Brown- 12 in. Floor Tile- 2 Layers- Dining Room	Brown- 12 in. Floor Tile- 2 Layers- Dining Room	Brown- 12 in. Floor Tile- 2 Layers- Living Room	Brown- 12 in. Floor Tile- 2 Layers- Living Room	Brown- 12 in. Floor Tile- 2 Layers- Living Room	Gray- Millboard- Basement	White- Sink Undercoating- Kitchen	White- Window Caulk- Exterior	White- Window Caulk- Exterior
mber: 1846(ed by: Joser tkec@	Sample	4-1	Layer 2	Layer 3	4-2	Layer 2	Layer 3	5-1	6-1	7-1	7-2
Job Nu Collect Email:	#	ω		n	റ		<u>R</u>	10	1	12	13

04/05/2019 Page 4 of 5

Date:

X-2126

04/05/2019 Reviewed by:

Date:

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Signature:

HAYES MICROBIAL CONSLITING	Turn-Key Environmental Consultants 790 Barnhart Road	Asbestos - Additional Information
3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562	Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	HMC #19012557
All samples were received in acceptable condition endorsement by AIHA, NIST, NVLAP, NY ELAP,	on unless otherwise noted on the report. This report must not be used by t or any agency. The results relate only to the items tested. Hayes Microbial Cc	le client to claim product certification, approval, or nsulting reserves the right to dispose of all samples
alter a period of ou days in compliance with state a All Polarized Light Microscopy (PLM) results inclu provided when requested.	and recercingulations. Ide an inherent uncertainty of measurement associated with estimating percent	ges by PLM. Measurement uncertainty data can be
'None Detected' - Below the detected reporting limi	iit of 1% unless point counting is performed, then the detected reporting limit is $.2$	5%.
Per NY ELAP198.6 (NOB), TEM is the only reliable	e method to declare an NOB material as Non-Asbestos Containing.	
Any NY ELAP samples that are subcontracted to original report provided to Hayes Microbial Consult	o another laboratory will display the name and ELAP Lab Identification numbe ting is available upon request.	in the report page heading of those samples. The
Signature:	Date: 04/05/2019 Reviewed by:	Date: 04/05/2019
		Page 5 of 5

E SULTING errace, #F USA 1,447.5562 Job Name: 7204 7204 138,1,198,6 198,1,198,6	
	MICROBIAL CONS MICROBIAL CONS Midlothian, VA 23112 S005 East Boundary 1 Midlothian, VA 23112 S04.562.3435 Fax: 80- Societical 3/25//9 Societ

ASBESTOS BULK SAMPLE LOG Project - 1202-A Huffman .

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Sample #	Date	Color	Type	Location	Collected By
1-1	3/25/19	White	Plaster/Skim Coat	Dining Room/Living Room	SQL/MLQ
1-2	3/25/19	White	Plaster/Skim Coat	Bedroom 1	SQL/MLQ
1-3	3/25/19	White	Plaster/Skim Coat	Bedroom 2	SQL/MLQ
2-1	3/25/19	Gray	12" Floor Tile	Hall Closet	SUL/MLD
2-2	3/25/19	Gray	12" Floor Tile	Bedroom 1	SQL/MLQ
3-1	3/25/19	Brown	12" Floor Tile/Mastic	Bathroom	SQL/MLQ
3-2	3/25/19	Brown	12" Floor Tile/Mastic	Bathroom	SOL/MLO
4-1	3/25/19	Brown	12" Floor Tile (2 Layers)	Dining Room	SQL/MLQ
4-2	3/25/19	Brown	12" Floor Tile (2 Layers)	Living Room	SQL/MLQ
5-1	3/25/19	Gray	Millboard	Basement	SQL/MLQ
6-1	3/25/19	White	Sink Undercoating	Kitchen	SQL/MLQ
7-1	3/25/19	White	Window Caulk	Exterior	SQL/MLQ
7-2	3/25/19	White	Window Caulk	Exterior	SOL/MLO

			#19013956 Report ID: 216408			
Analysis Report prepared for	We would like to thank you We received 2 samples by I	for trusting Hayes Microbial for your analytic Drop Off in good condition for this project on	al needs! March 25th, 2019.			
Environmental	The results in this analysis in the interpretation of any consent of Hayes Microbial	pertain only to this job, collected on the stat other job. This report may not be duplicated, I Consulting, LLC	ed date, and should not be used except in full, without the written			
CONSUITANTS 790 Barnhart Road Troy, OH. 45373 Phone: (937) 335-8807	This laboratory bears no res your use of the test results. health effects or interpretat Hayes Microbial or any of it consequential damages ari	sponsibility for sample collection activities, a . Interpretation and use of test results are yc ion of mold levels is strictly the opinion of H ts employees be liable for lost profits or any sing out of the use of these test results.	nalytical method limitations, or our responsibility. Any reference to ayes Microbial. In no event, shall special, incidental or			
18460-4 1202-A Huffman Ave.	Stephen TI	. Hayes				
Collected: March 25, 2019 Received: April 8, 2019 Reported: April 12, 2019	Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, L	V				
ANADA	Set 1025-2005 Set 1025-2005 Se	RV(A) ®	Connection Legisland			
EPA Laboratory ID: VA01419	Lab ID: #188863	NVLAP Lab Code: 500096-0	DPH License: #PH-0198			
Hayes Microbial Consulting, LLC. 3005 East Bou	undary Terrace, Suite F. Midlothian, VA. 231	112 (804) 562-3435 contact@hay	/esmicrobial.com Page: 1 of 3			
Barr Friph	I Saunders Sy Environmental Consultants Ihart Road 5-8807		18460-4 1202-A Huffman Ave.			#19013956 Report ID: 216408 Asbestos 400 Point Count
-------------------	--	-----------------------------------	---------------------------------------	--	---------------------	--
	Sample		Material Description	Total Points	Non-Asbestos Fibers	Asbestos Fibers
	7-1 - White Window Caulk- Exterior		Caulk / Dark Gray	400		0.25% Chrysotile
	7-2 - White Window Caulk- Exterior		Caulk / Dark Gray	400		<0.25% Chrysotile
	Lab Note: Chrysotile Observed <0.25	5%. Asbestos Observed	Not In Counting Point of View.			
	S	ollected: Mar 25, 2019	Received: Apr 8, 2019	Reported: Apr 12, 2019		
	HAYES	roject Analyst: enaldo Drakes,	0 0 0 0 - 1 - 10 Date:	Reviewed By: 2 - 2019 Steve Hayes, BSMT	Steelen n. Hours	Date: 04 - 12 - 2019
	MICROBIAL CONSULTING	2	- J. J.		- l' · · · · · · ·	

Page: 2 of 3

contact@hayesmicrobial.com

(804) 562 - 3435

3005 East Boundary Terrace, Suite F. Midlothian, VA. 23112

Joseph Saunders	18460-4	#19013956
Turn-Key Environmental	al Consultants	Report ID: 216408
790 Barnhart Road Troy, OH. 45373 (937) 335-8807		Asbestos Analysis Information
Analysis Details	All samples were received in acceptable condition unless otherwise noted on the report. This report must not be used by the clie approval, or endorsement by AlHA, NIST, NVLAP, NY ELAP, or any agency. The results relate only to the items tested. Hayes Micro dispose of all samples after a period of 60 days in compliance with state and federal guidelines.	nt to claim product certification, bial Consulting reserves the right to
PLM Analysis	All Polarized Light Microscopy (PLM) results include an inherent uncertainty of measurement associated with estimating percer uncertainty data can be provided when requested.	itages by PLM. Measurement
Definitions	'None Detected' - Below the detected reporting limit of 1% unless point counting is performed, then the detected reporting limit i	s .25%.
New York ELAP	Per NY ELAP198.6 (NOB), TEM is the only reliable method to declare an NOB material as Non-Asbestos Containing. Any NY ELAP samples that are subcontracted to another laboratory will display the name and ELAP Lab Identification number in samples. The original report provided to Hayes Microbial Consulting is available upon request.	the report page heading of those
	Any NY ELAP samples that are subcontracted to another laboratory will display the name and ELAP Lab Identification number in samples. The original report provided to Hayes Microbial Consulting is available upon request.	the report page heading of those



#19013956 Report ID: 216408

From: Turn-Key Environmental [mailto:tkec@turn-keyenvironmental.com]
Sent: Monday, April 08, 2019 9:04 AM
To: Dave Burrington <dave@hayesmicrobial.com
Subject: Report Correction and Point Counts</pre>

Hi Dave,

For report number HMC #19012557 please change the job name from 1204-A Huffman to 1202-A Huffman. Let me know if you need additional information.

Also, I would like to have PLM EPA 400 Point Count analysis done on the following samples:

19012557-12 19012557-13

40012564-8-

10012567-2

19012565-17

Four (4) day TAT is fine for these samples.

Thanks, Joe Saunders --Turn-Key Environmental Consultants, Inc. 790 Barnhart Road 714 East Monument Ave Troy, Ohio 45373 Dayton, OH 45402 937-335-8807 www.turn-keyenvironmental.com

D

SHIP: DROP OFF - HD DATE: 04-08-2019



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April 5, 2019

Client Job Number: 18460-4 Client Job Name: 1202-B Huffman Ave

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 9 samples by FedEx for the job referenced above. 9 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

Stephen n. Ha

Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LLC

HAYES	MICROBIAL CONSULTING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562
E	

HMC #19012564

0-4 ph Saunde @turn-key	ers environmental.com Name	Job Name: 1202-B Huffman Ave Description	Asbestos Fibers	Date Collected: 03/25 Date Received: 03/29 Date Reported: 04/05 Other Fibers	/2019 /2019 /2019 Non- Fibers
White- Texture- Drywall- Ceili	ng- Kitchen	Drywall / White/Brown	(None Detected)	12 % Cellulose fibers	88
White- Texture- Drywall- Ceiling-	Kitchen	Joint Compound / White	(None Detected)	(None Detected)	7
White- Texture- Drywall- Ceiling- K	itchen	Drywall / White/Brown	(None Detected)	12 % Cellulose fibers	
White- Texture- Drywall- Ceiling- Kit	chen	Joint Compound / White	(None Detected)	(None Detected)	
White- Texture- Drywall- Ceiling- Bat	hroom	Drywall / White/Brown	(None Detected)	12 % Cellulose fibers	
White- Texture- Drywall- Ceiling- Bath	шоол	Joint Compound / White	(None Detected)	(None Detected)	
Brown- 18 in. Floor Tile- Adhesive- Kitt	chen	Vinyl / Brown	(None Detected)	(None Detected)	
Brown- 18 in. Floor Tile- Adhesive- Ki	tchen	Adhesive / Yellow	(None Detected)	(None Detected)	
Brown- 18 in. Floor Tile- Adhesive- K	itchen	v / Brown	(None Detected)	(None Detected)	
Brown- 18 in. Floor Tile- Adhesive- Ki	itchen	Adhesive / Yellow	(None Detected)	(None Detected)	
Brown- 18 in. Floor Tile- Adhesive- Bat	throom	Vinyl / Brown	(None Detected)	(None Detected)	
Da Pa	;	01/02/2010 Daviawad hv.	testion 1. Kayes	Date .	05/20

Page 3 of 5

04/05/2019

Date:

Reviewed by:

04/05/2019

Date:

Signature:

HAYE	MICROBIAL CONSUI 3005 East Boundary Terr Midlothian, VA 23112, U 804.562.3435 Fax: 804.44
E	

HMC #19012564

	-			·	
2019 2019 2019	Non-Fibers	100 %	30 %	95 %	95 %
Date Collected: 03/25/ Date Received: 03/29/ Date Reported: 04/05/	Other Fibers	(None Detected)	15 % Cellulose fibers	(None Detected)	(None Detected)
	Asbestos Fibers	(None Detected)	55 % Chrysotile	5 % Chrysotile	5 % Chrysotile
1202-B Huffman Ave	Description	Adhesive / Yellow	Fibrous / White	Caulk / Gray	Caulk / Gray
Job Name:		e- Bathroom	ent	Jr- A	Jr- B
4 i Saunders turn-keyenvironmental.com	Name	Brown- 18 in. Floor Tile- Adhesive	Grey- Millboard- Basem	Grey- Door Caulk- Exterio	Grey- Door Caulk- Exterio
mber: 18460- 3d by: Joseph tkec@t	Sample	Layer 2	3-1	4-1	4-2
Job Nur Collecte Email:	#		2	8	6

Reviewed by: Steplen N. Hoyca

04/05/2019

Date:

Rely Signature:

04/05/2019

Date:

MICROBIAL CON 3005 East Boundary Midlothian, VA 231 804.562.3435 Fax: 8	NSULTING Y Terrace, #F 112, USA 804.447.5562	Turn-Key Environmental Consultants 790 Barnhart Road Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	Asbestos - Additional Informatior HMC #19012564
All samples were received in acce endorsement by AlHA, NIST, NVL ² after a period of 60 days in compliar	eptable condition AP, NY ELAP, or ince with state and	unless otherwise noted on the report. This report must not be used by any agency. The results relate only to the items tested. Hayes Microbial C federal guidelines.	he client to claim product certification, approval, or onsulting reserves the right to dispose of all samples
All Polarized Light Microscopy (PLN provided when requested.	M) results include	an inherent uncertainty of measurement associated with estimating percen	ages by PLM. Measurement uncertainty data can be
'None Detected' - Below the detecte	ed reporting limit o	f 1% unless point counting is performed, then the detected reporting limit is .	25%.
Per NY ELAP198.6 (NOB), TEM is t	the only reliable m	lethod to declare an NOB material as Non-Asbestos Containing.	
Any NY ELAP samples that are su original report provided to Hayes Mi	ubcontracted to ar licrobial Consulting	nother laboratory will display the name and ELAP Lab Identification number is available upon request.	r in the report page heading of those samples. The
Signature:	٩	Date: 04/05/2019 Reviewed by: April 1. Hey	رکل۔ Date: 04/05/2019

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Page 5 of 5

	NSULTING y Terrace, #F 12, USA 804.447.5562	14 MERICAN ENTRANCE	CL LONSCHTOMIS	X			HNA564
lumber: <i> 劣460-4</i> collected: <i>3/25//9</i> e:	Job Name: 1202 - B H	ultman Ave.	Collector: Jos + ph	Saunders	FREIW	turn-keyen	intras cutal
simple # See PH	Fach e.d. Bulk Sa	mple.Log	Analysis Type PL M	Volume	S Day	Group #	Pos. Stop
nalysis Type	Descriptio			Anticut	T A		
M PLM EPA 600/F	-93/116, M-4/82-020		3 Hour. Same Day, 1 Da	N 2 Dav 3 Dav 5 Dav	e I urn-Arouna II	Salli	
PC EPA Point	Count		3 Hour, Same Day, 1 Da	W. 2 Dav. 3 Dav. 5 Dav			
HODSYN YN	ELAP 198.1, 198.6		1 Day, 2 Day, 3 Day, 5 L	Jav Var			
M PCM NIOSH 74	00		Same Day, 1 Day, 2 Day	y, 3 Day, 5 Dav			
EM-A TEM-Air (/	(HERA)		1 Day, 2 Day, 3 Day, 5 L	Jay			
tuished by:	(Chatfield)	Scolar Rood Bu	1 Day, 2 Day, 3 Day, 5 L	Day Contract	100	The second s	

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ASBESTOS BULK SAMPLE LOG Project - 1202-B Huffman

TKEC Project: 18460-4

										 	 	 	 	-	
Collected By	SQL/MLQ	SQL/MLQ	SQL/MLQ	SQL/MLQ	SQL/MLQ	SQL/MLQ	SQL/MLQ	SUL/MLD	SUL/MLD						
Location	Kitchen	Kitchen	Bathroom	Kitchen	Kitchen	Bathroom	Basement	Exterior (A)	Exterior (B)						
Type	Texture/Drywall - Ceiling	Texture/Drywall - Ceiling	Texture/Drywall - Ceiling	18" Floor Tile/Adhesive	18" Floor Tile/Adhesive	18" Floor Tile/Adhesive	Millboard	Door Caulk	Door Caulk						
Color	White	White	White	Brown	Brown	Brown	Grey	Grey	Grey						
Date	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19						
Sample #	1-1	1-2	1-3	2-1	2-2	2-3	3-1	4-1	4-2						

	MICROBI	AL CONSULTING	#19013957 Report ID: 216409
Analysis Report prepared for	We would like to thank you f We received 2 samples by D	for trusting Hayes Microbial for your analytical needs Jrop Off in good condition for this project on March 2	s! 28th, 2019.
Turn-Key Environmental	The results in this analysis _f in the interpretation of any o consent of Hayes Microbial	pertain only to this job, collected on the stated date, other job. This report may not be duplicated, except in Consulting, LLC	, and should not be used in full, without the written
790 Barnhart Road Troy, OH. 45373 Phone: (937) 335-8807	This laboratory bears no res your use of the test results. health effects or interpretati Hayes Microbial or any of its consequential damages aris	ponsibility for sample collection activities, analytical Interpretation and use of test results are your respo on of mold levels is strictly the opinion of Hayes Mic s employees be liable for lost profits or any special, sing out of the use of these test results.	l method limitations, or onsibility. Any reference to crobial. In no event, shall incidental or
18460-4 1202- B Huffman Ave.	Stephen 11	, Aque	
Collected: March 28, 2019 Received: April 8, 2019 Reported: April 12, 2019	Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LL	ک ۲	
PROVING AGENCIA	SOLUTION S	NVLAD®	Connection to Party and Connec
EPA Laboratory ID: VA01419	Lab ID: #188863	NVLAP Lab Code: 500096-0 DPH	H License: #PH-0198
ayes Microbial Consulting, LLC. 3005 East Bo	oundary Terrace, Suite F. Midlothian, VA. 231	12 (804) 562-3435 contact@hayesmicrol	bial.com Page: 1 of 3

3957 3: 216409 t Count	Ś			
#19013 Report II Asbestos 400 Poin	Asbestos Fiber	0.75% Chrysotile	0.5% Chrysotile	
	Non-Asbestos Fibers			
	Total Points	400	400	
18460-4 1202- B Huffman Ave.	Material Description	Caulk / Gray	Caulk / Gray	
Saunders / Environmental Consultants art Road 45373 -8807	Sample	4-1 - Grey Door Caulk- Exterior (A)	4-2 - Grey Door Caulk- Exterior (B)	
Joseph S Tum-Key 790 Barnha Troy, OH. 4 (937) 335-8	#	<u>г</u>	2	



Page: 2 of 3

04 - 12 - 2019

71. Hayes

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Date:

contact@hayesmicrobfal.com

Joseph Saunders	18460-4	#19013957
lum-Key Environmenta 790 Barnhart Road Troy, OH. 45373	al consultants 1202- B Huffman Ave.	Report ID: 216409 Asbestos Analysis Information
(937) 335-8807		
Analysis Details	All samples were received in acceptable condition unless otherwise noted on the report. This report must not be used by the approval, or endorsement by AlHA, NIST, NVLAP, NY ELAP, or any agency. The results relate only to the items tested. Hayes dispose of all samples after a period of 60 days in compliance with state and federal guidelines.	e client to claim product certification, Microbial Consulting reserves the right to
PLM Analysis	All Polarized Light Microscopy (PLM) results include an inherent uncertainty of measurement associated with estimating uncertainty data can be provided when requested.	ercentages by PLM. Measurement
Definitions	'None Detected' - Below the detected reporting limit of 1% unless point counting is performed, then the detected reporting	imit is .25%.
New York ELAP	Per NY ELAP198.6 (NOB), TEM is the only reliable method to declare an NOB material as Non-Asbestos Containing. Any NY ELAP samples that are subcontracted to another laboratory will display the name and ELAP Lab Identification numt samples. The original report provided to Hayes Microbial Consulting is available upon request.	er in the report page heading of those



#19013957 Report ID: 216409

From: Turn-Key Environmental [mailto:tkec@turn-keyenvironmental.com] Sent: Monday, April 08, 2019 9:04 AM To: Dave Burrington < <u>dave@hayesmicrobial.com</u>> Subject: Report Correction and Point Counts

Hi Dave,

For report number HMC #19012557 please change the job name from 1204-A Huffman to 1202-A Huffman. Let me know if

Also, I would like to have PLM EPA 400 Point Count analysis done on the following samples:

19012557-12 19012557-13

19012564-8 19012564-9

19012567-2 19012567-3

19012565-17

Four (4) day TAT is fine for these samples.

Thanks, Joe Saunders

Turn-Key Environmental Consultants, Inc. 790 Barnhart Road 714 East Monument Ave Troy, Ohio 45373 Dayton, OH 45402 937-335-8807 www.turn-keyenvironmental.com

SHIP: DROP OFF - HD DATE: 04-08-2019



4 4-8-19





April 5, 2019

Client Job Number: 18460-4 Client Job Name: 1204- A Huffman Ave

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 7 samples by FedEx for the job referenced above. 7 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

Stephen n. Ha

Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LLC

MICROBIAL CONSULTINC 3005 East Boundary Terrace, # Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.556

EPA 600/R-93, M-4/82-020 (PLM)

HMC #19012556

ы По С С С С С С С С С С С С С С С С С С	Number: 1846 lected by: Jose ail: tkec	0-4 ph Saunders @turn-keyenvironmental.com	b Name: 1204- A Huffman Ave		Date Collected: 03/25/ Date Received: 03/29/ Date Reported: 04/05/	2019 2019 2019
#	Sample	Name	Description	Asbestos Fibers	Other Fibers	Non-Fibers
-	- - -	White- Drywall- Joint Compound- Ceiling- Kitchen	Drywall / White/Brown	(None Detected)	12 % Cellulose fibers	88 %
	Layer 2	White- Drywall- Joint Compound- Ceiling- Kitchen	Joint Compound / White	(None Detected)	(None Detected)	100 %
0	1-2	White- Drywall- Joint Compound- Ceiling- Kitchen	Drywall / White/Brown	(None Detected)	12 % Cellulose fibers	88 %
	Layer 2	White- Drywall- Joint Compound- Ceiling- Kitchen	Joint Compound / White	(None Detected)	(None Detected)	100 %
е	2-1	White- Plaster- Skim Coat- Ceiling - Living Room	Skim Coat / Tan/White	(None Detected)	(None Detected)	100 %
	Layer 2	White- Plaster- Skim Coat- Ceiling - Living Room	Rough Coat / Light Gray	(None Detected)	(None Detected)	100 %
4	2-2	White- Plaster- Skim Coat- Wall- Bedroom 2	Skim Coat / Tan	(None Detected)	(None Detected)	100 %
	Layer 2	White- Plaster- Skim Coat- Wall- Bedroom 2	Rough Coat / Light Gray	(None Detected)	(None Detected)	100 %
5	2-3	White- Plaster- Skim Coat- Wall- Bedroom 1	Skim Coat / White	(None Detected)	(None Detected)	100 %
	Layer 2	White- Plaster- Skim Coat- Wall- Bedroom 1	Rough Coat / Light Gray	(None Detected)	(None Detected)	100 %
9	3-1	White- Sink Undercoating- Kitchen	Debris / Lt Tan	(None Detected)	15 % Cellulose fibers	85 %
Š	jnature:	Date: 0	4/05/2019 Reviewed by:	Reral	Date: 04/	05/2019

Page 3 of 5

Reviewed by:

Date:

HAYES	MICROBIAL CONSULTING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562
E	

HMC #19012556

Job Nur	nber: 1846	0-4 Jo	ob Name:	1204- A Huffman Ave		Date Collected:	03/25/201	6
Collecte	d by: Jose	ph Saunders				Date Received:	03/29/201	6
Email:	tkec	@turn-keyenvironmental.com				Date Reported:	04/05/201	6
#	Sample	Name		Description	Asbestos Fibers	Other Fiber:	s No	n-Fibers
					45 % Chrysotile	35 % Cellulose	fibers	
7	4-1	Grey- Millboard- Basement		Fibrous / Gray				20 %

Page 4 of 5

04/05/2019

Date:

Date:

4

HAYES MICROBIAL CONSULTING	Turn-Key Environmental Consultants 790 Barnhart Road	Asbestos - Additional Information
3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562	Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	HMC #19012556
All samples were received in acceptable condition endorsement by AlHA, NIST, NVLAP, NY ELAP,	on unless otherwise noted on the report. This report must not be used by th or any agency. The results relate only to the items tested. Hayes Microbial Coi	e client to claim product certification, approval, or sulting reserves the right to dispose of all samples
after a period of 60 days in compliance with state a All Polarized Light Microscopy (PLM) results inclu- provided when requested.	and federal guidelines. Ide an inherent uncertainty of measurement associated with estimating percenta	ges by PLM. Measurement uncertainty data can be
'None Detected' - Below the detected reporting lim	nit of 1% unless point counting is performed, then the detected reporting limit is .2	%.
Per NY ELAP198.6 (NOB), TEM is the only reliable	e method to declare an NOB material as Non-Asbestos Containing.	
Any NY ELAP samples that are subcontracted to original report provided to Hayes Microbial Consult	o another laboratory will display the name and ELAP Lab Identification number Iting is available upon request.	in the report page heading of those samples. The
Signature:	Date: 04/05/2019 Reviewed by:	Date: 04/05/2019 Pare 5 of 5
		raye o u o

- Chain of Custod Form v.101302 HMC # Ö12556	ey environ entral.	up # Pos. Stop										Time:
Asbestos	i@hurn-k	Grou			I Times							
R	Engail 77.6	TAT			ble Turn-Arour	Jay	Jay					Date:
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Lewsultant	ollector, Jos + ph	Analysis Type				Hour, Same Day, 1 D	Hour, Same Day, 1 D	Day, 2 Day, 3 Day, 5	ame Day, 1 Day, 2 Da	Day, 2 Day, 3 Day, 5	Day, 2 Day, 3 Day, 5	.2 11.
uirentresta nent Aue 45402	N Are o						0	-	0,		-	Rcvd By:
Company: Lurn-Key En	04-A Huffma	mple Name			Description	0						Date: > / / /
CES ONSULTING ary Terrace, #F 3112, USA c: 804.447.5562	Job Name:	Sai				JR-93/116, M-4/82-020	nt Count	H ELAP 198.1, 198.6	7400	(AHERA)	k (Chatfield)	
HAN IICROBIAL CC 06 East Bounds didlothian, VA 23 14.562.3435 Fax	3/25/19				0	EPA 600	EPA Poir	NYSDOF	L HSOIN	TEM Air	TEM Bul	11 "
	er: /6	# 0			sis Type	PLM	PC	ΝΥ	PCM	TEM-A	TEM-C	:Vd'by

ASBESTOS BULK SAMPLE LOG Project - 1204-A Huffman Ave.

2 12556

TKEC Project: 18460-4

Sample #	Date	Color	Type	Location	Collected By
1-1	3/25/19	White	Drywall/Joint Compound-Ceiling	Kitchen	SOL/MLO
1-2	3/25/19	White	Drywall/Joint Compound-Ceiling	Kitchen	SQL/MLQ
2-1	3/25/19	White	Plaster/Skim Coat -Ceiling	Living Room	Sal/MLa
2-2	3/25/19	White	Plaster/Skim Coat -Wall	Bedroom 2	SOL/MLO
2-3	3/25/19	White	Plaster/Skim Coat -Wall	Bedroom 1	Sal/MLa
3-1	3/25/19	White	Sink Undercoating	Kitchen	Sar/Mra
4-1	3/25/19	Grey	Millboard	Basement	Sar/Wra
_					





April 5, 2019

Client Job Number: 18460-4 Client Job Name: 1208-A Huffman Ave.

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 4 samples by FedEx for the job referenced above. 4 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

Stephen n. Ha

Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LLC

HAYES	MICROBIAL CONSULTING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804,562:3435 Fax: 804.447.5562
E	

HMC #19012560

2019 2019 2019	Non-Fibers	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Date Collected:03/25Date Received:03/29Date Reported:04/05	Other Fibers	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)
	Asbestos Fibers	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)	(None Detected)
Vame: 1208-A Huffman Ave.	Description	Vinyl / Tan	Adhesive / Yellow	Vinyl / Tan	Adhesive / Yellow	Tile / White	Adhesive / Yellow	Tile / White	Adhesive / Yellow
l-4 Job N bh Saunders ≬turn-keyenvironmental.com	Name	Brown- Grey- 18 in. Floor Tile- Adhesive- Kitchen	Brown- Grey- 18 in. Floor Tile- Adhesive- Kitchen	Brown- Grey- 18 in. Floor Tile- Adhesive- Kitchen	Brown- Grey- 18 in. Floor Tile- Adhesive- Kitchen	Blue- 12 in. Floor Tile- Adhesive- Bathroom			
umber: 18460 ed by: Josep tkec@	Sample	1-1	Layer 2	1-2	Layer 2	2-1	Layer 2	2-2	Layer 2
Job Nt Collect Email:	#	1		2		3		4	

Date: Reviewed by: Steplan N. Hayes

04/05/2019

Date:

Reith

Signature:

04/05/2019

	Turn-Key Environmental Consultants 790 Barnhart Road	Asbestos - Additional Information
MICKOBIAL CONSOLITING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562	Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	HMC #19012560
All samples were received in acceptable condition	on unless otherwise noted on the report. This report must not be used by	he client to claim product certification, approval, or
endorsement by AIHA, NIST, NVLAP, NY ELAP, o after a period of 60 days in compliance with state ar	or any agency. The results relate only to the items tested. Hayes Microbial C nd federal guidelines.	onsulting reserves the right to dispose of all samples
All Polarized Light Microscopy (PLM) results includ provided when requested.	de an inherent uncertainty of measurement associated with estimating percen	ages by PLM. Measurement uncertainty data can be
'None Detected' - Below the detected reporting limit	t of 1% unless point counting is performed, then the detected reporting limit is	25%.
Per NY ELAP198.6 (NOB), TEM is the only reliable	e method to declare an NOB material as Non-Asbestos Containing.	
Any NY ELAP samples that are subcontracted to original report provided to Hayes Microbial Consulti	another laboratory will display the name and ELAP Lab Identification numb ing is available upon request.	ir in the report page heading of those samples. The
Signature:	Date: 04/05/2019 Reviewed by:	Cd Date: 04/05/2019

Page 4 of 4

Image: second	Image: Second control of the second control	3/25/19 Job Name: 3/25/19 1208-A Auffm Sample Name See Attached Bulk Sample L	M Hule Collector Jos Apple Analysis Type	Saunders Emailie Volume TAT	Oturn-keyenul Group#	2560 2560 Pos. Stop
EPA 600/R-93/116, M-4/82-020 3 Hour, Same Day, 1 Day, 2 Day, 3 Day, 5 Day EPA Point Count 3 Hour, Same Day, 1 Day, 2 Day, 3 Day, 5 Day NYSDOH ELAP 198.1, 198.6 1 Day, 2 Day, 3 Day, 5 Day	EPA 600/R-93/116, M-4/82-020 3 Hour, Same Day, 1 Day, 2 Day, 3 Day, 5 Day EPA Point Count 3 Hour, Same Day, 1 Day, 2 Day, 3 Day, 5 Day NYSDOH ELAP 198.1, 198.6 1 Day, 2 Day, 3 Day, 5 Day NIOSH 7400 Same Day, 1 Day, 2 Day, 3 Day, 5 Day	SEE MATALA Ed. Bulk Sample L	Colored HTW	Average Averag		
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NYSDOH ELAP 198.1, 198.6 1 Day, 2 Day, 3 Day, 5 Day	NYSDOH ELAP 198.1, 198.6 1 Day, 2 Day, 3 Day, 5 Day NIOSH 7400 Same Day, 1 Day, 2 Day, 5 Day	EPA Point Count	3 Hour, Same Day, 1 Day	y, 2 Day, 3 Day, 5 Day		
	NIOSH 7400 Same Day, 1 Day, 2 Day, 3 Day, 5 Day	NYSDOH ELAP 198.1, 198.6	1 Day, 2 Day, 3 Day, 5 Da	ay		
TEM Air (AHERA) 1 Day, 2 Day, 3 Day, 5 Day		TEM Bulk (Chatfield)	1 Day, 2 Day/ 3 Day, 5 Da	ay		
TEM Air (AHERA) 1 Day, 2 Day, 5 Day TEM Bulk (Chatfield) 1 Day, 2 Day, 5 Day	TEM Bulk (Chatfield) 1 Day, 2 Day, 5 Day					

ASBESTOS BULK SAMPLE LOG	Project - 1208-A Humman
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TKEC Project: 18460-4

ple #	Date	Color	Type	Location	Collected By	
	3/25/19	Brown/Grey	18" Floor Tile/Adhesive	Kitchen	SQL/MLQ	
	3/25/19	Brown/Grey	18" Floor Tile/Adhesive	Kitchen	SUL/MLD	
	3/25/19	Blue	12" Floor Tile/Adhesive	Bathroom	SQL/MLQ	
	3/25/19	Blue	12" Floor Tile/Adhesive	Bathroom	SUL/MLD	
						-
						_

12560

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April 5, 2019

Client Job Number: 18460-4 Client Job Name: 1208-B Huffman Ave.

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 5 samples by FedEx for the job referenced above. 5 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

Stephen n. Ha

Steve Hayes, BSMT(ASCP) Laboratory Director Hayes Microbial Consulting, LLC

HAYES	MICROBIAL CONSULTING 3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562
E	

EPA 600/R-93, M-4/82-020 (PLM)

HMC #19012569

Job N Collec Email:	umber: 1846 Xed by: Jose tkec	0-4 Jo ph Saunders @turn-keyenvironmental.com	b Name: 1208-B Huffman Ave.		Date Collected: 03 Date Received: 03 Date Reported: 04	25/2019 29/2019 05/2019
#	Sample	Name	Description	Asbestos Fibers	Other Fibers	Non- Fibers
~	1-1	White- Plaster- Skim Coat- Kitchen	Skim Coat / White	(None Detected)	(None Detected)	100 %
7	1-2	White- Plaster- Skim Coat- DR- LR	Rough Coat / Gray	(None Detected)	(None Detected)	100 %
	Layer 2	White- Plaster- Skim Coat- DR- LR	Skim Coat / Tan/White	(None Detected)	(None Detected)	100 %
3	1-3	White- Plaster- Skim Coat- Landing	Rough Coat / Gray	(None Detected)	(None Detected)	100 %
	Layer 2	White- Plaster- Skim Coat- Landing	Skim Coat / Tan/White	(None Detected)	(None Detected)	100 %
4	2-1	White Textured- Drywall- Joint Compound- Bathroo	m Drywall / White/Brown	(None Detected)	12 % Cellulose fibers	88 %
	Layer 2	White Textured- Drywall- Joint Compound- Bathroo	m Joint Compound / White	(None Detected)	(None Detected)	100 %
5	2-2	White Textured- Drywall- Joint Compound- Bathroo	m Drywall / White/Brown	(None Detected)	12 % Cellulose fibers	88 %
	Layer 2	White Textured- Drywall- Joint Compound- Bathroo	m Joint Compound / White	(None Detected)	(None Detected)	100 %

Page 3 of 4

04/05/2019

Date:

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Reviewed by: 04/05/2019

Date:

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Signature:

HAYES MICROBIAL CONSLITING	Turn-Key Environmental Consultants 790 Barnhart Road	Asbestos - Additional Information
3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562	Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	HMC #19012569
All samples were received in acceptable conditi endorsement by AIHA, NIST, NVLAP, NY ELAP,	ion unless otherwise noted on the report. This report must not be used by the , or any agency. The results relate only to the items tested. Hayes Microbial Con	e client to claim product certification, approval, or sulting reserves the right to dispose of all samples
after a period of 60 days in compliance with state All Polarized Light Microscopy (PLM) results inclu provided when requested.	and federal guidelines. ude an inherent uncertainty of measurement associated with estimating percentag	ges by PLM. Measurement uncertainty data can be
'None Detected' - Below the detected reporting lim	nit of 1% unless point counting is performed, then the detected reporting limit is .25	%.
Per NY ELAP198.6 (NOB), TEM is the only reliabl	le method to declare an NOB material as Non-Asbestos Containing.	
Any NY ELAP samples that are subcontracted to original report provided to Hayes Microbial Consu	o another laboratory will display the name and ELAP Lab Identification number Iting is available upon request.	in the report page heading of those samples. The
Signature:	Date: 04/05/2019 Reviewed by:	Date: 04/05/2019
		Page 4 of 4

7	MICRO 3005 Eas Midlothi 804.562.	BIAL CONSULTING t Boundary Terrace, #F m, VA 23112, USA 3435 Fax: 804,447,5562	Company: Tigen-Key Entrinen Dayten, Oft 45	mental Consulta 14 Mare.	nts, Tare	Asl	bestos - Chair	n of Custody Form v. 101302.5
b Number: ate Collecte	1846 13/25	0-4 Job Name: 1/9 1209	-B Huffman Ari	Collector 505	oh Saunders	FRaition	turn-keyen	intras cutal .
Sample #		Sarr	nple Name	Analysis Type	Volume	TAT	Group #	Pos Ston
		e Attach ed Bu	elk Sample. Log	PLM		5 Owy		
Analysis	Type		Description		Availa	able Turn-Around T	imes	
PLM	ILM	EPA 600/R-93/116, M-4/82-020		3 Hour, Same Day	, 1 Day, 2 Day, 3 Day, 5	Dav		
<u>a</u>	ç	EPA Point Count		3 Hour, Same Day	, 1 Day, 2 Day, 3 Day, 5	Dav		
Z	×	NYSDOH ELAP 198.1, 198.6		1 Day, 2 Day, 3 D	iy, 5 Day			
PCM P	CM	NIOSH 7400		Same Day, 1 Day,	2 Day, 3 Day, 5 Day			
TEM T	EM-A	TEM Air (AHERA)		1 Day, 2 Day, 3 De	ay, 5 Day			
F	EM-C	TEM Bulk (Chatfield)		1 Day, 2 Day, 3 Da	ay, 5 Day			
elinquished b	R.J. Julu	wlers	Date: 3/28/14	Revd By: PV 2	21-19	Date:	Time:	

ASBESTOS BULK SAMPLE LOG Project - 1208-B Huffman Ave.

TKEC Project: 18460-4

							 	 	 	 	 	 _
Collected By	SQL/MLQ	SQL/MLQ	SQL/MLQ	SQL/MLQ	SQL/MLQ							
Location	Kitchen	DR/LR	Landing	Bathroom	Bathroom							
Type	Plaster/Skim Coat	Plaster/Skim Coat	Plaster/Skim Coat	Texture/Drywall/Joint Compound	Texture/Drywall/Joint Compound							
Color	White	White	White	White	White							
Date	3/25/19	3/25/19	3/25/19	3/25/19	3/25/19							
Sample #	1-1	1-2	1-3	2-1	2-2							

12569





April 5, 2019

18460-4 Client Job Number: Client Job Name:

1210-A, B Haffman Ave.

Dear Turn-Key Environmental Consultants,

We would like to thank you for trusting Hayes Microbial for your analytical needs. On March 29, 2019 we received 5 samples by FedEx for the job referenced above. 5 samples were received in good condition. The results in this analysis pertain only to this job, collected on the stated date and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC.

Stephen n. Ha

Hayes Microbial Consulting, LLC Steve Hayes, BSMT(ASCP) Laboratory Director

HMC #19012570

					-	
Job ∧ Colle(Jumber: 1846 cted by: Jose	טן ph Saunders	ob Name: 1210-A, B Haffman Ave.		Date Collected: 03/25/ Date Received: 03/29/	2019 2019
Email	tkec	@turn-keyenvironmental.com			Date Reported: 04/05/	2019
#	Sample	Name	Description	Asbestos Fibers	Other Fibers	Non-Fibers
~	- - -	Tan- TSI- Basement	Fibrous / Yellow/White	(None Detected)	45 % Mineral/Glass wool 25 % Cellulose fibers	30 %
7	1-2	Tan- TSI- Basement	Fibrous / Yellow/Black	(None Detected)	65 % Mineral/Glass wool	35 %
ო	1-3	Tan- TSI- Basement	Fibrous / Yellow/Black	(None Detected)	55 % Mineral/Glass wool 15 % Cellulose fibers	30 %
4	2-1	Brown- 12 in. Floor Tile- Adhesive- Hallway	Floor Tile / Brown	(None Detected)	(None Detected)	100 %
	Layer 2	Brown- 12 in. Floor Tile- Adhesive- Hallway	Adhesive / Yellow	(None Detected)	(None Detected)	100 %
		Notes: Insufficient sample for Accurate Analyses.				
5	2-2	Brown- 12 in. Floor Tile- Adhesive- Hallway	Floor Tile / Brown	(None Detected)	(None Detected)	100 %
		Notes: Adhesive Layer Not Observed.				

Page 3 of 4

04/05/2019

Date:

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Reviewed by: 04/05/2019

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Signature:

Date:
HAYES MICROBIAL CONSLITING	Turn-Key Environmental Consultants 790 Barnhart Road	Asbestos - Additional Information
3005 East Boundary Terrace, #F Midlothian, VA 23112, USA 804.562.3435 Fax: 804.447.5562	Troy, OH 45373 Phone: (937) 335-8807 Fax: (937) 339-4882	HMC #19012570
All samples were received in acceptable condition endorsement by AIHA, NIST, NVLAP, NY ELAP,	ion unless otherwise noted on the report. This report must not be used by the or any agency. The results relate only to the items tested. Hayes Microbial Con	e client to claim product certification, approval, or sulting reserves the right to dispose of all samples
after a period of 60 days in compliance with state a All Polarized Light Microscopy (PLM) results inclu provided when requested.	and tederal guidelines. ude an inherent uncertainty of measurement associated with estimating percentag	jes by PLM. Measurement uncertainty data can be
'None Detected' - Below the detected reporting lim	nit of 1% unless point counting is performed, then the detected reporting limit is .25	%.
Per NY ELAP198.6 (NOB), TEM is the only reliable	le method to declare an NOB material as Non-Asbestos Containing.	
Any NY ELAP samples that are subcontracted to original report provided to Hayes Microbial Consul-	o another laboratory will display the name and ELAP Lab Identification number Iting is available upon request.	in the report page heading of those samples. The
Signature:	Date: 04/05/2019 Reviewed by:	Date: 04/05/2019
		Page 4 of 4

Asbestos - Chain of Custody Form v.101302.5 HMC #	Email: Electron-key environmented.	AT Group# Pos. Stop				Around Times					Timer
tal Consultants, Tarle	Collector-Joszph Sauraders Notes:	Analysis Type Volume T				Available Turn-	3 Hour. Same Day 1 Day 2 Day, 3 Day, 5 Day	1 Day, 2 Day, 3 Day, 5 Day	Same Day, 1 Day, 2 Day, 3 Day, 5 Day	1 Day, 2 Day, 3 Day, 5 Day 1 Day, 2 Day, 3 Day, 5 Day	A 2-79-16 Date:
Company: Lurw-Key Envirenter 7(4 Meniconent Par Duyten, 0H 45-402	9,8 Haffman Are,	ulk Sample. Log			Description						Date: 3/2,6/10 Rovd By:
LECOBIAL CONSULTING 10 East Boundary Terrace, #F diothian, VA 23112, USA 4.562.3435 Fax: 804.447.5562	460-4 Job Name:	see Pittacked B				EPA 600/R-93/116, M-4/82-020	EPA Point Count	NYSDOH ELAP 198.1, 198.6 NIOSH 7400	TEM Air (AHERA)	TEM Bulk (Chatfield)	Jundero
	Job Number: <u>/§</u> Date Collected: <u>2</u> Mobile:	Sample #			Analysis Type	PLM PLM	PC	PCM PCM	TEM TEM-A	TEM-C	Relinquished by:

ASBESTOS BULK SAMPLE LOG Project - 1210-A B Huffman Ave.

TKEC Project: 18460-4

Collected By SQL/MLQ SOH/MLO SQL/MLQ SQL/MLQ SQL/MLQ Basement Basement Basement Location Hallway Hallway 12" Floor Tile/Adhesive 12" Floor Tile/Adhesive Type TSI TSI TSI Brown Brown Color Tan Tan Tan 3/25/19 3/25/19 3/25/19 3/25/19 3/25/19 Date Sample # 2-2 1-3 2-1 1-2 1-1

5 12520

APPENDIX F

Sample Location Sketches







APPENDIX G

Photographs



	1-1	1-2
11 Parnell Ave., Apt. A	Sample 1-1, Texture/Drywall, Bathroom	Sample 1-2, Texture/Drywall, Bathroom

	1-1	
11 Parpoll Avo. Apt. P.	Sample 1-1, Texture/Plaster/Skim Coat, Kitchen	I-2 Sample 1-2, Texture/Plaster/Skim Coat, Dining Room
II Pameli Ave., Apt. B		2.2
Sample 1-3, Texture/Plaster/Skim Coat, Living Room	A-1 Sample 2-1, 12" Floor Tile/Adhesive, Bathroom	25. 3. 2019 18:3 Sample 2-2, 12" Floor Tile/Adhesive, Bathroom



Sample 5-1, Millboard, Basement

Sample 6-1, Sink Undercoat, Kitchen

Sample 7-1, Window Caulk, Exterior

7-2 Sample 7-2	







1208	1-2	1-3
1208 Huffman Ave., Apt. B	Sample 2-1. Plaster/Skim Coat, Dining Room	Sample 1-3, Plaster/Skim Coat, Landing
C) z'	2-2	
Sample 2-1, Texture/Drywall/Joint Compound, Bath- room	Sample 2-2. Texture/Drywall/Joint Compound, Bathroom	

1210 Huffman Ave., Apt A/B	Sample 1-1, TSI, Basement	Sample 1-2, TSI, Basement
		22
Sample 1-3, TSI, Basement	Sample 2-1, 12" Floor Tile/Adhesive, Hallway	Sample 2-2. 12" Floor Tile/Adhesive, Hallway

APPENDIX H

10-Day Notification Form and Instructions

OHIO ENVIRONMENTAL PROTECTION AGENCY INSTRUCTIONS FOR COMPLETING NOTIFICATION OF DEMOLITION AND RENOVATION/ABATEMENT FORM

General Information

These directions are for submitting hardcopy notifications to the Ohio EPA. Ohio EPA strongly encourages notifications to be submitted electronically via the Ohio EPA eBusiness Center located at <u>ebiz.epa.ohio.gov</u>.

Who must submit this notification? [OAC 3745-20-03 and OAC 3745-22-04(C)(4)]

- The <u>owner or operator</u> means any person who leases, operates, controls, or supervises the facility being demolished or renovated, or any person who owns, leases, operates, controls or supervises the demolition or renovation (activity), or both.
- <u>Asbestos Abatement Contractor</u> means a contractor who is currently licensed by the Ohio EPA as an Asbestos Hazard Abatement Contractor.

The Ohio EPA notification of demolition and renovation form is required for:

- <u>Every demolition</u> of a facility, regardless of whether asbestos is involved. This includes all structures that will be intentionally burned for fire training purposes.
- A <u>renovation</u> when the amount of regulated asbestos-containing material (RACM) stripped, removed, dislodged, cut, drilled, or similarly disturbed exceeds 260 linear feet on pipes or 160 square feet on other facility components or 35 cubic feet off facility components.
- An <u>abatement</u> when the activity involves the removal, renovation, enclosure, repair or encapsulation of friable asbestos-containing material in an amount greater than 50 linear feet on pipes or 50 square feet on other facility components.

When must I submit this notification?

<u>ORIGINAL</u>: The original notification must be **postmarked** or **hand delivered** to the Ohio EPA Central Office at least 10 working days (Monday-Friday excluding weekends) before operations begin. Please see example table below to help determine when to submit the original notification.

E-mail or FAX is not acceptable for original notification.

July													
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday							
	1	2	3 day 1	4 day 2	5 day 3	6							
7	8 day 4	9 day 5	10 day 6	11 day 7	12 day 8	13							
14	15 day 9	16 day 10	17 *	18	19	20							
21	22	23	24	25	26	27							
28	29	30	31										

Post mark date (and Day 1 of 10-day clock): July 3rd.

Note: Holidays are counted when they fall on a working day.

Completion of 10-day prior notification period: July 16th.

* First day work can commence (day following the 10th working day): July 17th.

<u>REVISIONS</u>: A revised notification must be submitted if there is any change in the notification which renders information in the notification no longer accurate. Examples of changes include but are not limited to: if the amount of RACM changes by at least 20 percent, any changes in work schedules (dates or hours), any change in owner or operator, a change in the asbestos hazard abatement specialist onsite, or any change in the name or location of selected waste disposal site. A revised notification may be initiated by phone, however, must be followed in writing by either email or fax. Revisions shall be submitted as soon as possible but not later than one working day following discovery of the change.

<u>EMERGENCY DEMOLITION OR RENOVATIONS</u>: The notification must be submitted as early as possible before, but not later than, the following working day from start of demolition or renovation/abatement activities. The notification must include the supplemental information required in Sections 9 or 10.

Where do I send my notification?

Send the notification to: Ohio EPA Central Office, Division of Air Pollution Control, P.O. Box 1049, Columbus, Ohio 43216-1049.

How does Ohio EPA assess fees? [ORC 3745.11(G) and OAC 3745-22-04(C)]

Per ORC 3745.11(G), an owner or operator who is responsible for an asbestos demolition or renovation/abatement project regulated under OAC Chapter 3745-20, shall pay the fees set forth in the following schedule. This applies when thresholds are greater than or equal to: 260 linear feet; 160 square feet; or 35 cubic feet.

- Each notification \$75 plus,
- Asbestos removal \$3/unit (1 unit = any combination of linear feet or square feet equal to fifty) and/or
- Asbestos cleanup \$4/cubic yard

Per OAC 3745-22-04(C), if the renovation/abatement project involves removal, encapsulation, enclosure or repair of greater than 50 square feet or 50 linear feet of RACM, the Ohio EPA licensed asbestos hazard abatement contractor is responsible for paying the fees set forth in the following schedule.

- If notification is not an installation, \$65 fee, or
- If notification is an installation, \$65 fee for each address where RACM exceeds 50 square feet or 50 linear feet.

The fees shall be submitted with the original notification. Check or Money Order shall be made payable to: Treasurer, Sate of Ohio. Projects may be subject to both regulatory fee requirements above. Please be aware that some local air agencies may have additional fees.

Who can help answer questions about completing this notification?

Contact the Ohio EPA Central Office at 614-466-0061 or by email at <u>asbestos@epa.ohio.gov</u>.

Line-by-line Instructions

[Below listed instructions are for hardcopy form submission only]

Section 1: General Information

- 1. Check the type of notification (all that apply):
 - "Original" is the first notification submitted for a project; hardcopy is required to be post-marked or hand-delivered 10 working-days prior to start of work.
 - "Revision" is any notification submitted after the original due to any change which renders information on the form no longer accurate. Examples of changes requiring a revision include but are not limited to: if the amount of RACM changes by at least 20 percent, any changes in work schedules (dates or hours), any change in owner or operator, a change in the asbestos hazard abatement specialist onsite, or any change in the name or location of selected waste disposal site. Revisions shall be numbered chronologically with Revision #1 being the first time any items on the notification form were changed. If revision is marked, please include the Revision # and check the "Revised" box for each section where information is revised. A "Revised" box is located near the upper right hand side of each section throughout the form.
 - "Installation" means any building or structure or any group of buildings or structures at a single demolition or renovation/abatement site that are under the control of the same owner or operator, or owner or operator under common control. This would include projects where multiple addresses are included in a common project, have the same owner, and are being completed in the same county (i.e. land banks, residential cooperatives, highway projects involving multiple facility demolitions, etc.). If the project includes more than one structure or address, be sure to complete a separate "Section 2: Project Address Specific Information" page for each address.
 - "Emergency" includes emergency demolitions and emergency renovation/abatement operations. Emergency demolition means any demolition operation conducted under a written order issued by a state or local

governmental agency because a facility is structurally unsound and in danger of imminent collapse. Emergency renovation/abatement means a renovation/abatement operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by non-routine failures of equipment, by actions of fire or emergency medical personnel pursuant to duties within their official capacities, or by significantly damaged friable asbestos-containing material causing an environmental health hazard (as assessed by an asbestos hazard evaluation specialist). The notification must be submitted as early as possible before, but not later than, the following working day from start of demolition or renovation/abatement activities. The notification must include the supplemental information required in Sections 9 or 10.

- "Annual" refers to planned renovation operations over a calendar year involving a series of non-scheduled operations that are collectively greater than the threshold limits; these notifications must be submitted in the month prior to the beginning of the calendar year. See separate guidance document or contact Ohio EPA Central Office to determine if the project will meet Annual notification requirements.
- "Cancellation" is submitted to indicate a project has been cancelled and work will not be completed.
- "County" is for listing the County in which the project will occur.
- "NESHAP Residential Exemption" is for a project that meets the residential building exemption requirements of OAC 3745-20 rules, however, a notification is still required due to OAC 3745-22 rules (RACM exceeds 50 square feet or 50 linear feet). Checking this box will indicated that the \$65 notification fee per OAC 3745-22-04(C) still applies, however, the \$75 notification fee + RACM fees per ORC 3745.11(G) will not apply.
- 2. Provide owner, asbestos abatement contractor, billing, fire department Information (all that apply):
 - In the "Owner" line, list the property owner [individual(s) who own(s) the property at the time of demolition/renovation (Note, this may be a government or private entity)] or list the Coordinating Entity (i.e., land bank, municipality, etc.) if the facility is part of a larger project or installation. Include address, contact person, phone, fax, and email for the listed Owner.
 - Specify the name, address, contact person, phone, fax, email, and Ohio Environmental Protection Agency license number (ACXXXX) for the "Asbestos Abatement Contractor" (if regulated asbestos containing material(s) is being abated).
 - Specify the billing contact for the project notification fees, either the Owner, the Asbestos Abatement Contractor, or the Demolition Contractor (if project is not an installation).
 - Specify the name, address, contact person, phone, fax, email, for the "Fire Department" (if demolition of a facility is by intentional burning).
- **3.** For any project subject to OAC 3745-20, include the Asbestos Hazard "Evaluation Specialist" Name, "Certification # (ESXXXX)", and "procedure used to detect and analyze asbestos". Analytical methods could include the collection of samples and sample analyses by polarized light microscopy (PLM) with dispersion staining. For samples that test under 10% asbestos content: An owner or operator may (a) elect to assume material to be greater than 1% asbestos, or, (b) require verification by point counting in which the point counting result will supersede the PLM estimation; Both choice and result should be stated on the notification. Explain any other method(s) used. All owners/operators should have the records of the asbestos assessment and analyses (inspection/survey report) on-site during active operations for reference and inspection. Such records would include a list of materials assessed, locations sampled and the sample results; this information can be found within the asbestos inspection report.
- 4. Describe the specific procedures to be followed in the event unexpected regulated asbestos-containing material (RACM) is found or non-friable asbestos-containing material becomes friable RACM.
 <u>Examples:</u>
 - A. Stop work, evacuate area, and demarcate the area.
 - B. Wetting of ACM with amended water and using wet cleaning methods.

Should the discovery of unexpected RACM change the original amount of asbestos to be abated by 20 percent or more, you

must submit a revised notification pursuant to OAC 3745-20-03. A revised notification must reflect the change in the amount of affected asbestos-containing material. The revised notification must also reflect the new asbestos removal start date, if applicable.

- 5. Select the appropriate box (*Implosion, Fire Training, Wet Methods, Manual Demolition, Mechanical Demolition or Other*). Underneath the check boxes, write a brief summary of the specific method to be used on this project. In the box *Description of affected facility components*, include detailed information for each component where RACM is being removed. "Fire Training" refers to the demolition of a facility by intentional burning. All asbestos containing material, including Category I and Category II non-friable ACM, must be removed in accordance with OAC 3745-20 before burning. <u>Additional requirements</u> also apply; please contact the Ohio EPA District Office or Local Air Agency with jurisdiction for additional information (See attached map).
- 6. For the materials listed in each project, on the line for *Type of ACM to be abated*, check the appropriate box (*Surfacing, Mechanical or Other*). If "*Other*" is selected, specify what the asbestos material is. At least one box must be checked, but if multiple types of asbestos are being removed, multiple boxes may be checked. On the line for *Engineering Controls*, select the appropriate box (*Wet Methods, Glove Bag, NPE, AFD or Other*). If "*Other*" is selected, specify the method(s) to be used. At least one type of engineering control must be selected, but multiple methods may be selected. On the line for *Work Practices*, select the appropriate box (*Intact Removal, Manual, Mechanical or Other*). If "*Other*" is selected, specify what the work practice method is. At least one work practice box must be selected but more than one may be selected.
- 7. Please complete the information for this section if asbestos containing material is being removed. On the name line, enter the name of the transporter company (example: *Jones Waste Hauler*) and complete the other fields in accordance to the information relating to this company. If more than one transporter is being used, complete the information for the second transporter in this same manner. <u>NOTE</u>: you must also complete a Waste Shipment Record prior to consigning any asbestos containing waste materials (ACWM).
- 8. Enter the name of the waste disposal site and complete all the other fields based on the physical location of the site. Check the following Ohio EPA website for an updated list of approved asbestos accepting waste disposal sites: www.epa.ohio.gov/dapc/atu/asbestos.aspx
- **9.** This section must be completed for emergency demolitions that meet the definitions and requirements of the regulation. If a facility is not in imminent danger of collapse, it is not an emergency demolition even though it may be ordered to be demolished due to hazardous conditions. Provide the name, title and agency of the state or local governmental representative who has ordered the demolition. The Authority of Order is the applicable state or local regulation under which the demolition order has been issued. **You must attach a copy of the demolition order to the notification.**
- **10.** This section shall be completed for emergency renovations/abatement that meet criteria described in OAC 3745-20-01 and OAC 3745-22-03(H). You must provide detail on the four items listed in this section, including a description of how the project meets the "emergency" requirements of OAC 3745-22-03(H). A separate sheet may be needed.
- 11. The person signing this notification is attesting to the fact that in accordance with Ohio Administrative Code rule 3745-20-03(A)(4)(p), they are certifying that at least one person trained as required by paragraph (B) of rule 3745-20-04 of the Administrative Code will supervise the stripping and removal described by this notification, and are acknowledging that the submission of false or misleading statements is prohibited by law and certifying that facts contained in this notification are true, accurate, and complete.

Section 2: Project Address Specific Information

Please complete Section 2 for the address included with this notification. If the project is an "Installation" per OAC 3745-20, complete a separate Section 2 page for each address associated with this notification.

- A. Describe the building(s) or structure(s) affected by the operations. Include building size in square feet, specific site location, number of floors, and age in years. Also include the present and prior use (i.e., industrial, commercial, institutional, residential, vacant, etc.) of the building(s).
- **B.** Identify the type of operation. Definitions of these terms can be found in OAC 3745-20-01.
 - "Demolition" means the wrecking, or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

- "Renovation" means altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing material in an amount greater than 260 linear feet, 160 square feet, or 35 cubic feet from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.
- "Abatement" refers to any Asbestos hazard abatement activity involving the removal, renovation, enclosure, repair, or encapsulation of reasonably related friable asbestos-containing materials in an amount greater than 50 linear feet or 50 square feet. Asbestos hazard abatement activity also includes any such activity involving such asbestos-containing materials in an amount of 50 linear or 50 square feet or less if, when combined with any other reasonably related activity in terms of time and location of the activity, the total amount is in an amount greater than 50 linear or 50 square feet.
- **C.** Declare whether or not asbestos is present in any quantity. This includes assumed asbestos containing materials such as roofing and flooring. Also specify if the facility was previously abated and year when previous asbestos abatement occurred (if applicable).
- D. Specify the amount of regulated asbestos-containing material (RACM) to be removed as follows: linear feet on pipes, square feet (surface area) on facility components, and total cubic feet (volume) on or off all facility components. Asbestos containing demolition debris and related materials shall be quantified in cubic feet (volume) Convert any cubic yardage measurements to cubic feet (1 cubic yard = 27 cubic feet). Estimate the approximate amount of Category I and Category II non-friable asbestos-containing material in the affected part of the facility that will be removed before demolition. Estimate the approximate amount of Category I and Category II non-friable asbestos-containing material in the affected part of the facility that will be removed before demolition in the affected part of the facility that will not be removed before demolition.
- **E.** Specify the scheduled dates for asbestos removal, the hours of operation, and the days of the week that asbestos removal operations will be active onsite. Please note, the setup date must be at least 10 working-days after postmark or hand-deliver date. Also include the name, certification number, and expiration date of the asbestos hazard abatement specialist scheduled to be onsite in charge of the asbestos abatement project. Additional boxes have been provided in the event the project involves more than one shift.
- **F.** Specify the name, address, contact person, phone, fax, and email for the Demolition Contractor, if applicable.
- **G.** Specify the starting and ending dates for demolition even when no asbestos-containing materials are present. Should the demolition not begin on the start date listed, a revised notification form shall be submitted prior to the listed start date. Please note the start date must be at least 10 working-days after postmark or hand-deliver date.
- **H.** If a project is being placed on hold, specify the dates as follows:
 - "Hold Begin Date" indicate date that the regularly scheduled demolition or renovation/abatement operations will be put on hold at the facility.
 - "Work Resume Date" indicate date that the regularly scheduled demolition or renovation/abatement operations will resume at the facility. If a project was previously placed "On Hold", the Ohio EPA must receive notification of returning to the project at least one (1) working day prior to resuming demolition and/or renovation/abatement activities.

Be sure to indicate the correct page numbers across the bottom of the notification once all the pages are complete.

The asbestos regulations, notification forms, guidance, local contacts, and other information can be found on Ohio EPA's asbestos program web site at <u>www.epa.ohio.gov/dapc/atu/asbestos.aspx</u>



Notification of Demolition and Renovation/Abatement

Section 1: General Information

Division of Air Pollution Control

Work on projects cannot begin until 10 working days after a COMPLETE original notification form, <u>including payment</u>, is submitted to Ohio EPA. Instructions and a worksheet for fee calculation are available at *epa.ohio.gov/asbestos*. This form can be completed, and payment made, at *ebiz.epa.ohio.gov*. Questions? *asbestos@epa.ohio.gov* or (614) 466-0061.

Ohio EPA Use	Only Notification #:		Postmar	ked: /		/	Red	ceived:			🗌 Har	nd-Delivered
1) Notificati	ion Information (Check	all that apply)										
Original	Revision # (count)	: Installation	Emerg	ency [A	nnual	Cance	ellation P	Project Co	unty:		
NESHAP Re	esidential Exemption											
2) Owner, As	sbestos Abatement Co	ntractor, Billing and Fire De	partment	Informati	ion							Revised?
Owner												
Name:									ls	this a co	mpany?] Yes 🗌 No
Address:						Contact I	Person:					
City:				State:					Zip:	-		
Email:				Phone: ()	-		Fax: ()	-	
Asbestos Abat	ement Contractor (if ap	plicable)										
Name:					Lic	ense #: /	AC			Expirati	on Date:	/ /
Address:						Contact I	Person:					
City:				State:					Zip:	-		
Email:				Phone: ()	-		Fax: ()	-	
Billing Contact												
s this contact associated with the 🗌 Owner, 🔲 Asbestos Abatement Contractor, or 🗌 Demolition Contractor (if not installation)?												
Address:						Contact I	Person:					
City:				State:					Zip:	-		
Email:				Phone: ()	-		Fax: ()	-	
Fire Department (if applicable)												
Name:	Name:											
Address:						Contact I	Person:					
City:				State:					Zip:	-		
Email:				Phone: ()	-		Fax: ()	-	
3) Ohio Asbe	estos Hazard Evaluation	n Specialist and Evaluation	Procedure									Revised?
Evaluation Spe	ecialist: JOSEPH SAU	JNDERS		с	Certif	fication #	: es 348	37	Expira	ation Dat	e: 06 / 10	/2019
Procedure, inc Category I and	luding analytical metho I Category II non-friable	ids, employed to detect the asbestos-containing mater	presence ial:	of and to	estir M	nate the 🔀 Point	quantity c : Count	of regulate	ed asbesto	os-contai er Metho	ning materi od (Explain I	al (RACM) and 3elow):
4) Procedure	es to be followed shoul	d unexpected RACM be dis	scovered (a	heck all t	hat a	apply)						Revised?
Stop work	and keep wet	Evacuate area		emarcate	area	a		Cor	ntact licen	sed abat	ement cont	ractor
Contact di	strict office/local air au	thority										
Other (Exp	olain):											
5) Planned D	Demolition (check all th	at apply)										Revised?
Describe demolition work to be performed and method(s) to be employed, including demolition techniques to be used: Implosion Fire Training Wet Methods Manual Demolition Mechanical Demolition Other (Explain):												
Description of	Description of affected facility components (include attachment if necessary):											

Mail completed form and payment to: Ohio EPA, DAPC – Asbestos P.O. Box 1049, Columbus, OH 43216-1049

Notification of Demolition and Renovation/Abatement Section 1: General Information

Continued

(Revised 04/18)		Page	1 of							
6) Asbestos Description and	Engineering Controls (if a	sbestos is being aba	ated)							Revised?
For the material listed in each project, describe the type(s) of ACM to be abated, engineering controls and work practices to be used to minimize emissions and ensure proper waste handling:										
Type of ACM to be abated:	Surfacing	Mechanical	🗌 Other	Other						
Engineering Controls:	U Wet Methods	Glove Bag	□ NPE		🗌 AFD	🗌 Oth	er:			
Work Practices:	Intact Removal	🗌 Manual	Mechar	ical	Other:	•				
7) Asbestos Waste Transpor	ter (if applicable)									Revised?
Transporter #1 Name:										
Address:				Conta	act Person:					
City:			State:				Zip:	-		
Email:			Phone: ()	-		Fax: ()	-	
Transporter #2 Name (if applic	cable):		•							
Address:				Conta	act Person:					
City:			State:				Zip:	-		
Email:			Phone: ()	-		Fax: ()	-	
8) Asbestos Waste Disposal	Site (if applicable)									Revised?
Name:										
Address:				Conta	act Person:					
City:			State:			Z	Zip:	-		
Email:			Phone: ()	-	F	=ax: ()	-	
9) Emergency Demolition (c	omplete if you checked "E	mergency" above a	nd "Demolitic	on" for	any project)					Revised?
A copy of the issued order, inc	luding the following inform	nation, must be atta	iched to this n	otifica	tion.					
Government Official Issuing O	rder:		Title:							
Agency:			Authority of Order (Citation of Code):							
Date of Order: / /			Demolitio	on Dat	e: / /					
10) Emergency Renovation/A	batement (complete if yo	ou checked "Emerge	ncy" above an	d "Rei	novation/Abatem	nent" for	any proje	ect)		Revised?
Date of Emergency: / /			Time of E	Emerge	ency: : [a.m. [p.m.			
Description of Sudden, Unexp	ected Event:									
Explanation of how the event	caused unsafe conditions	or equipment dama	ge:							
11) Attestation										Revised?
In accordance with Ohio Administrative Code rule 3745-20-03(A)(4)(p), I certify that at least one person trained as required by paragraph (B) of rule 3745-20-04 of the Administrative Code will supervise the stripping and removal described by this notification. I acknowledge that the submission of false or misleading statements is prohibited by law and I certify that facts contained in this notification are true, accurate, and complete.										
Signature:					Date: /	/				
Name:			Title:							
Organization:										

Mail completed form and payment to: Ohio EPA, DAPC – Asbestos P.O. Box 1049, Columbus, OH 43216-1049



Notification of Demolition and Renovation/Abatement Section 2: Project Address Specific Information

Division of Air Pollution Control

Please complete Section 2 for the address included with this notification. If the project is an "Installation" per OAC 3745-20, complete a separate Section 2 page for each address associated with this notification.

Ohio EPA Use Only	Project ID #	# :												
A. Facility Description Revised?														
Building Name (if a	pplicable):			Site Location (specific):										
Address:														
City: State: OH Zip: -														
Building Size (squar	e feet):				No. of F	loors:				Age	9:			
Present Use:					Prior Us	se:								
B. Type of Oper	ation (check a	ll that apply)											Revise	d? 🗌
Demolition	🗌 Reno	ovation/Abatement – Typ	be: 🗌 Remova		Repair	Encaps	ulation	🗌 End	closure					
C. Asbestos Present (check one) Revised?														
Yes No No, previously abated Year Abated:														
D. Approximate Amount of Asbestos-Containing Materials (complete table below and Section 1 #6 if asbestos is present) Revised?														
			Material to	be Ren	noved					Materia	I NOT to	be Rei	moved	
Non-fria					bestos-C	Containing M	laterial		Non-fr	Ion-friable Asbestos-Containing Material				ial
	RACM Catego			ry I		Categ	gory II		Ca	Category I			Category II	
Pipes (linear feet)														
Surface area on other facility components (ft ²)														
Volume if length or be measured (ft ³)	area cannot													
E. Asbestos Aba	tement Sched	lule and Abatement Spe	cialist (original r	notifica	ation is I	required 10	working	days pri	ior to the	start o	f work)		Revise	d? 🗌
Setup Date: /	/	Abaten	nent Date: /	/				Comp	lete Date	: /	/			
(Shift 1) Time	Monday	y Tuesday	Wednes	day		Thursday		Friday		Saturday			Sunday	r
start/end on site														
Abatement Special	ist Name:			Certification #: AS				Expiration Date: / /						
(Shift 2) Time	Monday	y Tuesday	Wednes	day		Thursday		Friday	,	Sat	urday		Sunday	,
start/end on site														
Abatement Special	ist Name:			Cert	ification	n #: AS				Exp	iration D	ate:	/ /	
F. Demolition C	ontractor (if a	pplicable)											Revise	d? 🗌
Name:														
Address:						Contact Pe	erson:							
City:					:				Zi	p:	-			
Email:		Phon	e: () -			Fa	ax: ()	-				
G. Demolition S	chedule (origiı	nal notification is requir	ed 10 working d	ays pri	ior to th	e start of wo	ork)						Revise	d? 🗌
Start Date: /	/			Comp	lete Dat	e: / /								
H. Project Hold													Revise	d? 🗌
Hold Begin Date:	/ /			Work	Resume	Date: /	/							



Cincinnati

3959 Fulton Grove Rd. Cincinnati, Ohio 45245 (513) 752-9111 (513) 752-7973 (Fax)

Cle eland

3100 E. 45th Street Suite 446 Cleveland, Ohio 44127 (216) 916-7378

lorida

11982 Granite Woods Loop Venice, Florida 34292 (513) 265-3299 (513) 752-7973 (Fax)

Ser ice

Phase I ESA's Phase II Investigations Asbestos Lead-Based Paint Industrial Hygiene Indoor Air Quality/Mold Radon Safety Training May 27, 2021

Mr. Kevin Arnold Greater Dayton Premier Management 400 Wayne Avenue Dayton, Ohio 45401-8750

E: Huffman-Parnell Property 11 Parnell A enue Dayton O io 4 40

Dear Mr. Arnold:

m.a.c. Paran Consulting Services, Inc. (m.a.c. Paran) was contracted to perform radon testing within the Huffman-Parnell property located at 11 Parnell Avenue, Dayton, Ohio 45403.

Ms. Barbara G. Cox, Ohio Department of Health Certified Radon Tester (License # RT626), performed the radon testing between the dates of May 4, 2021 and May 6, 2021.

Seventeen (14) samples (including duplicates and field blanks) were deployed. Sampling activities followed the testing and devices protocol outlined in the <u>Protocol for Conducting</u> <u>Radon and Radon Decay Product Measurements in Multifamily Buildings</u>, Designation: ANSI/AARST, MAMF 2017.

According to laboratory results, none of the radon concentrations exceeded the Environmental Protection Agency (EPA) Action Level of 4.0 picocuries per Liter (pCi/L). It should be noted that the inspector was denied entry into unit 1204A, and the testing device was missing at the time of retrieval from unit 1208A.

The EPA recommends that any frequently occupied areas that measure greater than 4 pCi/L be mitigated to a level below 4 pCi/L. If the measurement is below 4 pCi/L, then mitigation is not necessary. It is the client's obligation to inform the occupants of the results of the radon testing.

If you have any questions, please contact us at your convenience.

Respectfully submitted, m.a.c. Paran Consulting Services, Inc.

Jachra 6 M

Barbara G. Cox Ohio Department of Health Certified Radon Tester, (License #RT626)



adon Teteult

Client: Greater Dayton Premier Management 400 Wayne Avenue Dayton, Ohio 45401-8750 Te t Company: m.a.c. Paran Consulting, Inc. 3959 Fulton Grove Road Cincinnati, Ohio 45245 (513) 751-9111

Te t Location: Huffman-Parnell, 11 Parnell Avenue, Dayton, Ohio 45403

Detector D #	Sar Date Be in	nple Time End	Location	e ult pCi L	A era e
4592525	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	1202A, Living Room	0.4	0.5
4592526	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	1202A, Living Room (Duplicate)	0.6	0.5
4592527	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	1202B, Living Room	0.4	
4592528	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	1204B, Living Room	0.8	
4592530	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	1208B, Living Room	0.7	
4592531	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	1210B, Living Room	<0.4	
4592532	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	1210A, Living Room	<0.4	
4592533	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	9A, Living Room	0.7	
4592534	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	9B, Living Room	<0.4	
4592535	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	11A, Living Room	<0.4	-0.4
4592536	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	11A, Living Room (Duplicate)	<0.4	<0.4
4592537	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	11B, Living Room	<0.4	
4592538	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	Field Blank	<0.4	
4592539	5/4/21 11:30 a.m.	5/6/21 1:30 p.m.	Field Blank	<0.4	

adon De ice: AccuStar Liquid Scintillation Vial

Detector Placed y: Barbara G. Cox, RT626



ote 1: Quality assurance measurements were within acceptable parameters per the EPA device protocol.

ote 2: The building occupants agreed to maintain closed-house conditions during the testing.

ote : Radon levels tend to vary. We accept no liability for any or all loss due to the results of the radon testing.



UNDERSTANDING YOUR RADON TEST RESULTS

The EPA recommends that any frequently occupied areas that measure greater than 4 pCi/L be mitigated to a level below 4 pCi/L. If the measurement is below 4 pCi/L, then mitigation is not necessary. It is the client's obligation to inform the occupants of the results of the radon testing.

The owner is responsible for any additional or post mitigation testing. Re-testing should take place with each change of ownership, structural alterations to the dwelling that changes the ventilation pattern, major cracks occurring in the foundation or nearby blasting or earthquakes, or every two years.

There is uncertainty with any measurement result due to: statistical variations, daily and seasonal radon variations due to changes in weather, operation of the structure, as well as possible interference with the necessary test conditions that may or may not influence the results.



LABO ATO ESULTS



NELAC NY 11769 NRPP 103216 AL NRSB ARL0017 Ohio Approval # RL37

Laboratory Report for:

EPA Method #402-R-92-004 Liquid Scintillation NRPP Device Code 8088 NRSB Device Code 12193

Property Tested: Project # 21-7.9

Mac Paran Consulting Services	Huffman-Parnell	
3959 Fulton Grove Road	11 Parnell Avenue	
Cincinnati OH 45245	Davton OH 45403	

Log Number	Device Number		Test Exposure Duration:		n:	Area Tested	Result pCi/L	
2909614	4592525	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 1202A First Floor Living Room	0.4	
2909615	4592526	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 1202A First Floor Living Room Duplicate	0.6	
2909616	4592527	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 1202B Living Room	0.4	
2909617	4592528	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 1204B Living Room	0.8	
2909618	4592530	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 1208B Living Room	0.7	
2909619	4592531	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 1210B Living Room	< 0.4	
2909620	4592532	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 1210A Living Room	< 0.4	
2909621	4592533	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 9A Living Room	0.7	
2909622	4592534	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 9B Living Room	< 0.4	
2909623	4592535	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 11 First Floor Living Room	< 0.4	
2909624	4592536	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 11 First Floor Living Room Duplicate	< 0.4	

Comment: Mac Paran Consulting Services was emailed a copy of this report.

Test Performed By: Placed: Barbara G. Cox RT 621 Retrieved: Barbara G. Cox RT 621

Distributed by: Mac Paran Consulting Services

Date Received: 05/07/2021

Date Logged: 05/07/2021

Date Analyzed: 05/08/2021

Date Reported: 05/10/2021

Di claimer:

Report Reviewed By: ______



Shawn Price, Director of Laboratory Operations, AccuStar Labs

The uncertainty of this radon measurement is -+/- 10 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.



Radon in Air

NELAC NY 11769 NRPP 103216 AL NRSB ARL0017 Ohio Approval # RL37

Laboratory Report for:

EPA Method #402-R-92-004 Liquid Scintillation NRPP Device Code 8088 NRSB Device Code 12193

Property Tested: Project # 21-7.9

Mac Paran Consulting Services	Huffman-Parnell
3959 Fulton Grove Road	11 Parnell Avenue
Cincinnati OH 45245	Dayton OH 45403

Log Number	Device Number	Device Number		sure Duration	n:	Area Tested	Result pCi/L	
2909625	4592537	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 11 First Floor Living Room	< 0.4	
2909626	4592538	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 11 First Floor Living Room Field Blank	< 0.4	
2909627	4592539	05/04/2021	11:30 am	05/06/2021	1:30 pm	Unit 11 First Floor Living Room Field Blank	< 0.4	

Comment: Mac Paran Consulting Services was emailed a copy of this report.

Test Performed By: Placed: Barbara G. Cox RT 621 Retrieved: Barbara G. Cox RT 621

Distributed by: Mac Paran Consulting Services

Date Received: 05/07/2021 Date

Date Logged: 05/07/2021

Date Analyzed: 05/08/2021

Date Reported: 05/10/2021

Di claimer:

Report Reviewed By: ______



Shawn Price, Director of Laboratory Operations, AccuStar Labs

The uncertainty of this radon measurement is ~+/- 10 %. Factors contributing to uncertainty include statistical variations, daily and seasonal variations in radon concentrations, sample collection techniques and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Analytical results relate to the samples AS RECEIVED BY THE LABORATORY. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.



S TE PLA






ADO SPECTO L CE SE



STATE OF OHIO DEPARTMENT OF HEALTH Bureau of Environmental Health and Radiation Protection Indoor Radon Program

Hereby Approves:

Barbara G Cox 617 Locust Corner Road

Cincinnati, OH 45245

as a

Radon Tester

This license is issued pursuant to Chapter 3723 of the Ohio Revised Code and 3701-69 of the Ohio Administrative Code and in reliance upon statements and representations made heretofore by the licensee.

License Number: RT626

Amendment Number: 8

Expiration Date: 5/28/2022

In witness thereof:

Amy Acton, MD, MPH Director of Health

	F	Fold				
Your license card is valid for a period of two (2) years the expiration date on the card. Your card must be p project site where you are conducting radon-related All questions regarding your license should be direct (614) 752-4425	s, as indicated by present on any work. ed to	Barbar 617 Log	Stat Bureau of E a G Cox cust Corne	e of Ohio - De nvironmental H Rador r Road	epartment ealth and R n Tester	: of Health adiation Protection
To verify licensure please visit: www.odh.c	hio.gov	Cincini	nati, OH 45	245		
If found, please return to: Ohio Departu 246 North Hi Columbus, C	ment of Health igh Street DH 43215	Licens Ameno	e Number dment #	RT626 8	E	xpiration Date 5/28/2022
HEA 5520 11/11	2459727	This license Revised Co	e is issued pursu ode and 3701-69	ant to Chapter 3723 o of the Ohio Administr	of the Ohio rative Code	

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Lead in ater Te tin

Huffman-Parnell Property 11 Parnell A enue Dayton O io 4 40

ear of Con truction: 1 2

Prepared for:

Greater Dayton Premier Mana ement 400 ayne A enue Dayton O io 4 410 10- 00

Prepared y:



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<u>Cincinnati</u>

3959 Fulton Grove Rd. Cincinnati, Ohio 45245 (513) 752-9111 (513) 752-7973 (Fax)

Cle eland

3100 E. 45th Street Suite 446 Cleveland, Ohio 44127 (216) 916-7378 (513) 752-7973 (Fax)

lorida

11928 Granite Woods Loop Venice, Florida 34292(513) 265-3299

Ser ice

Phase I ESA's Phase II Investigations Asbestos Lead-Based Paint Industrial Hygiene Indoor Air Quality/Mold Radon Safety Training

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Appendix IDiagramsAppendix IILaboratory ResultsAppendix IIILead Risk Assessor Certification



1.0 E ecuti e Summary

m.a.c. Paran Consulting Services, Inc. (m.a.c. Paran) was contracted by Greater Dayton Premier Management (GDPM) to conduct lead in water sampling for the multi-family residential community located at the corner of Huffman Avenue and Parnell Avenue, Dayton, Ohio 45403. Samples were collected from available kitchen and bathroom faucets located within the residential community, and from the basement of Unit 11B. Sampling was performed on June 14, 2023, in accordance with established United States Environmental Protection Agency (EPA) protocols. Samples were submitted to ALS Environmental, 4388 Glendale Milford Road, Cincinnati, Ohio 45242 for analysis.

Forty-two (42) water samples were collected from bathroom and kitchen faucets located within available units, and the basement of Unit 11B. Laboratory results confirmed that the following locations exceeded the action level for lead in drinking water, as established by the EPA, of 15 parts per billion (ppb) or 15 micrograms per liter (μ g/L):

- Unit 9B kitchen sink; 1st draw
- Unit 9B bathroom sink; 1st draw
- Unit 9B bathroom sink; 2nd draw
- Unit 11A bathroom sink: 1st draw
- Unit 1204A bathroom sink; 1st draw
- Unit 1202A kitchen sink; 1st draw
- Unit 1202A kitchen sink: 2nd draw
- Unit 1202A bathroom sink; 1st draw
- Unit 1202A bathroom sink; 2nd draw
- Unit 1204B bathroom sink: 1st draw
- Unit 1208A bathroom sink; 1st draw
- Unit 11B basement sink; 1st draw
- Unit 11B basement sink; 2nd draw

2.0 O er ation Limitation to t e n pection

The following limitations and/or observations were encountered during the inspection:

- The kitchen and bathroom sinks located within Unit 11B were inoperable.
- Water service to Unit 9A was observed to have been discontinued.

.0 Property De cription

The property, located at the corner of Huffman Avenue and Parnell Avenue, consists of twelve residential units. The structure was reported to have been constructed in 1952, and was noted to be in poor condition.

4.0 Met odolo y

The EPA, in accordance with the Safe Drinking Water Act of 1974, determines safe levels of chemicals in drinking water. The action level for lead in drinking water is 15 parts per billion (ppb) or 15 micrograms per liter (μ g/L). Samples were submitted to ALS Environmental, 4388 Glendale Milford Road, Cincinnati, Ohio 45242 for analysis using ASTM methods as prescribed in the Environmental Protection Agency (EPA) regulations.



.0 Samplin Procedure

On June 14, 2023, forty-two (42) water samples were collected from the available bathroom and kitchen sink faucets located within available units. In lieu of collecting samples from the kitchen and bathroom of Unit 11B, which were inoperable, samples were collected from the basement.

Samples were collected in accordance with EPA established protocols for the sampling of lead in drinking water. A first draw sample was collected prior to allowing water to flush through the water fixture. Ideally, the water fixtures would not have been utilized for the 8 hours prior to sampling; however, m.a.c. Paran could not establish that the fixtures had not been used during that time period. The second "flush" draw was collected after allowing water to flush through the line for approximately 30 seconds prior to sample collection.

6.0 La oratory Analy i and e ult

The samples were submitted to ALS Environmental, 4388 Glendale Milford Road, Cincinnati, Ohio for lead analysis using EPA Method 6010B. Results were compared to the EPA established action level of 15 parts per billion (ppb) or 15 micrograms per liter (μ g/L). Results of the sampling are located in the table below.

Sample	Sample Location	Dra	e ult	Lead Ha ard
				e or o
B-1	Kitc en	1	0. m L 0 pp	е
9B-2	Kitchen	2	None Detected	No
B-	Bat room	1	0.0 m L pp	е
B-4	Bat room	2	0.080 m L 80 pp	e
11A-1	Kitchen	1	None Detected	No
11A-2	11A-2 Kitchen		None Detected	No
11A-	Bat room	1	0.01 m L 1 pp	е
11A-4	Bathroom	2	None Detected	No
1204A-1	Kitchen	1	None Detected	No
1204A-2	Kitchen	2	None Detected	No
1204A-	Bat room	1	0.048 m L 48 pp	е
1204A-4	Bathroom	2	None Detected	No
1210B-1	Kitchen	1	None Detected	No
1210B-2	Kitchen	2	None Detected	No
1210B-3	Bathroom	1	None Detected	No



Sample um er	Sample Location	Dra	e ult	Lead Ha ard e or o
1210B-4	Bathroom	2	None Detected	No
1210A-1	Kitchen	1	None Detected	No
1210A-2	Kitchen	2	None Detected	No
1210A-3	Bathroom	1	None Detected	No
1210A-4	Bathroom	2	None Detected	No
1202A-1	Kitc en	1	0.06 m L 6 pp	е
1202A-2	Kitc en	2	0.0 1 m L 1 pp	е
1202A-	Bat room	1	0.0 8 m L 8 pp	е
1202A-4	Bat room	2	0.0 1 m L 1 pp	е
1204B-1	Kitchen	1	None Detected	No
1204B-2	Kitchen	2	None Detected	No
1204B-	Bat room	1	0.022 m L 22 pp	e
1204B-4	Bathroom	2	None Detected	No
1208A-1	Kitchen	1	None Detected	No
1208A-2	Kitchen	2	None Detected	No
1208A-	Bat room	1	0.0 8 m L 8 pp	е
1208A-4	Bathroom	2	None Detected	No
1202B-1	Kitchen	1	None Detected	No
1202B-2	Kitchen	2	None Detected	No
1202B-3	Bathroom	1	None Detected	No
1202B-4	Bathroom	2	None Detected	No
1208B-1	Kitchen	1	None Detected	No
1208B-2	Kitchen	2	None Detected	No
1208B-3	Bathroom	1	None Detected	No
1208B-4	Bathroom	2	None Detected	No



Sample um er	Sample Location	Dra	e ult	Lead Ha ard e or o
11B-1	Ba ement	1	0.06m L 6pp	е
11B-2	Ba ement	2	0.10 m L 100 pp	e

Analytical results confirmed that the first draw samples for lead in drinking water exceeded the EPA action level of 15 ppb or 15 micrograms per liter (μ g/L) in the following areas:

- Unit 9B kitchen sink; 1st draw
- Unit 9B bathroom sink; 1st draw
- Unit 11A bathroom sink; 1st draw
- Unit 1204A bathroom sink; 1st draw
- Unit 1202A kitchen sink; 1st draw
- Unit 1202A bathroom sink; 1st draw
- Unit 1204B bathroom sink; 1st draw
- Unit 1208A bathroom sink; 1st draw
- Unit 11B basement sink; 1st draw

Analytical results confirmed that the second draw sample for lead in drinking water exceeded the EPA action level of 15 ppb or 15 micrograms per liter (μ g/L) in the following areas:

- Unit 9B bathroom sink; 2nd draw
- Unit 1202A kitchen sink; 2nd draw
- Unit 1202A bathroom sink; 2nd draw
- Unit 11B basement sink; 2nd draw



Appendi

Dia ram









SECOND FLOOR

Appendi

La oratory e ult





21-Jun-2023

Bobbie Cox M.A.C. Paran Consulting 3959 Fulton Grove Road Cincinnati, OH 45245

Re: Huffman-Parnell

Work Order: 23060667

Dear Bobbie,

ALS Environmental received 42 samples on 14-Jun-2023 01:34 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 21.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe Project Manager

Report of Laboratory Analysis

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347 ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 🐊

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client:M.A.C. Paran ConsultingProject:Huffman-ParnellWork Order:23060667

Date: 21-Jun-23

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	Tag Number	Collection Date	Date Received	Hold
23060667-01	9B-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-02	9B-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-03	9B-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-04	9B-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-05	11A-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-06	11A-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-07	11A-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-08	11A-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-09	1204A-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-10	1204A-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-11	1204A-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-12	1204A-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-13	1210B-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-14	1210B-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-15	1210B-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-16	1210B-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-17	1210A-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-18	1210A-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-19	1210A-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-20	1210A-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-21	1202A-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-22	1202A-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-23	1202A-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-24	1202A-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-25	1204B-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-26	1204B-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-27	1204B-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-28	1204B-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-29	1208A-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-30	1208A-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-31	1208A-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-32	1208A-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-33	1202B-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-34	1202B-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-35	1202B-3	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-36	1202B-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-37	1208B-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-38	1208B-2	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-39	1208B-3	Water		6/13/2023 11:00	6/14/2023 13:34	

Client:M.A.C. Paran ConsultingProject:Huffman-ParnellWork Order:23060667

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	Tag Number	Collection Date	Date Received	<u>Hold</u>
23060667-40	1208B-4	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-41	11B-1	Water		6/13/2023 11:00	6/14/2023 13:34	
23060667-42	11B-2	Water		6/13/2023 11:00	6/14/2023 13:34	

Client:	M.A.C. Paran Consulting	
Project:	Huffman-Parnell	Case Narrative
Work Order:	23060667	

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

Client: N Project: H	M.A.C. Paran Consulting Huffman-Parnell	5				Work	Order: 23060667
Lab ID: Client Sample ID:	23060667-01A 9B-1				C	Collection Date: 6/13/2 Matrix: WATE	023 11:00:00 AM ER
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.35		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16: 1	²⁸ Analyst: CW 6/19/2023 02:52 PM
Lab ID:	23060667-02A				C	Collection Date: 6/13/2	023 11:00:00 AM
Client Sample ID:	9B-2					Matrix: WATE	ER
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16: 1	²⁸ Analyst: CW 6/19/2023 02:56 PM
Lab ID:	23060667-03A				C	Collection Date: 6/13/2	023 11:00:00 AM
Client Sample ID:	9B-3					Matrix: WATE	ER
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.095		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16: 1	²⁸ Analyst: CW 6/19/2023 03:00 PM
Lab ID:	23060667-04A				C	Collection Date: 6/13/2	023 11:00:00 AM
Client Sample ID:	9B-4					Matrix: WATE	ER
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.080		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16: 1	²⁸ Analyst: CW 6/19/2023 03:12 PM
Lab ID:	23060667-05A				C	Collection Date: 6/13/2	023 11:00:00 AM
Client Sample ID:	11A-1					Matrix: WATE	ER
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16: 1	²⁸ Analyst: CW 6/19/2023 03:16 PM

Client: I Project: I	M.A.C. Paran Consulting Huffman-Parnell	5				Work Or	der: 23060667
Lab ID: Client Sample ID:	23060667-06A 11A-2				C	Collection Date: 6/13/202 Matrix: WATER	3 11:00:00 AM
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0 B mg/L	Prep: SW3010A 6/15/23 16:28 1	Analyst: CW 6/19/2023 03:20 PM
Lab ID:	23060667-07A				C	Collection Date: 6/13/2023	3 11:00:00 AM
Client Sample ID:	11A-3					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.019		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:28 1	Analyst: CW 6/19/2023 03:24 PM
Lab ID:	23060667-08A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	11A-4					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:28 1	Analyst: CW 6/19/2023 03:28 PM
Lab ID:	23060667-09A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1204A-1					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:28 1	Analyst: CW 6/19/2023 03:32 PM
Lab ID:	23060667-10A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1204A-2					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:28 1	Analyst: CW 6/19/2023 03:36 PM

Client: I Project: I	M.A.C. Paran Consulting Huffman-Parnell	7				Work O	rder: 23060667
Lab ID: Client Sample ID:	23060667-11A 1204A-3				C	ollection Date: 6/13/202 Matrix: WATER	3 11:00:00 AM
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.048		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:28 1	Analyst: CW 6/19/2023 03:40 PM
Lab ID:	23060667-12A				С	ollection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1204A-4					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 06:42 PM
Lab ID:	23060667-13A				С	ollection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1210B-1					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 06:54 PM
Lab ID:	23060667-14A				С	ollection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1210B-2					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 06:57 PM
Lab ID:	23060667-15A				С	ollection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1210B-3					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0 B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:18 PM

Client: N Project: H	M.A.C. Paran Consulting Huffman-Parnell	5				Work Or	rder: 23060667
Lab ID: Client Sample ID:	23060667-16A 1210B-4				C	Collection Date: 6/13/202 Matrix: WATER	3 11:00:00 AM
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:22 PM
Lab ID:	23060667-17A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1210A-1					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:26 PM
Lab ID:	23060667-18A				С	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1210A-2					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:30 PM
Lab ID:	23060667-19A				С	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1210A-3					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:33 PM
Lab ID:	23060667-20A				С	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1210A-4					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:37 PM

Client: Project:	M.A.C. Paran Consulting Huffman-Parnell	3				Work Or	rder: 23060667
Lab ID: Client Sample ID:	23060667-21A : 1202A-1				C	Collection Date: 6/13/202 Matrix: WATER	3 11:00:00 AM
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.067		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:41 PM
Lab ID:	23060667-22A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	: 1202A-2					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.051		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:45 PM
Lab ID:	23060667-23A				C	Collection Date: 6/13/2023	3 11:00:00 AM
Client Sample ID:	: 1202A-3					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.078		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:49 PM
Lab ID:	23060667-24A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	: 1202A-4					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		0.091		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/16/2023 07:53 PM
Lab ID:	23060667-25A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	: 1204B-1					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/19/2023 10:33 AM

Client: M Project: H	M.A.C. Paran Consulting Huffman-Parnell	7				Work Or	der: 23060667	
Lab ID: Client Sample ID:	23060667-26A 1204B-2				C	Collection Date: 6/13/2023 Matrix: WATER	3 11:00:00 AM	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/19/2023 10:37 AM	
Lab ID:	23060667-27A				C	Collection Date: 6/13/2023	3 11:00:00 AM	
Client Sample ID:	1204B-3					Matrix: WATER		
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		0.022		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/19/2023 10:42 AM	
Lab ID:	23060667-28A				C	Collection Date: 6/13/2023	3 11:00:00 AM	
Client Sample ID:	1204B-4		Matrix: WATER					
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/19/2023 10:46 AM	
Lab ID:	23060667-29A				С	Collection Date: 6/13/2023	3 11:00:00 AM	
Client Sample ID:	1208A-1					Matrix: WATER		
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/19/2023 10:51 AM	
Lab ID:	23060667-30A				С	Collection Date: 6/13/2023	3 11:00:00 AM	
Client Sample ID:	1208A-2					Matrix: WATER		
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/19/2023 10:55 AM	

Client: N Project: H	M.A.C. Paran Consulting Huffman-Parnell	;				Work O	rder: 23060667	
Lab ID: Client Sample ID:	23060667-31A 1208A-3				C	Collection Date: 6/13/202 Matrix: WATER	3 11:00:00 AM	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		0.058		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:29 1	Analyst: SLT 6/19/2023 11:00 AM	
Lab ID:	23060667-32A				C	Collection Date: 6/13/202	3 11:00:00 AM	
Client Sample ID:	1208A-4					Matrix: WATER		
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 05:25 PM	
Lab ID:	23060667-33A				С	Collection Date: 6/13/202	3 11:00:00 AM	
Client Sample ID:	1202B-1		Matrix: WATER					
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 05:44 PM	
Lab ID:	23060667-34A				С	Collection Date: 6/13/202	3 11:00:00 AM	
Client Sample ID:	1202B-2					Matrix: WATER		
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 05:48 PM	
Lab ID:	23060667-35A				С	Collection Date: 6/13/202	3 11:00:00 AM	
Client Sample ID:	1202B-3					Matrix: WATER		
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed	
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 05:52 PM	

Client: N Project: H	M.A.C. Paran Consulting Huffman-Parnell	5				Work O	rder: 23060667
Lab ID: Client Sample ID:	23060667-36A 1202B-4				C	Collection Date: 6/13/202 Matrix: WATER	3 11:00:00 AM
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 05:56 PM
Lab ID:	23060667-37A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1208B-1					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 06:00 PM
Lab ID:	23060667-38A				С	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1208B-2					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 06:04 PM
Lab ID:	23060667-39A				С	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1208B-3					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 06:08 PM
Lab ID:	23060667-40A				C	Collection Date: 6/13/202	3 11:00:00 AM
Client Sample ID:	1208B-4					Matrix: WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP Lead		ND		SW601 0.015	0B mg/L	Prep: SW3010A 6/15/23 16:30 1	Analyst: SLT 6/16/2023 06:12 PM

Client: Project:	;					Work Or	der: 23060667	
Lab ID:	23060667-41A				C	Collection Date:	6/13/2023	11:00:00 AM
Client Sample ID	: 11B-1					Matrix:	WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor		Date Analyzed
METALS BY ICP Lead		0.036		SW601 0.015	0B mg/L	Prep: SW3010A 6 1	6/15/23 16:30	Analyst: SLT 6/16/2023 06:23 PM
Lab ID:	23060667-42A				С	Collection Date:	6/13/2023	11:00:00 AM
Client Sample ID	: 11B-2					Matrix:	WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor		Date Analyzed
METALS BY ICP				SW601	0B	Prep: SW3010A 6	6/15/23 16:30	Analyst: SLT
Lead		0.10		0.015	mg/L	1		6/16/2023 06:27 PM

Client:	M.A.C. Paran Consulting
Work Order:	23060667
Project:	Huffman-Parnell

QC BATCH REPORT

Batch ID: 91862	Instrument ID ICP	1		Metho	d: SW601	10	B					
MBLK	Sample ID: MBLK-9186	2-91862					Units: mg/	L	Analysis	Date: 6/19	/2023 12:	44 PM
Client ID:		Run ID	ICP1_	_230619A		1	SeqNo: 3079	9285	Prep Date: 6/15	/2023	DF: 1	
Analyte		Result	PQL	_ SPK Val	SPK Ref Value	:	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		ND	0.015	5								
LCS	Sample ID: LCS-91862	91862					Units: mg/	L	Analysis	Date: 6/19	/2023 12:	48 PM
Client ID:		Run ID	ICP1_	_230619A		;	SeqNo: 3079	9286	Prep Date: 6/15	/2023	DF: 1	
Analyte		Result	PQL	_ SPK Val	SPK Ref Value	:	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		1.055	0.015	5 1.1		(0 95.9	73.7-110) 0			
LCSD	Sample ID: LCSD-9186	2-91862					Units: mg /	L	Analysis	Date: 6/19	/2023 12:	52 PM
Client ID:		Run ID	ICP1_	_230619A		1	SeqNo: 3079	9287	Prep Date: 6/15	/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	:	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		1.054	0.015	5 1.1		(0 95.8	73.7-110) 1.055	0.0417	20	
MS	Sample ID: 23060618-0	1A MS					Units: mg /	L	Analysis	Date: 6/19	/2023 02:	40 PM
Client ID:		Run ID	ICP1_	230619A		;	SeqNo: 3079	9295	Prep Date: 6/15	/2023	DF: 1	
Analyte		Result	PQL	_ SPK Val	SPK Ref Value	:	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		0.9975	0.015	5 1.1		C	0 90.7	59.3-11 ²	0			
MSD	Sample ID: 23060618-0	1A MSD					Units: mg/	L	Analysis	Date: 6/19	/2023 02:	44 PM
Client ID:		Run ID	ICP1_	_230619A		;	SeqNo: 3079	9296	Prep Date: 6/15	/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	:	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		0.9894	0.015	5 1.1		(0 90	59.3-11 <i>°</i>	0.9975	0.808	20	
The following san	nples were analyzed in thi	s batch:		23060667-01/ 23060667-04/ 23060667-07/ 23060667-10/	A 23 A 23 A 23 A 23 A 23	30 30 30 30)60667-02A)60667-05A)60667-08A)60667-11A	23 23 23	060667-03A 060667-06A 060667-09A			

QC BATCH REPORT

Batch ID: 91863 Instrument ID IC

Instrument ID ICP1 Method: SW6010B

MBLK	Sample ID: MBLK-9186	3-91863				Un	its: mg /	L	1	Analysi	s Date: 6/1	6/2023 06:	31 PM
Client ID:		Run ID:	ICP1_2	230616B		Seq	No: 307	8219	Prep Da	ate: 6/1	5/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	:	%REC	Control Limit	RPD Va	Ref ue	%RPD	RPD Limit	Qual
Lead		ND	0.015										
LCS	Sample ID [.] I CS-91863.	91863				Un	its: ma /	1		Analysi	s Date: 6/1	6/2023 06:	35 PM
Client ID:		Run ID [.]	ICP1 2	30616B		Seal	No: 307	- 8220	Pren Da	ate: 6/1	5/2023	DE 1	
		rtan 15.									0,2020		
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Va	Ref	%RPD	Limit	Qual
Lead		1.004	0.015	1.1		0	91.3	73.7-110)	C)		
LCSD	Sample ID: LCSD-9186	3-91863				Un	its: mg /	L	/	Analysi	s Date: 6/1	6/2023 06:	39 PM
Client ID:		Run ID:	ICP1_2	230616B		Seq	No: 307	8221	Prep Da	ate: 6/1	5/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	:	%REC	Control Limit	RPD Va	Ref ue	%RPD	RPD Limit	Qual
Lead		1.008	0.015	1.1		0	91.6	73.7-110)	1.004	4 0.35	20	
MS	Sample ID: 23060667-1	2A MS				Un	its: ma /	L		Analvsi	s Date: 6/1	6/2023 06:	46 PM
Client ID: 1204A-4		Run ID:	ICP1 2	230616B		Seal	No: 307	- 8223	Prep Da	ate: 6/1	5/2023	DF: 1	
								0		Dif			
Analyte		Result	PQL	SPK Val	Value		%REC	Limit	RPD Va	Ref lue	%RPD	Limit	Qual
Lead		0.9569	0.015	1.1		0	87	59.3-111	1	C)		
MS	Sample ID: 23060667-1	2A MS				Un	its: mg /	L	/	Analysi	s Date: 6/1	6/2023 06:	50 PM
Client ID: 1204A-4		Run ID:	ICP1_2	230616B		Seq	No: 307	8224	Prep Da	ate: 6/1	5/2023	DF: 1	
Analyte		Result	POI	SPK Val	SPK Ref Value	:	%RFC	Control Limit	RPD Va	Ref ue	%RPD	RPD Limit	Qual
Lead		0.9583	0.015	1 1		0	87.1	50 3-111	1				
The following same	alos woro analyzod in thi	s batch:	0.015	3060667-12/	<u>م</u>	306066	07.1	29.3-11	060667-	144)]	
The following same	pies were analyzed in thi	S Daten.	2	3060667-127 3060667-157	A 23	306066	67-16A	23	060667- 060667-	17A			
			23	3060667-18	A 23	306066	67-19A	23	060667-2	20A			
			23	3060667-21	A 23	306066	67-22A	23	060667-2	23A			
			23	3060667-24	A 23	306066	67-25A	23	060667-2	26A			
			23	3060667-27	A 23	306066	67-28A	23	060667-2	29A			
			2	3060667-30	A 23	306066	67-31A						

Client:M.A.C. Paran ConsultingWork Order:23060667

QC BATCH REPORT

Project: Huffman-Parnell

Batch ID: 91864

Instrument ID ICP1 Method: SW6010B

MBLK	Sample ID: MBLK-9186	64-91864				ι	Jnits: mg /	L	Analy	ysis Date: 6/1	6/2023 05:	14 PM
Client ID:		Run ID	ICP1_2	230616B		Se	qNo: 307	8203	Prep Date: 6	6/15/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		ND	0.015									
LCS	Sample ID: LCS-91864	-91864				ι	Jnits: mg /	L	Analy	ysis Date: 6/1	6/2023 05:	18 PM
Client ID:		Run ID	ICP1_2	230616B		Se	qNo: 307	8204	Prep Date: 6	6/15/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		1.026	0.015	1.1		0	93.3	73.7-110)	0		
LCSD	Sample ID: LCSD-9186	4-91864				ι	Jnits: mg /	L	Analy	ysis Date: 6/1	6/2023 05:	22 PM
Client ID:		Run ID	ICP1_2	230616B		Se	qNo: 307	8205	Prep Date: 6	6/15/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		1.04	0.015	1.1		0	94.5	73.7-110) 1.0	1.27	20	
MS	Sample ID: 23060667-3	2A MS				ι	Jnits: mg /	L	Analy	ysis Date: 6/1	6/2023 05:	37 PM
Client ID: 1208A-4		Run ID	ICP1_2	230616B		Se	qNo: 307	8207	Prep Date: 6	6/15/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		0.9921	0.015	1.1		0	90.2	59.3-11 ⁻	1	0		
MS	Sample ID: 23060667-3	2A MS				ι	Jnits: mg /	L	Analy	ysis Date: 6/1	6/2023 05:	41 PM
Client ID: 1208A-4		Run ID	ICP1_2	230616B		Se	qNo: 307	8208	Prep Date: 6	6/15/2023	DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead		0.9812	0.015	1.1		0	89.2	59.3-11 ⁻	1	0		
The following sam	ples were analyzed in thi	is batch:	2 2 2 2	3060667-32/ 3060667-35/ 3060667-38/ 3060667-41/	A 23 A 23 A 23 A 23 A 23	3060 3060 3060 3060 3060	667-33A 667-36A 667-39A 667-42A	23 23 23	060667-34A 060667-37A 060667-40A			

Client:	M.A.C. Paran Consulting	OUALIFIERS
Project:	Huffman-Parnell	ACDONVMS UNITS
WorkOrder:	23060667	ACRONY M5, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
а	Not accredited
В	Analyte detected in the associated Method Blank above the Reporting Limit
Е	Value above quantitation range
Н	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
О	Sample amount is > 4 times amount spiked
Р	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
Acronym	Description
DUP	Method Duplicate
Е	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method
Units Reported	Description

mg/L

Date: 21-Jun-23

Sample Receipt Checklist

Client Name: <u>N</u>	ACPARAN-CINCINNATI				Date/Time	Received:	<u>14-</u>	Jun-23	13:34		
Work Order: 2	23060667				Received b	y:	<u>MB</u>				
Checklist comple	ted by Alec Bolender	14	-Jun-23 _{Date}	_	Reviewed by:	Shaw	/n Smy re	/the			14-Jun-23 Date
Matrices: Carrier name:	water Client	I								ļ	
Shipping containe	er/cooler in good condition?		Yes	\checkmark	No 🗌	Not F	Present				
Custody seals int	act on shipping container/coole	er?	Yes		No 🗌	Not I	Present	✓			
Custody seals int	act on sample bottles?		Yes		No 🗌	Not I	Present	\checkmark			
Chain of custody	present?		Yes	\checkmark	No 🗌						
Chain of custody	signed when relinquished and	received?	Yes	✓	No 🗌						
Chain of custody	agrees with sample labels?		Yes	\checkmark	No 🗌						
Samples in prope	er container/bottle?		Yes	✓	No 🗌						
Sample container	rs intact?		Yes	✓	No 🗌						
Sufficient sample	volume for indicated test?		Yes	✓	No 🗌						
All samples recei	ved within holding time?		Yes	✓	No 🗌						
Container/Temp I	Blank temperature in compliand	ce?	Yes	✓	No 🗌						
Sample(s) receive Temperature(s)/T	ed on ice? Thermometer(s):		Yes 22.4	✓	No 🗌		120258				
Cooler(s)/Kit(s):	ζ,										
Date/Time sampl	e(s) sent to storage:										
Water - VOA vial	s have zero headspace?		Yes		No 🗌	No VOA	vials subi	mitted	\checkmark		
Water - pH accep	otable upon receipt?		Yes		No 🗌	N/A	∠				
pH adjusted? pH adjusted by:			Yes		No 🗔	N/A [
Login Notes:	metals don't need cooled										
Client Contacted: Contacted By:	:	Date Contacted: Regarding:			Person	Contacte	d:				
		5 5									
Comments:											

	ANALYTICAL REQUEST FORM
	REGULAR Status 23060667
	RUSH Status Required - ADDITIONAL CHARGE
(ALS)	RESULTS REQUIRED BY
	CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES
DatePurchase Order No. Huff-Par	Billing Address (if different)

Company	Name_	m.a.c. Paran Cor	isulting Servic	ces, Inc.
Address	3959 F	ulton Grove Roa	d	
Cincin	nati		OH	45245
City Person to	Contact	Bobbie Cox	State	Zip
Email Add	dress bo	bbie@macparar	n.com	
Telephon	e (513-752-9111	(O); 513-383-	6263 (C)
Fax Telep	hone ()		

	an san an a	
Quote No.	ta na posta a ny provins con concentration con concentration and a second decision of the second decision of the	
Quote No Sampling Site Huffman-P	arnell	

Laboratory Use Only	Client Sample Number	Media Type	Sample Volume (Liters)	ANALYSES R	EQUESTED - Use Method Number if Known
1	9B-1	NA	250m)	head in	Water
2	9B.2			10000	
3	QB.3				1
9	9B.W				
5	11A-1				V
6	G-AIL				
7	11A-3				
8	LIA-H				
9	1204A-1				
10	1204A-2				V
61	1204A-3				٧
ル	1204A-W				
13	121013-1				
14	1010B.2				U
15	1203.3				
16	DIAR-4				

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

CHAIN OF CUSTODY

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	1/ mgh	Date / Time 6-14-2-3 /3:734
Relinquished b (Signature)	Date / Time	Received by: (Signature)		Date / Time

ALS ENVIRONMENTAL 4388 Glendale Milford Road / Cincinnati, OH 45242 = 800-458-1493 or 513-733-5336 / Fax: 513-733-5347

	ANALYTICA		EST FORM
	REGULA	R Status	2-3060667
		atus Required	- ADDITIONAL CHARGE
(ALS)	CONTACT ALS	LABORATO	DATE RY GROUP PRIOR TO SENDING SAMPLES
Date Purchase Order No. Huff-Pa Company Name m.a.c. Paran Consulting Se	r rvices, Inc.	Billing Addr Same	ress (if different)
Address 3959 Fulton Grove Road	15015	Sand - Constant of the Property of the same	

Cincinnati		OH	45245
City Person to Conta	Bobbie Cox	State	Zip
Email Address	bobbie@macparar	n.com	
Telephone () 513-752-9111	(O); 513-383-	6263 (C)
Fax Telephone	()		

Sampling Site Huffman-Parnell

Quote No.

Date/Time of Collection 6/13/2023

1(Am

Laboratory Use Only	Client Sample - Number	Media Type	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known	
17	1210A-1	NA	250 ml	head in	Water
18	126A-2	1	1		
19	1210A.3				
20	1210A.N				
21	1202A-1			1	
22	1202A-2	<u> </u>			1
23	1202A-3				
24	1202A-2				(
25	12043-1				
26	1204B.2				
27	1204B.3				
28	1204B-W				
29	1208 A-1				
30	1208A-2				
3)	1008A-3				
32	DOBA-W				

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

CHAIN OF CUSTODY

Relinquished by (Signature)	Date / Time	Received by: (Signature)	Date / Time 6-14-2-3 1 3 i 3 4
Relinguyned by (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS ENVIRONMENTAL 4388 Glendale Milford Road / Cincinnati, OH 45242 . 800-458-1493 or 513-733-5336 / Fax: 513-733-5347

Client

22.4

20255

	ANALYTICAL REQUEST FORM
	REGULAR Status
	RUSH Status Required - ADDITIONAL CHARGE
(ALS)	CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES
Date 6/14/23 Purchase Order No. Huff-Par m.a.c. Paran Consulting Serv	Billing Address (if different)

Company	Name_	n.a.c. Paran Cor	isulting Service	Jes, Inc.	
Address 3959 Fulton Grove Road					
Cincin	nati		ОН	45245	
City Person to	Contact	Bobbie Cox	State	Zip	
Email Add	dress bo	bbie@macparar	n.com		
Telephon	e (513-752-9111	(O); 513-383-	6263 (C)	
Fax Teler	hone ()			

Quote No.

Sampling Site Huffman-Parnell

Date/Time of Collection 6/13/2023

11Am

Fax	Telephone	()

Laboratory Use Only	Client Sample Number	Media Type	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known		
38 39 38 30 37 38	Number 12023-1 12023-7 12023-7 12023-7 12023-1 12033-1		(Liters)	Lead in Water		
39 40 41 42	12098.3 12098.4 113-1 113-2					

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

CHAIN OF CUSTODY

Relinquished by: (Signature)	Date / Time	Received by (Signature)	Date / Time 6-14-2-3 13/34
Relinquished by Control (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS ENVIRONMENTAL 4388 Glendale Milford Road / Cincinnati, OH 45242 . 800-458-1493 or 513-733-5336 / Fax: 513-733-5347

Client

22.4 120288

	ANALYTICAL REQUEST FORM				
	REGULAR Status	23060667			
	RUSH Status Required - A	DDITIONAL CHARGE			
(ALS)	RESULTS REQUIRED BY	DATE			
	CONTACT ALS LABORATORY O	GROUP PRIOR TO SENDING SAMPLES			
Date 6/14/23 Purchase Order No. Huff-Par	Billing Address (if different)			

Company	Name_	m.a.c. Paran Cor	isulting Service	ces, Inc.			
Address	3959 F	959 Fulton Grove Road					
Cincir	inati		ОН	45245			
City Person to	Contact	Bobbie Cox	State	Zip			
Email Ad	dress b	obbie@macparar	n.com				
Telephon	е () 513-752-9111	(O); 513-383-	6263 (C)			
Fax Teler	ohone ()					

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ampling Site	man-ramen		
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Date/Time of Collection 0/13/2023

Laboratory Use Only	Client Sample Number	Media Type	Sample Volume (Liters)	ANALYSES REQUESTED - Use Method Number if Known
	9B-1	NA	250m)	head in Water
2	9B.2			
3	9B.3			ŝ.
9	9B.4			
5	11A-1			
ø	G-AIL			
7	11A-3			
8	IIA-4			
9	1204A-1			
10	1204A-2			V
11	1204A-3			N
ル	1204A-W			
13	1210B-1			
١Ŋ	1010 B.2			4
15	120B-3			
16	12103-4	1		

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Relinquished b (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS ENVIRONMENTAL 4388 Glendale Milford Road / Cincinnati, OH 45242 × 800-458-1493 or 513-733-5336 / Fax: 513-733-5347 Client 22.4 120258

	ANALYTICAL REQUEST FORM			
	REGULAR	Status	23060667	
	RUSH Stat	us Required - A	DDITIONAL CHARGE	
(ALS)	RESULTS R	_ABORATORY	DATE GROUP PRIOR TO SENDING SAMPLES	
Date 6/14/23 Purchase Order No. Huff-Par	vices Inc	Billing Address	(if different)	
Address 3959 Fulton Grove Road				

Address 395	3959 Fulton Grove Road						
Cincinnati		OH	45245				
City Person to Con	tact Bobbie Cox	State	Ζίρ				
Email Address	bobbie@macparar	n.com					
Telephone () 513-752-9111	(O); 513-383-	6263 (C)				
Fax Telephone)						

Quote No.		
Sampling Site Huffma	n-Parnell	
Date/Time of Collection .	6/13/2023	ILAM

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22.4

Laboratory Use Only	Client Sample Number	Media Type	Sample Volume (Liters)	ANALYSES R	EQUESTED - Use Method Number if Known
17	1210A-1	NA	250 ml	head in	Water
18	126A-2	<u> </u>	1		
19	1210A.3				
20	1210A.N				
21	1202A-1			Λ	1
22	1202A-2	<u> </u>			
23	1202A-3				
24	1202A-2				1
25	12043-1				
26	12048.2				
27	1204B.3				
28	1204B-W		¥	·	
29	1208 A-1				
30	1208A-2				
31	1008A-3				
32	1208A-2				

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

CHAIN OF CUSTODY

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ALS ENVIRONMENTAL 4388 Glendale Milford Road / Cincinnati, OH 45242 + 800-458-1493 or 513-733-5336 / Fax: 513-733-5347

Client
	ANALYTICAL REQUEST FORM	
	REGULAR Status	
	RUSH Status Required - ADDITIONAL CHARGE	
(ALS)	RESULTS REQUIRED BY	
	CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES	
Date 6/14/23 Purchase Order No. Huff-Par	Billing Address (if different)	

Company	Name _	n.a.c. Paran Cor	sulting Servic	ces, Inc.
Address	3959 F	ulton Grove Roa	d	
Cincinr	nati		OH	45245
City Person to	Contact	Bobbie Cox	State	Zip
Email Add	ress bo	bbie@macparar	n.com	
Telephone	. (513-752-9111	(O); 513-383-	6263 (C)
Fax Telepl	none ()		

Quote No.

Sampling Site Huffman-Parnell

Date/Time of Collection 6/13/2023

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11Am

Laboratory Use Only	Number	Media Type	(Liters)	ANALYSES REQUESTED - Use Method Number if Known		
33	12228-1	NA	250 ml	Lead in Water		
34	12023-0-9	1				
35	12023-3					
30	120033-4	/ h				
37	1-58001	1				
38	12088-2					
39	12088.3					
40	1208B.4					
41	11B-1					
42	11B-2					
		-				
		1				

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Relinquished by Horizon (Signature)	Date / Time	Received by: (Signature)	Date / Time

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Client

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Appendi

Lead i A e or Certification



Ohio

Department of Health

Mike DeWine, Governor Jon Husted, Lt.Governor Bruce Vanderhoff, MD, MBA, Director

April 08, 2022

Barbara G Cox MAC Paran Consulting Services 3959 Fulton Grove Rd Cincinnati OH 45245

RE: Lead Risk Assessor License Number: LA006241 Expiration Date: 04/27/2024

Dear Barbara G Cox:

This letter and enclosed license approves your request to be licensed as a Lead Risk Assessor. You must present your license upon request at any project site while performing duties. A copy of your license is not acceptable as proof of licensure.

Please be aware of the rules and regulations governing your discipline for Ohio. If you choose to renew this license, you must take an Ohio approved refresher course appropriate for the discipline within your current two year licensure period. Please visit our website at www.odh.ohio.gov for information.

This license may be revoked by the Director of Health for violation of any of the requirements of 3701-32 of the Ohio Administrative Code.

If you have any questions, please call the Ohio Department of Health, Lead Poisoning Prevention Program at (614) 466-1450.

Sincerely,

Shamus Estep Program Administrator Bureau of Environmental Health and Radiation Protection



246 North High Street Columbus, Ohio 43215 U.S.A. 614 | 466-3543 www.odh.ohio.gov

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SECTION 03 01 00 - MAINTENANCE OF CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Concrete surface repair.
 - 2. Concrete crack repair.
 - 3. Concrete sealer.

1.2 SUBMITTALS

- A. Product Data: Submit product standards, physical and chemical characteristics, technical specifications, limitations, maintenance instructions, and general recommendations regarding each material.
 - 1. Concrete repair products.
- B. Samples: Submit color samples for patches exposed to view in finished construction and required to match existing.
- C. Manufacturer's Instructions: Submit mixing instructions.

1.3 MOCK-UP

- A. Construct mockup panel illustrating patching method, color and texture of repair surface.
- B. Prepare one mockup of each type of patching/repair procedure.
- C. Locate where directed by Architect.
- D. Incorporate accepted mockup as part of Work.

PART 2 PRODUCTS

2.1 BASIS OF DESIGN

A. General basis of design for all systems is SIKA, other manufacturers accepted provided bidder/contractor submission of complete technical data of proposed products/systems for review by Architect.

2.2 CONCRETE SELF-LEVELING UNDERLAYMENT MIX

- A. Concrete Leveling Mix: one-component, fast drying, cementitious skim mortar ideal for repair or reprofiling of concrete slabs. Zero feather edge to ½" thickness application. Sika, Sika Level SkimCoat
 - 1. Flexural strength ASTM C-293: 1,300 psi at 28 days.
 - 2. Compressive strength ASTM C-109: 3,700 psi at 28 days
- B. Concrete Leveling Mix: one-component, polymer modified, self-leveling underlayment ideal for repair or reprofiling of concrete slabs. Zero feather edge to ½" thickness application. Sika, Sika Level-125
 - 1. Flexural strength ASTM C-293: 1,150 psi at 28 days.
 - 2. Compressive strength ASTM C-109: 4,000 psi at 28 days
- C. Concrete Leveling Mix: one-component, cementitious underlayment, self-leveling underlayment ideal for repair or reprofiling of concrete slabs. Zero feather edge to ½" thickness application. Sika, Sika Level-325
 - 1. Flexural strength ASTM C-293: 1,500 psi at 28 days.
 - 2. Compressive strength ASTM C-109: 5,300 psi at 28 days

2.3 CONCRETE REPAIR / CEMENTITIOUS MORTAR –PARTIAL DEPTH REPAIRS

- A. Concrete Repair/Patch Cementitious Mortar: one-component, rapid hardening [ASTM C-928], early strength gaining, cementitious mix for repairs on horizontal surfaces.
 - 1. Flexural strength ASTM C-293: 1,000 psi at 28 days.
 - 2. Bond strength ASTM C-882: 2,500 psi at 28 days,
 - 3. Compressive strength ASTM C-109: 7,000 psi at 28 days
- B. Sika, SikaQuick 1000 or Equal

2.4 CRACK REPAIR/EPOXY ADHESIVE

- A. Epoxy Adhesive for injection repair of cracks: two-component, 100% solids, moisture-tolerant, low-viscosity, high strength, epoxy resin adhesive. ASTM C-881, Type I, II, and IV, Grade-1, Class-C, AASHTO M-235.
 - 1. Tensile strength ASTM D-638, 8,900 psi at 7 days.
 - 2. Bond strength ASTM C-882 2,900 psi at 14 days,
 - 3. Compressive strength ASTM D-695 28 days 13,000 psi at 73 degrees F.
- B. Sika, Sikadur 35 Hi Mod LV or Equal

2.5 CRACK REPAIR/EPOXY PASTE ADHESIVE

- A. Epoxy Adhesive for sealing cracks and around injection ports prior to pressure injection grouting: two-component, 100% solids, solvent free, moisture-tolerant, high modulus, high strength, structural epoxy paste adhesive. ASTM C-881, Type I and IV, Grade-3, Class-B/C, AASHTO M-235.
 - 1. Tensile strength ASTM D-638, 420 psi at 2 days.
 - 2. Bond strength ASTM C-882 2,900 psi,
 - 3. Compressive strength ASTM D-695 28 days 14,000 psi. at 28 days
- B. Sika, Sikadur 31, Hi-Mod Gel or Equal

2.6 CONCRETE REPAIR / EPOXY GROUT BONDING ADHESIVE

- A. Epoxy bonding/grouting adhesive: multi-purpose, two-component, 100% solids, moisture tolerant, structural epoxy adhesive. ASTM C-881, Types I and II, Grade 2, Class C, AASHTO M-235 specifications
 - 1. Flexural strength ASTM C-293, 2,000 psi.
 - 2. Bond strength ASTM C-882 2,200 psi,
 - 3. Compressive strength ASTM C-109 28 days 7,000 psi.
- B. Sika, Sikadur 32, Hi-Mod LPL or Equal

2.7 REINFORCMENT MATERIALS

A. Reinforcing Steel: ASTM A996, 60 ksi yield grade axle-steel deformed bars, unfinished.

2.8 EPOXY BONDING ADHESIVE AND REINFORCING STEEL PRIMER/BONDING ADHESIVE

- A. Multi-purpose, 2-component, 100% solids, moisture tolerant structural epoxy adhesive. ASTM C-881, Type I, II, and V, Grade 2, Class C, AASHTO M-235.
 - 1. Tensile strength ASTM D-638: 6,900 psi
 - 2. Flexural strength ASTM D-790: 7,000 psi
 - 3. Bond strength ASTM C-882: 2,200 psi
 - 4. Compressive strength ASTM D-695: 12,200 psi
- B. Sika, Sikadur 32 Hi-Mod LPL or Equal.

2.9 CONCRETE SEALER

A. Concrete Sealer for new and existing concrete slabs on grade. Solvent based liquid membrane forming curing compound to seal surfaces with abrasion and stain resistant coating, non-yellowing resin. 100% acrylic polymer blend, fast drying solvent blend.
 1. SIKA Scofield Cureseal 100

PART 3 EXECUTION

3.1 REMOVALS

- A. Remove all existing finish flooring tile, VCT, epoxy paint from the existing concrete slabs. Remove/strip sealer from existing unfinished concrete slabs.
- B. Prep existing concrete / substrate for new floor systems as specified.

3.2 EXAMINATION

- A. Verify surfaces are ready to receive work.
- B. Beginning of installation means acceptance of existing surfaces.

3.3 PREPARATION

- A. Provide all temporary shoring and bracing as required for intended work.
- B. Provide all required formwork, tools, and equipment as required for intended work.
- C. Provide temporary barricades and other protective measures as required during the course of the work. Provide protection of all new work while curing and as applicable for the conditions. Maintain egress paths during the course of the work. Provide safe access for residents, including handicap accessible units that may utilize a wheelchair for mobility.
- D. Clean concrete surfaces of dirt, laitance, corrosion, or other contamination; wire brush using water; rinse surface and allow to dry.
- E. Flush out cracks and voids with chemical solvent or water to remove laitance and dirt. Chemically neutralize by rinsing with water.
- F. For areas patched with epoxy mortar, remove all broken and soft concrete. Remove corrosion from steel. Clean surfaces mechanically; wash with acid; rinse with water.
- G. Sandblast clean exposed reinforcement steel surfaces. Mechanically cut away damaged portions of rebar in accordance with repair / replacement notes herein.

3.4 REINFORCING STEEL REPAIR / REPLACEMENT

- A. Where reinforcing steel with active corrosion is encountered, sandblast steel to a white metal finish to remove all contaminants and rust. If remaining reinforcing is less than 85% of its original size, contact Architect for direction on additional reinforcement steel to be installed.
- B. Properly cleaned and prepared reinforcing steel may remain if 85% or greater of its original size.
- C. Apply epoxy bonding agent/primer to all existing reinforcing steel.
- D. Replacement reinforcing steel shall be drilled and epoxy grouted into the existing concrete as detailed on the drawings, using Sika AnchorFix 3001 Epoxy Anchoring Gel. Installation per manufacturer's recommendations.
 - 1. Sika AnchorFix 3001: High Performance 2 component adhesive anchor system for threaded bars and reinforcing in cracked and uncracked concrete.

3.5 APPLICATION – PRIMER

- A. Exposed reinforcing steel must be thoroughly prepared by mechanical cleaning to remove all traces of rust or corrosion.
 - 1. Clean corrosion with high pressure wash.
 - 2. Prime reinforcing steel as necessary for the conditions.
- B. Prime prepared substrate with brush or spray applied primer.
- C. Mixing: mechanically mix components per manufacturer requirements. Mix to a uniform consistency until blend is uniform and free of lumps.
- D. Application by stiff bristle brush as recommended by the manufacturer to a +/- 20 MIL application thickness.

3.6 APPLICATION - CEMENTITIOUS MORTAR PARTIAL DEPTH REPAIR

- A. Clean all surfaces of contaminants.
 - 1. Clean and prep all exposed reinforcing steel.
 - 2. Replace deteriorated reinforcing steel with new as indicated on the drawings.
- B. Prime substrate in accordance with manufacturer requirements.
- C. Mixing: mechanically mix per manufacturer requirements. Mix to a uniform consistency with a thorough mixing and proper proportioning of the two components.
 - 1. Add 3/8" course aggregate at desired quantity to uniform consistency as necessary.
- D. Screed level.
- E. Finish with float or light broom finish in accordance with approved mockup for desired finish texture.
- F. Cure concrete per ACI recommendations using wet burlap, water mist,
 - 1. Do not use curing compounds for curing of concrete.
- G. Avoid contact with aluminum materials to prevent adverse chemical reaction and possible failure of the repair. Insulate potential areas of contact by coating aluminum with epoxy.

3.7 APPLICATION – CEMENTITIOUS MORTAR FULL DEPTH REPAIR

- A. Install formwork as required for the conditions / repair area.
- B. Clean all surfaces of contaminants.
 - 1. Clean and prep all exposed reinforcing steel.
 - 2. Replace deteriorated reinforcing steel with new as indicated on the drawings.
- C. Prime substrate in accordance with manufacturer requirements.
- D. Mixing: mechanically mix per manufacturer requirements. Mix to a uniform consistency with a thorough mixing of the concrete mix and water. DO NOT overwater.
- E. Screed level.
- F. Finish with float or light broom finish in accordance with approved mockup for desired finish texture.
- G. Cure concrete per ACI recommendations using wet burlap, water mist,1. Do not use curing compounds for curing of concrete.
- H. Avoid contact with aluminum materials to prevent adverse chemical reaction and possible failure of the repair. Insulate potential areas of contact by coating aluminum with epoxy.
- I. Remove formwork once repair has set up in accordance with manufacturer recommendations. Repair any defects as necessary.

3.8 APPLICATION – FORM AND POUR APPLICATIONS

- A. Install formwork as required for the conditions / repair area.
- B. Clean all surfaces of contaminants.
 - 1. Clean and prep all exposed reinforcing steel.
 - 2. Replace deteriorated reinforcing steel with new as indicated on the drawings.
- C. Prime substrate in accordance with manufacturer requirements.
- D. Mixing: mechanically mix per manufacturer requirements. Mix to a uniform consistency with a thorough mixing of the concrete mix and water. DO NOT overwater.
- E. Pre-wet surface to SSD. Ensure good intimate contact with substrate is achieved. Scrub repair mortar into substrate as appropriate for conditions.
- F. Cure concrete per ACI recommendations using wet burlap, water mist,
 - 1. Do not use curing compounds for curing of concrete.
- G. Avoid contact with aluminum materials to prevent adverse chemical reaction and possible failure of the repair. Insulate potential areas of contact by coating aluminum with epoxy.
- H. Remove formwork once repair has set up in accordance with manufacturer recommendations. Repair any defects as necessary.

3.9 APPLICATION – CRACK REPAIR EPOXY ADHESIVE

- A. Clean all surfaces of contaminants using methods directed by the manufacturer to render a clean, contaminant free, open textured surface.
- B. Mixing: mechanically mix components per manufacturer requirements. Mix to a uniform consistency.
- C. Application:
 - 1. Gravity feed cracks: blow crack with compressed air. Pour epoxy adhesive into crack until completely filled. Seal underside of slab if crack telescopes through to underside.
 - 2. Pressure injection of cracks: use automated injection equipment method of installation. Set injection ports. Seal ports and crack with paste adhesive [Sikadur 31 Hi-Mod Gel]. Once epoxy adhesive seal has cured, inject epoxy adhesive [Sikadur 35 Hi-Mod LV] with steady pressure.

3.10 APPLICATION – EPOXY GROUT BONDING ADHESIVE

- A. Clean all surfaces of contaminants.
- B. Prime substrate in accordance with manufacturer requirements.
- C. Mixing: mechanically mix components per manufacturer requirements. Mix to a uniform consistency.
- D. Apply bonding adhesive by brush or roller.
- E. Place repair concrete mix while bonding adhesive is still tacky.

3.11 APPLICATION – EPOXY BONDING ADHESIVE

- A. Prepare surfaces in accordance with manufacturer requirements.
- B. Bonding adhesive applied to provide insulate between aluminum and concrete as applicable for the conditions.

3.12 APPLICATION – CONCRETE SEALER

- A. Prep and clean surface per manufacturer requirements clean from all prior sealers, curing compounds, oils, and foreign matters that may prevent penetration or adhesion. Meet Concrete Surface Profile of 1.
- B. Distribute / Apply sealer per manufacturer requirements. Apply with garden sprayer and back roll with roller.

3.13 SCHEDULE / GENERAL REPAIR SCOPE

- A. Repair existing concrete foundation walls with crack injection or concrete repairs as appropriate to the condition.
- B. Clean entire concrete surface, etc. as applicable to the work scope to allow application of repair materials.
- C. Remove all existing surface coatings and patch repairs as applicable to the work scope.
- D. Remove all existing spalling and previous repair areas/patches.
- E. Apply cementitious repairs to all areas of affected surfaces at vertical fins, beams, and columns.
 - 1. Repair of existing cracks/fractures.
 - 2. Repair of delaminated edges/shoulders.
 - 3. Repair/replace deteriorated reinforcing steel that is exposed as required by the conditions.
- F. Clean / prep all existing concrete slabs after removal of existing floor finishes.
 - 1. Remove all existing surface coatings, adhesives, mortar, etc. and patch repairs.
- G. Remove all existing spalling and previous repair areas/patches.
- H. Apply cementitious repairs to all areas of affected surfaces and to level various areas of the concrete slab between spaces within the building.
 - 1. Intent of repairs is to provide a smooth, uniform, floor slab free of voids, divots, and other irregularities in the finish, ready for a new finish floor system. Repairs shall be from edge to edge, across the entire floor system without exception.
- I. Apply sealant [Sika, Sikaflex 1A or Equal] to joints and cracks.
- J. Apply sealer to new / existing concrete where noted and concrete is intended to be left exposed.

END OF SECTION

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Formwork.
 - 2. Reinforcement and Accessories.
 - 3. Cast-in place concrete.
 - 4. Finishing and curing.

1.2 SYSTEM DESCRIPTION

- A. Design, engineer and construct formwork, shoring, and bracing in accordance with ACI 301 to conform to the design and applicable code requirements to achieve concrete shape, line, and dimension as indicated on the drawings.
- B. Vapor Retarder Permeance: Maximum 1 perm when tested in accordance with ASTM E96/E96M, water method.

1.3 SUBMITTALS

A. Design Data: Submit mix designs, admixtures, reinforcement, and anchors.

1.4 QUALITY ASSURANCE

A. Construct and erect concrete formwork, reinforcing, and cast-in-place concrete in accordance with ACI 301.

PART 2 PRODUCTS

2.1 FORM MATERIALS AND ACCESSORIES

- A. Form Materials: At discretion of Contractor and per building conditions.
- B. Form Release Agent: Colorless mineral oil not capable of staining concrete or impairing natural bonding characteristics of coating intended for use on concrete.
- C. Slab Edge Joint Filler: ASTM D1751, Premolded asphaltic board, 1/2 inch thick; as applicable to the conditions.
- D. Vapor Retarder: ASTM E1745 Class A; 6 mil thick clear polyethylene film; type recommended for below grade application. Furnish joint tape recommended by manufacturer.

2.2 REINFORCEMENT MATERIALS

- A. Reinforcing Steel: ASTM A615/A615M, 60 ksi yield grade, deformed billet bars, uncoated finish.
- B. Welded Plain Wire Fabric: ASTM A185/A185M; in flat sheets; unfinished. [WWM 6x6-W2.9-W2.9]
- C. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for support of reinforcing; plastic tipped or non-corroding for supports in slabs forming finished ceilings or where supports are exposed to weather.
- D. Fabricate concrete reinforcement in accordance with ACI 301.
- E. Non-shrink grout: Pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.

2.3 CONCRETE MATERIALS

A. Cement: ASTM C150, Normal-Type I Portland type.

- B. Fly Ash/Slag [coal combustion by-product]: ASTM C 618, Class C.
- C. Fine and Coarse Aggregates: ASTM C33.
- D. Water: Clean and not detrimental to concrete.
- E. Air Entrainment Admixture: ASTM C260.
- F. Fiber Mesh Reinforcing: ASTM 1116-C.
- G. Bonding Agent: Latex emulsion.
- H. Non-shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.

2.4 CONCRETE MIX

- A. Mix and deliver concrete in accordance with ASTM C94/C94M, Option A.
- B. INTERIOR CONCRETE SLAB: Furnish concrete of the following strength:
 - 1. Compressive strength 3,000 psi (28 day). Fibermesh reinforced
 - 2. Slump limit of 4 inches at point of placement.
 - 3. Minimum Cement Content: 600 pounds/cu yd.
 - 4. Maximum water-cement ratio: 0.45
 - 5. Air Entrainment: none
 - 6. Transit Mixed.
- C. EXTERIOR CONCRETE SLAB: Refer to Section 32 13 13.
- D. Add air entraining agent to concrete mix for concrete work exposed to exterior.

2.5 GRANULAR BASE

- A. Interior Slabs:
 - 1. Install ODOT Item 703 #6, 3/8" ¾" clean, uniformly graded crushed stone or gravel. Existing gravel base may remain if found to be in good condition.
- B. Exterior Slabs: Refer to Section 32 13 13.

2.6 COMPOUNDS, HARDENERS AND SEALERS

- A. Membrane Curing Compound and Sealer: ASTM C1315 Type I, Class A. Dayton Superior or Equal
 - 1. Install only at areas not receiving finish flooring system.

PART 3 EXECUTION

3.1 FORMWORK ERECTION

- A. Erect formwork, shoring and bracing to achieve design requirements.
- B. Apply form release agent to formwork prior to placing form accessories and reinforcement.
- C. Clean forms as erection proceeds, to remove foreign matter.

3.2 INSERTS, EMBEDDED COMPONENTS, AND OPENINGS

- A. Provide formed openings where required for work to be embedded in and passing through concrete members.
- B. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
- C. Install concrete accessories straight, level, and plumb.

D. Place joint filler at perimeter of floor slab, penetrations, and isolation joints.

3.3 REINFORCEMENT PLACEMENT

- A. Place reinforcement, supported and secured against displacement.
- B. Ensure reinforcing is clean, free of loose scale, dirt, or other foreign coatings.
- C. Do not weld reinforcement bars for assembly.
- D. Space reinforcement bars with a minimum clear space in accordance with ACI 301 of not less than 1 inch.
- E. Maintain concrete cover around reinforcement in accordance with ACI 301 of not less than 1 1/2" inches for concealed work and 3 inches for concrete exposed to weather.

3.4 PLACING CONCRETE

- A. Install 4 inch minimum thickness granular base over undisturbed soils and compact as applicable.
- B. Install vapor retarder under interior slabs on grade in accordance with ASTM E1643. Lap joints and seal watertight using manufacturer supplied tape.
- C. Repair damaged vapor retarder with vapor retarder material, lap over damaged areas minimum 6 inches and seal watertight.
- D. Place concrete continuously between predetermined expansion, control and construction joints. Do not break or interrupt successive pours creating cold joints.
- E. Separate slabs-on-grade from vertical services with ½ inch joint filer, extended from bottom of slab to within ¼ inch of finished slab surface.
- F. Where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack with non-shrink grout.
- G. Form ³/₄" chamfer at all exposed outside corners and edges.
- H. Screed slabs-on-grade level.

3.5 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
- B. Remove formwork progressively and in accordance with code requirements.

3.6 FLOOR FINISHING

- A. Finish concrete floor surfaces in accordance with ACI 301.
- B. Uniformly spread, screed, and float concrete.
 - 1. Smooth finish at interior slabs and garage slabs.
 - 2. Light broom finish at exterior slabs; troweled and retraced joints [no sawcut control joints].
- C. Maintain surface flatness, with maximum variation of 1/8 inch in 10 ft.
- D. Control joints:
 - 1. Locate at maximum of 10'-0" o.c. each way.
 - 2. Sawcut joints permitted only at concealed concrete areas.
 - 3. Trowel joints and retreace at all exposed concrete areas.

3.7 CURING AND PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

- 1. Protect concrete footings from freezing for a minimum of 7 days.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete for not less than 7 days.

3.8 ERECTION TOLERANCES

A. Install reinforcement within tolerances required by ACI 301.

3.9 FIELD QUALITY CONTROL

- A. Perform field inspection and testing in accordance with ACI 301 at the request of Architect/DMHA.
- B. Strength Test Samples:
 - 1. Sample concrete and make one set of three cylinders for every 25 cu yds or less of each class of concrete placed.
- C. Field Testing:
 - 1. Measure slump and temperature for each compressive strength concrete sample.
 - 2. Measure air content in air entrained concrete for each compressive strength concrete sample.
- D. Cylinder Compressive Strength Testing:
 - 1. Test Method: ASTM C39.
 - 2. Test Acceptance: In accordance with ACI 301.
 - 3. Test two cylinders at 28 days.
 - 4. Dispose remaining cylinders when testing is not required.

3.10 DEFECTIVE CONCRETE

A. Modify or replace concrete not conforming to required lines, details and elevations, as directed by Architect/Engineer.

END OF SECTION

SECTION 04 01 00 - MAINTENANCE OF MASONRY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Water and/or chemical cleaning of masonry surfaces, water repellent.

1.2 SUBMITTALS

- A. Product Data: Submit data on cleaning solutions, water repellent.
- B. Manufacturer's Installation Instructions: Products selected for use, manufacturer's installation instructions.

1.3 QUALITY ASSURANCE

- A. Perform Work according to ACI 530 and ACI 530.1 requirements.
- B. Installer: Company specializing in performing Work of this Section with three years' experience.
- C. Coordinate work with masonry repairs, re-pointing, limited brick replacement, etc.

1.4 ENVIRONMENTAL REQUIREMENTS

- Repoint mortar joints and repair masonry only when air temperature is between and 40°f and 90°f and is predicted to remain so for at least 7 days after completion of work.
 In accordance with ACI 530.1
- B. Hot-weather requirements: protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 90°f and above.
 1. In accordance with ACI 530.1
- C. Patch masonry only when air and surface temperatures are between and 55°f and 100°f and are predicted to remain above 55°f for at least 7 days after completion of work. On days when air temperature is predicted to go above 90°f, schedule patching work to coincide with time that surface being patched will be in shade or during cooler morning hours.
- D. Provide shoring, bracing, or support to prevent movement, settlement, or collapse of structure, work under demolition, or adjacent work to remain.
- E. Prevent grout or mortar used in assembly and repair work from staining face of surrounding surfaces. Immediately remove grout and mortar in contact with exposed surfaces.
- F. Protect sills, ledges, and projections from mortar droppings.

1.5 SEQUENCING

A. Perform repointing after cleaning masonry surfaces.

PART 2 PRODUCTS

2.1 MASONRY RESTORATION AND CLEANING

A. Cleaning Agent: Low Acid Cleaning Solution; Prosoco Sure Klean Light Duty Restoration Cleaner or Equal.

2.2 WATER REPELLENT

- A. Free flowing, colorless liquid, non water based.
 - 1. ProSoCo, 'Sure Klean', Weather Seal Siloxane PD'
 - 2. Diedrich Chemicals, 303S-7 Siloxseal'

PART 3 EXECUTION

3.1 **EXAMINATION**

A. Verify surfaces to be cleaned are ready for Work of this Section.

3.2 PREPARATION

A. Close off and/or seal areas, landscaping, materials, and surfaces not receiving work of this Section to protect from damage.

3.3 **FINAL CLEANING**

- After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar Α. and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water, spray applied at low pressure. Do not use metal scrapers or brushes. Do not use acidic or alkaline cleaners.
- Clean masonry debris from roof; remove debris from gutters and downspouts. Rinse off roof and Β. flush gutters and downspouts.
- C. Sweep and rake adjacent pavement and grounds to remove masonry debris. Where necessary, pressure wash surfaces to remove mortar, dust, dirt, and stains.

3.4 **GENERAL CLEANING**

- A. As work proceeds and on completion, remove excess mortar, smears, droppings.
- Β. Clean dirt and light staining from all brick surfaces.
- C. If the specified chemicals and cleaning processes do not remove graffiti, paint, or other stains, contact Architect for direction.
- D. Perform cleaning working from top to bottom working in sections around the building at one elevation at a time.
- Use spray equipment that provides controlled application at volume and pressure indicated. E. Adjust pressure and volume to ensure cleaning methods do not damage masonry.

3.5 SURFACE CLEANING APPLICATION

General: Cleaners shall be installed in accordance with the recommendation of the manufacturer. Α.

- All masonry surfaced shall be cleaned utilizing a pressure water spray (1,000 p.s.i. max.).
 - Intent of cleaning program is to remove all surface staining, dirt and fungal growth. 1.

3.6 WATER REPELLANT APPLICATION

General: Water repellant shall be installed in accordance with the recommendation of the manufacturer.

All masonry surfaced shall have the water repellant installed utilizing a low-pressure water spray Α. (50 psi max.), brush or roller at the rate recommended by the manufacture. Flow coat to saturation point, allow for penetration 5 -10 minutes.

SCHEDULES 3.7

- Α. Refer to drawings for extent of work.
- Β. Clean existing masonry at all buildings

END OF SECTION

SECTION 04 05 03 - MASONRY MORTARING AND GROUTING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes mortar and grout for masonry, parging for CMU foundations.

1.2 SUBMITTALS

- A. Samples: Submit two samples of mortar illustrating mortar color and color range.
- B. Project data: Submit product data on mortar mix.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 530 Building Code Requirements for Masonry Structures and ACI 530.1 Specification for Masonry Structures.
- B. Sustainable Design Requirements:
 - 1. Recycled Content Materials: Furnish materials with recycled content.
 - 2. Regional Materials: Furnish materials extracted, processed, and manufactured within 500 miles of Project site.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Repoint mortar joints and repair masonry only when air temperature is between and 40°f and 90°f and is predicted to remain so for at least 7 days after completion of work.
 1. In accordance with ACI 530.1
- B. Hot-weather requirements: protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 90°f and above.
 - 1. In accordance with ACI 530.1
- C. Patch masonry only when air and surface temperatures are between and 55°f and 100°f and are predicted to remain above 55°f for at least 7 days after completion of work. On days when air temperature is predicted to go above 90°f, schedule patching work to coincide with time that surface being patched will be in shade or during cooler morning hours.
- D. Provide shoring, bracing, or support to prevent movement, settlement, or collapse of structure, work under demolition, or adjacent work to remain.
- E. Prevent grout or mortar used in assembly and repair work from staining face of surrounding surfaces. Immediately remove grout and mortar in contact with exposed surfaces.
- F. Protect sills, ledges, and projections from mortar droppings.

1.5 SEQUENCING AND SCHEDULING

- A. Order re-pointing mortar immediately after approval of samples. Take delivery of and store at project site a sufficient quantity of mortar to complete project.
- B. Perform re-pointing after repair of existing masonry, including replacing existing masonry with new masonry materials and cleaning.
- C. As scaffolding is removed, patch any anchor holes used to attach scaffolding. Patch holes in mortar joints in accordance with section covering re-pointing masonry.

PART 2 PRODUCTS

2.1 FACTORY-MIXED MORTAR

A. Match original mortar remnants on brick as determined from field sampling and laboratory analysis at the mortar manufacturers plant. Match for color, texture and compressive strength.

2.2 COMPONENTS

- A. Portland Cement: ASTM C150, Type I, gray color.
- B. Premix Mortar for below grade applications: ASTM C387/C387M, Type S using gray color cement.
- C. Premix Mortar for above grade applications: ASTM C387/C387M, Type N using colored cement.
- D. Mortar Aggregate: ASTM C144, standard masonry type.
- E. Hydrated Lime: ASTM C206, Type N.
- F. Mortar Color: color as selected by Architect from full range of available colors for above grade applications.
- G. Grout Aggregate: ASTM C404, fine.
- H. Water: Clean and potable.
- I. Bonding Agent: Latex type.
- J. Calcium chloride is not permitted.

2.3 MIXES

- A. Mortar Mixes:
 - 1. Mortar for Structural Masonry: ASTM C270, Type S using Proportion specification.
 - 2. Mortar for Non-Structural Masonry: ASTM C270, Type N using Proportion specification.
 - 3. Mortar For Glass Unit Masonry: ASTM C270, Type O using Property specification.
- B. Mortar Mixing:
 - 1. Thoroughly mix mortar ingredients in accordance with ASTM C270 in quantities needed for immediate use.
 - 2. Add mortar color.
- C. Grout Mixing:
 - 1. Mix grout in accordance with ASTM C94/C94M.
 - 2. Do not use anti-freeze compounds to lower freezing point of grout.
- D. Mixing Procedures:
 - 1. Measure materials by volume or equivalent weight. Do not measure by shovel; use known measure.
 - 2. To hydrate mortar, thoroughly mix ingredients dry. Mix again, adding only enough water to produce a damp mix which will retain its form when pressed in a ball. After keeping mortar in this dampened condition for 1-2 hours, add sufficient water to form proper consistency.
 - 3. Mix mortar using a clean mechanical batcher for 3-5 minutes or by hand until completely mixed.
 - 4. Place mortar within two hours of final mixing.
 - 5. Do not re-temper or use partially hardened materials

2.4 PARGING / COATING FOR CMU FOUNDATIONS

A. Cement based waterproof coating for concrete and masonry breathable, waterproof, and resistant to positive and negative hydrostatic pressure.

1. Thoroseal by Degussa or equal. Additive with Acryl 60.

2.5 ACCESSORIES

- A. Adjustable Anchors / Wire Ties to Connect to Existing Structure: Anchors / Wire Ties that allow for vertical and / or horizontal adjustment but resist tension and compression forces on the wall.
 - 1. Adjustable ties with pintle and eye connections with an adjustment of +/- 1 inch.
- B. Flexible Flashing:
 - 1. Self-adhering, flexible membrane flashing; cross laminated polyethylene film; self-healing; Nominal 40 mils thick.
 - a. WR Meadows; Air-Shield Thru-Wall Flashing
 - b. Grace Products, Perm-A-Barrier Wall Flashing
 - c. York, York Seal Peel & Stick Flashing
- C. Compressible Expansion Joint Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; formulated from closed cell neoprene or urethane. Sized as applicable to conditions.
- D. Weeps: Cellular Plastic Weep: One piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch less than other wythe of masonry.

PART 3 EXECUTION

3.1 PREPARATION

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from masonry restoration work. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during course of restoration and cleaning work.
- B. Prevent mortar from staining face of surrounding masonry and other surfaces. Cover sills, ledges, and projections to protect from mortar droppings. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering. Immediately remove mortar in contact with exposed masonry and other surfaces. Clean mortar splatters from scaffolding at end of each day.

3.2 INSTALLATION

A. Install mortar in accordance with ACI 530.1 Specification for Masonry Structures.

3.3 FIELD QUALITY CONTROL

- A. Testing of Mortar Mix: In accordance with ASTM C780.
- B. Testing of Grout Mix: In accordance with ASTM C1019.

3.4 GENERAL CLEANING

- A. As work proceeds and on completion, remove excess mortar, smears, droppings.
- B. Clean dirt and light staining from all brick surfaces.
- C. If the specified chemicals and cleaning processes do not remove graffiti, paint, or other stains, contact Architect for direction.
- D. Perform cleaning working from top to bottom working in sections around the building at one elevation at a time.
- E. Use spray equipment that provides controlled application at volume and pressure indicated. Adjust pressure and volume to ensure cleaning methods do not damage masonry.

3.5 REPOINTING MASONRY

- A. Joint raking: rake out all joints to be pointed by hand, using a mason's chisel that is not more than 1/4" thick or by approved hand grinding methods. If grinding is used, wet methods are required to minimize dirt and dust. Rake or grind out mortar from joints to depths equal to 2-1/2 times their widths but not less than 1-inch nor less than required to expose sound, un-weathered mortar.
 - 1. Remove mortar to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum or flush joints to remove dirt and loose debris. No abrasive methods of cleaning shall be used.
 - 2. Do not spall edges of masonry units or widen joints. Replace masonry units which become damaged.
 - a. Do not use power-operated grinders without Architect's written approval based on submission by Contractor of a satisfactory quality-control program and demonstrated ability of operators to use tools without damaging masonry. Quality control program shall include provisions for supervising performance and preventing damage due to worker fatigue.
 - 3. Replace any units which become damaged.
 - 4. if the existing bricks have worn rounded edges, recess final mortar slightly from face to a point where joint face will not be wider than the original joint.
- B. Joint Pointing:
 - 1. Rinse masonry joint surfaces with water to remove any dust and mortar particles. Time application of rinsing so that, at time of pointing, excess water has evaporated or run off, and joint surfaces are damp but free of standing water.
 - 2. Apply first layer of pointing mortar to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8-inch until uniform depth is formed. Compact each layer thoroughly and allow to become thumbprint-hard before applying next layer.
 - After joints are filled to uniform depth, place remaining pointing mortar in 3 layers with each of first and second layers filling approximately 2/5 of joint depth and third layer the remaining 1/5. Fully compact each layer and allow to become thumbprint-hard before applying next layer. Take care not to spread mortar over edges onto masonry surfaces, or to featheredge mortar.
 - 4. When mortar is thumbprint-hard, tool joints to match original appearance of joints as determined by the architect. Remove excess mortar from edge of joint by brushing.
 - 5. Cure mortar by maintaining in damp condition for not less than 72 hours.

3.6 PARGING

- A. Parge concrete/CMU foundation walls as follows:
 - 1. Provide all required tuckpointing of mortar joints prior to parging.
 - 2. Dampen masonry walls prior to parging.
 - 3. Surface Preparation
 - a. Surface preparation is extremely important for proper adhesion. Substrates must be sound, and free of dust, dirt, laitance, paints, oils, grease, curing compounds, or any other contaminants. Verify substrate has properly cured. Concrete should obtain 80% of design strength, typically achieved within 3 to 14 days. If efflorescence is present, mechanically remove it before proceeding.
 - b. All holes and cracks must be patched before installation.
 - c. Extremely smooth surfaces such as precast and cast-in-place concrete will require roughening or brush blast to ensure good adhesion.
 - 4. Mixing
 - a. Thoroseal is to be mixed with a mixing liquid consisting of a blend of Acryl 60 diluted with water. Dilute and mix per manufacturer requirements.
 - b. Refer to manufacturer requirements for blending, consistency, and for pot life.
 - 5. Application

- a. Thoroseal may be applied with a brush or broom or equivalent stiff fiber brush. Spray application not permitted. The substrate must be completely dampened with water before application starts. Do not saturate the substrate, but keep it cool and damp throughout the application.
- b. It is essential that the first coat be thoroughly worked into the substrate to completely fill and cover all voids, holes, and nonmoving cracks. Finish with a horizontal stroke for an even coat.
- c. Allow to cure 24 hours, then apply the second coat and finish with a vertical stroke. Above grade, the second coat can be replaced with a Thoro high-build architectural coating to achieve better color uniformity.
- d. On block or masonry walls, allow 5-7 days before applying second coat to eliminate joint read through.

3.7 FINAL CLEANING

- A. Where re-pointing work precedes cleaning of masonry, allow mortar to harden at least 30 days prior to final cleaning.
- B. After mortar has fully hardened, thoroughly clean exposed masonry surfaces using stiff nylon or fiber brush and clean water, spray applied at low pressure.

3.8 SCHEDULES

- A. General: Contractor to verify all existing masonry conditions, including anchorage to substrate, to determine scope of masonry repairs. Refer to drawings and additional work allowances to be included in the bid.
- B. CMU Foundations: Tuckpoint exposed mortar joints in CMU foundation wall where required by conditions.
- C. Limestone Sills: Remove and reset all limestone sills that are loose, displaced, or disbonded. If stone is cracked, broken, or missing, install a new limestone sill to match existing. Replacement will be a field change if needed. Re-point joints in 2 piece sills.
- D. Masonry Repairs:
 - 1. Remove damaged, cracked, spalled, or dislocated masonry units as required by conditions.
 - 2. Replace damaged masonry with new or salvaged masonry as applicable to the repair. Install new masonry per Section 04 20 00. Tooth into existing masonry as appropriate.
- E. Masonry Tuckpointing:
 - 1. Tuck point existing mortar joints where indicated and as required by existing conditions.
 - 2. Tuck point locations of removed hose bibs, address plaques, building equipment, electrical service, conduits, wiring, etc. that were anchored into the mortar joints.

END OF SECTION

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SECTION 04 20 00 - UNIT MASONRY

PART 1 GENERAL

1.1 SUMMARY

A. Section includes concrete and brick masonry units; anchorage, and accessories.

1.2 PERFORMANCE REQUIREMENTS

A. Clay Masonry Compressive Strength (f'm): 1,500 psi; determined by unit strength method.

1.3 SUBMITTALS

- A. Product Data: Submit masonry units and wall ties and other accessories.
- B. Samples: Submit two samples of brick to illustrate color, texture and extremes of color range.
 1. Contractor shall coordinate with brick suppliers to find brick match to the existing brick
 - color on the buildings.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with MSJC Code (ACI 530/ASCE 5/TMS 402) and MSJC Specification (ACI 530.1/ASCE 6/TMS 602).

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Repoint mortar joints and repair masonry only when air temperature is between and 40°f and 90°f and is predicted to remain so for at least 7 days after completion of work.
 - 1. In accordance with ACI 530.1
- B. Hot-weather requirements: protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 90°f and above.
 In accordance with ACI 530.1
- C. Patch masonry only when air and surface temperatures are between and 55°f and 100°f and are predicted to remain above 55°f for at least 7 days after completion of work. On days when air temperature is predicted to go above 90°f, schedule patching work to coincide with time that surface being patched will be in shade or during cooler morning hours.
- D. Provide shoring, bracing, or support to prevent movement, settlement, or collapse of structure, work under demolition, or adjacent work to remain.
- E. Prevent grout or mortar used in assembly and repair work from staining face of surrounding surfaces. Immediately remove grout and mortar in contact with exposed surfaces.
- F. Protect sills, ledges, and projections from mortar droppings.

1.6 MOCKUP

- A. Mockup masonry installation at one area, including mortar and accessories for review by Architect and Owner.
- B. Acceptable panel illustrating results of work will become standard for work of this section.

PART 2 PRODUCTS

2.1 BRICK UNIT MASONRY ASSEMBLIES

- A. Manufacturers:
 - 1. The Belden Brick Co.
 - 2. Glen-Gary Brick.

- 3. Bowerstone Shale Co.
- 4. Equal.
- B. Facing Brick: ASTM C216, Type FBS, Grade MW; color and texture as selected by Architect from full range of available colors/textures. Match existing brick.
 - 1. Brick Size and Shape: modular size.
 - 2. It shall be the contractor's responsibility to locate the appropriate brick match for each of the buildings.
- C. Precast Concrete sills: fabricated to suit opening, sized as required. Positive slope out to face of wall, extend 1 inch past face of brick.

2.2 CONCRETE MASONRY UNIT ASSEMBLIES

- A. Manufacturers:
 - 1. Snyder Brick & Block or Equal.
- B. Hollow Load Bearing Concrete Masonry Units: ASTM C90; normal weight.
- C. Solid Load Bearing Concrete Masonry Units: ASTM C90, normal weight.
- D. Hollow Non-Loading Bearing Concrete Masonry Units: ASTM C129, normal weight.
- E. Concrete Masonry Units: Size and Shape: Nominal modular size of 8 x 16 x 8 inches. Furnish special units for 90 degree corners, bond beams, bullnosed corners, and lintels.

2.3 ACCESSORIES

- A. Joint Reinforcement: ASTM A951: ladder/truss type, steel, 0.148 inch diameter side rods with 0.148 inch diameter cross ties; hot dip galvanized.
- B. Wall Ties: Corrugated formed sheet metal, 1" x 7" inch size x 20 gage thick; ASTM A153/A153M hot dip galvanized. Provide fasteners suitable for fastening through insulation board into framing [if applicable].
- C. Reinforcing Steel: ASTM A615, 60 ksi yield grade, deformed billet bars, uncoated finish.
- D. Mortar and Grout: As specified in Section 04 05 03.
- E. Self stick SBS type flashing, size and type to suit installation.
- F. Lap Sealant: Butyl type as specified in Section 07 90 00.
- G. Joint Filler: Closed cell polyethylene; oversized 50 percent to joint width; self expanding; 3/8 inch wide x by maximum lengths.
- H. Building Paper: ASTM D226; Type II, No. 30 unperforated asphalt felt.
- I. Weeps: Preformed plastic tubes, sloped thru mortar joint.
- J. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials, recommended by masonry unit manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify field conditions are acceptable and are ready to receive Work.

3.2 PREPARATION

A. Coordinate placement of anchors supplied by other sections.

3.3 INSTALLATION

- A. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- B. Coursing of Concrete Masonry Units:
 - 1. Bond: Running
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.
- C. Coursing of Brick units:
 - 1. Bond: Running
 - 2. Coursing: Three units and three mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.
- D. Weeps: Install weeps in outer wythe at 24 inches oc horizontally above through-wall flashing, at bottom of walls, and other locations where the downward flow of water will be stopped.
- E. Cavity Wall: Do not permit mortar to drop or accumulate into cavity air space or to plug weep holes.
- F. Joint Reinforcement and Anchorage CMU Foundation walls:
 - 1. Install vertical reinforcement at 48 inches on center per the drawings. Grout cores to receive reinforcing solid.
- G. Joint Reinforcement And Anchorage Masonry Veneer:
 - 1. Install horizontal joint reinforcement 16 inches oc. Place joint reinforcement continuous in first and second joint below top of walls.
 - 2. Place masonry joint reinforcement in first horizontal joint above and below openings.
 - 3. Secure wall ties to stud framed backing and embed into masonry veneer at maximum 16 inches oc vertically and 16 inches oc horizontally.
 - 4. Place wall ties at maximum 8 inches oc vertically within 8 inches of jamb of wall openings.
 - 5. Place wall ties at maximum 8 inches on center horizontally within 8 inches of head and sill of wall openings.
- H. Masonry Flashings:
 - 1. Extend flashings horizontally through outer wythe at foundation walls, above ledge or shelf angles and lintels and turn down on outside face to form drip.
 - 2. Turn flashing up minimum 8 inches and seal to sheathing over wood framed back-up.
 - 3. Lap end joints and seal watertight.
 - 4. Turn flashing, fold, and seal at corners, bends, and interruptions.
- I. Grouted Components:
 - 1. Reinforce CMU foundation wall per drawings.
 - 2. Place and consolidate grout without displacing reinforcing.
 - 3. Fill masonry cores with grout per Section 04 05 14.
- J. Cutting And Fitting:
 - 1. Cut and fit for pipes, conduit, sleeves, grounds, etc. Coordinate with other sections of work to provide correct size, shape, and location.
- K. Cleaning:
 - 1. Remove excess mortar and mortar smears as work progresses.
 - 2. Clean soiled surfaces with cleaning solution.
- L. Tolerances:
 - 1. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.

2. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft;1/2 inch in 30 ft.

3.4 SCHEDULES

- A. Install new masonry veneer at infill of existing openings where indicated on drawings. Tooth into existing masonry veneer.
- B. Remove and replace defective or deteriorated masonry with new masonry where indicated on drawings. Tooth into existing masonry veneer.

END OF SECTION

SECTION 04 23 00 - GLASS UNIT MASONRY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Glass masonry units; mortar bed and pointing mortar; and perimeter treatment, area well covers.

1.2 SUBMITTALS

- A. Product Data: Glass units, accessories.
- B. Samples: Two glass units, illustrating size variations, color, design, face pattern.
- C. Manufacturer's Installation Instructions: Special procedures, positioning of reinforcement, perimeter conditions requiring special attention.

1.3 QUALITY ASSURANCE

- A. Perform Work according to ACI 530 Building Code Requirements for Masonry Structures and ACI 530.1 Specification for Masonry Structures.
- B. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.
- C. Installer: Company specializing in performing Work of this Section with three years' experience.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Cold Weather Requirements: According to ACI 530.1 when ambient temperature or temperature of masonry units is less than 40 degrees F.
- B. Hot Weather Requirements: According to ACI 530.1 when ambient temperature is greater than 100 degrees F or ambient temperature is greater than 90 degrees F with wind velocity greater than 8 mph.

PART 2 PRODUCTS

2.1 GLASS MASONRY ASSEMBLIES

- A. Manufacturers:
 - 1. Pittsburgh Corning
 - 2. Seves Glassblock
 - 3. Pacific Glass Block

2.2 COMPONENTS

- A. Hollow Glass Units: Permanently seal hollow unit by heat fusing joint with joint key to assist mortar bond. Factory coat units edges to improve bond with mortar.
 - 1. Nominal Size: 8x8x4 inch, Pittsburgh Corning Signature Line
 - 2. Color: Clear glass.
 - 3. Pattern and Design: Essex AA Pattern
 - 4. Insulation Value: U-value of 0.51 BTU/sq ft/h/degree F.
 - 5. Compressive Strength: 400 to 600 psi.
 - 6. Visible Light Transmittance: 45 percent.
 - 7. Shading Coefficient: 0.45.
 - 8. Acoustic Sound Loss: 39 STC
- B. Stain-Resistant Pointing Mortar: One part portland cement, 1/8 part hydrated lime, and two parts graded (80 mesh) aggregate, proportioned by volume. Add aluminum tristearate, calcium stearate, or ammonium stearate equal to 2 percent of portland cement by weight.

2.3 ACCESSORIES

- A. Panel Reinforcement: Steel, hot dip galvanized to ASTM A153/A153M B2 finish.
 - 1. Side Rods: Two 0.147 inch diameter rods spaced 2 inches apart.
 - 2. Cross Rods: 0.147 inch diameter rods welded 8 inches o.c.
- B. Panel Anchors: Steel strips, 20 gage thick x 1-3/4 inch wide; punched with three rows of elongated holes, pattern staggered, hot dip galvanized to ASTM A153/A153M B2 finish.
- C. Asphalt Emulsion: Water based.
- D. Area Well Covers: Polycarbonate cover over existing area well. Minimum thickness of 1/8 inch plastic, sloped to drain water, Field Verify size and conditions.

2.4 MIXES

A. Mix mortar and grout ingredients according to Section 04 01 00.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify openings are ready to receive Work.

3.2 PREPARATION

- A. Clean glass units of substances that impair bond with mortar or sealant.
- B. Protect elements surrounding Work of this Section from damage or disfiguration.

3.3 INSTALLATION

- A. Locate and secure perimeter channel.
- B. Coat sill under units with asphalt emulsion as bond breaker, and allow to dry.
- C. Set panel anchors in mortar bed directly over coating.
- D. Install masonry with full mortar joints. Furrowing not permitted. Remove excess mortar.
- E. Maintain uniform joint width of 1/4 inch.
- F. Place panel reinforcement at every second horizontal joint in full mortar bed and at first course above and below openings within glass unit panel.
- G. Lap reinforcement joints 6 inches. Discontinue reinforcement at expansion joints.
- H. Isolate panel from adjacent construction on sides and top with expansion strips. Keep expansion joint voids clear of mortar.
- I. Shore assembly until setting bed will maintain panel in position without movement.
- J. Rake out perimeter joint to accommodate sealant as indicated.
- K. Fill joints with pointing mortar. Pack into voids. Neatly tool surface to concave profile.
- L. Remove excess mortar and sealant.

3.4 ERECTION TOLERANCES

- A. Variation from Joint Width: Plus or minus **1/8** inch and minus zero inches.
- B. Maximum Variation from Plane of Unit to Adjacent Unit: 1/32 inch.
- C. Maximum Variation of Panel from Plane: 1/8 inch.

END OF SECTION

SECTION 05 52 00 - METAL FABRICATIONS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes steel fabrications, including steel railing systems and steel guard rail systems.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM A53/A53M Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 - ASTM A123/A123M Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 3. ASTM A500/A500M Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
 - 4. ASTM A501 Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
 - 5. ASTM A513 Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing.
- B. SSPC: The Society for Protective Coatings:
 - 1. SSPC Steel Structures Painting Manual.
 - 2. SSPC Paint 20 Zinc-Rich Coating, Type I Inorganic and Type II Organic.

1.3 DESIGN REQUIREMENTS

- A. Design handrail, guardrail, and attachments to resist forces as required by Ohio Building Code. Apply loads non-simultaneously to produce maximum stresses.
 - 1. Guard Top Rail and Handrail Concentrated Load: 200 pounds applied at any point in any direction.
 - 2. Guard Top Rail Uniform Load: 50 pounds per linear foot applied in any direction.
 - 3. Intermediate Rails, Panels, and Baluster Concentrated Load: 50 pounds applied to 1 sf area.

1.4 SUBMITTALS

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.
- B. Samples: Submit samples of components upon request by Architect.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
 - 1. Structural Steel: AISC 303.
 - High Strength Bolted Connections: RCSC Specification for Structural Joints Using ASTM A 325 or A 490 Bolts.
- B. Finish joints in accordance with NOMMA Guideline 1.

1.6 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

PART 2 PRODUCTS

2.1 STEEL RAILING SYSTEM COMPONENTS

- A. Tubing: ASTM A513, Type 5, minimum 50 ksi yield strength.
- B. Pipe: ASTM A53, Grade B, Schedule 40
 - 1. Rails and Posts: 1 1/2 inch outside diameter [graspable]

- 2. Pickets: 3/4 inch outside diameter.
- C. Fittings: Elbows, T-shapes, wall brackets, and escutcheons as appropriate for conditions.

2.2 STRUCTURAL STEEL

- A. Channels and Angles: ASTM A36/A36M. 36 ksi.
- B. Structural Pipe: ASTM A53/A53M, Grade B.
- C. Structural Plates: ASTM A36/A36M. 36 ksi.

2.3 BOLTS, CONNECTORS, AND ANCHORS

- A. Bolts: Heavy hex, structural type.1. ASTM A325; Type 1, hot dipped galvanized, or Type 3, plain.
- B. Nuts: ASTM A563 heavy hex type.
 - 1. Finish: Hot dipped galvanized.
- C. Washers: ASTM F436; Type 1, circular. Furnish clipped washers where space limitations require.1. Finish: Hot dipped galvanized.
- D. Anchor Rods: ASTM F1554; Grade 55, weldable.
- E. Threaded Rods: ASTM A36/A36M.1. Finish: Hot dipped galvanized.

2.4 WELDING MATERIALS

A. Welding Materials: AWS D1.1; type required for materials being welded.

2.5 FABRICATION

- A. Continuously seal joined members by continuous welds. Grind exposed welds smooth.
- B. Fabricate connections for bolt, nut, and washer connectors.
- C. Fit and shop assemble components in largest practical sizes for delivery to site.
- D. Fabricate components with joints tightly fitted and secured. Furnish spigots and sleeves to accommodate site assembly and installation.
- E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- G. Exterior Components: Continuously seal joined pieces by continuous welds. Drill condensate drainage holes at bottom of members at locations not encouraging water intrusion.
- H. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- I. Exposed Welded Joints: NOMMA Guideline 1 Joint Finish 2.
- J. Accurately form components to suit stairs and landings, to each other and to building structure.
- K. Accommodate for expansion and contraction of members and building movement without damage to connections or members.

2.6 FINISHES

- A. Prepare structural component surfaces in accordance with SSPC SP 3 or as required by conditions.
- B. Shop prime structural steel members.

C. Shop apply finish coating system over primer.

2.7 ACCESSORIES

- A. Grout: Non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing additives, capable of developing minimum compressive strength of 5,000 psi at 28 days.
- B. Shop Primer: SSPC Paint 15, Type 1, red oxide.
- C. Touch-Up Primer: Match shop primer.

2.8 FINISHES

- A. Prepare surfaces in accordance with SSPC SP 1 and requirements of finish coating system.
- B. Shop prime items with one coat. Do not prime surfaces in direct contact with concrete or where field welding is required.
- C. Finish coatings per Section 09 90 00.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify field conditions are acceptable and are ready to receive work.
- B. Verify concealed blocking and reinforcement is installed and correctly located to receive wall mounted handrails.

3.2 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply items required to be cast into concrete and/or embedded in masonry with setting templates, to appropriate sections.

3.3 ERECTION

- A. Allow for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in alignment until completion of erection and installation of permanent bracing.
- B. Field weld components indicated.
- C. Do not field cut or alter structural members without approval of Architect/Engineer.
- D. After erection, touch up welds and abrasions to match shop finishes.

3.4 ERECTION TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From Alignment: 1/4 inch.
- C. Maximum Out-of-Position: 1/4 inch.

3.5 GROUT INSTALLATION

- A. Shim bearing plates and equipment supports to proper elevation, snug tighten anchor bolts.
- B. Fill void under bearing surface with grout. Install and pack grout to remove air pockets.
- C. Moist cure grout.
- D. Remove forms after grout is set. Trim grout edges to from smooth surface, splayed 45 degrees.
- E. Tighten anchor bolts after grout has cured for a minimum of 3 days.

3.6 FIELD QUALITY CONTROL

- A. Bolted Connections: Inspect in accordance with AISC 303.
 - 1. Visually inspect all bolted connections.
 - 2. For Direct Tension Indicators, comply with requirements of ASTM F959. Verify that gaps are less than gaps specified in Table 2.
- B. Welding:
 - 1. Certify welders and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.
 - 2. Visually inspect all welds.
 - 3. Ultrasonic Inspection: ASTM E164; perform on all full penetration welds.
- C. Correct defective bolted connections and welds.

END OF SECTION

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 GENERAL

1.1 SUMMARY

A. Section includes structural wall and roof framing, built-up structural members, non-structural interior wall framing, wall sheathing; subfloor sheathing; sill gaskets and flashings; preservative and fire retardant treatment; electrical panel backboards; blocking and related furring and framing materials.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A135.4 Basic Hardboard.
 - 2. ANSI A208.1 Mat-Formed Wood Particleboard.
- B. American Wood-Preservers' Association:
 - 1. AWPA M4 Standard for the Care of Preservative-Treated Wood Products.
 - 2. AWPA U1 Use Category System: User Specification for Treated Wood.
- C. ASTM International:
 - 1. ASTM C1396/C1396M Standard Specification for Gypsum Board.
 - 2. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 3. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 4. ASTM F1667 Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.
- D. Forest Stewardship Council:
 - 1. FSC Guidelines Forest Stewardship Council Guidelines.
- E. Green Seal:
 - 1. GS-36 Aerosol Adhesives.
- F. National Lumber Grades Authority:
 - 1. NLGA Standard Grading Rules for Canadian Lumber.
- G. Northeastern Lumber Manufacturers Association:
 - 1. NELMA Standard Grading Rules for Northeastern Lumber.
- H. South Coast Air Quality Management District:
 - 1. SCAQMD Rule 1168 Adhesive and Sealant Applications.
- I. Southern Pine Inspection Bureau:
 - 1. SPIB Standard Grading Rules for Southern Pine Lumber.
- J. U.S. Department of Commerce National Institute of Standards and Technology:
 - 1. DOC PS 1 Construction and Industrial Plywood.
 - 2. DOC PS 2 Performance Standard for Wood-Based Structural-Use Panels.
 - 3. DOC PS 20 American Softwood Lumber Standard.
- K. West Coast Lumber Inspection Bureau:
 - 1. WCLIB Standard Grading Rules for West Coast Lumber.
- L. Western Wood Products Association:
- 1. WWPA G-5 Western Lumber Grading Rules.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with the following agencies:

- 1. Lumber Grading Agency: Certified by DOC PS 20.
- 2. Wood Structural Panel Grading Agency: Certified by EWA The Engineered Wood Association.
- 3. Plywood Grading Agency: Certified by APA.
- 4. Lumber: DOC PS 20.
- 5. Wood Structural Panels: DOC PS 1 or DOC PS 2.
- B. Perform Work in accordance with Ohio Building Code.
- C. Apply label from agency approved by authority having jurisdiction to identify each preservative treated and fire retardant treated material.

PART 2 PRODUCTS

2.1 LUMBER MATERIALS

- A. Lumber Grading Rules: SPIB, ASLS.
- B. Beam Framing: southern yellow pine species, No. 1 grade, 2" and wider size classification, 19 percent maximum moisture content.
- C. Joist Framing: southern yellow pine species, No. 1 grade, 2" and wider size classification, 19 percent maximum moisture content.
- D. Columns: southern yellow pine species, No. 2 grade, 4" and wider size classification, 19 percent maximum moisture content.
- E. Non-structural Light Framing: Stress Group D, spruce, pine, fir species, 19 percent maximum moisture content.
- F. Studding: Stress Group D, spruce, pine, fir species, 19 percent maximum moisture content.
- G. Sill Plate: AWPA C2 Lumber, Stress Group D, spruce, pine, and fir species, and 19 percent maximum moisture content, pressure preservative treated.

2.2 SHEATHING MATERIALS

- A. Wall Sheathing: ANSI A208.1, Oriented Strand Board [OSB]; wood chips set with waterproof resin binder; unsanded faces; 7/16 inch thickness; 48x96 inch sized sheets
- B. Roof Sheathing: ANSI A208.1, Oriented Strand Board [OSB]; wood chips set with waterproof resin binder; unsanded faces; 3/4 inch thickness; 48x96 inch sized sheets [match existing conditions]
- C. Subfloor Sheathing: APA Rated Sheathing Structural I, Span Rating 24/16, Exposure Durability 1, unsanded; 3/4 inch thickness; 48x96 inch sized sheets. Alternate: 1x6 lumber infill.
- D. Electrical Panel Back Board: 3/4 inch thick Plywood, sized for application

2.3 UNDERLAYMENT

- A. Plywood Underlayment: Rated Sheathing Structural I, Span Rating 24/16, Exposure Durability 1, sanded; ¼ or ½ inch thickness [conform to flooring installation requirements]; 48x96 inch sized sheets.
- B. Cement Board: Refer to Section 09 21 16.
- C. Luan Plywood Underlayment: 1/4 inch Thickness, sanded, 48x96 inch sized sheets.

2.4 FIREBLOCKING AND FIRESTOPPING

A. Fireblocking: Solid lumber, structural wood panel, or particleboard.

- 1. Solid lumber nominal 2 inches thick.
- 2. Structural wood panel 23/32 inch thick with joints backed by structural wood panel.
- B. Draftstopping: Gypsum board or OSB
 - 1. Gypsum board: 1/2 inch thick.
 - 2. OSB: 7/16 inch thick.

2.5 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Fasteners: ASTM A153/A153M, hot dipped galvanized steel for high humidity and treated wood locations, unfinished steel elsewhere.
 - 2. Nails and staples: ASTM F1667.
- B. Die Stamped Connectors: galvanized steel, specific type/profile as applicable
- C. Structural Framing Connectors: Galvanized steel, sized to suit framing conditions.1. Simpson or Equal.
- D. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Powder actuated fasteners into slab. Hilti or Equal. All anchors sized to suit application and loads.
- E. Sill Gasket: Plate width, closed cell foam strip.
- F. Sill Flashing: Polyethylene Sheet or Galvanized Steel.
- G. Subfloor Glue: ASTM D3498, water base, waterproof.
- H. Weather Resistive Barrier / Building Paper: ASTM D226; spun bonded polyethylene, Tyvek or Equal. Coordinate with existing conditions as appropriate.

2.6 WOOD TREATMENT

- A. Wood Preservative (Pressure Treatment): AWPA U1, Commodity Specification A-Sawn Products or F-Wood Composites using water-borne preservative with .25 pcf retention.
- B. Fire Retardant Treatment: Chemically treated and pressure impregnated, having flame spread of 25 or less when tested in accordance with ASTM E 84 and showing no evidence of significant progressive combustion when test is continued for an additional 20 minute period, Exterior or Interior Type.
- C. Moisture Content After Treatment: Kiln dried (KDAT).
 - 1. Lumber: Maximum 19 percent.
 - 2. Structural Panels: Maximum 15 percent.

PART 3 EXECUTION

3.1 FRAMING

- A. Set structural members level and plumb, in correct position.
- B. Fasten framing in accordance with Ohio Building Code.
- C. Place horizontal members crown side up.
- D. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in alignment until completion of erection and installation of permanent bracing.
- E. Provide all required shoring and temporary bracing required to support structure prior to removing any load-bearing components.

- F. Construct load bearing framing members full length without splices.
- G. Double members at openings. Space short studs over and under opening to stud spacing.
- H. Place full width continuous sill flashings under framed walls on cementitious foundations. Lap flashing joint 4 inches.
- I. Place sill gasket directly on cementitious foundation. Puncture gasket clean and fit tight to protruding foundation anchor bolts.
- J. All exterior framing intended to be left exposed to weather shall be pressure treated and anchored with galvanized fasteners and appropriate connectors.
- K. All framing in contact with concrete shall be treated. Interior or exterior walls.
- L. Frame new walls, partitions, and openings to suit conditions and as designed.
- M. Install solid 2x bearing at each end of beams and headers. Ensure that blocking is positioned with full support/blocking under to existing bearing conditions. Install supplemental blocking as required between joists, framing, etc.
- N. Bridge joists at mid-space with solid 2x blocking.

3.2 SHEATHING

- A. Install sheathing over framing members in full size sheets in accordance with APA Construction Guide.
- B. Fasten sheathing in accordance with Ohio Building Code.
- C. Install subfloor sheathing with longer edge perpendicular to floor framing with end joints staggered. Secure sheet edges over firm bearing. Attach sheathing with subfloor glue and appropriate fasteners.
- D. Install underlayment in accordance with APA Construction Guide.
 - 1. 3d x 1 ¼" ring shank nails at 3" at perimeter and 6" in field. No staples permitted.
 - 2. Glue to subfloor as applicable by condition.
- E. Secure wall sheathing with ends staggered, over firm bearing.
- F. Install new underlayment at areas of wood framed floor systems where required for new finish flooring. Remove all existing underlayment down to original subfloor as required.
- G. Place WRB/building paper over wall sheathing, weather lap joints and end laps, staple in place. Coordinate flashing installation to ensure continuous water resistant barrier.
- H. Install electrical panel back board with plywood sheathing. Size back board by 12 inches beyond size of electrical panel.

3.3 FIREBLOCKING AND DRAFTSTOPPING

- A. Install fireblocking to cut off concealed draft openings as required.
 - 1. Concealed Framed Wall and Furred Spaces: Install fireblocking vertically at floor and ceiling levels and horizontally.
 - 2. Connections Between Horizontal and Vertical Spaces: Install fireblocking between vertical walls and partitions and the following:
 - a. Horizontal floor and roof framing.
 - b. Soffits, dropped ceilings, cove ceilings and other horizontal concealed spaces.

3.4 SITE APPLIED WOOD TREATMENT

A. Treat site sawn cuts. Brush apply one coat of preservative treatment on untreated wood in contact with cementitious materials.
B. Allow preservative to cure prior to erecting members.

3.5 TOLERANCES

A. Framing members: 1/4 inch from indicated position, maximum.

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SECTION 06 20 00 - FINISH CARPENTRY

PART 1 GENERAL

1.1 SUMMARY

A. Section includes interior and exterior finish carpentry items, other than shop prefabricated casework; solid surface components; solid surface window sills, closet rods and shelving, hardware and attachment accessories.

1.2 SUBMITTALS

- A. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, finishes, and accessories.
- B. Samples: Submit two samples illustrating wood grain, colors/finishes and profiles.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with AWI Quality Standards, Custom Grade.
- B. Surface Burning Characteristics: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

PART 2 PRODUCTS

2.1 EXTERIOR FINISH CARPENTRY

- A. Porch Columns / Trim: 1x composite trim, S4S, width to match conditions, prep for painted finish.
- B. Miscellaneous Exterior Trim: Clear pine. 1x material by widths as indicated on drawings and to match existing conditions. Aluminum wrap where indicated / to match existing conditions.
- C. Exterior Door Trim: 1x composite trim as required by conditions. New exterior door frames are steel. [match existing width / conditions as appropriate].

2.2 COMPOSITE TRIM

- A. Exterior synthetic/composite trim, ASTM C 1185
 - 1. Manufactured by Boral TruExterior Trim or Equal
- B. Properties:
 - 1. Density, ASTM C 1185, 40 to 50 pcf.
 - 2. Water Absorption, ASTM D 570: Less than 1.5 percent.
 - 3. Fungi Rot, AWPA E10:
 - a. White Rot: Negligible Loss.
 - b. Brown Rot: Negligible Loss.
 - 4. Termite Resistance, AWPA E1: Greater than 9.0 with 10 being impervious.
 - 5. Flexural Strength, ASTM C 1185: Greater than 1,600 psi
 - 6. Nail Withdraw, ASTM D 1761: Greater than 50 lbf/in.
 - 7. Coefficient of Linear Expansion, ASTM D 6341: 1.40E-05 in/in/degree F
 - 8. Flame Spread, ASTM E 84: Between 25 and 29.
 - 9. Smoke Developed, ASTM E 84: Less than 450.
- C. Trim Sizes: Coordinate with drawings as applicable.1. Exposed Texture: Smooth.

2.3 INTERIOR FINISH CARPENTRY

- A. Interior Running Trim for Opaque [Painted] finish:
 - 1. Grade: Custom
 - 2. Cut: plain sawn
 - 3. Finger jointing: permitted

- 4. Species: pine, poplar, or any close grained hardwood lumber. [MDO, MDF, PVC or other composite materials not permitted]
- 5. Profiles:
 - a. Base Trim:
 - 1) 3-1/4 inch ranch [WM 724] profile [match existing as appropriate]
 - b. Shoemold Trim:
 - 1) 1/2 inch x 3/4 inch shoe mold [WM 126]
 - c. Door Casing Trim:
 - 1) 2-1/4 inch ranch [WM327] profile [match existing as appropriate]
 - d. Shelving Cleats [if required]
 - 1) 3/4 inch x 3-1/2 inch square with eased edge
 - e. Miscellaneous Trim:
 - 1) Size and profile to suit conditions.
- B. Interior Running Trim for Transparent [Stained] finish:
 - 1. Grade: Custom
 - 2. Face: plain sawn
 - 3. Finger jointing: not permitted
 - 4. Species: Oak or other close grained hardwood lumber [as approved by Architect]
- C. Interior Handrails: Hardwood lumber for Opaque [Painted] finish:
 - 1. Grade: Custom
 - 2. Species: pine, poplar, any close grained hardwood lumber.
 - 3. Profile: 1-1/2 x 1-3/4 radiused profile [WM 230]
 - 4. Accessories: Handrail brackets: Heavy Duty rated, Satin Nickel, space at approximately 48 inches on center [provide blocking in wall as required]
- D. Plywood: Graded in accordance with AWI Custom veneer with lumber core; birch face species, rotary cut, primed for painted finish.
- E. Hardwood Flooring for Transparent [Stained] finish:
 - 1. Grade: Match existing for grain, finish, and quality
 - 2. Species: Red Oak [unless existing differs match existing as appropriate]
 - a. 2 1/4 inch wide, 3/4 inch thick, tongue and groove strip flooring, match existing.

2.4 INTERIOR FINISH COMPONENTS

- A. Plastic Laminate Countertops: Refer to Section 12 35 30.
 1. Interior Adhesives: Maximum VOC content in accordance with SCAQMD Rule 1168.
- B. Solid Surface Tub / Shower Surround / Lavatory Tops: Refer to Section 06 61 16
- C. Solid Surface Window Sills: Solid polymer fabrication: Homogeneous filled acrylic; not coated, laminated or of composite construction meeting ANSI Z124.3 and 6, Type 6. Color as selected from full range of colors included premium colors. As manufactured by Formica, Wilsonart, Hanex, or Equal.
 - 1. Fabricate for installation at window stools. Minimum of ½" thick with eased edges.
 - 2. Superficial damage to a depth of .010" shall be repairable by sanding and polishing.
- D. Wire Closet Shelving / Closet Rod: open-wire closet shelving system with rod system. ClosetMaid Close Mesh Shelf and Rod or Equal.
 - 1. 12" shelf depth with hanging rod below
 - 2. Vinyl coated steel, PVC vinyl thickness 9-11 mills
 - 3. Support brackets at 36" on center max.
 - 4. End caps at all open or cut ends.
- E. Closet Rod [Contractor Alternate]: 1 5/16" heavy weight white closet rod, cut to length, white or chrome steel wall brackets and intermediate supports [at maximum of 36" o.c.]. Manufactured by Lido Designs or Equal.
 - 1. Anchor wall brackets into 1x6 cleats mounted to walls/framing.

06 20 00 - 2 FINISH CARPENTRY

- F. Closet / Storage / Pantry / Linen Shelving [Contractor Alternate]: ³/₄" medium density fiberboard [MDF], sanded, bullnose edge. Install on 1x cleats mounted to blocking in the wall.
- G. Non-Rated Access Panels [located within individual dwelling units]:
 - 1. Access panels: sized as required by conditions or equipment requiring servicing.
 - a. $\frac{1}{2}$ " thick finish A / C grade plywood, painted.
 - b. 2 ¼" colonial profile trim surround, installed to overlap the perimeter of opening.
 - c. Screwed into framing.
 - d. Plastic access panels secured to framing may be permitted at interior partitions in inaccessible locations [cabinets, closets, etc.] for plumbing access points, etc.
- H. Fire Rated Access Panels: Refer to Section 08 31 13.
- I. Non-Fire Rated Access Panels located in common areas: Refer to Section 08 31 13.

2.5 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Fasteners: Size and type to suit application, stainless steel for exterior, high humidity and treated wood locations, plain finish elsewhere.
 - 2. Nails and Staples: ASTM F1667.
- B. Contact Adhesives: Water Base type.
- C. Wall Adhesive: Cartridge type, compatible with wall substrate, capable of achieving durable bond.
- D. Primer: Alkyd primer sealer type.
- E. Hardware: as required to suit application.

2.6 FABRICATION

A. Fabricate to AWI Custom standards.

2.7 SHOP FINISHING

- A. Sand work smooth and set exposed nails and screws.
- B. Apply wood filler in exposed nail and screw indentations.
- C. On items to receive transparent finishes, use wood filler matching surrounding surfaces and of types recommended for applied finishes.
- D. Stain, seal, and varnish exposed to view surfaces, refer to Section 09 90 00.
- E. Seal internal surfaces and semi-concealed surfaces.
- F. Seal surfaces in contact with cementitious materials.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify field conditions are acceptable and are ready to receive work.

3.2 PREPARATION

A. Prime paint surfaces of items or assemblies in contact with cementitious materials, before installation.

3.3 INSTALLATION

- A. Install work in accordance with AWI Custom quality standard.
 - 1. Set and secure materials and components in place, plumb and level.
 - 2. Install trim by nails.
 - 3. Miter trim and return to wall where applicable.

- 4. Install hardware.
- B. Preparation For Finish:
 - 1. Sand work smooth and set exposed fasteners. Apply wood filler in exposed fastener indentations.
 - 2. Site Finishing: Refer to Section 09 90 00.

SECTION 06 61 16 - SOLID SURFACING FABRICATIONS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes cast plastic/solid surface fabrications.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- B. Underwriters Laboratories Inc.:
 - 1. UL Fire Resistance Directory.

1.3 SUBMITTALS

- A. Shop Drawings: Indicate dimensions, thicknesses, required clearances, tolerances, materials, colors, finishes, fabrication details, field jointing, adjacent construction, methods of support, integration of plumbing components, and anchorages.
- B. Product Data: Submit data on specified component products, electrical characteristics and connection requirements.
- C. Samples: Submit **two** samples representative of solid surface chips illustrating color, texture, and finish.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit list of approved cleaning materials and procedures required; list of substances harmful to component materials, Include instructions for stain removal, surface and gloss restoration.

1.5 QUALITY ASSURANCE

A. Surface Burning Characteristics: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

1.7 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.8 WARRANTY

A. Provide manufacturer's standard warranty for lavatory sinks, shower/bath wall systems.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Swan Corporation, or Equal.

2.2 COMPONENTS

A. Solid Surface Resin: Homogeneous compression molded material composed of acrylic resins or polyester/acrylic blend, fire-retardant filler materials, fiber reinforcement, and integral coloring agents; stain resistant to domestic chemicals and cleaners; meeting ANSI Z124.3; ASTM E84, ASTM D 570.

- 1. Construction make up:
 - a. Nominal sheet thickness of 0.25"
 - b. Nominal countertop thickness of 0.75"
 - c. Nominal bathtub/shower wall sheet thickness of 0.225"
 - d. Nominal shower base thickness as determined by manufacturer.
- B. Color: as selected from ALL manufacturer colors.
- C. Polishing Cream: Compatible polishing cream to achieve specified sheen to gel coat.
- D. Adhesive: type approved by manufacturer, cartridge dispensed.

2.3 FABRICATION

- A. Fabricate components by mold to achieve shape and configuration.
- B. Gel coat exposed finish surfaces smooth and polish to low sheen, uniform finish.
- C. Radius corners and edges.
- D. Provide holes and cutouts for plumbing and bath accessories as indicated on the drawings.
- E. Cure components prior to shipment, except sheet materials requiring site handling.

2.4 ACCESSORIES

- A. Supply materials for installation of products as specified in manufacturer's printed instructions including color matched silicone sealant and adhesives where applicable.
- B. Supply accessory components as indicated in the schedule in this section.

2.5 SHOP FINISHING

A. Color: color as selected by Architect from full range of standard and premium color options.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions are ready to accept solid surfacing materials.
- B. Verify joint preparation and affected dimensions are acceptable.

3.2 PREPARATION

- A. Provide anchoring devices for installation.
- B. Provide templates and rough-in measurements.

3.3 INSTALLATION

- A. Align work plumb and level.
- B. Rigidly anchor to substrate to prevent misalignment.
- C. Seal to adjacent construction in accordance with appropriate sealant.

3.4 ERECTION TOLERANCES

- A. Maximum Variation From Indicated Dimension: **1/8** inch.
- B. Maximum Offset From Indicated Position: 1/8 inch.

3.5 CLEANING

A. Clean and polish fabrication surfaces.

3.6 SCHEDULES

- A. Lavatory Top: Swanstone Chesapeake Single Bowl Lavatory Top, sized per drawings, 3 1/2 inch backsplash and side splash panel, 1 1/4 inch thick top with eased edges; integral bowl with overflow. Color as selected by Architect.
- B. Tub Surround: Swanstone Bathtub 3-Panel Wall Kit, SSIT-60-3, designed to fit tub area 33 1/2 inch deep x 60 inches wide or smaller. Back panel with integral trim, two side panels with integral trim, 2 bathtub apron strips, two corner moldings. Provide nominal 4 inch trim surround at each side and along top of shower walls. Cut / trim to fit as applicable, cut and return into window openings where they occur [Swanstone Window Trim Kit]. Color as selected by Architect.
 - 1. Provide [1] corner shelf SS-7211 or Equal
 - 2. Provide [2] corner soap dishes ES-2 or Equal
- C. Accessible Transfer Shower: Swanstone Veritek Perfomix Transfer Trench Drain Shower, FTF-3838 shower base. Swanstone Shower Wall Kit, SK-366272. Back panel with integral trim, two side panels with integral trim, two corner moldings. Cut / trim to fit as applicable. Color as selected by Architect
 - 1. Provide [1] recessed shelf/alcove RS-2215 or Equal
 - 2. Provide [2] corner soap dishes ES-2 or Equal
 - 3. Field installed shower accessories grab bars, seat, etc.

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SECTION 07 21 00 - THERMAL INSULATION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes batt thermal insulation and vapor retarder in exterior walls, blown thermal insulation in ceilings/roof construction; expanding foam insulation for joints and cracks in the building envelope.

1.2 SYSTEM DESCRIPTION

- A. System performance to provide continuity of thermal barrier and vapor retarder at building enclosure elements in conjunction with air barrier materials.
- B. Vapor Retarder Permeance: Maximum 1 perm when tested in accordance with ASTM E96/E96M, water method.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product data including thermal performance of materials. Provide recycled content and emissions information as part of the product data.

1.4 QUALITY ASSURANCE

- A. Furnish and label cellulose loose fill insulation in accordance with CPSC 16 CFR 1209 and CPSC 16 CFR 1404.
- B. Insulation Installed in Concealed Locations Surface Burning Characteristics:
 - 1. Foam Plastic Insulation: Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
 - 2. Other Insulation: 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
- C. Insulation Installed in Exposed Locations Surface Burning Characteristics:
 - 1. Other Insulation Materials: 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
 - 2. Attic Floor Insulation: Minimum 0.12 watt per sq cm critical radiant flux when tested in accordance with ASTM E970.

PART 2 PRODUCTS

2.1 BUILDING INSULATION

- A. Insulation Manufacturers:
 - 1. Certainteed.
 - 2. Johns Manville.
 - 3. Owens-Corning Fiberglass.
 - 4. Dow Building Products
 - Mineral Fiber Insulation Manufacturers:
 - 1. Roxul AFB or Equal
- C. Two part closed cell polyurethane expandable insulation
 - 1. Dow Building Solutions, Great Stuff or Approved Equal.

2.2 COMPONENTS

R

- A. Batt Insulation for walls: ASTM C665, preformed glass fiber batt, friction fit, conforming to the following:
 - 1. Thermal Resistance: R of 13.
 - 2. Facing: Kraft paper.

- B. Blanket Insulation for fire resistance rated demising walls: ASTM C665 Type 1; ASTM E90; preformed mineral fiber batt/blanket; friction fit, conforming to the following:
 - 1. Thermal Resistance: R of 13; 3 1/2 inch thickness [match wall assembly thickness].
 - 2. Facing: None.
- C. Blanket Insulation for fire resistance rated demising floors: ASTM C665 Type 1; ASTM E90; preformed mineral fiber batt/blanket; friction fit, conforming to the following:
 - 1. Thermal Resistance: R of 30; 7 1/4 inch thickness.
 - 2. Facing: None.
- D. Fiber Fill Insulation: ASTM C764, glass fiber type, bulk for pneumatic placement.
- E. Ventilation Baffles: Formed rigid fiberboard or cardboard used with fiber fill insulation, sized to fit between roof framing members to permit cross ventilation of attic and eave. Provide complete vertical return down to meet top of top plate at wall framing. Length as required by conditions and provide clear ventilation path to ridge.

2.3 ACCESSORIES

- A. Adhesive: Type recommended by insulation manufacturer for application.
- B. Exterior Walls, Sill Seal Insulation: Poly foam sill seal gasket, 3 ¹/₂" wide roll type installation. Owens Corning Foam SealR or Equal.
- C. Slab on Grade Sheet Vapor Barrier: 6 mil polyethylene film.
- D. Tape: Polyethylene self-adhering type, mesh reinforced, 2 inch wide.
- E. Insulation Fasteners: Impaling clip of galvanized steel or nylon with washer retainer and clips, to be adhered to surface to receive board insulation, length to suit insulation thickness and substrate, capable of securely and rigidly fastening insulation in place.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate, adjacent materials, and insulation boards are dry and ready to receive insulation.

3.2 INSTALLATION

- A. Vapor Barrier
 - 1. Install vapor barrier over compacted granular base in accordance with manufacturer requirements.
 - 2. Tape and seal all laps, joints, tears, etc. per the manufacturer requirements to maintain the continuous air seal.
- B. Exterior Walls, Sill Seal Insulation:
 - 1. Roll sill seal gasket onto top of foundation wall. Butt all ends tightly together.
 - 2. Pierce at anchor bolt locations.
- C. Exterior Wall Batt Insulation:
 - 1. Install in exterior walls without gaps or voids.
 - 2. Fit insulation tight in spaces. Leave no gaps or voids.
 - 3. Install with factory applied membrane facing warm side of building spaces. Attach flanges of facing to framing members.
 - 4. Seal vapor retarder to framing to ensure airtight installation.
- D. Demising Wall Blanket Insulation:
 - 1. Install in demising walls without gaps or voids.
 - 2. Fit insulation tight in spaces. Leave no gaps or voids.
- E. Floor Blanket Insulation:

- 1. Install in demising walls without gaps or voids.
- 2. Fit insulation tight in spaces. Leave no gaps or voids.
- F. Attic Ventilation Air Baffles:
 - 1. Install pre-formed attic air baffles between each truss bay along the perimeter of the building. Return baffles down to meet exterior edge of top plate.
 - 2. Maintain required clearance between underside of roof sheathing per shingle manufacturer requirements.
 - 3. Maintain required depth between top plate and baffle to maintain a minimum level of R-21 to exterior edge of top plate.
 - 4. Extend baffles sufficiently to allow insulation to the described depth/thickness.
- G. Ceilings/Attic Blow in Insulation:
 - 1. Place insulation pneumatically, tight in truss bay spaces.
 - 2. Place insulation against baffles. Do not impede natural attic ventilation from eave to ridge.
 - 3. Place against and behind mechanical and electrical services within plane of insulation.
 - 4. Completely fill intended spaces. Leave no gaps or voids.
- H. Expanding polyurethane insulating foam insulation/sealant:
 - 1. Clean surfaces from debris, dust, and dirt.
 - 2. Spray in place using care not to apply to adjacent surfaces.
 - 3. Trim back flush or slightly behind finish surfaces.

3.3 SCHEDULES

- A. Exterior Wall Sill Seal Insulation: ¹/₄" thick foam roll under bottom plate, at areas of new sill plate.
- B. Exterior Stud Wall Insulation: New R13 batt, kraft faced, friction fit. Exterior walls where impacted by other work / existing framing is exposed.
- C. Demising Stud Wall Insulation: New R13 mineral wool blanket, friction fit. All demising walls where impacted by other work / existing framing is exposed.
- D. Demising Floor Insulation: New R30 mineral wool blanket, friction fit. All floors where finishes have been removed and where impacted by other work / existing framing is exposed.
- E. Attic Spaces: New R-38 blown in attic insulation. Install new baffles at eaves. Maintain existing insulation where it exists, supplement / blow in above existing to a minimum of R-38. All attics.
- F. Gaps/Cracks in floor slab around openings for bathtubs, piping, etc. and around perimeter of building foundation where wall meets slab: Fill gap or crack with expanding polyurethane foam sealant.
- G. Miscellaneous gaps and cracks in building envelope: Fill gaps with expanding foam sealant where applicable such as gaps at window and door openings, etc. Install minimal expansion foam at all locations where sealant may bow or warp materials.
- H. Expanding foam sealant: Install at all joints of stud/plate, sheathing, penetration of wiring into stud cavity top/bottom plates, into box/cable penetrations, around openings and other cracks/joints in building envelope. Install at all interior partitions at wiring, etc. through top/bottom plates.
- I. Expanding foam sealant: Install at all penetrations of ductwork, conduits, etc. through the floor, walls or ceiling. Cap all chases with a rigid air barrier as applicable for the condition. Seal all HVAC boots, electrical boxes, etc. to the gypsum board finishes.
- J. Expanding foam sealant: Install at backside of all stud cavity bays at joint between each wood stud and face of exterior sheathing. Typical all exterior walls where framing is exposed and as impacted by other work.

- K. Expanding foam sealant: Fill all cavities at framed building corners, etc. with foam sealant. Refer to drawings for framing details.
- L. Special Note: Refer to the air-sealing guidelines and requirements as part of Green Communities Requirements, and follow applicable requirements. All insulation shall be installed and certified as Grade 1 installation in accordance with Energy Star requirements.
- M. Note: Fibrous insulation is NOT acceptable as part of the air sealing strategies in the building envelope.

SECTIONS 07 31 13 - SHINGLES AND ACCESSORIES

PART 1 GENERAL

1.1 WORK INCLUDES, BUT NOT LIMITED TO:

General: Existing Roof system is scheduled to remain. Install new penetrations as applicable to the proposed work. Flash into existing shingle roof system to maintain watertightness and integrity of the roof system.

- A. Installation of shingles and underlayment where impacted by work.
- B. Installation of associated ice and water shield membrane and synthetic underlayment.
- C. Installation of vents, pipe boots and accessories.

1.2 APPLICABLE REFERENCES

- A. The following references form a part of this specification.
 - 1. ASTM D3462 Asphalt Shingles, Fiberglass, Class A, Mineral surfaced
 - 2. ASTM D1970 Rubberized Asphalt Membrane.
 - 3. ASTM B209 Aluminum.
 - 4. ASTM E 108 Fire Test of Roof Coverings
 - 5. [SMACNA] Sheet Metal and Air Conditioning Contractors Association- 6th Edition or Current Manual
 - 6. [OSHA] Occupational Safety and Health Administration, Guidelines
 - 7. ANSI/SPRI WD-1 Wind Design Standards
 - 8. CertainTeed, Shingle Applicators Manual [Current Edition].
 - 9. ASTM D3161 Wind Testing for Steep Sloped Roofing.
 - 10. ASTM D226/D4869 Underlayment.
 - 11. ASTM D7158 H, Wind Rating for Asphalt Shingles

1.3 PRECAUTIONS

- A. Do not install shingles or roofing when the temperature is below 45 degrees F or when rain or snow is falling.
- B. Do not overload the structure with storage of materials or equipment.

1.4 SEQUENCING/SCHEDULING AND PROTECTION

- A. Building space underneath roof work is utilized by on-going operations. Coordinate all work with Owner including, material storage and contractor parking. Owner's approval required before proceeding with the work. Contractor must provide overhead protection for Owners / Residents / Visitors, etc from falling materials/debris at building entry points and other hazard locations.
- B. Coordinate the work of installing all associated items in such sequence that will not necessitate movement of workers and equipment over completed roof areas.
- C. Sequence work so that all underlayment, flashing, etc. is installed to produce a watertight condition as work progresses.
- D. Protect building surfaces/interior spaces against damage from roofing work. It is the Contractor's responsibility to take any necessary actions to prevent construction-related leaks, to include but not limited to repairing watertight existing surrounding roofing scheduled to be replaced or overlaid. Surround roofing areas include roof top material storage areas, workers roof top access to from roofing work site areas and any drainage system [roof drain-scuppers] leak issues located in work area. Contractor must include the cost to deal with these existing leak sources into the overall project unless the Owner is made aware of these leak sources prior to commencement of the project.

07 31 13 - 1 SHINGLES AND ACCESSORIES E. Provide, erect barricades, guardrails as required by applicable regulatory advisory to protect occupants of building and workers.

1.5 MANUFACTURER'S WARRANTY [Shingles/Protective Membrane]

- A. Provide a manufacturer's warranty for both repairs/replacements due to any faults in the material and workmanship [Total System Responsibility]. Any leak repairs/replacement due to normal wear and tear, membrane defects, workmanship defects, damage due to wind speeds as noted [10 meters above ground], shall be performed at no charge to the owner through the period of the warranty.
 - 1. Shingles: Furnish a 15 year,110 miles per hour wind warranty, 15-year algae resistance warranty, [50] fifty-year manufacturer's defects warranty with a prorated 10-year labor and material replacement warranty.
 - 2. Protective Membrane: Furnish a [30] thirty year prorated waterproof warranty.
 - 3. Vents: Lifetime warranty.

1.6 MEETINGS/COORDINATION

- A. A pre-installation conference one week prior to commencing work of this section will be mandatory. All parties responsible for work in this section are required to attend.
- B. Progress meetings will be held during construction. Memos resulting from these meetings will be provided to the Owner and Contractor by owner's rep.
- C. Daily reporting by the Contractor is required.
 - 1. Contractor to email project team daily with outline summary of work accomplished, any problems encountered such as bad deck, etc.
 - 2. Contractor to email project team on days when weather prohibits work to indicate a 'weather day'

PART 2 PRODUCTS

2.1 ASPHALT SHINGLES

- A. ASTM D 3462, CertainTeed SAINT-GOBAIN, Landmark PRO, Dimensional, two-piece laminated fiber glass construction, UL class A rating, 240 -267 pounds per square, self-sealing type, class F, algae resistance, wind rated and a manufactures defects and replacement warranty. Color to be selected by Owner from full range of colors.
 - 1. All shingles shall be from the same dye lot.

2.2 FASTENERS

A. General: Fasteners/Anchors: strength, type and configuration must meet the required pull test resistance for each attachment application. Fasteners rate and pattern must be FMG or local code approved to meet the intent of the wind uplift rating specified. The contractor shall determine fastener lengths, minimum embedment: steel-3/4 inch, concrete/concrete block-1 ¼ inch, gypsum 2 inches and wood blocking 1 1/4 inch [decking ¾ inch]. All fasteners shall be corrosion resistant steel in accordance with meeting ASTM F1667 [2015].

2.3 ACCESSORIES

- A. <u>Cap Nails for Underlayment</u>: Simplex, Plex-Cap, length as required to penetration wood decking ³/₄ inch.
- B. <u>Nails for shingles</u>: Round wire type, corrosion resistant, 3/8-inch minimum diameter head, 11or 12-gauge shank, length as required to penetration wood decking ³/₄ inch [use longer nails for attachment of ridge vent, when required].
- C. <u>Ridge Vents</u>: CertainTeed filtered ridge vent, shingle-over vent, 9 Inches or 12 inches wide, polypropylene construction, internal baffles to deflect wind and drainage system, weep holes, 9 square inches of net free venting per linear foot, color black.

07 31 13 - 2 SHINGLES AND ACCESSORIES

- D. <u>Roof [static vents]</u>: Lomanco, 750 series, slant back, weather tight seamed collar, pre-finished aluminum, size as required. Color to closely match shingle color.
- E. <u>Pipe Boots</u>: Manning Building Products 'Perma-boot or Protech Specialty Products , pipe boot.
- F. <u>Plastic Cement</u>: ASTM D4586, Asphalt type with mineral fiber components, free of toxic solvents, capable of setting within 24 hours at temperatures of 75 degrees F and 50 percent RH.
- G. <u>Lap Cement</u>: Fibrated cutback asphalt type, recommended for use in application of underlayment, free of toxic solvents.
- H. Flashing Materials:
 - 1. Sheet Flashings: As specified in Section 07 62 00.
 - 2. Gutters and Downspouts: As specified on Section 07 71 23.
- I. <u>Base Flashing</u>: 24 gauge galvanized steel, 4 inch roof / vertical flange, 7 inch long.

2.4 SHINGLE UNDERLAYMENT/RUBBERIZED ASPHALT PROTECTIVE MEMBRANE

- A. Ice and Water Shield: ASTM D 1970, Certainteed WinterGuard or Equal, 40 mil thick selfadhering membrane with strippable release paper, homogeneous rubberized asphalt waterproofing compound, fiberglass reinforced, skid resistant sand / granular surface, self sealing
- B. Synthetic Underlayment: ASTM D-828; Synthetic high strength woven roof underlayment; 100% polypropylene fabrication; CertainTeed Roof Runner or Equal.
 - 1. Install and secure using the pre-printed nailing pattern for increased wind resistance.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify all existing and newly replaced wood decks are level and smooth after existing roof system, underlayment, and deteriorated decking is removed. Verify deck surfaces are dry, free of ridges, warps, or voids.
- B. Remove and replace deteriorated wood decking [deteriorated framing/conditions allowance].
- C. Verify roof penetrations and plumbing stacks are in place and flashed to deck surface.
- D. Verify roof openings are correctly framed.

3.2 PREPARATION

- A. Fill knot holes and surface cracks with latex filler at areas of eave and valley protection membrane. Cover knot holes with sheet metal.
- B. Broom clean deck surfaces under ice dam membrane and underlayment.
- C. Ensure penetrations are correctly framed.
- D. Fill all holes in areas where eave/valley protection membrane is being installed.
- E. Replace any deteriorated wood decking.

3.3 SHINGLE UNDERLAYMENT AND ICE AND WATER SHIELD MEMBRANE

- A. Ice and Water Shield Membrane Installation:
 - 1. Install ice and water shield membrane parallel with eave edge, flush with face of eave edge flashing with edges lapped shingle style and ends lapped and staggered between rows. Unroll underlayment parallel to the eave. Install over the drip edge at the eave flashing and under the rake edge flashing. Install underlayment in accordance with manufacturer's instructions without distortions capable of preventing shingles from sealing.

07 31 13 - 3 SHINGLES AND ACCESSORIES

- 2. Weather lap joints minimum 2 inches at side laps and 6 inches at end laps.
- 3. Secure underlayment in place with fasteners at the perimeter of the roll and in field of roll per manufacturer installation instructions.
- 4. Install self-adhered protective ice and water shield membrane / underlayment at the following areas / conditions with careful detailing: Eaves, intersections of roof-wall [1 full sheet], rake / roof edges [1 full sheet], and valleys [1 full sheet centered in valley].
- B. Synthetic Underlayment Installation:
 - 1. Install synthetic underlayment parallel to the eave edge with edges lapped shingle style and ends lapped and staggered between rows. Install underlayment in accordance with manufacturer's instructions without distortions capable of preventing shingles from sealing.
 - 2. Weather lap joints a minimum of 3 inches at side laps and 6 inches at end laps.
 - 3. Weather lap and seal items projecting through or mounted on roof watertight with plastic cement.
 - 4. Secure underlayment in place with fasteners at the perimeter of the roll and in field of roll per manufacturer installation instructions.
 - 5. Install synthetic roof underlayment at all roof areas which do not receive ice and water shield.
- C. Synthetic Underlayment Installation for roof slopes between 2:12 and 4:12
 - 1. Install [2] layer application in accordance with the manufacturer's installation instructions for low slope applications.

3.4 ACCESSORIES INSTALLATION

General, all accessories shall be installed in accordance with manufacturer's written guidelines with installation summary as outlined herein.

- A. Ridge Vents shall be installed on ridges as where shown. After the underlayment is installed. Cut roof deck on both sides of the ridge. Center ridge vent over opening and nail in place. Install ridge shingles with nails long enough to penetrate the deck 1 inch.
- B. Intake Vents shall be installed on the lower section of the roof just above the eaves as shown. After the underlayment is installed, cut a slot thru the decking to allow for the venting. Center the vent over the opening and nail in place. Install new underlayment over the vent, over the underlayment install the starter shingles. Nail pattern may be deviated to avoid nailing into the slot.
- C. Static Box Vents to be located as shown and evenly spaced. Center the vent between rafters and approx. 24 inches down from the ridge. Saw out the deck where the vent is being installed. If the shingles have been installed, remove the nails so the flashing flange of the vent will slide under the shingles with the embossed arrow pointing up centered over opening. Once the throat of the vent is aligned, apply roof cement to the bottom of the vent. Seven nails are required to fasten the vent keeping the nail heads under shingles where possible or applying roof cement to exposed nail heads in accordance with manufacturer's recommendations.
- D. Metal Flashing and Accessories Installation:
 - 1. Flashings shall be provided at the intersection of the roofs, adjoining walls, or projections through the deck.
 - 2. Shingle base flashing shall be installed in accordance with SMACNA Fig. 4-22A recommendations.
 - 3. Counter-flashing shall be surface mounted attached with wood fasteners as applicable fitted with EPDM washer at 12 inches on center with minimum of 1 inch embedment. Apply bead of sealant on the top of the flashing. Counter flashing shall overlap base flashing sheet metal a minimum of 3 inches and shall terminate no lower than 4 inches above the finished roof surface, unless approved by the manufacturer.
 - 4. Weather lap joints minimum 2 inches and seal weather tight with plastic cement.

07 31 13 - 4 SHINGLES AND ACCESSORIES

- 5. Secure in place with nails. Conceal fastenings.
- 6. Flash and seal Work weather tight, projecting through or mounted on roofing with plastic cement.

3.5 SHINGLE APPLICATION

General, all shingles shall be installed in accordance with manufactures written guidelines.

- A. Apply starter strips at eaves. Starter strips shall consist of one layer of strip shingles laid with cutouts reversed. Project strip 1/2 inch beyond eaves line to form a drip overlap. Fasten strip in place within row of nails 1 inch above lower edge and spaced 3 inches on center. Lay first course of shingles directly on top of starter strip, flush with drip edge. Succeeding courses shall have chalk lines snapped as required for proper alignment. Nail 1 inch from each end of the shingle and 12 inches from each end, **6 nails per shingle.** All 6 nails must be placed on a white line 5-5/8 above the butt edge of the shingle. A cutout must never overlap another cutout in the below course. Firmly press each tab into the factory applied sealant. If the sealant appears not to be adhering the shingle apply new sealant.
- B. Ridges shall be 3-tab shingles cut in three sections or ridge shingles. Bend shingle at center, nail in place using 2 nails each located 4-1/2 inches from the exposed butt end and 1 inch from the side edge. Place to avoid exposed nails, all exposed nails shall have roof cement applied over nail heads. Use nails long enough to penetrate thru both layers of shingles and into wood ³/₄ inch. Shingles installed over ridge vents shall have nails long enough to penetrate shingle all layers and into decking 1 inch.
- C. Valleys shall be the closed cut type [no metal], Install full length [course] shingles 12 inches beyond the valley center, nail shingles in place avoiding nails 6 inches from the center of valley. Chalk a line in the valley center, then cut shingles along chalk line using a sheet metal under shingles avoiding cut thru shingles below. Trim corners of each shingles at a 45-degree angle and apply sealant under shingles on both sides of the valley and any other area requiring sealant. Follow printed manufacturers installation instructions.

3.6 CLEAN UP

A. Clean up all debris resulting from each day's work.

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SECTION 07 46 00 - VINYL SIDING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes vinyl lap siding, soffits, composite trim, flashings, accessories, and fastenings.

1.2 SUBMITTALS

- A. Product Data: Submit data indicating materials, component profiles, fastening methods, jointing details, sizes, surface texture, finishes, and accessories.
- B. Samples: Submit two samples illustrating surface texture and color.

1.3 PERFORMANCE REQUIREMENTS

- A. PVC Fire Resistance: Provide vinyl siding products that meet or exceed the following ratings:
 1. Flame spread index 20, fuel contribution 0, smoke development rating 360, per ASTM E 84.
 - 2. Self-ignition temperature: 824 degrees F per ASTM D 1929.
 - 3. Fire endurance classification of 1 hour, per ASTM E 119 as wall assembly.
- B. Siding: TPO Fire Resistance: Provide thermoplastic polyolefin siding products that meet or exceed the following ratings:
 - 1. Minimum self-ignition temperature of 650 degrees F per ASTM D 1929.
 - 2. Smoke density rating of 40, per ASTM D 2843.

1.4 **PROJECT CONDITIONS**

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.5 WARRANTY

A. Furnish lifetime limited manufacturer warranty for prefinished siding products.

PART 2 PRODUCTS

2.1 SIDING

- A. Manufacturers:
 - 1. Westlake Royal Building Products, Exterior Portfolio, [basis of design]
 - 2. Certainteed, Siding Products Group.
 - 3. Alcoa Building Products.
 - 4. Mastic Home Exteriors
- B. Product Description: Furnish vinyl lap siding and trim components.

2.2 COMPONENTS

- A. Vinyl Siding Components: Extruded polyvinyl chloride; comply with requirements of ASTM D3679.
 - 1. Provide elongated nailing slots on nailing flanges to allow for movement.
 - 2. Factory-notch ends of horizontal panels to form overlapping joints.
 - 3. Provide products that meet weathering requirements of ASTM D3679.

2.3 VINYL SHAKE SIDING

A. Portsmouth Shakes and Shingles EP: D5 Cedar Shingles

2.4 VINYL HALF ROUNDS

A. Portsmouth Shakes and Shingles EP: Half Rounds

2.5 VINYL SOFFITS

- A. Soffits: Polyvinyl Chloride: PVC compound with cell classification of 13344-B, as defined by ASTM D 4216, meeting or exceeding the following properties:
 - 1. Provide elongated nailing slots on nailing flanges to allow for movement.
 - 2. Factory-notch ends of horizontal panels to form overlapping joints.
 - 3. Provide products that meet weathering requirements of ASTM D 4477.
- B. Triple 4" soffit, fully vented, Triple 4 Traditional Soffit, Vented
 - 1. Design: Triple 4 inches fully vented.
 - 2. Width: 12 inches plus or minus .062 inch.
 - 3. Length: 12 feet plus or minus) .025 inch.
 - 4. Average Thickness: 0.040 inch.
 - 5. Exposure: 12 inches single nailing hem.
 - 6. Panel Projection: 1/2 inch.
 - 7. Maximum Warp (per 2 panels): 0.250 inch.
 - 8. Ventilation: 10.0 sq. inches per sq. ft.
- C. Soffit Accessories:
 - 1. J-Channel: 3/8 inch (10 mm) by 12 feet, 6 inch length, for vertical and eave applications.
 - 2. F-Channel: 5/8 inch (15.88 mm) and 3/4 inch by 12 feet 6 inches (3.81 m) length.
 - 3. Soffit Double Channel Lineal: 3/8 inch or 1/2 inch by 12 feet, 6 inches length, for eave applications.
 - 4. Soffit Cove Trim: 1/2 inch by 12 feet, 6 inches length.
 - 5. Color: Match soffit color.

2.6 ACCESSORIES

- A. Provide all related accessories, trim, etc. for a complete installation.
- B. Nails: Hot dipped galvanized type, non-staining, for concealed installation.
 - 1. Vinyl Siding Nails: Minimum 0.313 inch diameter head and 0.125 inch shank diameter; length required to penetrate support minimum 0.75 inch.
- C. Building Paper: Spun bonded polyolefin sheeting, Tyvek or Equal.
- D. Flashings: 26 gauge thick metal to match siding.
- E. Accessory Components:
 - 1. Vinyl starter strips, J-mold, F-mold, interior and exterior corner posts, and related trim profiles; of same material and finish as siding/soffits.

PART 3 EXECUTION

3.1 **PREPARATION**

A. Verify framing conditions are within allowable tolerances without twists, bows, waves, etc.

3.2 INSTALLATION

- A. Install vinyl siding in accordance with ASTM D4756 and manufacturer's instructions.
- B. Install all required supplemental blocking and furring as required to allow installation as scheduled.
- C. Nail vinyl siding into solid backing per manufacturer's requirements.1. Nail to aligned pattern.
- D. Align level, and plumb.

- E. Install metal flashings at areas required by siding manufacturer.
- F. Install corner strips, closures, trim.
- G. Install sealant as applicable to prevent weather penetration. Maintain neat appearance.
- H. Install flashing around openings, etc.

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SECTIONS 07 62 00/07 71 00 - SHEET METAL, FLASHING

PART 1 GENERAL

1.1 WORK INCLUDES BUT NOT LIMITED TO:

General: Intent of project is to provide new sheet metal components for the new roof systems and related fascia / rake components.

- A. Removal of existing sheet metal items as noted and in the preparation of reroofing section.
- B. Installation of new sheet metal items:
 - 1. Drip edges [face less than 3 ¹/₂ inches, non-wind rated]
 - 2. Fascia and rake metal covers.
 - 3. Fasteners.
 - 4. Bib flashing, counter flashing and other sheet metal items.
 - 5. Gutters and downspouts.

1.2 APPLICABLE REFERENCES

- A. General: The following references form a part of this specification.
 - 1. ASTM A653 Metallic Coated, Sheet Steel [Galvanized], Grade A, Hot Dipped, Zinc Coated, Coating Class G90.
 - 2. ASTM A792, Metallic Coated, Sheet Steel [Galvalume and Galvalume plus], Grade 40, Coating Class A250 [galvalume] or AZ55 [galvalume plus], 55 % Aluminum-45 % Zinc Alloy.
 - 3. ASTM A755, Pre-Finished, Sheet Steel [Galvanized/galvalume], Grade 40, Coating Class A250 or G90, Pre-painted by the coil coating process.
 - 4. ASTM B209, Aluminum.
 - 5. ASTM E108 Fire Test of Roof Coverings.
 - 6. [FMG] Factory Mutual Global Current Approval System [NAV assembly numbers], Loss Prevention Data Sheets for Roof Deck Securement for Above Deck Roof Components, Perimeter Flashings, Wind Design-ANSI/FM 4474, Approval Standard FM 4470 and Roof Loads for Construction
 - 7. [UL] Underwriters Laboratories Roofing Materials and Systems Directory, Fire Resistance Directory, Current Edition.
 - 8. [NRCA] National Roofing Contractors Association Current Roofing and Waterproofing Manual, including shop-fabricated edge metal testing data.
 - 9. [AISC] Manual of Steel Construction
 - 10. [SMACNA] Sheet Metal and Air Conditioning Contractors Association-Current Manual
 - 11. [OSHA] Occupational Safety and Health Administration, Guidelines
 - 12. [ASCE] 7-10 Minimum Design Loads for Buildings
 - 13. [ANSI/SPRI/FM] 4435 standard ES-1-17 Wind Design for Edge Systems
 - 14. [NFPA] National Fire Protection Association, 58 Liquefied Petroleum Gas Code
 - 15. [ANSI/SPRI] WD-1 Wind Design Standards

1.3 QUALITY ASSURANCE

- A. Fabricator/Installer: Company specializing with skilled workers in sheet metal with minimum 5 years documented experience, never been terminated by a manufacturer for workmanship problems and be capable of providing the warranties as specified.
- B. Sheet Metal items and installation shall comply with SMACNA's [Architectural Sheet Metal] and NRCA [Roofing] current manuals.

1.4 COORDINATION

A. Coordinate sheet metal flashing, trim layout installation with adjoining roofing to provide a leakproof, secure, non-corrosive installation.

07 62 00 - 1 SHEET METAL FLASHING

1.5 PERFORMANCE REQUIREMENTS

- A. Fire Hazard Classification: Underwriters Laboratories [UL], Use only Class A fire-rated materials as tested in accordance with ASTM E 108 or UL 790 for exterior fire.
- B. Install sheet metal items to withstand wind loads, structural movement, by preventing buckling, opening of joints, hole elongation, failure of joint sealant, failure of connections and other detrimental effects.
- C. All perimeter metal items [copings and edges] must have been tested to resist equal or greater wind design load.

1.6 DELIVERY, STORAGE and HANDLING

- A. Do not overload structure with storage of materials; verify roof deck weight capacity and location of structural supports, only items needed that day shall be stored on the roof. Limit loads on roof to 25 pounds per square foot for uniformly distributed loads for wood decks. Store and protect products in accordance with manufacturer's instructions.
- B. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact. Protect sheet metal items during transportation and handling.
- C. Store products in weather-protected environment [manufacturer's plastic wrap is accepted for proper protection, unless wrap is broken, torn, removed], clear of ground 4 inches minimum and exposure from direct sunlight. Use breathable tarps for moisture protection as needed. Damaged materials will be marked 'rejected' by the contractor/owner or Owner's rep. and removed from the site.
- D. Storage of flammable liquids in buildings is prohibited. All combustible debris shall be removed from the site daily.

1.7 WEATHER CONDITIONS

A. Do not apply materials during inclement weather, high winds or when the chance of rain is 60% or greater, percentage as listed on www: weather.com for the local area, percentage as listed when read at 7 AM local time or at time of work commencement.

1.8 SEQUENCING and SCHEDULING

A. Building space underneath roof work is utilized by on-going operations. Coordinate all work with Owner including, material storage, scaffolding [as required] and contractor parking. Owner's approval required before proceeding with the work. **Contractor must provide overhead protection for owner's workers from falling materials/debris at building entry points.**

1.9 MANUFACTURERS WARRANTIES

- A. Provide a manufacturer's warranty for both repairs/replacements due to any faults in the material and workmanship. Any repairs/replacement due to normal wear and tear, material finish defects and workmanship defects. Warranty shall cover finish fading, chalking, cracking, peeling or failure of paint to adherer to base metal.
 - 1. Sheet metal items shall be warranted watertight for [20] twenty years by the roof membrane manufacturer.
 - Sheet metal manufacturer of record must provide a [20] twenty-year finish warranty for the metal fascia, coping and edge as outlined herein, covering, finish and base metal. Warranty shall be a lifetime warranty for defects of material or failure to resist wind speeds.
 - 3. Sheet metal coping and roof edges that terminate or attach into the roof membrane shall be warranted for winds up to 72 MPH by the roof membrane manufacturer [part of the warranty]. Pre-manufactured items regardless of their location must be warranted by the

07 62 00 - 2 SHEET METAL FLASHING metal manufacturer for winds to meet or exceed 120 mph [90 mph edges] and also be certified to meet or exceed the design pressure and other requirements as stated herein.

B. In the event of a default by the contractor, the manufacturer will provide a new contractor to fulfill the warranty obligation.

1.10 PORTABLE FIRE EXTINGUISHERS

- A. Two standard listed multipurpose dry chemical fire extinguisher, NFPA 10, with 10-pound capacity, 4A-60B:C UL rating shall be provided and located near the work area. Additional fire extinguishers shall be provided for different roof levels/work sites.
 - 1. Contractor to ensure all personnel are trained to use fire extinguishers.

1.11 DEFINITIONS

A. Shop fabricated includes items that will be formed at the fabricators shop predominately by press brake. Prefabricated or manufactured items will be plant manufactured ready for installation. Both items must be wind rated in compliance with ANSI/SPRI/FM ES-1-17

PART 2 PRODUCTS

General: All products shall be state approved and Building Code approved as applicable. Some items below may not be required for this project, but are outlined herein if required during course of work due to changing conditions or changes in scope.

2.1 FABRICATION

A. Fabricate sheet metal items to comply with recommendations in SMACNA [architectural Sheet metal manual] and NRCA [NRCA roofing manual]. Conceal fasteners and expansion provisions where possible on exposed to view items. Provide expansion provisions as recommended where lapped or bayonet type expansion cannot be used.

2.2 FASTENERS/SPECIALTY ITEMS

General: Fasteners/Anchors: strength, type and configuration must meet the required pull test resistance for each attachment application. Fasteners rate and pattern must be FMG or local code approved to meet the intent of the wind uplift rating specified. The contractor shall determine fastener lengths, minimum embedment: steel 3/4-inch, concrete/concrete block-1 ¼ inch, and wood-1 1/4 inch. Fastener manufacturers listed are ITW Buildex, IWT Red Head and Tru-Fast or equal. All fasteners shall be corrosion resistant steel in accordance with meeting ASTM F1667 or type 304 stainless. *Wind rated copings and edges required - see details for selection of item.*

A. Summary of fasteners and requirements are as follows:

- 1. <u>Metal Counterflashing and other LG metal sheets to Wood</u>, ITW Buildex, 'Scots Teks' [AB point] stainless steel-hex head, ¼ inch, corrosion resistance steel shank with EPDM washer.
- Metal Counterflashing and Other LG Sheet Metal [exposed] to Masonry, ITW Red Head, 1/4 inch, 'Scots Tapcon', stainless steel-hex head, HL treads, corrosion resistant steel shank, with EPDM washer.
- 3. <u>Termination Bars [exposed] to Masonry</u>, ITW Red Head, ¼ inch, 'Scots Tapcon', stainless steel-hex head, HL treads, corrosion resistant steel shank, with EPDM washer.
- 4. <u>General Purpose Stainless Steel</u>: Series 304 fasteners, with or w/out EPDM washers.

B. Summary of specialty items and requirements as follows:

- 1. <u>Continuous Cleats</u>: Galvanized steel, 22 gauge.
 - <u>Counter-flashing</u>: Pre-finished, 24 gauge metal, fabricated in lengths maximum 12 feet, designed to be removable. CF to be notched and lapped at inside corners and joints. Flashings shall be provided at the intersection of the roofs, adjoining walls or projections through the deck [chimney/ vent stacks etc.].

07 62 00 - 3 SHEET METAL FLASHING

- 3. <u>Fascia / Rake Cover</u>: .032 inch thick pre-finished aluminum, brake formed to profiles required.
- 4. <u>Downspouts:</u> .024 inch thick pre-finished aluminum, corrugated rectangular profile with smooth with flat lock seams, complete with mitered elbows, size 2 x 3 inches, unless otherwise noted.
- <u>Gutter</u>: Pre-finished, .032 inch thick pre-finished aluminum, K style profile, continuous, straight back, size 6 inch x 4 1/2 inch, with gutter spacers, spaced at 24 inches on center. Complete with end pieces, outlet tubes and other items required. Fabricate expansion joints, expansion joint covers with same metal as the gutter. Longest length possible, 50 foot maximum, between expansion butt joints. SMACNA Figre 1-6 Lap Type
- 6. <u>Gutter Guards</u>: Perforated aluminum sheet 0.027 inch thickness, with baked enamel finish. Fabricated to fit into front of gutter and slip under first row of shingles. Secure to top edge of gutter. 4'-0" long sections. Color selected by Architect. Leaf Relief TP300 or Equal.
- 7. <u>Splash guard</u>: Pre-finished aluminum valley splash guards, standard size and type. Locate at all internal corners along the terminate of valleys at the gutter.
- 8. Downspout Hangers: 1/16-inch-thick aluminum. Straps with hidden anchors
- 9. Drip Edge at Shingle Roof Systems: .024 inch thick prefinished aluminum
- 10. <u>Step Flashing, Sheet Metal</u>: 24 gauge pre-finished galvanized metal as shown.

2.3 SHEET METAL

General: Roof membrane manufacturer supplied and approved components [copings/fascia edges - if required/shown] must be used, these sheet metal components must be premanufactured and be tested and approved in accordance with ANSI/SPRI/FM ES-1 test method, FM Class Number 4435 approved standard and must be included into the roof warranty. Fabricated by Metal Panel System, Architectural Products, Metal Era, Pac-Clad Peterson, Una-Clad, Drexel Metals or Dimensional Metals, etc., [Drip edge/gravel stop edge - roof penetrating flange type, may be pre-manufactured or shop fabricated, the metal manufacturer may allow the contractor to use their metal/materials/installation methods and shop fabricate and install the items in accordance with their wind rated ES-1 and FM 4435 standard approved tested drip/gravel stop edge rated requirements, only will be accepted if the metal manufacturer and/or the contractor is a certified ES-1 sheet metal shop and will provide/support the wind and finish warranties as outline herein and meet RDA design requirements].

All other metal shall be shop fabricated in accordance with SMACNA 6th Edition or other details or pre-manufactured as shown. All pre-finished metal shall be fabricated using aluminum unless not available. All metal components not incorporated into the roof system and is not outlined herein or shown on the drawings shall be fabricated with .032 prefinished aluminum otherwise directed by RDA.

- A. Pre-Finished Sheet Steel [Galvalume]: ASTM A792, grade 40, class A250, 24 or 22 gauge [as noted], primed and preprinted by coil coating, finished exposed to view side with a fluoropolymer Kynar 500 PVDF resin coating and a wash coat .5 mil thick applied to the reverse side, 20-year warranty covering fade, chalking and film integrity. Colors as selected by owner.
- B. Sheet Steel [Galvalume Plus]: ASTM A792, grade 40, 24 or 22 gauge [as noted], coating class AZ55, coated with an organic resin .012 to .090 inches thick, thermally cured. Finished on both sides with a fine sparkle appearance. 20-year warranty covering fade, chalking and film integrity. Colors as selected by owner.
- C. Pre-Finished Sheet Steel [Galvanized]: ASTM A755/A653, G90, 24 or 22 gauge [as noted], primed and preprinted by coil coating, finished exposed to view side with a fluoropolymer Kynar 500 PVDF resin coating and a wash coat .5 mil thick applied to the reverse side, 20-year warranty covering fade, chalking and film integrity. Colors as selected by owner.

- D. Pre-Finished Aluminum: ASTM B209, 3105 H15 alloy, thickness .032, .040 or .050 [or as noted], primed and repainted by the coil coating, finished exposed to view side with a fluoropolymer kynar 500 PVDF resin coating and a wash coat .5 mil thick applied to the reverse side, 20-year warranty covering fade, chalking and film integrity. Colors as selected by the owner.
- E. Galvanized Sheet Steel: ASTM A653, hot dipped, zinc-coated, G90, gauges as shown.

2.4 SEALANTS/TAPES

General: Provide joint sealants, backings and other materials as required to seal joint that are compatible with each other based on test and field experience.

- A. ASTM C920, Type S, Grade NS, Class 25 as required for each joint condition, single component, elastomeric silicone polymer, non-staining, non-shrinking, non-sagging and ultraviolet resistance, clear or to match surrounding existing color.
 - 1. Provide where sealant is exposed or movement exceeds butyl sealant capability.
- B. Gutter: GE Silicone II or equal, Clear in color.
- C. Butyl Sealant: ASTM C1311, single component, solvent released butyl rubber sealant, polyisobutylene plasticized.
- D. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release paper.

PART 3 EXECUTION

3.1 EXAMINATION AND CONDITIONS

A. Verify that surfaces and site conditions are ready to receive work.

3.2 PROTECTION

- A. Protect building surfaces/interior spaces against damage from work.
- B. Provide, erect barricades, guardrails as required by applicable regulatory advisory to protect occupants of building and workers.

3.3 INSTALLATION OF SHEET METAL AND SPECIALTY ITEMS

General: Sheet metal items shall be installed in accordance with manufacturers and NRCA's/SMACNA recommendations and details from their current manual. Anchor sheet metal items securely in place with provisions for expansion. Use items as required to complete the sheet metal or drainage system. Where dissimilar metals contact each other, protect against galvanic action by coating material as recommended by the fabricator. Seal joints with sealant as required for a watertight condition.

- A. Continuous cleat [for non-pre-manufactured metal components]: Cleats shall not exceed 12 feet in length; allow a ¼ inch gap between pieces. Fasten cleat to wood nailer top as applicable at 4 inches on center [staggered pattern-1 inch from edge] with corrosion resistant annular threaded nails [3/16-inch head], long enough to penetrate the wood 1 ¼ inch.
- B. Termination bars shall be placed no more then 1 1/2 inches down from top of base flashing and be fastened at 6 inches on center with concrete self-tapping [tapcon] or wood fasteners, as applicable fitted with an EPDM washer. Provide sealant at top edge of bars.
- C. Counter-flashing [CF] shall be surfaced mounted [SM] or in existing or new riglets/receivers with lap joints 4 inches. Attach SM with concrete self-tapping [tapcon] or wood fasteners, as applicable fitted with an EPDM washer at 12 inches on center, 1-inch minimum embedment. Attach riglets installed CF with components recommended by the manufacturer, including metal wedges and edge crimping. Apply a bead of sealant on the top of 45% angle lip of the metal flashing, if SM type. CF shall overlap base flashing a minimum of three inches, fit tightly

07 62 00 - 5 SHEET METAL FLASHING to base flashing and shall terminate no lower than 4 inch above finished roof surface, unless approved by the manufacturer.

- D. Wind Rated pre-manufactured ES-1 approved coping sections shall be jointed together with a butt type joint with 8-inch-wide concealed splice located underneath the 10 to 12-foot-long panels, which must allow to expand and contract freely while locked in place. Provide factory-fabricated corners, intersections and ends. Coping metal anchor clips to be anchored to wood nailer or surface material at splice joints and within the coping panel [approx. every three feet on center-2 feet in corners.] or coping that is installed using continuous cleats on both sides shall have cleats anchored on top of nailer at 12 inches on center. Provide self-adhered or adhered 60 mil thick EPDM or TPO or PVC over nailers/substrate to allow moisture to drain off edges without moisture to enter wall under coping cap [provide non-curing dual sealant strips on each side of splice plates]. Both methods shall use stainless steel fasteners or other fasteners to meet the wind resistance rating pressures as shown and as recommended by coping manufacturer **print approvals**. Coping shall have a 4-inch vertical end flange where terminating into wall, counter-flash flanges.
- E. Wind Rated ES-1 approved continuous cleated drip edge/gravel stop shall have the cleat face anchored into the nailer face at 12 inches on center. Space cleats as outlined by the metal manufacturer. The exposed to view metal edge to be cleated and fastened on top of the nailer at 6 inches on center. Strip-in flange with membrane over the top of the fastened roof flange. Edge face shall be a single piece extending down to overlap and cover nailers and down exterior wall. Follow manufacturer installation instructions.
- F. Downspouts shall be attached to the gutter with screws. Ensure downspout sections are attached to the wall with 1 1/2-inch-wide, .063-inch-thick aluminum straps [2 per 10 foot section] Fig 1-35G SMACNA 6th Edition, using 2 fasteners per strap [provide if none exist]. Downspouts terminating at ground or roof shall be provided with an elbow fitting and a concrete splash block [provide a roof membrane sheet under blocks that terminate on the roof]. If existing receivers are available downspouts shall be inserted into receives, provide size and shape adapters as necessary.
- G. Gutter to be attached to fascia / substrate at 24 inches on center thru spacers/gutter back. Screws to penetrate wood 1 ¼ inch. Provide mitered corners, end caps, splash guards and other items required. Drip edge shall extend into gutter 2-3 inches.

3.4 INSTALLATION

- A. Comply with SMACNA's "Architectural Sheet Metal Manual." Allow for thermal expansion; set true to line and level. Install Work with laps, joints, and seams permanently watertight and weatherproof; conceal fasteners where possible.
 - 1. Roof-Edge Flashings: Secure metal flashings at roof edges according to FM Loss Prevention Data Sheet 1-49 for specified wind zone.
- B. Sealed Joints: Form non-expansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
- C. Fabricate nonmoving seams in sheet metal with flat-lock seams. For metals other than aluminum, tin edges to be seamed, form seams, and solder.
- D. Separations: Separate non-compatible metals or corrosive substrates with a coating of asphalt mastic or other permanent separation.
- E. Install gutters in one continuous sections sloped at ¼"- ½" every 20'-0" maximum. Anchor gutters to building using concealed gutter hanger brackets at 24" on center typical screwed directly into fascia/building structure. Attach aluminum gutters to fascia between ½" and 1" below drip edge of shingle. Shingle should extend 1" over gutter.
 - 1. Install gutter expansion joints at maximum of 50' intervals.

- F. Sheet Metal: Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts and accessories.
- G. Direct downspout to discharge to existing underground storm drain piping or to new precast concrete splashblock.

3.5 CLEANING

A. In areas where finished surfaces are soiled by any other source of soiling caused by work of this section, consult manufacturer for cleaning advice.

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SECTION 07 84 00 - FIRESTOPPING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Firestopping through-penetrations of fire rated assemblies.
 - 2. Firestopping joints in fire rated assemblies.
 - 3. Firestopping tops of fire rated walls.
 - 4. Smoke sealing at joints between floor slabs and exterior walls.
 - 5. Smoke sealing penetrations and joints of smoke partitions.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 2. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 3. ASTM E814 Standard Test Method for Fire Tests of Through-Penetration Fire Stops.
 - 4. ASTM E1966 Standard Test Method for Fire-Resistive Joint Systems.
- B. Forest Stewardship Council:
 - 1. FSC Guidelines Forest Stewardship Council Guidelines.
- C. Intertek Testing Services (Warnock Hersey Listed):1. WH Certification Listings.
- D. South Coast Air Quality Management District:
 - 1. SCAQMD Rule 1168 Adhesive and Sealant Applications.
- E. Underwriters Laboratories Inc.:
 - 1. UL 263 Fire Tests of Building Construction and Materials.
 - 2. UL 1479 Fire Tests of Through-Penetration Firestops.
 - 3. UL 2079 Tests for Fire Resistance of Building Joint Systems.
 - 4. UL Fire Resistance Directory.

1.3 DEFINITIONS

A. Firestopping (Through-Penetration Protection System): Sealing or stuffing material or assembly placed in spaces between and penetrations through building materials to arrest movement of fire, smoke, heat, and hot gases through fire rated construction.

1.4 PERFORMANCE REQUIREMENTS

A. Conform to UL for fire resistance ratings and surface burning characteristics.

1.5 SUBMITTALS

- A. Product Data: Submit data on product characteristics, performance and limitation criteria.
- B. Manufacturer's Installation Instructions: Submit preparation and installation instructions.
- C. Manufacturer's Certificate: Certify products meet or exceed specified requirements and applicable code requirements.

1.6 QUALITY ASSURANCE

- A. Through Penetration Firestopping of Fire Rated Assemblies: UL 1479 or ASTM E814 with 0.10 inch water gage minimum positive pressure differential to achieve fire F-Ratings and temperature T-Ratings as indicated on Drawings, but not less than 1-hour.
 - 1. Floor / Wall Penetrations: Fire F-Ratings as indicated on Drawings, but not less than 1-hour.
- B. Through Penetration Firestopping of Non-Fire Rated Floor and Roof Assemblies: Materials to resist free passage of flame and products of combustion.
- C. Fire Resistant Joints in Fire Rated Floor, Roof, and Wall Assemblies: ASTM E1966 or UL 2079 to achieve fire resistant rating as indicated on Drawings for assembly in which joint is installed.
- D. Surface Burning Characteristics: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Maintain this minimum temperature before, during, and for minimum 3 days after installation of materials.
- B. Provide ventilation in areas to receive solvent cured materials.

PART 2 PRODUCTS

2.1 FIRESTOPPING

- A. Manufacturers:
 - 1. 3M Fire Protection Products
 - 2. United States Gypsum Co.
 - 3. Equal.
- B. Product Description: Different types of products by multiple manufacturers are acceptable as required to meet specified system description and performance requirements; provide only one type for each similar application.
 - 1. Silicone Firestopping Elastomeric Firestopping: Single component silicone elastomeric compound and compatible silicone sealant.
 - a. Interior Sealants and Sealant Primers: Maximum volatile organic compound content in accordance with SCAQMD Rule 1168.
 - 2. Foam Firestopping Compounds: Single component foam compound.
 - 3. Fiber Stuffing and Sealant Firestopping: Composite of mineral fiber stuffing insulation with silicone elastomer for smoke stopping.
 - 4. Intumescent Firestopping: Intumescent putty compound which expands on exposure to surface heat gain.

2.2 ACCESSORIES

- A. Primer: Type recommended by firestopping manufacturer for specific substrate surfaces and suitable for required fire ratings.
- B. Installation Accessories: Provide clips, collars, fasteners, temporary stops or dams, and other devices required to position and retain materials in place.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify openings are ready to receive firestopping.

3.2 PREPARATION

- A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter affecting bond of firestopping material.
- B. Remove incompatible materials affecting bond.
- C. Install backing materials to arrest liquid material leakage.

3.3 APPLICATION

- A. Install material at fire rated construction perimeters and openings containing penetrating sleeves, piping, ductwork, conduit and other items, requiring firestopping.
- B. Apply primer where recommended by manufacturer for type of firestopping material and substrate involved, and as required for compliance with required fire ratings.
- C. Apply firestopping material in sufficient thickness to achieve required fire and smoke rating to uniform density and texture.
- D. Place foamed material in layers to ensure homogenous density, filling cavities and spaces. Place sealant to completely seal junctions with adjacent dissimilar materials.

3.4 FIELD QUALITY CONTROL

A. Inspect installed firestopping for compliance with specifications and submitted schedule.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Protect adjacent surfaces from damage by material installation.

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SECTION 07 90 00 - JOINT PROTECTION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes sealants and joint backing.

1.2 SUBMITTALS

A. Product Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

1.3 ENVIRONMENTAL REQUIREMENTS

A. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

1.4 QUALITY ASSURANCE

A. Sealant shall be installed by a qualified sealant applicator for any/all joint sealant exposed to view. Owner reserves the right to request a mockup of the quality for the joint sealant installation.

PART 2 PRODUCTS

2.1 JOINT SEALERS

- A. Manufacturers:
 - 1. Tremco [basis of design]
 - 2. Sika
 - 3. GE Silicones.
 - 4. Pecora Corp.
 - 5. DAP
- B. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- C. Low-Emitting Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- D. Liquid-Applied Sealants: Comply with ASTM C920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- E. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.
- F. Additional Movement Capability: Where additional movement capability is specified, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C719, to withstand the specified percentage change in the joint width existing at the time of installation and remain in compliance with other requirements of ASTM C920 for uses indicated.
- G. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range, unless otherwise noted.

2.2 SILICONE JOINT SEALANTS:

A. **Type S-1**: Single component, nonsag, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, Use NT

- 1. Tremco Spectrem 1 or Spectrem 800 or Equal
- B. **Type S-2**: Single Component, nonsag, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 50, use NT
 - 1. Tremco Spectrem 2 or Spectrem 3 or Equal
- C. **Type S-3**: Multi-Component, Nonsag, Silicone Joint Sealant: ASTM C920, Type M, Grade NS, Class 50, Use NT
 - 1. Tremco Spectrem 4-TS or Equal
- D. Type S-4: Single Component, nonsag, Traffic-Grade, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, Use T
 1. Tremco Spectrem 800 or Equal
- E. **Type S-5**: Mildew Resistant, Single Component, Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 25, Use NT
 - 1. Tremco Tremsil 200 Sanitary or Equal

2.3 URETHANE JOINT SEALANTS

- A. **Type U-1**: Single Component, nonsag, Urethane Joint Sealant: ASTM C920, Type S, Grade NS, Class 25 or 35, Use NT:
 - 1. Tremco Dymonic or Dymonic FC or Equal
- B. Type U-2: Single Component, nonsag, Traffic Grade, Urethane Joint Sealant: ASTM C920, Type S, Grade NS, Class 25, Use T.
 1. Tremco Vulkem 116 or Equal.
- C. **Type U-3**: Multi-Component, nonsag, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, Use T.

1. Tremco Dymeric 240 or Dymeric 240 FC or Equal

- D. **Type U-4**: Multi-Component, nonsag, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, Use NT.
 - 1. Tremco Vulken 227 or Equal
- E. **Type U-5**: Multi-Component, nonsag, Traffic Grade, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, Use T.
 - 1. Tremco Vulken 227 or Equal

2.4 BUTYL JOINT SEALANTS

A. Type B-1: Butyl Rubber based Joint Sealants: ASTM C 1311
 1. Tremco General Purpose Butyl Sealant or Equal

2.5 LATEX JOINT SEALANTS

- A. **Type L-1**: Latex Joint Sealant: Acrylic latex or Siliconized Acrylic Latex: ASTM C834, Type OP, Grade NF or better
 - 1. Tremco Tremflex 834 or Equal.
- B. **Type L-2**: Paintable Mildew-Resistant Latex Joint Sealant: Acrylic Latex or Siliconized Acrylic Latex: ASTM C834, Type OP, Grade NF or better.
 - 1. Tremco Tremflex 834 or Equal.

2.6 ACCESSORIES

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin) as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and

density to control sealant depth and otherwise contribute to producing optimum sealant performance:

- 1. Oversized to 30 to 50 percent larger than joint width.
- C. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.
- E. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated. Non-staining type, recommended by sealant manufacturer to suit application.
- F. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- G. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify substrate surfaces and joint openings are ready to receive work.
- B. Verify joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

- A. Remove loose materials and foreign matter impairing adhesion of sealant.
- B. Clean and prime joints.
- C. Perform preparation in accordance with ASTM C1193.

3.3 INSTALLATION

- A. Perform installation in accordance with ASTM C1193.
- B. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.
- C. Install bond breaker where joint backing is not used.

D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Tool joints concave.

3.4 SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and non-traffic horizontal surfaces.
 1. Joint locations such as, but not limited to:
 - a. Construction joints in cast-in-place concrete.
 - b. Control joints in unit masonry.
 - 1) Provide joint sealants slightly darker than the adjacent masonry units. Provide multiple colors as may be required for match.

- c. Perimeter joints between masonry, concrete, or stone and frames of doors, windows, storefronts, louvers, and similar openings.
- d. Lintels and shelf angles to masonry construction.
- e. Butt joints between metal panels.
- f. Control and expansion joints in ceiling/soffit and similar overhead surfaces.
- g. Exterior joints between dissimilar materials where the joining of the two surfaces leaves a gap between the meeting materials or components as may be dictated by various methods of construction to make building watertight.
- h. Other joints as indicated on Drawings.
- 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type S-1**, **Type S-2**, **Type S-3**
- 3. Color: As selected by Architect from manufacturer's full range of colors.
- B. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.
 - 1. Joint locations such as, but not limited to:
 - a. Isolation joints in cast-in-place concrete slabs.
 - b. Perimeter of floor slabs or concrete curbs which abut vertical surfaces.
 - c. Areas around all piping systems that penetrate the slab or foundation walls below grade (utility trenches, electrical conduits, plumbing penetrations, etc.).
 - d. Control and expansion joints in tile flooring.
 - e. Other joints as indicated on Drawings.
 - 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type S-4**
 - 3. Color: As selected by Architect from manufacturer's full range of colors.
- C. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal non-traffic surfaces, subject to movement, unless otherwise noted.
 - 1. Joint locations such as, but not limited to:
 - a. Control joints on exposed interior surfaces of exterior walls.
 - b. Interior joints where interior partitions meet exterior walls of dissimilar materials and components.
 - c. Other joints as indicated on Drawings.
 - 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type U-1**
 - 3. Color: As selected by Architect from manufacturer's full range of colors. Paintable Sealant, prep for painted finish.
- D. Joint-Sealant Application: Interior joints in vertical surfaces subject to abuse and movement.
 - 1. Joint locations such as, but not limited to:
 - a. Vertical joints, including control joints and joints between masonry and structural support members, on exposed surfaces of interior unit masonry walls and partitions.
 - 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type U-2**
 - 3. Color: As selected by Architect from manufacturer's full range of colors.
- E. Joint-Sealant Application: Interior joints in vertical surfaces not subject to movement.
 - 1. Joint locations such as, but not limited to:
 - a. Interior perimeter joints of exterior openings.
 - b. Perimeter joints between interior wall surfaces and frames of interior doors, windows, and elevator entrances.
 - c. Interior joints between dissimilar materials where a gap is created where materials meet, unless otherwise noted.
 - 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type L-1**, **Type L-2**
 - 3. Color: As selected by Architect from manufacturer's full range of colors.

- F. Joint-Sealant Application: Mildew-resistant interior joints in non-painted vertical surfaces and horizontal nontraffic surfaces.
 - 1. Joint locations such as, but not limited to:
 - a. Interior joints between plumbing fixtures and adjoining floors and counters.
 - b. Joints between countertops and backsplashes.
 - c. For interior joints in non-painted vertical and horizontal surfaces where incidental food contact may occur.
 - d. Tile control and expansion joints where indicated.
 - e. Other joints as indicated on Drawings.
 - 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type S-5**
 - a. For potable water storage sealant shall be certified by National Sanitation Foundation as conforming to the requirements of NSF Standard 61 Drinking Water System Components Health Effect.
 - b. For surfaces where incidental food contact may occur sealant must comply with United States Department of Agriculture (USDA) guidelines for incidental food contact with cured sealant.
 - 3. Color: As selected by Architect from manufacturer's full range of colors.
- G. Joint-Sealant Application: Mildew-resistant interior joints in painted vertical surfaces and horizontal non-traffic surfaces.
 - 1. Joint locations such as, but not limited to:
 - a. Interior joints between plumbing fixtures and adjoining painted walls.
 - b. Joints where countertops or backsplashes intersect painted walls.
 - c. For interior joints in painted vertical and horizontal surfaces where incidental food contact may occur.
 - 2. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type L-2**
 - 3. Color: As selected by Architect from manufacturer's full range of colors.
- H. Joint-Sealant Application: Interior or exterior joints in vertical surfaces between laps in fabrications of sheet metal.
 - 1. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type U-1**
 - 2. Color: As selected by Architect from manufacturer's full range of colors.
- I. Joint-Sealant Application: Exterior joints under metal thresholds and saddles, sill plates, or as bedding sealant for sheet metal flashing and frames of metal or wood.
 - 1. Provide one of the following acceptable sealants as approved by manufacturer for substrates and uses indicated: **Type S-1**, **Type U-1**, **Type B-1**
 - 2. Color: As selected by Architect from manufacturer's full range of colors.

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SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes steel doors and frames; non-rated and fire rated.

1.2 SUBMITTALS

- A. Shop Drawings: Indicate door and frame elevations, internal reinforcement, cut-outs for glazing, and finishes.
- B. Product Data: Submit door and frame configurations, location of cut-outs for hardware reinforcement.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
 - 1. ANSI 250.8 Recommended Specifications for Standard Steel Doors and Frames.
 - 2. DHI Door Hardware Institute The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.
- B. Fire Rated Door Construction: Conform to NFPA 252.
- C. Installed Fire Rated Door Assembly: Conform to NFPA 80 for fire rated class as indicated on Drawings.
- D. Attach label from agency approved by authority having jurisdiction to identify each fire rated door.
- E. Surface Burning Characteristics:
 - 1. Foam Insulation: Maximum 75/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
- F. Apply label from agency approved by authority having jurisdiction to identify each foam plastic insulation material.

PART 2 PRODUCTS

2.1 STEEL DOORS AND FRAMES

- A. Manufacturers:
 - 1. Republic Doors [basis of design]
 - 2. Ceco Door Products.
 - 3. Fleming Steel Doors and Frames.
 - 4. Kewanee Corp.
 - 5. Steelcraft.
 - 6. Daybar
- B. Product Description: Standard shop fabricated steel doors, and frames; fire rated and non-rated types; embossed panel face.

2.2 DOOR TYPES

- A. Exterior Doors (Insulated): ANSI A250.8, SDI 100.
 - 1. Level 2 Heavy Duty, Model 1
 - 2. Door Size: per drawings
 - 3. Thickness: 1-3/4 inch nominal thickness
 - 4. Hinge Rail& Reinforcement: 16 gauge steel channel projection welded
 - 5. Lock Rail: 16 gauge steel channel with 16 gauge reinforcements for locks / hardware
 - 6. Edge Seams: Overlapping

- 7. Top Channel: 16 gauge channel
- 8. Bottom Channel: Inverted 16 gauge channel.
- 9. Interior Core: 2 lb. polyurethane.
- 10. Face: 18 gauge gauge, embossed, raised panels, interior and exterior face. One sheet with no visible seams.
- 11. Panel Style: 6 panel design
- 12. Hardware: Prep door slab for hardware
- B. Interior Doors (Non-Rated and Rated): ANSI A250.8, SDI 100.
 - 1. Level 2 Heavy Duty, Model 1,
 - 2. Door Size: per drawings
 - 3. Thickness: 1-3/4 inch nominal thickness
 - 4. Hinge Rail& Reinforcement: 16 gauge steel channel projection welded
 - 5. Lock Rail: 16 gauge steel channel with 16 gauge reinforcements for locks / hardware
 - 6. Edge Seams: Overlapping
 - 7. Top Channel: 16 gauge channel
 - 8. Bottom Channel: Inverted 16 gauge channel.
 - 9. Interior Core: 2 lb. polyurethane.
 - 10. Face: 18 gauge gauge, embossed, raised panels, interior and exterior face. One sheet with no visible seams.
 - 11. Panel Style: 6 panel design
 - 12. Hardware: Prep door slab for hardware

2.3 FRAME TYPES

- A. General: Provide steel frames for doors, transoms, sidelights, borrowed lights, and other openings that comply with ANSI A250.8, SDI 111 and with details indicated for type and profile. Conceal fastenings, unless otherwise indicated.
- B. Frames for exterior and interior door openings:
 - 1. Profile: for 1 3/4 inch door thickness
 - 2. Wall Thickness: confirm with field conditions, match existing conditions.
 - 3. Gauge: 16 gauge steel
 - 4. Standard Face: 2 inches [jambs, heads], unless conditions dictate otherwise.
 - 5. Standard Rabbet: 1-3/8 inch [double rabbet design]
 - 6. Standard Stop: 5/8 inch
 - 7. Hinges: 4 1/2 x 4 1/2 tamplate hinge
 - 8. Frame Type: welded except for conditions which require knock-down

2.4 FRAME ASSEMBLIES

- A. Mortar/Plaster Guards: Provide minimum 26 gauge steel plaster guards or mortar boxes, welded to the frame, at back of door hardware cutouts where materials might obstruct hardware operation.
- B. Provide minimum 9 MSG hinge reinforcement, including all doors with continuous type hinges.
- C. Provide minimum 12 MSG frame head reinforcement for closers, surface, and concealed overhead stop and holders, removable mullions, flush bolts, and top latch of vertical rod exit devices.
- D. Door Silencers: Drill stops and install 3 silencers on strike jambs of single swing frames and 2 silencers on heads of double swing frames.

2.5 FRAME ANCHORAGE

A. Jamb Anchors

- 1. Frames Set in Existing Masonry: Provide specifically designed 18 gauge jamb anchors used to add support for bolting the frame into the rough opening of the existing wall.
- 2. Frames Set in New Masonry: Provide metal anchors of shapes and sizes required for the adjoining wall construction. Provide a minimum of 3 wall anchors per jamb.
 - a. Provide adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 18 gauge, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 7 WMG.
- 3. Frames Set in Wood / Metal Stud Partitions: Provide a minimum of three 18 gauge metallic coated "Z" shaped sheet metal jamb anchor clips welded in each jamb.
- B. Provide head anchors at door or window heads over 5 feet wide at minimum 3 feet o.c. mounted in metal-stud partitions.
- C. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottom of jambs.
 - 1. Provide 14 gauge minimum anchors punched for two 3/8 inch diameter bolts each.

2.6 FIRE DOORS AND FRAMES

- A. Provide approved and labeled hollow metal fire doors and frames at locations indicated in Door Schedule. Approved doors, frames, and hardware shall be constructed and installed in accordance with requirements of NFPA 80 and tested by UL (Underwriters' Laboratories, Inc.) or WH (Warnock Hersey) for the class of door opening indicated in schedules.
- B. Label Materials and Attachment: Labels shall be steel, brass, aluminum, or non-metallic. Metal labels shall be attached by welding, riveting, pop riveting, or with drive screws. Embossed labels stamped directly into the steel will not be acceptable. Labels shall be provided for doors, door frames, and borrowed lites. Labels shall be protected during painting. Label protection shall be removed after final coat of paint has been completed and approved.
- C. Labeled metal frames are required for labeled wood doors.

2.7 FABRICATION

- A. Fabricate steel door and frame units to comply with ANSI A250.8 and to be rigid, neat in appearance, and free from defects, warp, or buckle. Accurately form metal to required sizes and profiles. Wherever practicable, fit and assemble units in the manufacturer's plant. Clearly identify work that cannot be permanently factory assembled before shipment, to assure proper assembly at the Project site.
- B. Hollow-Metal Doors:
 - 1. Vertical Edges for Single-Acting Doors: Bevel edges 1/8 inch in 2 inches, unless otherwise noted.
 - 2. Top Edge Closures: Close top edges of doors with inverted closures, except provide flush closure at exterior doors of same material as face sheets.
 - 3. Bottom Edge Closures: Close bottom edge of doors with end closures or channels of same material as face sheets. Coordinate with weatherstripping.
- C. Hollow-Metal Frames: Where frames are fabricated in Sections due to shipping or handling limitations, provide alignment plates of angles at each joint, fabricated of same thickness metal as frames.
 - 1. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
- D. Fabricate concealed stiffeners, reinforcement, edge channels, and moldings from either cold rolled or hot rolled steel (at fabricator's option).

- 1. Minimum hardware reinforcement gage shall comply with Table 4 of ANSI/SDI A250.8 "SDI 100, Recommended Specifications for Standard Steel Doors and Frames".
- E. Clearances for Non-Fire Rated Doors: Not to exceed 1/8 inch at jambs and heads, 3/32 inch between pairs of doors, and 3/4 inch at bottom.
- F. Clearances for Fire Rated Doors: As required by NFPA 80.
- G. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat Phillips heads for exposed screws and bolts.
- H. Door Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
 - 1. Prepare hollow metal units to receive mortised and concealed door hardware, including cutouts, steel reinforcing, drilling, and tapping in accordance with final door hardware schedule and templates provided by hardware supplier. Comply with applicable requirements of ANSI A250.6 and ANSI/BHMA A156.115 for preparation of hollow-metal work for hardware.
 - 2. Reinforce hollow metal units to receive nontemplated, mortised, and surface mounted hardware. Hardware installer shall drill and tap for surface applied hardware.

2.8 STEEL FINISHES

- A. General: Comply with recommendations in "Metal Finishes Manual by Architectural and Metal Products (AMP) Division of National Association of Architectural Metal Manufacturers (NAAMM) for applying and designating finishes.
 - 1. Finish standard steel door and frames after assembly.
- B. Metallic Coated Steel Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas, and apply galvanizing repair paint specified below to comply with ASTM A780.
 - 1. Galvanizing Repair Paint: High zinc dust content paint for regalvanizing welds in steel, complying with SSPC Paint 20.
- C. Steel Surface Preparation: Clean surfaces to comply with SSPC-SP1, SSPC-SP 3, SSPC-SP 6/NACE No. 3.
- D. Factory Priming for Field Painted Finish: Apply shop primer specified below immediately after surface preparation and pretreatment. Apply a smooth coat of even consistency to provide a uniform dry film thickness of not less than 0.7 mils.
 - 1. Shop Primer: Manufacturer's standard, fast curing, lead and chromate free primer complying with ANSI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field applied finish paint system indicated; and providing a sound foundation for field applied topcoats despite prolonged exposure.

2.9 GLAZING

A. Refer to Section 08 80 00.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify opening sizes and tolerances are acceptable.

3.2 PREPARATION

- A. Prior to installation, adjust and securely brace standard steel door frames for squareness, alignment, twist, and plumb to the following tolerances:
 - 1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - 2. Alignment: Plus or minus 1/16 inch, measured on jambs on a horizontal line parallel to plane of wall.
 - 3. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines,
 - 4. Plumbness: Plus or minus 1/16 inch, measured at jambs on a perpendicular line from head to floor.
- B. Drill and tap doors and frames to receive nontemplated mortised and surface mounted door hardware.

3.3 INSTALLATION

- A. General: Provide doors and frames of sizes, thicknesses, and designs indicated. Install standard steel doors and frames plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Install doors and frames in accordance with ANSI A250.11.
- C. Install fire rated doors and frames in accordance with NFPA 80.
- D. Coordinate installation of doors and frames with installation of hardware specified in Section 08 71 00.
- E. Coordinate door frames with masonry and gypsum board wall construction for frame anchor placement.
- F. Steel Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.
 - 1. Non Fire Rated Standard Steel Doors:
 - a. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
 - b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
 - c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
 - d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.
 - 2. Fire Rated Doors: Install with clearances according to NFPA 80.
 - 3. Smoke Control Door Assemblies: Install according to NFPA 105.
- G. Coordinate installation of glass and glazing specified in Section 08 80 00.
- H. Adjust door for smooth and balanced door movement.
- I. Tolerances:
 - 1. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.4 SCHEDULE

A. Refer to Drawings.

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SECTION 08 14 00 - WOOD DOORS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes composite interior wood doors within individual dwelling units.
 - 1. Sized to fit existing steel frames [new steel frames where applicable] and hardware prep locations.

1.2 SUBMITTALS

- A. Shop Drawings: Indicate door elevations, cutouts for hardware preparation.
- B. Product Data: Submit information on door core materials and construction, and on veneer species, type and characteristics.
- C. Samples: Submit samples of door veneer illustrating pre-finished stain color selections and finish as specified.

1.3 QUALITY ASSURANCE

A. Perform work in accordance with NWWDA I.S.1.

1.4 WARRANTY

A. Furnish five year manufacturer's warranty for interior doors.

PART 2 PRODUCTS

2.1 WOOD DOORS

- A. Manufacturers:
 - 1. Masonite, Molded Panel Series Doors
 - 2. Jeldwen
 - 3. Approved Equal
- B. Product Description:
 - 1. 1-3/8 inches thick side-hinged door systems
 - 2. Molded wood fiber facing, wood stiles, wood or MDF rails, and engineered low-density composite core
 - 3. Door facings bonded to stiles, rails, and core forming a 3-ply structural attachment.
 - 4. Internal reinforcement for hardware
 - 5. 6 panel molded design per drawings
 - 6. Smooth face
 - 7. Factory primed, ready for site finish

2.2 ACCESSORIES

A. Hinges: 1 pair, confirm size / location, 26D finish to match door hardware.

2.3 FABRICATION

- A. Fabricate doors in accordance with NWWDA I.S.1 requirements.
- B. Fabricate doors with hardware reinforcement blocking in place.
- C. Factory machine doors for finish hardware in accordance with hardware requirements and dimensions. Do not machine for surface hardware.
- D. Hardware: As specified in 08 71 00 and in finishes specified.

2.4 FINISH

A. Prep doors and frames for site finishing, painted finish.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install doors in accordance with NWWDA I.S.1 requirements.
- B. Adjust door for smooth and balanced door movement.
- C. Tolerances:
 - 1. Conform to NWWDA requirements for fit and clearance tolerances and maximum diagonal distortion.
 - 2. Maximum Diagonal Distortion: 1/4 inch measured with straight edge, corner to corner.

3.2 SCHEDULE

- A. Interior doors: Match size and configuration/swing as designed on drawings. Size new door slabs to fit existing steel frames and hardware locations. Field verify all conditions.
- B. Undercut doors 1" for opening.

SECTION 08 31 13 - ACCESS DOORS AND FRAMES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Fire-resistive-rated and non-rated Access doors and panels with frames.

1.2 SUBMITTALS

- A. Product Data: Indicate sizes, types, finishes, hardware, scheduled locations, fire-resistance listings, and details of adjoining Work.
- B. Manufacturer's Installation Instructions: Include rough-in dimensions.

1.3 QUALITY ASSURANCE

- A. Fire-Rated Access Door Construction:
 - 1. Wall Access Doors: NFPA 252 or UL 10B.
 - 2. Ceiling Access Doors: ASTM E119 or UL 263.
- B. Installed Fire-Rated Access Door Assembly: Conform to NFPA 80 for fire-rated class as indicated.
- C. Attach label from agency approved by authority having jurisdiction to identify each fire-rated access door.

1.4 COORDINATION

A. Coordinate Work with Work requiring controls, valves, traps, dampers, cleanouts, and similar items requiring operation being located behind finished surfaces.

PART 2 PRODUCTS

2.1 ACCESS DOORS AND PANELS

- A. Flush Framed Access Doors (Type 1): Frames and nominal 1 inch wide exposed flanges of 16 gage steel and door panels of 14 gage steel.
- B. Fire-Rated Access Doors (Type 2): Frames and nominal 1 inch wide exposed flanges of minimum 16 gage steel and door panels of 20 gage steel. Provide self-closing and latching doors with cam lock.

2.2 FABRICATION

- A. Fabricate units of continuous welded construction; weld, fill, and grind joints to assure flush and square unit.
- B. Wall and Ceiling Access Door and Panel Hardware:
 - 1. Hinge: Standard continuous or concealed spring pin type, 175-degree steel hinges.
 - 2. Lock: Self-latching lock. Screw driver slot for quarter turn cam lock.

2.3 SHOP FINISHING

- A. Base Metal Protection: Prime coat units with baked on primer.
- B. Finish: to match adjacent wall/ceiling surface.

PART 3 EXECUTION

3.1 INSTALLATION

A. Set concealed frame type units flush with adjacent finished surfaces.

- B. Position unit to provide convenient access to concealed Work requiring access.
- C. Install fire-rated units according to NFPA 80 and requirements for fire listing.

3.2 SCHEDULES

A. Provide and install access panels where required by existing construction, utilities, etc. Field coordinate requirements, sizes, and locations.

SECTION 08 53 00 - VINYL WINDOWS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes factory fabricated tubular extruded vinyl windows with fixed and operating sash [double hung], glass, and framed insect screens.

1.2 SYSTEM DESCRIPTION

- A. Windows and Sliding Doors: Extruded tubular plastic sections, factory fabricated, fusion welded, vision glass, related flashings, anchorage and attachment devices.
- B. System Design: Performance to provide for expansion and contraction within system components caused by temperature cycling. Design and size members to withstand loads caused by pressure and suction of wind in accordance with applicable code.
- C. Water Leakage: None, when measured in accordance with ASTM E331.
- D. System Internal Drainage: Drain water entering framing system, to exterior.
- E. Thermal Movement: Design sections to permit thermal expansion and contraction of plastic as compared to glass, infill, and perimeter opening construction.

1.3 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. AAMA 502 Voluntary Specification for Field Testing of Newly Installed Fenestration Products.
- B. American Architectural Manufacturers Association/Window & Door Manufacturers Association/Canadian Standards Association (AAMA/WDMA/CSA):
 - 1. AAMA/WDMA/CSA 101/I.S.2/A440 Standard/Specification for Windows, Doors, and Skylights.
- C. National Fenestration Rating Council (NFRC):
 - 1. NFRC 100 Procedure for Determining Fenestration Product U-factors.
 - 2. NFRC 200 Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.

1.4 PERFORMANCE REQUIREMENTS

- A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance materials, components, accessories, and fabrication unless more stringent requirements are indicated.
- B. Performance Class and Grade: AAMA/WDMA/CSA 101/I.S.2/A440 as follows:
 - 1. Minimum Performance Class: R.
 - 2. Minimum Performance Grade: 20.
- C. Fabricate windows to AAMA Gold Label Certification Program for thermal performance and air, water, and structural integrity.
- D. Forced Entry Resistance: Meet the requirements of ASTM F588 for Type A [sliding sashes], Grade 10.
- E. Air Infiltration: Maximum air leakage through fixed glazing and framing areas of 0.30 cfm/sq ft of fixed wall area as determined according to ASTM E283 at a minimum static-air-pressure differential of 1.57 lbf/sq ft.
- F. Operating Force: Maximum allowable lb force of 30 lbf.

- G. Water Penetration: Minimum water resistance of 2.86 psf for entry level R20 structural rating.
- H. Thermal Transmittance: NFRC 100 maximum whole window U-factor of 0.30 Btu/sq ft x°h x degrees F.
- I. Solar Heat Gain Coefficient (SHGC): NFRC 200 maximum whole window SHGC of 0.30.

1.5 SUBMITTALS

- A. Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work; and installation requirements.
- B. Product Data: Submit component dimensions, anchorage and fasteners, glass, and internal drainage details. Indicate Energy Star compliance.
- C. Samples: Provide [2] samples of exposed finishes.

1.6 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for past 10 years, in manufacture of vinyl windows of similar type to that specified.
- B. Installer's Qualifications:
 - 1. Installer regularly engaged, for past 5 years, in installation of vinyl windows of similar type to that specified.
 - 2. Employ persons trained for installation of vinyl windows.

C. Mockup:

- 1. Construct mock-ups of vinyl windows for evaluation of preparation techniques and installation workmanship.
 - a. Construct mock-ups using same materials for use in the Work.
 - b. Construct mock-ups at locations determined by Architect.
 - c. Do not proceed until workmanship of mock-ups are approved by Architect.
 - d. Approved Mock-ups: Standard for workmanship of vinyl windows.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage and Handling Requirements:
 - 1. Store and handle materials in accordance with manufacturer's instructions.
 - 2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
 - 3. Store materials in clean, dry area indoors.
 - 4. Do not store materials directly on floor.
 - 5. Protect materials and finish during storage, handling, and installation to prevent damage.

1.8 WARRANTY

A. Furnish 10-year manufacturer warranty for insulated glass units and vinyl window components.

PART 2 PRODUCTS

2.1 VINYL WINDOWS

- A. Manufacturers:
 - Simonton Windows by PlyGem: Reflections 5500 Series, Double Hung. [BASIS OF DESIGN]

- 2. Jeldwen Windows:
- 3. Soft Lite Windows:
- 4. Silverline by Anderson Windows
- B. Product Description:
 - 1. Unit Frame: Extruded tubular plastic with welded corner construction.
 - 2. Windows: Conform with AAMA 101 Designations for windows required for Double Hung window operation.
 - 3. Type: 2 lite double hung
 - 4. Sizes: As indicated on drawings.
 - 5. Frame and Sash Color: Tan / Almond / Driftwood [As selected from full range of available colors]
 - a. Interior and Exterior Surfaces to be the same color.

2.2 COMPONENTS

- A. Extruded PVC frames and sashes: AAMA 303 hollow, multi-chambered sections of extruded polyvinyl chloride (PVC), with integral ultra-violet degradation resistance. Fusion Welded frame and sash.
- B. Frame
 - 1. Frame Thickness: +/- 3-1/4 inches
 - 2. Construction: Welded, thermally broken
 - 3. Screen Track: Integral
 - 4. Sill: sloped design sill out from unit/building wall.
- C. Sash
 - 1. Construction: Welded
 - 2. Glazing Bead: Color Matched, dual durometer
- D. Grille: Refer to drawings
- E. Glass and Glazing Materials:
 - 1. Gas: Air / Argon Filled Airspace
 - 2. Glass Strength: Single Strength
 - 3. Glass Type: Low E
 - 4. Dual Pane Insulated Glass: 3/4 inch thickness
 - 5. Spacer: Supercept Window Spacer System
 - Insulating Glass: SIGMA sealed double pane float glass with clear outer pane and Low E 366 coating with Argon Filled airspace; total thickness 3/4 inch minimum. U-Value of 0.30 or Less
 - 7. Safety glass conforming to ANSI Z97.1 and applicable codes where required.
 - 8. Obscure glass where noted on drawings.
- F. Hardware: Manufacturer's standard window and door hardware based on following requirements. Hardware to match frame and sash color.
 - 1. Sash Lock: [2] Lever handles with cam lock.
 - 2. Rollers / Gliders: Corrosion resistant Rollers
 - 3. Safety / Night Latch [Window opening Control Device]: safety catch to limit operation of window opening for security and safety purposes.
- G. Sills, Stools, and Aprons: Tubular plastic; slope sills for positive wash; extend 1/2 inch beyond wall face; one piece full width of opening.
- H. Frame Expanders: Vinyl frame expanders/receptors sized as required to suit opening extending to meet existing construction and ready to accept new window units.
- I. Insect Screens:

- 1. Frame: Roll formed
- 2. Size: to fit half of window unit.
- 3. Mesh: Fiberglass mesh set into frame and secured.
- J. Weather Stripping: Dual fin seal at sash perimeter, triple weather stripped at sash edges, closed cell foam weather stripping, configured for flexible fit.
- K. Trim/Closure: Vinyl trim stock for interior perimeter/jamb application. Color to match window units.
- L. Field Coordinate size requirements to conceal any gap between original window and new window.
- M. Fasteners: Galvanized steel.
- N. Anchor Devices: Galvanized steel.
- O. Sealant and Backing Materials: Specified in Section 07 90 00.

2.3 FABRICATION

- A. Fabricate framing, mullions and sash members with fusion welded corners and joints, in rigid jig. Supplement frame sections with internal reinforcement where required for structural rigidity.
- B. Form snap in glass stops, closure molds, weather stops, and flashings of extruded PVC for tight fit into window frame section.
- C. Install glass using exterior dry method of glazing.
- D. Fit insect screen frames with four spring loaded pin retainers.
- E. Double weatherstrip operable units.

2.4 SHOP FINISHING

- A. Exterior Surfaces: as selected from Manufacturer's standard colors.
- B. Interior Surfaces: Manufacturer's standard colors.
- C. Screens: Match window frame color with light screening.
- D. Operators/Hardware: color to match unit

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify rough openings are correctly sized and located.
- B. Examine abutting wall flashing, vapor retarders, weather barriers, and other components to ensure weathertight window installation.
- C. Verify rough opening dimensions, sill levelness, and operational clearances are acceptable.
- D. Notify Architect of conditions that would adversely affect installation or subsequent use.
- E. Do not begin installation until unacceptable conditions are corrected.

3.2 PREPARATION

A. Prepare opening to permit correct installation of frame and achieve continuity of air and vapor retarder seal.

3.3 INSTALLATION

- A. Use anchorage devices to securely attach frames to structure.
- B. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work. Anchor windows securely in place to supporting substrate. Verify that windows are installed in proper relation to wall flashing and other abutting materials to achieve a watertight installation.
- C. Install vinyl windows in accordance with manufacturer's instructions at locations indicated on the Drawings.
- D. Install vinyl windows plumb, level, square, true to line, and without distortion.
- E. Anchor vinyl windows securely in place to supports.
- F. Verify vinyl windows are installed in proper relation to wall flashing and other abutting materials. Coordinate attachment and seal of air and vapor retarder materials. Pack fibrous insulation (or low expansion foam) in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- G. Install vinyl windows weathertight.
- H. Verify vinyl windows open, close, and lock properly.
- I. Install interior vinyl trim at perimeter of window unit as applicable to the conditions.
- J. Coordinate installation of perimeter sealants and backing materials with Section 07 90 00.

3.4 ADJUSTING

- A. Adjust operating components to ensure a tight fit at contact points and weather stripping for smooth operation and weathertight closure.
- B. Replace damaged glass.
- C. Remove and replace with new material, damaged components that cannot be successfully repaired, as determined by Architect.

3.5 CLEANING

- A. Clean vinyl windows promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage windows.

3.6 SCHEDULES

- A. Refer to drawings.
- B. Refer to drawings/schedules for tempered glazing requirements.

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SECTION 08 71 00 - DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes hardware for doors.
 - 1. All hardware components to be ADA/UFAS compliant.
 - 2. New cylinders and keys for all units.

1.2 SUBMITTALS

- A. Shop Drawings:
 - 1. Indicate locations and mounting heights of each type of hardware, schedule, and catalog cuts.
 - 2. Submit manufacturer's parts list, and templates.
- B. Manufacturer's installation instructions: Submit special procedures, and perimeter conditions requiring special attention.

1.3 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of installed cylinders and their master key code.
- B. Operation and Maintenance Data: Submit data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- C. Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the following requirements:
 - 1. ANSI A156 series.
 - 2. NFPA 80 Fire Doors and Windows.
 - 3. NFPA 101 Life Safety Code.
- B. Furnish hardware marked and listed in BHMA Directory of Certified Products.
- C. Coordinate work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware and recessed items.
 - 1. Provide templates or actual hardware as required to ensure proper preparation of doors and frames.
- D. Coordinate Owner's keying requirements during course of work.

1.5 WARRANTY

A. Furnish five year manufacturer warranty for door hardware.

1.6 MAINTENANCE SERVICE

A. Provide special wrenches and tools applicable to each different or special hardware component.

PART 2 PRODUCTS

2.1 DOOR HARDWARE

- A. Lockset, Latch Set, and Cylinder Manufacturers:
 - 1. Falcon Lock or Equal Model W-Series, Dane Handle Design 6 pin cover style for Exterior Doors, Unit Entry Doors, and Common Building Areas

- 2. Falcon Lock or Equal Model W-Series, Dane Handle Design 6 pin cover style for Interior Doors within Unit.
- B. Deadlock Manufactures:
 - 1. Falcon Lock or Equal Model D241 6 pin cover style.
- C. Cylinders: Falcon interchangeable "A" keyway cores, 6 pin type.
- D. Door Viewer Manufacturers:1. Rockwood

Model 622

2.2 COMPONENTS

- A. General Hardware Requirements: Where not specifically indicated, comply with applicable ANSI A156 standard for type of hardware required. Furnish each type of hardware with accessories as required for applications indicated and for complete, finished, operational doors.
 - 1. Templates: Furnish templates or physical hardware items to door and frame manufacturers sufficiently in advance to avoid delay in Work.
 - 2. Reinforcing Units: Furnished by door and frame manufacturers; coordinated by hardware supplier or hardware manufacturer.
 - 3. Fasteners: Furnish as recommended by hardware manufacturer and as required to secure hardware.
 - a. Finish: Match hardware item being fastened.
- B. Hinges: ANSI A156.1, full mortise type, template type, ANSI A156.7, complying with following general requirements unless otherwise scheduled.
 - 1. Widths: Sufficient to clear trim projection when door swings 180 degrees.
 - 2. Number: Furnish minimum three hinges to 90 inches high, four hinges to 120 inches high for each door leaf.
 - a. Residential Interior Wood Doors: Furnish minimum two hinges.
 - b. Size and Weight: Doors 1-3/8" thick: match existing cut outs in steel door frames.
 - 3. Pins: Furnish nonferrous hinges with non-removable pins (NRP) at exterior doors, non rising pins at interior doors.
 - 4. Tips: Flat button tips with matching plug.
 - 5. Provide three spare sets.
- C. Locksets: Furnish locksets compatible with specified cylinders. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt verify type of cutouts provided in metal frames.
 - 1. Bored (Cylindrical) Locksets: ANSI A156.2, Series 4000, Grade 2 unless otherwise indicated.
- D. Latch Sets: Match locksets. Typical 2-3/4" backset. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt, field verify conditions with existing steel frames.
 - 1. Bored (Cylindrical) Latchsets: ANSI A156.2, Series 4000, Grade 2 unless otherwise indicated.
- E. Closers: ANSI A156.4 modern type with cover, surface mounted center or offset pivot closers; full rack and pinion type with steel spring and non-freezing hydraulic fluid; closers required for fire rated doors unless otherwise indicated.
 - 1. Adjustability: Furnish controls for regulating closing, latching, speeds, and back checking.
 - 2. Arms: Type to suit individual condition; parallel-arm closers at reverse bevel doors and where doors can swing full 180 degrees.
 - 3. Location: Mount closers on inside of exterior doors, room side of interior doors typical; mount on pull side of other doors.
 - 4. Operating Pressure: Maximum operating pressure as follows.

- a. Interior Doors: Maximum 5 pounds.
- b. Exterior Doors: Maximum 10 pound.
- c. Fire Rated Doors: As required for fire rating, maximum 15 pounds.
- F. Push/Pulls, Gaskets, Thresholds, and Trim: Furnish as indicated in Schedule, with accessories as required for complete operational door installations.
 - 1. Push/Pulls: ANSI A156.6; Furnish straight push-pull type pulls with bolts to secure from opposite door face.
 - 2. Kickplates: ANSI A156.6, metal; 36 inch high, 1 inch less than door width; stainless steel.
 - 3. Weatherstripping: Furnish continuous weatherstripping at top and sides of exterior doors.
 - 4. Fire Rated Gaskets: Furnish continuous fire rated gaskets at top and sides of fire rated doors.
 - 5. Thresholds: Maximum 1/2 inch height; requirements to ensure accessibility for persons with disabilities.
- G. Cylinders: Furnish new interchangeable cores, Falcon C606, 6 pin design with "A" standard keyway to match DMHA standard installation.
- H. Keying: Keyed as directed by Owner to integrate with existing Keying Schedule.
 - 1. Keys: Nickel silver. Stamp keys with "DO NOT DUPLICATE".
 - 2. Supply keys in the following minimum quantities
 - a. 5 master keys.
 - b. 3 keys per residential unit.
- I. Door Viewers: 1-way viewing, three precision ground optical glass lenses, 180 degree angle viewing.
- J. Bi-Pass Door Hardware: Johnson 200 SD or Equal, top hung sliding door hardware with I-Beam rail

2.3 ACCESSORIES

- A. Lock Trim: Furnish levers with 2 9/16" [small SR] rose.
- B. Through Bolts: Through bolts and grommet nuts are not permitted on door faces in occupied areas unless no alternative is possible.
 - 1. Do not permit through bolts on solid wood core doors.

2.4 FINISHING

- A. Finishes: ANSI A156.18; with following finishes except where otherwise indicated in Schedule at end of section.
 - 1. Hinges:
 - a. BHMA 626, satin finish.
 - 2. Typical Exterior Exposed and High Use Interior Door Hardware:
 - a. BHMA 626, satin chromium plated brass.
 - 3. Typical Interior Door Hardware:
 - a. BHMA 626, satin chromium plated brass.
 - 4. Thresholds: Finish appearance to match door hardware on exterior face of door.
 - a. BHMA 628, satin aluminum, clear anodized.
 - 5. Other Items: Provide manufacturer's standard finishes matching similar hardware types on same door, and maintaining acceptable finish considering anticipated use and BHMA category of finish.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify doors and frames are ready to receive work and dimensions are as indicated on shop drawings and as instructed by manufacturer.

3.2 INSTALLATION

- A. Coordinate mounting heights with door and frame manufacturers. Use templates provided by hardware item manufacturer.
- B. Mounting Heights from Finished Floor to Center Line of Hardware Item: Comply with manufacturer recommendations and applicable codes.
 - 1. Locksets: 38 inches
 - 2. Dead Bolt: 48 inches
 - 3. Top Hinge: Jamb manufacturer's standard, but not greater than 10 inches from head of frame to centerline of hinge.
 - 4. Bottom Hinge: Jamb manufacturer's standard, but not greater than 12-1/2" from floor to centerline of hinge.
 - 5. Intermediate Hinges: Equally spaced between top and bottom hinges and from each other.
 - 6. Door Viewers:
 - a. Door viewer: 48" and 60" AFF at accessible units.

3.3 ADJUSTING

A. Adjust hardware for smooth operation.

3.4 SCHEDULE

A. The following hardware sets are intended to establish type and standard of quality when used together with these section requirements. Examine Drawings and Specifications and furnish proper hardware for door openings.

1. Each new door requires two (2) of the Rockwood 528 stop. Also provide wall mounted plastic door stop plate at any door adjacent to a gypsum wall.

Hinges: 1-1/2 pair heavy weight hinges Stops: [2] Rockwood 528; plastic wall plate Closer: SC80A. Overhead Door Closer [only at locations marked "closer" on door schedule] Latch Set: W101 26D Dead Bolt D241 26D Door Viewer: Rockwood 622, Satin Chrome [2 at ADA entrance doors] Gaskets Weatherstripping [smoke seal in lieu of weatherstripping at interior unit entrance doors] Threshold ADA Compliant Anodized Aluminum Kickplate 8" high stainless steel kickplate, exterior side only Hardware Set 2: Passage Set 1 pair or 1-1/2 pair hinges Hinges: [existing door frames only have [2] existing hinge pockets] [2] Rockwood 528; plastic wall plate Stops: Latch Set: W101 26D

Hardware Set 1: Unit Entrance Doors

Hardware Set 3: Privacy Set

Hinges:

Stops: Lock Set: pair or 1-1/2 pair hinges
 [existing door frames only have [2] existing hinge pockets]
 [2] Rockwood 528; plastic wall plate
 W301 26D

Hardware Set 4: Bi-Pass Doors

Hanging Rail:	By door manufacturer [26D finish]
Pulls [each leaf]:	Recessed cups [each door leaf]

Hardware Set 5: Storeroom Lock

Hinges:	1-1/2 pair hinges		
Closer:	SC80A, Overhead Door Closer		
Lock Set:	W581	26D	
Gaskets	Smoke Seal Gasket		

Hardware Set 6: Building Entrance Doors

Hinges:	1-1/2 pair heavy weight hinges
Stops:	[2] Rockwood 528; plastic wall plate
Closer:	SC80A, Overhead Door Closer
Lock Set:	W581 26D
Door Viewer:	Rockwood 622, Satin Chrome [2] each
Gaskets	Weatherstripping
Threshold	ADA Compliant Anodized Aluminum
Kickplate	8" high stainless steel kickplate, both sides

See Part 2.2 Components above for accessories and other hardware.

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SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes gypsum board with joint treatment; tile backer board.

1.2 SUBMITTALS

A. Product Data: Submit data on each type of gypsum board, backer board, joint tape and accessories.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with GA-201 Gypsum Board for Walls and Ceilings. GA-214 -Recommended Specification: Levels of Gypsum Board Finish. GA-216 - Recommended Specifications for the Application and Finishing of Gypsum Board. GA-600 - Fire Resistance Design Manual.
- B. Surface Burning Characteristics:
 - 1. Textile Wall Coverings: Comply with one of the following:
 - a. Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
- C. Mock-up:
 - 1. Provide mockup of the quality of finishes for one wall that indicates the level of finish quality. Approved mockup will become standard for comparing other work.
 - 2. Provide mockup of the quality of finishes for one ceiling area that indicates the level of finish quality for knockdown stomped ceiling finishes. Approved mockup will become standard for comparing other work.

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

- A. Manufacturers:
 - 1. United States Gypsum Co.
 - 2. BPB Americas Inc.
 - 3. G-P Gypsum Corp.
 - 4. National Gypsum Co.
 - 5. Certainteed.
- B. Gypsum Board [Type GB-1]: ASTM C1396; 1/2 inch thick, maximum available length in place; ends cut square, tapered square edges.
- C. Gypsum Board [Type GB-2A]: ASTM C1396; ASTM D3273, non-paper faced, mold-moisture resistant, 1/2 inch thick, maximum available length in place; ends cut square, tapered square edges.
- D. Gypsum Board [Type GB-2B]: ASTM C1396; ASTM D3273, paper faced, mold-moisture resistant, 1/2 inch thick, maximum available length in place; ends cut square, tapered square edges.
- E. Gypsum Board [Type GB-3]: ASTM C1396; Type X fire resistant type, high density; 5/8 inch thick, maximum available length in place; ends cut square, tapered square edges.
- F. Gypsum Board [Type GB-4A]: ASTM C1396; non-paper faced, mold-moisture resistant, Type X fire resistant type; 5/8 inch thick, maximum available length in place; ends cut square, tapered square edges.

- G. Gypsum Board [Type GB-4B]: ASTM C1396; paper faced, mold-moisture resistant, Type X fire resistant type; 5/8 inch thick, maximum available length in place; ends cut square, tapered square edges.
- H. Tile / Shower Backer Boards [Type TB-1]:
 - 1. Cement Tile Backer Board: ASTM A118.9; high density, glass fiber reinforced; 1/2 inch thick; mold resistant.
 - 2. Tile Backer Board Joint Tape: 2 inch wide, coated glass fiber tape for joints and corners.

2.2 ACCESSORIES

- A. Gypsum Board Accessories: ASTM C1047; metal, metal and paper combination; corner beads, edge trim, and expansion joints.
 - 1. Metal Accessories: Galvanized steel.
 - 2. Edge Trim: Type LC or U bead.
- B. Joint Materials: ASTM C475/C475M, reinforcing tape, joint compound, and water.
- C. Fasteners: ASTM C1002; Type S12 hardened screws, length to suit application.
- D. Gypsum Board Screws: ASTM C1002; Type W or S hardened screws, length to suit application.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify site conditions are ready to receive work.

3.2 INSTALLATION

- A. Gypsum Board:
 - 1. Install gypsum board in accordance with GA-216 and GA-600.
 - 2. Fasten gypsum board to furring or framing with screws.
 - 3. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
 - 4. Seal cut edges and holes in moisture resistant gypsum board with sealant.
- B. Joint Treatment:
 - 1. Finish in accordance with GA-214 Level 4.
 - a. Level 5 finish at areas receiving tile backer board or paperless gypsum board.
 - 2. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 3. Feather coats onto adjoining surfaces so camber is maximum 1/32 inch.

3.3 SCHEDULE

- A. Match existing / adjacent finishes as applicable to the conditions. General intent is repair existing gypsum board finishes to a Level 4 standard finish. Prep, repair, and skim as required to achieve desired finish.
 - 1. Level 4 finishes at all paper faced gypsum board.
 - 2. Level 5 finishes at all non-paper faced gypsum board.
- B. Refer to Drawings for Schedule of Non-Paper faced gypsum board and moisture resistance gypsum board finishes.
- C. Interior walls [except where noted otherwise]: GB-1.
- D. Interior Walls at Wet Areas: GB-2A / GB-2B, GB-4A, GB-4B.
- E. Interior Ceilings: GB-1.
- F. Interior Ceilings at Bathrooms / Wet Areas: GB-2A

- G. Interior Ceilings below Toilet Rooms: GB-2A / GB-4A.
- H. Interior Walls / Ceilings at Demising Wall Locations: GB-3 or GB-4A GB-4B as applicable.
- I. Interior walls to receive tile / solid surface finishes: TB-1 or GB-2A / GB-4A as applicable and per manufacturer installation instructions.

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SECTION 09 26 13 - GYPSUM VENEER PLASTERING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Veneer plaster / Skim coat over existing plaster or gypsum board surfaces.

1.2 SUBMITTALS

A. Product Data: Veneer plaster products.

1.3 QUALITY ASSURANCE

- A. Apply gypsum base according to ASTM C844 and GA 216.
- B. Apply gypsum veneer plaster according to ASTM C843.
- C. Veneer plaster Work according to GA 216.
- D. Fire-Rated Wall and Floor Construction: in conjunction with Section 09 21 16 and the drawings.
- E. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.
- F. Installer: Company specializing in performing Work of this Section with three years' experience.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Do not apply veneer plaster when substrate or ambient air temperature is less than 50 degrees F nor more than 80 degrees F; for 24 hours prior to, during operations and after, until building heating system can maintain spaces above minimum temperature.

PART 2 PRODUCTS

2.1 GYPSUM VENEER PLASTER

- A. Manufacturers:
 - 1. USG
 - 2. Georgia Pacific
 - 3. National Gypsum

2.2 COMPONENTS

- A. Gypsum Veneer Plaster: ASTM C587.
- B. Gypsum Base: Refer to Section 09 21 16 for gypsum board base materials.
- C. Gypsum Veneer Base Accessories: ASTM C1047; metal; corner beads, edge trim, and expansion joints.
- D. Reinforcing Tape, Joint Compound, Adhesive, Water, Fasteners: GA 216.
- E. Bond Coat: ASTM C631, vinyl polymer type.

2.3 ACCESSORIES

A. Gypsum Board Screws: ASTM C954; length to suit application.1. Screws for Wood Framing: Type W.

2.4 MIXES

A. Mix plaster according to ASTM C587.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify gypsum base is flat, joints are taped and sanded, and surface is ready to receive Work of this Section. Verify joint and surface perimeter accessories are in place.
- B. Verify gypsum plaster base has been installed according to ASTM C844, is flat, smooth and surface is ready to receive Work. Verify joint and surface perimeter accessories are in place.

3.2 PREPARATION

A. Clean surfaces of dust or loose matter.

3.3 INSTALLATION

- A. Install gypsum base according to GA 216. Refer to Section 09 21 16.
- B. Use drywall screws to fasten gypsum board to framing substrate.
- C. Install accessories.
- D. Tape, fill, and sand filled joints, edges, corners, openings, and fixings to produce surface ready to receive veneer finish.
- E. Feather coats onto adjoining surfaces so joint camber is maximum 1/32 inch.
- F. Apply gypsum veneer plaster according to ASTM C843.
- G. Apply single coat of veneer plaster immediately after dampening substrate to thickness of 1/16 to 3/16 inch in thickness or as required to suit existing conditions.
- H. Finish surface of veneer plaster to smooth skim coat finish to match new adjacent gypsum board finishes.

3.4 ERECTION TOLERANCES

A. Maximum Variation from Specified Thickness: Plus or minus 1/32 inch.

3.5 SCHEDULES

A. Existing plaster/ gypsum board finishes to remain: Repair walls from prior damage and as a result of cut-patch operations for proposed work. Apply new full skim coat gypsum veneer skim coat over the entire surface of the existing finishes scheduled to remain where impacted by the work. New finish shall be smooth and consistent with the finish of new gypsum board, Level 4 finish.

SECTION 09 30 00 - TILING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes ceramic tile for interior floor and wall applications; and thresholds at door openings.

1.2 SUBMITTALS

- A. Product Data: Submit information on tile and grout, instructions for using grouts and adhesives.
- B. Samples: Submit tile and grout samples illustrating pattern, color variations, and grout joint size variations.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with TCA Handbook and ANSI A108.1 Series/A118.1 Series.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Do not install adhesives in unventilated environment.
- B. Maintain ambient and substrate temperature of 50 degrees F during installation of mortar materials.

1.5 ALLOWANCE

A. Allow \$8.00/sf for the purchase of the tile excluding all accessories and installation.

PART 2 PRODUCTS

2.1 TILE

- A. Manufacturers:
 - 1. Dal Tile International, Core Fundamentals, Advantage Tier [Basis of Design]
 - 2. American Olean Tile Co.
 - 3. Crossville Porcelain Stone.
 - 4. Florida Tile.

2.2 COMPONENTS

- A. Porcelain Floor Tile: ANSI A137.1, conforming to the following:
 - 1. Moisture Absorption: 0 to 0.5 percent.
 - 2. Size: 12x12 x5/16 inch
 - 3. Shape: Square.
 - 4. Edge: Square/Eased.
 - 5. Surface Finish: Unglazed.
 - 6. Color: As selected from full range of standard colors.
- B. Base: Same as floor tile if there is no wall tile above.
 - 1. Length: 12" length.
 - 2. Height: 3".
 - 3. Bottom Edge: Square
 - 4. Top Edge: Eased.
 - 5. Moisture Absorption: 0 to 0.5 percent.
 - 6. Surface Finish: Unglazed.
 - 7. Color: As selected.
- C. Mortar Materials:
 - 1. Mortar Bed Materials: ANSI A108.1A; portland cement, sand, latex additive, and water; proportioned in accordance with applicable code.

- 2. Mortar Bond Coat Materials:
 - a. Dry-Set Portland Cement type: ANSI A118.1.
 - b. Latex-Portland Cement type: ANSI A118.4.
- D. Grout Materials:
 - 1. Standard Grout: Latex-Portland cement type as specified in ANSI A118.6; color as selected, sanded at floor, unsanded at walls [as applicable]
 - 2. Silicone Rubber Grout: Silicone sealant, moisture and mildew resistant type, complying with ANSI A118.6, color as selected.
- E. Cementitious Backer Board: Refer to Section 09 21 16.
- F. Thresholds:
 - 1. Extruded aluminum, with integral edge strip and bullnosed edge applicable to floor transition.
 - 2. Sloped profile as required to meet applicable threshold requirements for accessibility.
- G. Tile Floor Edging: Extruded Aluminum to suit condition.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify surfaces are ready to receive work.

3.2 PREPARATION

A. Install cementitious backer board. Tape joints and corners, cover with skim coat of mortar to feather edge.

3.3 INSTALLATION

- A. Install tile, and grout in accordance with applicable requirements of ANSI A108.1 through A108.10, and TCA Handbook recommendations.
- B. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor, base and wall joints.
- C. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
- D. Grout tile joints. Use standard grout unless otherwise indicated.
- E. Floors:
 - 1. Over interior cementitious backer unit substrates, install in accordance with TCA Handbook Method F113, dry-set or latex-portland cement bond coat, with standard grout.
- F. Wall Tile:
 - 1. Over cementitious backer units install in accordance with TCA Handbook Method W244, using membrane at bathrooms, kitchens.
 - 2. Over gypsum wallboard on wood studs install in accordance with TCA Handbook Method W243, thin-set with dry-set or latex-portland cement bond coat, unless otherwise indicated.
SECTION 09 64 00 - RESILIENT WOOD FLOORING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes resilient plank flooring – direct glue down.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data.
- B. Samples:
 - 1. Submit manufacturer's complete set of color samples for initial selection.

1.3 QUALITY ASSURANCE

- A. Surface Burning Characteristics:
 - 1. Floor Finishes: Class I, minimum 0.45 watts/sq cm when tested in accordance with NFPA 253.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature in storage area between 55 degrees F and 85 degrees F.
- B. Store materials for not less than 48 hours prior to installation in area of installation at temperature of 65 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F. Maintain relative humidity between 40% and 60% during installation.

1.5 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sg. cm.

1.6 EXTRA MATERIALS

- A. Furnish an additional 5% of each type of floor, base and accessories.
- B. Document attic stock, properly label, and turn over to Owner.

1.7 WARRANTY

A. Furnish twenty [20] year warranty on Vinyl Plank Flooring.

PART 2 PRODUCTS

2.1 TILE FLOORING

- A. Manufacturers:
 - 1. Tarkett Luxury Vinyl Planks, Event+Wood
 - 2. Armstrong, Vinyl Plank Flooring, LUXE Best Collection.
 - 3. Congoleum Corp.
- B. Vinyl Plank Flooring: ASTM F1066:
 - 1. Tile Standard: ASTM F 1700, Class III, Type B, printed film vinyl tile, embossed surface
 - 2. Size: 6 x 36 inch.
 - 3. Wear Layer Thickness: 30 mil [embossed]
 - 4. Total Thickness: 0.120 inch
 - 5. Surface Treatment: Polyurethane Reinforced
 - 6. Installation Method: Glue Down
 - 7. Pattern: Surface woodgrain pattern, as selected from full range of manufacturers colors.

2.2 ACCESSORIES

- A. Subfloor Filler: Premix latex; type recommended by floor material manufacturer.
- B. Primers and Adhesives: Waterproof, types recommended by floor material manufacturer.
- C. Moldings and Edge Strips: Same material as flooring as applicable, molded rubber other locations.
- D. Sealer and Wax: Types recommended by floor material manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. All subfloors must be permanently dry, clean, smooth, and structurally sound. The surface must be free of all dust, loose particles, solvents, paint, grease, oil, wax, alkali, sealing/curing compounds, old adhesive, and any other foreign material, which could affect the installation and adhesive bond to the substrate. Permanent and non-permanent markers, pens, crayons, paint, or similar marking tools used to mark the substrate or the back of the resilient flooring material will cause migratory staining. All substrate contaminants must be mechanically removed prior to the installation of the flooring material. NOTE: Do not use liquid solvents or adhesive removers.
- B. Verify concrete floors are dry to maximum moisture content as recommended by manufacturer, and exhibit negative alkalinity, carbonization, and dusting.
- C. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.

3.2 PREPARATION

- A. Clean substrate.
- B. Fill all depressions, cracks, and other surface irregularities with a good quality Portland cement based underlayment patching compound appropriate for this purpose.
- C. Fill minor low spots and other defects with sub-floor filler.
- D. Repair concrete surfaces in accordance with ASTMF 710.
- E. Wood subfloors shall have a 1/4 or 1/2 inch APA approved underlayment plywood and approved by LVP manufacturer.
- F. Fill cracks, holes, depressions and irregularities in the substrate with good quality Portland cement based underlayment leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.
- G. Apply primer as required to prevent "bleed-thru" or interference with adhesion by substances that cannot be removed. Apply primer to substrate surfaces per manufacturer.

3.3 INSTALLATION

- A. Layout flooring planks in accordance with manufacturer's recommendations. Set flooring in place. Bond planks together, adhered to underlayment per manufacturer's recommendations.
- B. Install tile flooring with joints and seams parallel to building lines.
- C. Scribe flooring to produce tight joints at items penetrating flooring.
- D. Where floor finishes are different on opposite sides of door, terminate flooring under centerline of door.

- E. Apply adhesive to the underlayment in preparation for LVP, install per manufacturer's requirements.
- F. LVP shall be lightly butted together when placing the LVP into the adhesive.
- G. Roll floor in both direction with weighted roller in accordance with manufacturer's recommendations.
- H. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated. Secure resilient strips by adhesive.
- I. Adhere base tight to wall and floor surfaces.
- J. Fit joints tightly and make vertical. Miter internal corners. At external corners, V cut back of base strip to 2/3 of its thickness and fold.

3.4 CLEANING

A. Remove excess adhesive from surfaces without damage.

3.5 SCHEDULE

A. Vinyl Plank Flooring: at areas identified on the drawings.

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SECTION 09 65 00 - RESILIENT RUBBER FLOORING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes resilient tile flooring; resilient base; thresholds and resilient stair accessories

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM F1344 Standard Specification for Rubber Floor Tile.
 - 2. ASTM F1861 Standard Specification for Resilient Wall Base.
- B. National Fire Protection Association:
 - 1. NFPA 253 Standard Method of Test for Critical Radiant Flux for Floor Covering Systems Using a Radiant Heat Energy Source.
- C. South Coast Air Quality Management District:
 - 1. SCAQMD Rule 1113 Architectural Coatings.
 - 2. SCAQMD Rule 1168 Adhesive and Sealant Applications.

1.3 SUBMITTALS

- A. Shop Drawings: Indicate seaming plan, custom patterns and inlay designs.
- B. Product Data: Submit data describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Samples:

- 1. Submit manufacturer's complete set of color samples for initial selection.
- 2. Submit two samples, illustrating color and pattern for each resilient product specified.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning

1.5 QUALITY ASSURANCE

- A. Surface Burning Characteristics:
 - 1. Base Material: Class I, minimum 0.45 watts/sq cm when tested in accordance with NFPA 253.
- B. Accessibility: Base shall comply with accessibility requirements ICC/ANSI A117.1.
 - 1. Exceed Federal Standards and ADA requirements for slip-resistance.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
 - Manufacturers Qualifications: Product manufacturer will have a technical installation representative available at the job site at the start of the installation to insure there are no conditions which will compromise the installation of the material and that the material is being installed according to industry standards, practices and manufacturers guidelines. The manufacturer's technical representative will document and confirm that the substrate, material, and installation are in compliance with manufacturer's guidelines and accepted industry standards and practices.
 - a. Any noticed defect with the product or installation system will require the response of the manufacturer's technical field service personnel on site to determine cause, correction or replacement.

- B. Installer: Company specializing in performing Work of this section with minimum ten years documented experience.
 - 1. An installer is "qualified" if trained by the manufacturer or a certified INSTALL [International Standards and Training Alliance] resilient covering installer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by Tarkett, but not less than 55 deg F (13 deg C) or more than 85 deg F (29 deg C).

1.8 PROJECT CONDITIONS / ENVIRONMENTAL REQUIREMENTS

- A. Install resilient products after other finishing operations, including painting, have been completed. If that is not possible due to the compressed schedule, provide all required protection of the floor system after installation until turnover of the space.
- B. Maintain ambient temperatures within range recommended by the manufacturer, but not less than 65 deg F or more than 85 deg F in spaces to receive resilient products during the following time periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.
- C. Maintain the ambient relative humidity between 40% and 60% during installation.
- D. Until Substantial Completion, maintain ambient temperatures within range recommended by the manufacturer, but not less than 55 deg F or more than 85 deg F.

1.9 EXTRA MATERIALS

- A. Furnish an additional 5% of each type of floor, base and accessories.
- B. Document attic stock, properly label, and turn over to Owner.

1.10 WARRANTY

A. Provide five [5] year manufacturer warranty for all resilient flooring, base, and accessories.

PART 2 PRODUCTS

2.1 TILE FLOORING

- A. Manufacturers:
 - 1. Tarkett North America / Johnsonite [Basis of Design]
- B. Rubber Tile: ASTM F1344; Class I-B- Homogenous Composition of 100% synthetic rubber: Tarkett / Johnsonite Color Splash Speckled Rubber Tile
 - 1. Size: 24 x 24 inch.
 - 2. Overall Thickness: 0.125 inch.
 - 3. Colors: manufacturer standard color mix as approved by Architect and Owner.
 - 4. Surface Texture:
 - a. Hammered at all floors unless specifically noted otherwise
 - b. Raised Round at treads, ramps or other areas if specifically noted.
 - 5. Test data:
 - a. Hardness (ASTM D2240): ≥ 85 Shore A
 - b. Abrasion Resistance (ASTM D3389): Passes
 - c. Thickness Tolerance (ASTM F386): Passes
 - d. Resistance to Chemicals (ASTM F925): Passes
 - e. Static Load Resistance (ASTM F970): 250 psi

- f. Resistance to Heat (ASTM F 1514): $\Delta E \le 8$
- g. Size/Squareness Tolerance (ASTM F2055): Passes
- h. Dimensional Stability (ASTM F2199): Passes
- i. Static Coefficient of Friction (ASTM D 2047): ≥ 0.8 SCOF, exceed ADA requirements for slip-resistance.
- j. Flammability (ASTM E648, Critical Radiant Flux): Class 1 (≥ 0.45 W/cm²)

2.2 RESILIENT BASE

- A. Manufacturers:
 - 1. Tarkett North America [Basis of Design]
 - 2. Approved Equal.
- B. Base: ASTM F1861 Type TP Thermoplastic, Rubber; coved style:
 - 1. Height: 4 inch.
 - 2. Thickness: 0.125 inch thick.
 - 3. Finish: Satin or Matte.
 - 4. Length: 4 foot sections.
 - 5. Outside Corners: Premolded or precut. Corners shall be a minimum of 4 inches in length each direction.
 - 6. Inside Corners: Job formed

2.3 STAIR COVERING

- A. Manufacturers:
 - 1. Tarkett North America [Basis of Design]
 - 2. Must be the same manufacturer as rubber flooring system.
- B. Rubber Stair Treads: FS RR-T-650, Composition A; full width and depth of stair tread in one piece; tapered thickness; nosing not less than 2 inches deep. Tarkett / Johnsonite Color Splash Speckled Rubber Tile
 - 1. Nominal Thickness: 0.1875 inch.
 - 2. Nosing Style: Square or round to match existing conditions.
 - 3. Colors: manufacturer standard color mix as approved by Architect and Owner.
 - 4. Surface Pattern: Hammered or as directed by Owner.
- C. Stair Risers: Maintain height and length in one piece, matching treads in material and color:
 1. Thickness: 0.125 inch.
- D. Stair Nosings: 1-1/2 inch horizontal return, 1-1/2 inch vertical return, full width of stair tread in one piece:
 - 1. Material: Rubber.
 - 2. Nominal Thickness: 0.125 inch.
 - 3. Pattern: Smooth.

2.4 ACCESSORIES

A. Transition Moldings and Edge Strips, same material as flooring or metal as applicable. Refer to drawings.

2.5 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated and coordinate with substrate.
- B. Primer: A primer may be required and must be verified by the manufacturer.
- C. Adhesives: Water-resistant type recommended by manufacturer to suit floor tile and substrate conditions indicated.

1. Adhesives shall be approved by manufacturer for use over concrete substrates with maximum RH of 85 percent (ASTM F2170) and maximum pH of 9.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- D. Verify floor and wall surfaces are free of substances capable of impairing adhesion of new adhesive and finish materials.

3.2 PREPARATION

- A. Contractor shall provide all required field verification of conditions, quantity take-offs, layout confirmations, etc. as applicable to the work.
- B. Prohibit traffic until filler is cured.
- C. Clean substrate.
- D. Apply primer as required to prevent "bleed-thru" or interference with adhesion by substances cannot be removed.
- E. Do not install resilient products until they are same temperature as the space where they are to be installed.
 - 1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
- F. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

3.3 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.
- B. Perform the following operations immediately after completing resilient product installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
 - 1. Prohibit traffic on resilient flooring for 48 hours after installation.
 - 2. No heavy traffic, rolling loads, or furniture placement for 72 hours after installation.
- D. Wait 72 hours after installation before performing initial cleaning.
- E. A regular maintenance program must be started after the initial cleaning.

3.4 SCHEDULE

A. Refer to Drawings.

SECTION 09 90 00 - PAINTING AND COATING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and field application of paints and other coatings.
- B. Paint/Stain all exposed surfaces, new and existing, unless otherwise indicated.
 - 1. Exterior Work:
 - a. Exterior wood and composite siding, soffits and trim.
 - b. Door Frames.
 - c. Metal railings and handrails.
 - d. Steel lintels.
 - e. Steel bollards
 - 2. Interior Work
 - a. Basement Concrete / CMU Walls
 - b. Walls and ceilings.
 - c. Interior trim and casing
 - d. Doors and frames.
 - e. Shelving and miscellaneous components.
 - f. Hardwood flooring
- C. Do not paint prefinished items, finished metal surfaces, operating parts, labels, and materials obviously intended to be left exposed such as brick and tile.
- D. Unless otherwise indicated do not paint concealed surfaces.
- E. Obtain primers and undercoat materials for each coating system from the same manufacturer as the finish coats. Primer and finish coat shall be factory applied, finish coat shall be field applied.
- F. **Extra Materials**: Deliver to Owner **any extra materials**, properly labeled, factory sealed, of each color and type of finish coat paint used on project for each building in contract. Materials shall be signed for by GDPM Construction Inspector.
- G. Minimum surface temperature of 50 degrees required for all coating systems.
- H. Store all materials in tightly closed containers when not in use, away from heat, electrical equipment, sparks and open flames. Use approved bonding and grounding procedures. Keep out of the reach of children and residents.
- I. Transfer materials to approved containers with complete and appropriate labeling.

1.2 APPLICATORS QUALIFICATIONS

A. Engage an experienced applicator with a minimum of <u>five</u> years experience and who has completed painting systems application similar in materials and extend to those indicated for the Project and that have resulted in a construction record of successful in-service performance.

1.3 SUBMITTALS

- A. Product Data and Color Samples: Provide product data on each coating system component indicating VOC and environmental requirements. Coordinate coating systems for each material/substrate.
- B. Provide draw down samples of each coating for final review and approval by Owner.

1.4 REFERENCES AND REGULATIONS:

A. Standards: Comply with applicable provisions and recommendations of the following, except when otherwise shown or specified:

- 1. OSHA Safety Standards for the Construction Industry
- 2. SSPC Volume 1, Good Painting Practice,
- 3. SSPC Volume 2, Systems and Specifications, Surface Preparation Guide and Paint Application Specifications of the Steel Structures Painting Council.
- 4. SSPC and NACE Painter Safety Guidelines, latest editions.
- B. Requirements of Regulatory Agencies, conform with the following:
 - 1. Clean Air Act (CAA)
 - 2. Clean Water Act (CWA)
 - 3. Toxic Substances Control Act (TSCA)

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit maintenance and cleaning instructions.

1.6 QUALITY ASSURANCE

- A. Surface Burning Characteristics:
 - 1. Fire Retardant Finishes: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Store and apply materials in environmental conditions required by manufacturer's instructions.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information:
 - 1. Product name and type (description)
 - 2. Application & use instructions
 - 3. Surface preparation
 - 4. VOC content
 - 5. Environmental handling and an SDS
 - 6. Batch date
 - 7. Color number
- B. Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- C. Handling: Maintain a clean, dry storage area to prevent contamination or damage to the coatings.

1.9 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not apply coatings under environmental conditions outside manufacturer's absolute limits.

1.10 MOCKUP

A. Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections and demonstrate aesthetic effects and set quality standards for materials and execution.

PART 2 PRODUCTS

2.1 PAINT AND COATINGS

- A. Manufacturer
 - 1. Sherwin-Williams (SW) Basis of Design

- 2. PPG Porter
- 3. Benjamin Moore
- B. Paints and Coatings General:
 - Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such a procedure is specifically described in manufacturer's product instructions. VOCs need to be confirmed by using the products EDS sheets.
- C. Primers:
 - 1. Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- D. Coating Application Accessories:
 - 1. Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required per manufacturer's specifications.
- E. Colors: As selected from a full range of manufacturer's offerings, including premium colors.
- F. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated.
- G. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated.
 - 1. Lead: Measurable lead content in either the pigment or binder will not be permitted.
 - 2. The finish coats shall match colors selected.
- H. Finish Quality:
 - 1. Finishes shall exhibit a high quality, commercial grade appearance of uniform thickness.
 - 2. Finishes shall be free of runs, sags, drips, waves, orange peel, festoons, dry spray, cloudiness, spotting, ropiness, brush marks, roller marks, fish eyes or other surface imperfections, voids, discontinuities, pinholes, holidays and overspray.
 - 3. Final coat shall be uniform in texture, color and gloss, and shall provide an acceptable match with the approved drawdown sample sheet.
- I. Contractor shall provide for a <u>minimum</u> of the following:
 - 1. Exterior Finishes: 3 colors
 - 2. Interior Finishes: 4 colors ceiling, walls, accent wall, and trim

2.2 EXTERIOR PAINT APPLICATION SCHEDULE

General: All coatings shall be applied according to manufacturer's application instructions, including application rates for wet film and dry film thickness.

- A. Metals Ferrous: [Semi-Gloss Finish]
 - 1. 1st Coat: S-W Pro Industrial[™] Pro-Cryl[®] Universal Primer, B66-1300 Series
 - 2. 2nd Coat: S-W Emerald[®] Urethane Trim Enamel Semi-Gloss, K38 Series
 - 3. 3rd Coat: S-W Emerald[®] Urethane Trim Enamel Semi-Gloss, K38 Series
- B. Metals Aluminum / Galvanized: [Semi-Gloss Finish]
 - 1. 1st Coat: S-W Pro Industrial DTM Acrylic Primer / Finish, B66 Series
 - 2. 2nd Coat: S-W Pro Industrial DTM Acrylic Enamel Semi-Gloss, B66 Series
 - 3. 3rd Coat: S-W Pro Industrial DTM Acrylic Enamel Semi-Gloss, B66 Series
- C. Exterior Wood / Composite Trim, etc: [Satin Finish]
 - 1. 1st Coat: S-W Exterior Latex Wood Primer, B42W8141
 - 2. 2nd Coat: S-W SuperPaint® Exterior Latex Satin, A89 Series
 - 3. 3rd Coat: S-W SuperPaint[®] Exterior Latex Satin, A89 Series
- D. Miscellaneous metals and steel lintels:
 - 1. 1st Coat: S-W DTM Acrylic Primer/Finish.
 - 2. 2nd Coat: S-W SW DTM Acrylic Semi-Gloss Enamel Semi-Gloss, Acrylic Coating.

09 90 00 - 3 PAINT AND COATING 3. 3rd Coat: S-W SW DTM Acrylic Semi-Gloss Enamel Semi-Gloss, Acrylic Coating.

2.3 INTERIOR PAINT APPLICATION SCHEDULE

- A. Concrete / Concrete Block / CMU Basement Walls:
 - 1. 1st Coat: UGL Drylok Wet Wall Bonding Primer
 - 2. 2nd Coat: UGL Drylok Original Concrete and Masonry Waterproofer
 - 3. 3rd Coat: UGL Drylok Original Concrete and Masonry Waterproofer
- B. Metals Ferrous: [Semi-Gloss Finish]
 - 1. 1st Coat: S-W Pro Industrial[™] Pro-Cryl[®] Universal Primer, B66-1300 Series
 - 2. 2nd Coat: S-W Pro Industrial[™] Semi-Gloss Acrylic, B66-650 Series
 - 3. 3rd Coat: S-W Pro Industrial[™] Semi-Gloss Acrylic, B66-650 Series
- C. Metals Aluminum / Galvanized: [Semi-Gloss Finish]
 - 1. 1st Coat: S-W Pro Industrial[™] Pro-Cryl[®] Universal Primer, B66-1300 Series
 - 2. 2nd Coat: S-W Pro Industrial[™] Semi-Gloss Acrylic, B66-650
 - 3. 3rd Coat: S-W Pro Industrial[™] Semi-Gloss Acrylic, B66-650
- D. Painted Wood Trim, Trim Components, Doors, and Frames: [Semi-Gloss Finish]
 - 1. 1st Coat: S-W Premium Wall & Wood Latex Primer, B28W8111
 - 2. 2nd Coat: S-W ProMar® HP 200 Zero VOC Latex Semi-Gloss, B31-1900 Series
 - 3. 3rd Coat: S-W ProMar® HP 200 Zero VOC Latex Semi-Gloss, B31-1900 Series
- E. Wood: [Eg-Shel/Satin Finish]
 - 1. 1st Coat: S-W Premium Wall & Wood Latex Primer, B28W8111
 - 2. 2nd Coat: S-W ProMar® 200 HP Zero VOC Latex Eg-Shel, B20-1900 Series
 - 3. 3rd Coat: S-W ProMar[®] 200 HP Zero VOC Latex Eg-Shel, B20-1900 Series
- F. Gypsum Board Walls: [Eg-Shel/Satin Finish]
 - 1. 1st Coat: S-W ProMar[®] 200 Zero VOC Latex Primer, B28W2600
 - 2. 2nd Coat: S-W ProMar® 200 HP Zero VOC Latex Eg-Shel, B20-1900
 - 3. 3rd Coat: S-W ProMar[®] 200 HP Zero VOC Latex Eg-Shel, B20-1900
- G. Gypsum Board Ceilings: [Flat Finish]
 - 1. 1st Coat: S-W ProMar[®] 200 Zero VOC Latex Primer, B28W2600
 - 2. 2nd Coat: S-W ProMar[®] 200 Zero VOC Latex Flat, B30-12600 Series
 - 3. 3rd Coat: S-W ProMar[®] 200 Zero VOC Latex Flat, B30-12600 Series
- H. Stained Interior Finish Carpentry / Wood Doors [if not pre-finished / painted]
 - 1. 1st coat: Wood Conditioner: SW Min-Wax Pre-Stain Wood Conditioner
 - 2. 2nd coat: Wood Stain: SW Min-Wax Performance Series Tintable Wood Stain 250 VOC,
 - 3. 3rd coat: Sealer: SW Min-Wax Performance Series Fast-Dry Sanding Sealer.
 - 4. 4th / 5th coats: Satin Varnish: SW Min-Wax Fast-Dry Polyurethane

2.4 PRE-CLEANING AND SURFACE PREPARATION PRODUCTS

- A. Pre-cleaning Agents
 - 1. SW No Rinse Prepaint Cleaner
 - 2. Krud Kutter
 - 3. Potable water
- B. Pre-cleaning (Power Wash) Equipment
 - 1. Capacity to continuously deliver 3-5 gpm at 2,500 psig of 180-200 degree F hot water.
 - 2. Cleaning system shall affect the 32-ounce per gallon dilution.
 - 3. Manufacturer: Alkota, Model 565T with model 520 water heater or approved equal.
 - 4. Power wash with 15 degree tip capable of delivering hot water at 2500 psig.
- C. Power Tool Surface Preparation Media:
 - 1. Scotch Brite No. 07451 by 3 M Corporation, Surface Conditioning disc.
 - a. Properties

- b. Texture: A Medium
- c. Maximum Speed: 18,000 RPM
- Clean 'N" Strip Disco No CSD2 by 3 M Corporation
- a. Texture: Course
- b. Maximum Speed: 8,000 RPM
- c. Or approved equal.

PART 3 EXECUTION

2.

3.1 EXAMINATION

- A. Do not begin application of coatings until substrates have been properly examined and prepared. Notify Architect of unsatisfactory conditions before proceeding.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Proceed with work only after conditions have been corrected, and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.
- D. Previously Painted Surfaces: Verify that existing painted surfaces do not contain lead based paints, notify Architect immediately if lead based paints are encountered.

3.2 SURFACE PREPARATION

- A. Comply with paint manufacturer's written instructions for surface preparation, environmental and substrate conditions, product mixing, and application.
- B. Perform all surface preparation in accordance with SSPC specifications, guidelines and good painting practices.
- C. Proper product selection, surface preparation, and application affect coating performance. Coating integrity and service life will be reduced because of improperly prepared surfaces. Selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the service life of the coating system.
- D. Selection of the proper method of surface preparation depends on the substrate, the environment, and the expected service life of the coating system. Economics, surface contamination, and the effect on the substrate will also influence the selection of surface preparation methods.
- E. The surface must be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion. Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system.
- F. Prior to attempting to remove mildew, it is always recommended to test any cleaner on a small, inconspicuous area prior to use. Bleach and bleaching type cleaners may damage or discolor existing paint films. Bleach alternative cleaning solutions may be advised.
- G. Mildew may be removed before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
- H. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50°F, unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50°F or higher to use low temperature products.
- I. Methods:

- 1. Aluminum: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.
- 2. Block (Cinder and Concrete): Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement, and hardeners. Concrete and mortar must be cured at least 30 days at 75°F unless the manufacturer's products are designed for application prior to the 30-day period. The pH of the surface should be between 6 and 9 unless the products are designed to be used in high pH environments. On tilt-up and poured-in-place concrete, commercial detergents and abrasive blasting may be necessary to prepare the surface. Fill bug holes, air pockets, and other voids with a cement patching compound.
- 3. Concrete, SSPC-SP13 or NACE 6: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.
- 4. Cement Composition Siding/Panels: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments.
- 5. Drywall—Exterior: Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting. Exterior surfaces must be spackled with exterior grade compounds.
- 6. Exterior Composition Board (Hardboard): Some composition boards may exude a waxy material that must be removed with a solvent prior to coating. Whether factory primed or unprimed, exterior composition board siding (hardboard) must be cleaned thoroughly and primed with an alkyd primer.
- 7. Galvanized Metal: Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.
- 8. Steel: Structural, Plate, etc.: Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.
- 9. Solvent Cleaning, SSPC-SP1: Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.
- 10. Hand Tool Cleaning, SSPC-SP2: Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before Hand Tool Cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
- 11. Power Tool Cleaning, SSPC-SP3: Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before Power Tool Cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.

- 12. White Metal Blast Cleaning, SSPC-SP5 or NACE 1: A White Metal Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
- 13. Commercial Blast Cleaning, SSPC-SP6 or NACE 3: A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
- 14. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4: A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP 1 or other agreed upon methods.
- 15. Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals, SSPC-SP16: This standard covers the requirements for brush-off blast cleaning of uncoated or coated metal surfaces other than carbon steel by the use of abrasives. These requirements include visual verification of the end condition of the surface and materials and procedures necessary to achieve and verify the end condition. A brush-off blast cleaned non-ferrous metal surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, metal oxides (corrosion products), and other foreign matter. Intact, tightly adherent coating is permitted to remain. A coating is considered tightly adherent if it cannot be removed by lifting with a dull putty knife.
- 16. Power Tool Cleaning to Bare Metal, SSPC-SP11: Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.
- 17. Near-White Blast Cleaning, SSPC-SP10 or NACE 2: A Near White Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 5 percent of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
- 18. Water Blasting, NACE Standard RP-01-72: Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.
- 19. Stucco: Must be clean and free of any loose stucco. If recommended procedures for applying stucco are followed, and normal drying conditions prevail, the surface may be painted in 30 days. The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments such as Loxon.
- 20. Wood—Exterior: Must be clean and dry. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.
- 21. Vinyl Siding, Architectural Plastics & Fiberglass or other PVC, plastic building products. Clean the surface thoroughly by scrubbing with warm, soapy water. Rinse thoroughly, prime with appropriate white primer. Do not paint vinyl with any color darker than the

original color. Do not paint vinyl with a color having a Light Reflective Value (LRV) of less than 56 unless VinylSafe® Colors are used. If VinylSafe® Colors are not used and darker colors lower than an LRV of 56 are, the vinyl may warp. Follow all painting guidelines of the vinyl manufacturer when painting. Only paint properly installed vinyl siding. Deviating from the manufacturer's painting guidelines may cause the warranty to be voided.

3.3 APPLICATION

- A. Examination and Verification of Condition: Contractor shall verify the areas and conditions under which the work is to be performed and notify the Owner in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until satisfactory conditions have been corrected. Do not coat over chalk, dirt, scale, moisture, oil, surface contaminants, coatings that have exceeded the manufacturer's re-coat guidelines, or conditions otherwise detrimental to the formation of a durable high quality coating system.
- B. Comply with manufacturer's instructions and SSPC Good Paint Practices Volumes 1 and 2.
- C. Comply with OSHA regulations, State of Ohio and Federal laws, ordinances, and guidelines.
- D. Follow manufacturer's requirements for temperature and humidity at time of application.
- E. Refer to SDS sheets before using any product.
- F. All surfaces must be thoroughly dry before coating applications. Do not apply to wet or damp surfaces.
 - 1. Wait at least 30 days before applying to new concrete or masonry or follow manufacturer's procedures to apply appropriate coatings prior to 30 days.
 - 2. Test new concrete for moisture content.
 - 3. Wait until wood is fully dry after rain or morning fog or dew.
- G. Apply coatings using brush or roller only.
- H. Apply all coatings and materials with the manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendation.
- I. Apply coatings using methods recommended by manufacturer.
- J. Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.
- K. Apply coatings at spreading rate required to achieve the manufacturer's recommended dry film thickness.
- L. Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- M. Exterior Woodwork: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 2 weeks.
- N. Inspection: The coated surface must be inspected and approved by the Architect or Engineer just prior to the application of each coat.

3.4 CLEAN UP

- A. Clean site and remove debris and empty cans daily. Remove all paint from adjacent surfaces. Clean spills and splatters immediately.
- B. Clean hands and tools immediately after use with soap and water for water based products and with mineral spirits for oil based products.
- C. Follow manufacturer's safety recommendations when using mineral spirits.

3.5 ENVIRONMENTAL REQUIREMENTS

A. Store and apply materials in environmental conditions required by manufacturer's instructions.

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SECTION 10 00 00 - SPECIALTIES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes address plaques, mailboxes

1.2 SUBMITTALS

- A. Shop Drawings: Indicate component locations, dimensions, details of blocking and attachment, and anchors.
- B. Product Data: Submit data on Product and accessories.

PART 2 PRODUCTS

2.1 CAST ALUMINUM ADDRESS PLAQUES

- A. Cast aluminum address plaque, 6 1/4 x 11 inch face x 1/4 inch thickness, 4 inch high numbers. Raised numbers on contrasting background, Color as selected by Architect. Provide Type II braille at all front entrances [glue onto face of address plaque]
 - 1. Front Entrances:
 - a. Provide [1] address plaque for each front entrance.
 - b. Provide [1] address plaque for each individual entrance.
 - 2. Rear Entrances:
 - a. Provide [1] address plaque for each rear entrance.

2.2 EXTERIOR WALL MOUNTED MAILBOXES

A. Surface Mounted – Traditional Mailbox, Standard – Horizontal Style with top hinged lid. Provide address number / unit number label at each mailbox. Color: black

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify surfaces and internal wall blocking are ready to receive work and opening dimensions are as instructed by manufacturer.

3.2 INSTALLATION – ADDRESS PLAQUES

A. Install address plaques at existing walls near location of existing address plaque to be removed. Coordinate exact location with Architect.

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SECTION 10 28 00 - BATH ACCESSORIES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes bath accessories.

1.2 SUBMITTALS

A. Product Data: Submit data on accessories describing size, finish, details of function, attachment methods.

PART 2 PRODUCTS

2.1 TOILET AND BATH ACCESSORIES

- A. Manufacturers:
 - 1. American Specialties, Inc.
 - 2. Bobrick Washroom Accessories
 - 3. A&J Washroom Accessories
 - 4. Broan / Nutone

2.2 COMPONENTS

- A. Accessories General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
 - 1. Grind welded joints smooth.
 - 2. Fabricate units made of metal sheet of seamless sheets, with flat surfaces.
- B. Stainless Steel Sheet: ASTM A666, Type 304.
- C. Stainless Steel Tubing: ASTM A269, stainless steel.
- D. Galvanized Sheet Steel: ASTM A653, G90 zinc coating.
- E. Mirror Glass: Float glass, Type I, Class 1, Quality q2 (ASTM C 1036), with silvering, copper coating, and suitable protective organic coating to copper backing in accordance with FS A-A-3002.
- F. Fasteners, Screws, and Bolts: Hot dip galvanized.
- G. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.3 ACCESSORIES

- A. Toilet Tissue Holder (recessed): Wall mounted, stainless steel, rectangular-shaped bracket and back plate for concealed attachment, satin finish.
 - 1. Manufactured by ASI, #7402.
- B. Towel Bar 18" and 24" bar with back plate for concealed attachment, satin finish, ³/₄" square bar
 - 1. Manufactured by ASI, #7360.
- C. Grab Bar: 18", 24", 36", 42" and 48" and corner grab bar with back plate for concealed attachment, stainless steel satin finish, 1 ½" diameter
 - 1. Manufactured by ASI, #3200 Type 01.
 - 2. Manufactured by ASI, #3574 Type 01, corner shower grab bar
- D. Robe Hook: Single hook type.

- 1. Manufactured by ASI, #7340.
- E. Mirror:
 - 1. Manufactured by ASI #600 Series, 18" wide x 36" high
 - 2. Stainless steel, Type 304 with #8 finish
- F. Medicine Cabinet:
 - 1. Basco WM331-W, surface mounted Medicine cabinet, 18" x 36"
 - 2. Stainless steel framed mirror door concealing storage cabinet equipped with swing door with magnetic catch with continuous piano hinge.
 - 3. Four adjustable stainless steel shelves.
 - 4. Baked Enamel Interior finish.
- G. Shower Curtain Rod:
 - 1. Manufactured by ASI, #1214, with concealed mounted brackets.
 - 2. Length: 60" +/- (cut length of opening)
- H. Shower Curtain Hooks:
 - 1. Manufactured by ASI, #1200-SHU
- I. Shower Seat:
 - 1. Manufactured by ASI, # 8205, left or right hand as required for conditions.
 - 2. Padded seat, folding, accessible type.

2.4 FACTORY FINISHING

- A. Stainless Steel: Satin finish.
- B. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats baked enamel.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify exact location of accessories for installation and that blocking is in place to receive accessory.

3.2 PREPARATION

- A. Deliver inserts and rough-in frames to site. Provide templates and rough-in measurements.
- B. Install solid 2 x 8 (minimum) blocking behind all accessories.

3.3 INSTALLATION

- A. Install plumb and level, securely and rigidly anchored to substrate.
- B. Mounting Heights and Locations: As indicated on Drawings:

SECTION 10 44 00 - FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Fire extinguishers; fire extinguisher cabinets.

1.2 PERFORMANCE REQUIREMENTS

- A. Conform to NFPA 10 and City of Dayton Fire Department Requirements.
- B. Provide extinguishers classified and labeled by UL for purpose specified and indicated.
- C. Provide fire extinguisher cabinets classified and labeled by UL or testing firm acceptable to authority having jurisdiction for purpose specified and indicated.

1.3 SUBMITTALS

- A. Shop Drawings: Indicate cabinet physical dimensions, rough-in measurements for recessed cabinets, wall bracket mounted measurements, location, fire ratings.
- B. Product Data: Extinguisher operational features, color and finish, anchorage details.
- C. Manufacturer's Installation Instructions: Special criteria and wall opening coordination requirements.
- D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Test, refill or recharge schedules, and re-certification requirements.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Do not install extinguishers when ambient temperature are capable of freezing extinguisher ingredients.

PART 2 PRODUCTS

2.1 FIRE EXTINGUISHERS

- A. Manufacturers:
 - 1. Larsen
 - 2. Kidde
 - 3. Equal
- B. Dry Chemical Type: Aluminum tank, with pressure gage; Class A: B: C, Size 10.

2.2 FIRE PROTECTION CABINETS

- A. Manufacturers:
 - 1. Larsen or Equal.
- B. Metal: Formed sheet steel, white baked enamel finish.
- C. Configuration: Semi-recessed type, sized to accommodate accessories.
- D. Door: Horizontal Duo steel with clear acrylic glazing; latch access.
- E. Cabinet Mounting Hardware: Appropriate to cabinet.
- F. Form cabinet enclosure with right angle inside corners and seams.
- G. Pre-drill for anchors.

- H. Hinge doors for 180-degree opening with continuous piano hinge.
- I. Weld, fill, and grind components smooth.
- J. Glaze doors with resilient channel gasket glazing.

2.3 ACCESSORIES

A. Extinguisher Brackets: Formed steel, white enamel finish.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify rough openings for cabinet are correctly sized and located.

3.2 INSTALLATION

- A. Install cabinets maximum 48 inches from finished floor to top of extinguisher handle.
- B. Install wall brackets maximum 48 inches from finished floor to top of extinguisher handle.
- C. Position cabinet signage as required by authorities having jurisdiction.

3.3 SCHEDULES

- A. Fire Extinguisher Cabinets: Surface Mounted or Semi-Recessed Fire Rated Cabinets in Common Areas as indicated on drawings, or as approved by City of Dayton Fire Department.
- B. Fire Extinguishers: 1 per unit.

SECTION 11 31 00 - RESIDENTIAL APPLIANCES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes Energy Star rated appliances: refrigerator, range with anti-tip kit, range hood and splash plates.

1.2 SUBMITTALS

- A. Product Data: Submit data on equipment and accessories.
- B. Manufacturer's Installation Instructions: Submit manufacturer's installation instructions.

1.3 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit relevant instructions.

PART 2 PRODUCTS

2.1 RESIDENTIAL EQUIPMENT

- A. Manufacturers:
 - 1. General Electric
 - 2. Whirlpool
 - 3. Maytag
 - 4. Hotpoint

2.2 APPLIANCES – STANDARD UNITS

- A. Refrigerator: GE Model GTE18GTNRWW, 17.5 cubic feet capacity, free standing type, self defrosting, double door with freezer compartment over, upfront temperature controls, meat keeper and crisper, glass shelves, white color. Energy Star Rated.
- B. Range: GE Model JB256DMWW, electric freestanding type, porcelain enamel top with four coil top burners with front controls, self-cleaning oven below with top and bottom elements, with two porcelain-enameled steel racks, vision panel, interior oven light, white color.
- C. Range Hood: GE JVX5305DJWW, 30" range hood, ducted, two speed with fan control, light control with [2] 15W energy efficient appliance bulbs, white color, Energy Star Rated.
- D. Splash guard: Broan SP300108, 30" x 24", white color. Locate behind range.
- E. Range Fire Suppression System: Louisville Fire & Safety, Stovetop Firestop Venthood or Equal. Fire suppression powder canister, attach with magnets to underside of range hood.

2.3 APPLIANCES – ACCESSIBLE UNITS

- A. Refrigerator: GE Model GTE18GTNRWW, 17.5 cubic feet capacity, free standing type, self defrosting, double door with freezer compartment over, upfront temperature controls, meat keeper and crisper, glass shelves, white color. Energy Star Rated, ADA Compliant.
- B. Range: GE Model JD630DTWW, electric drop-in, glass top with four top burners with front controls, self-cleaning oven below with top and bottom elements, with two porcelain-enameled steel racks, vision panel, interior oven light, white color, ADA Compliant.
- C. Range Hood: GE JVX5305DJWW, 30" range hood, ducted, two speed with fan control, light control with [2] 15W energy efficient appliance bulbs, white color, Energy Star Rated. Wire to switch located on wall.
- D. Splash guard: Broan SP300108, 30" x 24", white color. Locate behind range.

E. Range Fire Suppression System: Louisville Fire & Safety, Stovetop Firestop Venthood or Equal. Fire suppression powder canister, attach with magnets to underside of range hood.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify openings and utility services are ready to receive work and opening dimensions are as indicated on shop drawings and instructed by manufacturer.

3.2 INSTALLATION

A. Appliances

- 1. Set and adjust unit's level and plumb.
- 2. Connect to utilities and make units operational.
- 3. Activate units to confirm correct operation.
- 4. Turn refrigerators on to moderate temperature setting.
 - a. Locate door handle as required. Field verify door swing.
- 5. Range: Install anti-tip safety device on range.
- 6. Range Hood: Recirculating type
- 7. Install range splash plates, install with adhesive to wall and color match screws.

SECTION 12 20 00 - WINDOW TREATMENTS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes vinyl mini-blinds and operating hardware.

1.2 SUBMITTALS

- A. Product Data: Submit data indicating physical and dimensional characteristics, operating features.
- B. Samples: Submit two samples illustrating slat materials and finish, color, cord type and color.

PART 2 PRODUCTS

2.1 HORIZONTAL BLINDS

- A. Manufacturers:
 - 1. Bali Blinds, Vinyl Horizontal Blinds, Value Vinyl Blinds
 - 2. Hunter Douglas
 - 3. Levolor
 - 4. Equal

2.2 COMPONENTS

- A. Mini Blinds: 1" vinyl horizontal slat louvers hung from full-width aluminum head rail with fullwidth bottom rail; cordless manual control with full range operation, blade angle adjustment by control wand.
 - 1. Slat Support: Woven polypropylene cord, ladder configuration.
 - 2. Pull Cord: Cordless.
 - 3. Color: As selected from manufacturer's standard colors.
 - 4. Roller Mechanism: Internally fitted with hardware for blind operation.
 - 5. Attachment Hardware: Type recommended by blind manufacturer. Brackets shall be heavy-duty type.

2.3 FABRICATION

A. Fabricate blinds to fit within openings with uniform edge clearance of 1/2 inch.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify openings are ready to receive the Work.

3.2 INSTALLATION

- A. Secure in place with flush countersunk fasteners.
- B. Adjust blinds for smooth operation.
- C. Provide blinds at each window opening, sized to fit openings.

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SECTION 12 35 30 - RESIDENTIAL CASEWORK

PART 1 GENERAL

1.1 SUMMARY

A. Section includes shop fabricated residential cabinet units with hardware and plastic laminate counter tops.

1.2 SUBMITTALS

- A. Shop Drawings: Indicate casework locations, scale plans, elevations and clearances required.
- B. Product Data: Submit data on component profiles, sizes, assembly methods, and schedule of finishes.
- C. Samples: Submit two wood samples, 2 x 2 inch in size of the final wood stain/finish selection and rings for counter top finish selection.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with KCMA (Directory of Certified Cabinet Manufacturers) - Certification Program.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Install after interior temperature and humidity are controlled and stabilized.

PART 2 PRODUCTS

2.1 KITCHEN AND BATHROOM CASEWORK

- A. Manufacturer
 - 1. Quality Cabinets
 - 2. Smart Cabinets
 - 3. Mid America Cabinets
 - 4. Evans
 - 5. TruWood
- B. Cabinet Specification:
 - 1. Wood Species: Maple
 - 2. Door Overlay Style: Partial Overlay,
 - 3. Drawer Style: Solid Drawer Front
 - 4. Door Style: Recessed Panel Door style [exact profile as selected by Architect]
 - 5. Finish: Stained Finish as selected from full range of available finishes for Maple Cabinets, all exposed to view components shall be maple / maple veneer and of matching finishes.
- C. Kitchen and Bathroom cabinet Construction:
 - 1. Traditional HUD severe use
 - 2. Face Frames: 3/4 inch thick solid door frames and drawer fronts
 - a. 1-1/2 inch wide stiles
 - b. 3 inch wide mulls
 - c. 1-3/4 inch wide rails
 - 3. End Panels: 1/2 inch thick multi-ply hardwood plywood dadoed to receive tops and bottoms, Type 1 exterior glue
 - 4. Top and Bottom Panels: 1/2 inch thick multi-ply hardwood plywood
 - 5. Hanging Rails:
 - a. Base Cabinets: 3/4 inch thick x 7-1/4 inch high multi-ply hardwood plywood running full cabinet width at top

- b. Wall Cabinets: 3/4 inch thick x 3 inch high multi-ply hardwood plywood running full cabinet width at the top and bottom
- 6. Back Panel: 1/4 inch thick hardwood plywood
- 7. Shelves: FIXED, 1/2 inch multi-ply hardwood plywood, 11 inch deep with hardwood veneer banded front edge. Shelves fixed into dadoes in end panels, typical base and wall cabinets.
- 8. Toe Board: 3/4 inch thick pressure treated toe board, 4 inches high
- 9. Base I-Beam Braces: [2] 1/2 inch thick x 3 inch wide plywood braces running full depth front to back of cabinet, recessed 1 inch from top. Glue and staple at top of cabinet to front frame and hang rail, and dadoed into end panel
- 10. Drawers: 5/8 inch thick solid wood front, back, and sides with dovetail construction.
- 11. Drawer Bottom: 1/4 inch multi-ply hardwood plywood inserved and stapled into dado in front, back, and sides
- 12. Drawer Guides: Epoxy coated steel, extreme grade, side mounted guides, self-adjusting in mounting brackets, built in stop, self-closing, and stay closed feature, 100 lb rated load capacity.
- 13. Hinges: heavy duty, high-quality, concealed 6 way adjustable hinge
- 14. Scribe trim, fillers, other miscellaneous panels: manufacturer supplied components of same species and finish as cabinets as required by conditions.
- D. Kitchen cabinets and vanity frame/panel Construction Accessible Units:
 - 1. Traditional HUD severe use
 - 2. Face Frames: 3/4 inch thick solid door frames and drawer fronts
 - a. 1-1/2 inch wide stiles
 - b. 3 inch wide mulls
 - c. 1-3/4 inch wide rails
 - 3. End Panels: 1/2 inch thick multi-ply hardwood plywood dadoed to receive tops and bottoms, Type 1 exterior glue
 - 4. Top and Bottom Panels: 1/2 inch thick multi-ply hardwood plywood
 - 5. Hanging Rails:
 - a. Base Cabinets: 3/4 inch thick x 7-1/4 inch high multi-ply hardwood plywood running full cabinet width at top
 - b. Wall Cabinets: 3/4 inch thick x 3 inch high multi-ply hardwood plywood running full cabinet width at the top and bottom
 - 6. Back Panel: 1/4 inch thick hardwood plywood
 - 7. Shelves:
 - a. FIXED, 1/2 inch multi-ply hardwood plywood, 11 inch deep with hardwood veneer banded front edge. Shelves fixed into dadoes in end panels, typical base and wall cabinets.
 - b. Full Depth Shelves in pantry and linen cabinets
 - c. Slide out shelve tray at all base cabinets
 - 8. Toe Board: 3/4 inch thick pressure treated toe board, 8-1/2 inches high
 - 9. Base I-Beam Braces: [2] 1/2 inch thick x 3 inch wide plywood braces running full depth front to back of cabinet, recessed 1 inch from top. Glue and staple at top of cabinet to front frame and hang rail, and dadoed into end panel
 - 10. Drawers: 5/8 inch thick solid wood front, back, and sides with dovetail construction.
 - 11. Drawer Bottom: 1/4 inch multi-ply hardwood plywood inserved and stapled into dado in front, back, and sides
 - 12. Drawer Guides: Epoxy coated steel, extreme grade, side mounted guides, self-adjusting in mounting brackets, built in stop, self-closing, and stay closed feature, 100 lb rated load capacity.
 - 13. Hinges: heavy duty, high-quality, concealed 6 way adjustable hinge

14. Scribe trim, fillers, other miscellaneous panels [countertop support brackets]: manufacturer supplied components of same species and finish as cabinets as required by conditions.

2.2 HARDWARE

- A. Hinges: Manufacturers standard high quality steel wrap around hinge with self-closing feature.
 - 1. Slides: 100#, high quality epoxy coated steel, extreme grade, side mounted or equal.
 - 2. Provide slide out shelves at all pantry and base cabinets at Accessible units
- B. Pulls: Manufacturer: Armstrong or equal and as follows:
 - a. Model: BP76313-BN
 - b. Length: 4-1/8"
 - c. Width: 5/16"
 - d. Projection: 1-3/16"
 - e. Material: Zinc Die cast

2.3 FACTORY FINISHING

- A. Exposed To View Surfaces: Stain, seal and varnish.
- B. Interior Surfaces: Manufacturers standard.

2.4 PLASTIC LAMINATE COUNTERTOPS

- A. Manufacturers:
 - 1. Formica
 - 2. Wilsonart
 - 3. Arborite
- B. Plastic Laminate: NEMA LD 3, Grade HGS laminate.
 - 1. Substrate: ³/₄" exterior plywood backing with one coat water lox transparent finish.
 - 2. Countertop Configuration: As follows:
 - a. Front Style: Waterfall.
 - b. Cove Type: Post formed laminate supported at junction of top and backsplash by wood cove molding.
 - c. Backsplash: 4" Curved or waterfall shape
 - d. End Splash: 4" Square edge.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify adequacy of backing and location of mechanical and electrical outlets.

3.2 PREPARATION

A. Install supplementary support framing.

3.3 INSTALLATION

- A. Set and secure casework in place rigid, plumb, and level.
- B. Provide cutouts for plumbing fixtures, appliances, and other fixtures and fittings.
- C. Use fixture attachments at concealed locations for wall mounted components.
- D. Use concealed joint fasteners to align and secure adjoining cabinet units and counter tops
- E. Carefully scribe casework against other building materials, leaving gaps of 1/32 inch maximum. Use filler strips not additional overlay trim for this purpose.
- F. Secure cabinet and counter bases to floor using appropriate anchorage.

- G. Adjust moving or operating parts to function smoothly and correctly.
- H. Install backsplashes and end splashes.
- I. Install door and drawer hardware.

SECTION 31 10 00 - SITE CLEARING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removing surface debris, paving, curbs, etc.
 - 2. Removing designated plant life.
 - 3. Removing topsoil and subsoil.
 - 4. Rough grading and site contouring.

1.2 SUBMITTALS

A. Product Data: Submit data for herbicide.

PART 2 PRODUCTS

2.1 SITE CLEARING

A. Herbicide: approved by authority having jurisdiction.

PART 3 EXECUTION

3.1 PREPARATION

- A. Call Local Utility Line Information service not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.

3.2 PROTECTION

- A. Locate, identify, and protect utilities indicated to remain, from damage.
- B. Protect trees, plant growth, and features designated to remain, as final landscaping.
- C. Protect bench marks, [survey control points,] [and existing structures] from damage or displacement.

3.3 CLEARING

- A. Clear areas required for access to site and execution of Work.
- B. Remove paving, curbs, and other site improvements to be removed.
- C. Remove trees and shrubs. Remove stumps, main root ball and root system.
- D. Apply herbicide to remaining stumps or plant life to inhibit growth.

3.4 ROUGH GRADING

- A. Identify required lines, levels, contours, and datum.
- B. Identify known underground, above ground, and aerial utilities. Stake and flag locations.
- C. Notify utility company to remove and relocate utilities as applicable.
- D. Excavate topsoil and subsoil from areas to be further excavated, re-landscaped or re-graded.
- E. Stockpile topsoil in area designated on site.
- F. Remove excess topsoil and subsoil not being reused, from site.

3.5 CLEAN UP

A. Remove debris, rock larger than 1.5 cu ft, and extracted plant life from site.

SECTION 31 20 00 - EARTH MOVING

PART 1 GENERAL

1.1 SUMMARY

A. Section includes site grading, removal of topsoil and subsoil, trenching, backfilling, and compacting.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

- A. Topsoil: Reusable excavated or Imported friable loam; free of subsoil, roots, grass, weeds, large stone, and foreign matter. ASTM D 4268, pH range of 5.5 to 7, minimum of 4 percent organic material content.
 - 1. Amend existing in place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources.
- B. Subsoil: Excavated material, graded free of lumps larger than 6 inches, rocks larger than 2 inches, organic material, and debris. ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM or a combination there of.

2.2 FILL MATERIALS

- A. Type A Select Granular Material: Coarse stone: Pit run, washed natural stone; free of shale, clay, friable material, sand, debris.
 - 1. Grading: AASHTO M147; Grade 57.

2.3 ACCESSORIES

A. Geotextile Fabric: See 32 90 00.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Call OUPS to mark locations of all underground utilities a minimum of 3 working days prior to starting work.
- B. Identify required lines, levels, contours, and datum.
- C. Notify Architect/Engineer of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- D. Maintain and protect existing utilities to remain.
- E. Provide erosion control measures to prevent erosion or displacement of soils and discharge of soil bearing water runoff of airborne dust to adjacent properties.
- F. Prevent surface water and ground water from entering excavations, from ponding on prepared sub-grades, and from flooding the project site and surrounding areas.

3.2 PROTECTION OF ADJACENT WORK

- A. Grade excavation top perimeter to prevent surface water run-off into excavation or to adjacent properties.
- B. Contractor shall be responsible for damage to utilities caused by construction operations.

3.3 TOPSOIL EXCAVATING

A. Do not excavate wet topsoil.

B. Excavate topsoil and stockpile for reuse.

3.4 SUBSOIL EXCAVATING

- A. Do not remove wet subsoil. Remove groundwater by pumping to keep excavations dry.
- B. Excavate subsoil required for construction operations, and other Work.
- C. Slope banks [to angle of repose or less, until shored].
- D. Do not interfere with 45 degree bearing splay of foundations.
- E. Correct unauthorized excavation at no cost to Owner.
- F. Fill over-excavated areas under structure bearing surfaces in accordance with direction by Architect/Engineer.
- G. Stockpile subsoil in area designated on site. Remove excess subsoil not being reused from site.

3.5 TRENCHING

- A. Cut trenches sufficiently wide to enable installation of utilities and allow inspection.
- B. Hand trim excavation and leave free of loose matter.
- C. Support pipe during placement and compaction of bedding fill.
- D. Backfill trenches to required contours and elevations.
- E. Place and compact fill materials as for Backfilling.

3.6 BACKFILLING

- A. Backfill areas to contours and elevations. Use unfrozen and unsaturated materials.
- B. Backfill systematically, as early as possible, to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Place geotextile fabric over unstable subsoil.
- D. Place material in continuous layers as follows:
 - 1. Soil Materials: Maximum 8 inches compacted depth.
 - 2. Fill Materials: Maximum 6 inches compacted depth.
- E. Employ placement method so not to disturb or damage utilities in trenches.
- F. Maintain optimum moisture content of backfill materials to attain required compaction density.
- G. Slope grade away from building minimum $\frac{1}{2}$ " per 1 ft, unless noted otherwise.

3.7 PLACING TOPSOIL

- A. Place topsoil in areas where seeding and planting is scheduled.
- B. Fine grade topsoil eliminating rough or low areas. Maintain levels, profiles, and contours of subgrade.
- C. Remove large stone, roots, grass, weeds, debris, and foreign material while spreading.
- D. Lightly compact placed topsoil. 85% proctor.
- E. Leave stockpile area and site clean and raked, ready to receive landscaping.
SECTION 31 21 13 - RADON MITIGATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Passive Building Radon Venting system.

1.2 SYSTEM DESCRIPTION

- A. Radon venting system consists of the following:
 - 1. Permeable floor slab base course.
 - 2. Sealing joints, cracks, and other penetrations through floor slab.
 - 3. Piping to exhaust underslab air to above the roofline.
 - 4. In-Line vacuum motor [future].

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with EPA requirements.

1.4 ENVIRONMENTAL REQUIREMENTS

A. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

PART 2 PRODUCTS

2.1 PIPE MATERIALS

- A. Pipe: ASTM D2729; polyvinyl chloride pipe.
 - 1. Joints: Socket ends for solvent welding.
 - 2. Joint Cement: ASTM D2564, solvent type.
 - 3. Fittings: Polyvinyl chloride.

2.2 ACCESSORIES

- A. Penetration Boot: Form using vapor retarder with stainless steel clamping ring.
- B. Roof Flashing: Boot type.
- C. Vent Cap: Plastic with screen to prevent insect intrusion.
- D. Joint Filler: Compressible PVC foam type with recovery rate of minimum 95 percent.
- E. Tape: Self-adhering type, 2 inch wide, compatible with vapor retarder.
- F. Electrical Junction Box: As required for electrical connection to future fan.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify slab on grade subbase is compacted, graded, and ready to receive work.
- B. Verify subbase elevations are as indicated on Drawings.

3.2 VAPOR RETARDER INSTALLATION

- A. Install vapor retarder over entire base course surface at open areas of slab.
- B. Lap joints minimum 12 inches. Seal laps with one continuous bead of sealant. Tape joints to retain retarder in place.
- C. Inspect vapor retarder immediately before placing concrete for slab on grade.

- 1. Repair tears and punctures with patches extending minimum 12 inches beyond extent of tears and punctures.
- 2. Seal and tape repairs as specified for lap joints.

3.3 PASSIVE RADON SYSTEM INSTALLATION

- A. Drill concrete slab where indicated on drawings, or otherwise approved by Architect and Contractor.
- B. Install radon vent piping from below slab to above roof line.
- C. Seal slab penetrations.
- D. Extend electrical junction box to location to suit installation for in-line fan.
- E. Refer to attached details.

SECTION 31 23 17 - TRENCHING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavating trenches for utilities outside building to utility service.
 - 2. Compacted fill from top of utility bedding to subgrade elevations.
 - 3. Backfilling and compaction.

1.2 QUALITY ASSURANCE

A. Perform Work according to City of Dayton standards as applicable.

1.3 FIELD MEASUREMENTS

A. Verify field measurements, inverts, etc prior to fabrication.

1.4 COORDINATION

A. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 PRODUCTS

2.1 FILL MATERIALS

A. Subsoil / Granular Fill: Type as required to suit conditions, suitability installed in compacted lifts.

2.2 ACCESSORIES

A. Geotextile Fabric: Non-biodegradable, woven.

PART 3 EXECUTION

3.1 LINES AND GRADES

- A. Lay pipes to lines and grades indicated.
 - 1. Architect/Engineer may make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

3.2 PREPARATION

- A. Call local utility line information service not less than three working days before performing Work.
 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum locations.
- C. Protect plant life, lawns and other features remaining as portion of final landscaping.
- D. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- E. Maintain and protect above and below grade utilities indicated to remain.
- F. Establish temporary traffic control when trenching is performed in public right-of-way. Relocate controls as required during progress of Work.

3.3 TRENCHING

A. Excavate subsoil required for utilities to utility service.

- B. Perform excavation within 24 inches of existing utility service according to utility's requirements.
- C. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.
- D. Excavate bottom of trenches maximum 24 inches wider than outside diameter of pipe.
- E. Excavate trenches to depth required for utilities. Provide uniform and continuous bearing and support for bedding material and pipe and utilities.
- F. Do not interfere with 45-degree bearing splay of foundations.
- G. When Project conditions permit, slope side walls of excavation starting 24 inches above top of pipe. When side walls cannot be sloped, provide sheeting and shoring to protect excavation as specified in this Section.
- H. When subsurface materials at bottom of trench are loose or soft, excavate to greater depth as directed by Architect/Engineer until suitable material is encountered.
- I. Cut out soft areas of subgrade not capable of compaction in place. Backfill and compact to density equal to or greater than requirements for subsequent backfill material.
- J. Trim excavation. Remove loose matter.
- K. Correct areas over excavated areas with compacted backfill as specified for authorized excavation or replace with fill concrete as directed by Architect/Engineer.
- L. Remove excess subsoil not intended for reuse, from Site.

3.4 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Design sheeting and shoring to be removed at completion of excavation Work.
- D. Repair damage caused by failure of sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- E. Repair damage to [new] [and] [existing] Work from settlement, water or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

3.5 BACKFILLING

- A. Backfill trenches to contours and elevations with unfrozen fill materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Place geotextile fabric prior to placing subsequent fill materials.
- D. Place material in continuous layers as follows:
 - 1. Subsoil Fill: Maximum 8 inches compacted depth.
 - 2. Structural Fill: Maximum 6 inches compacted depth.
 - 3. Granular Fill: Maximum 6 inches compacted depth.
- E. Employ placement method that does not disturb or damage foundation perimeter drainage, utilities in trench, and any other obstructions or utilities encountered.
- F. Maintain optimum moisture content of fill materials to attain required compaction density.
- G. Protect open trench to protect the public/residents.

3.6 TOLERANCES

- A. Top Surface of Backfilling Under Paved Areas: Plus or minus 1 inch from required elevations.
- B. Top Surface of General Backfilling: Plus or minus 1 inch from required elevations.

3.7 FIELD QUALITY CONTROL

- A. Perform laboratory material tests according to ASTM D1557.
- B. Perform in place compaction tests according to following:
 - 1. Density Tests: ASTM D1556.
 - 2. Moisture Tests: ASTM D3017.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.

3.8 PROTECTION OF FINISHED WORK

A. Reshape and re-compact fills subjected to vehicular traffic during construction.

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SECTION 32 01 16 - ASPHALT PAVING REHABILITATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Repair and replacement of existing asphaltic concrete paving as identified.

1.2 SUBMITTALS

- A. Product Data:
 - 1. Submit product information for asphalt and aggregate materials.
 - 2. Submit mix design with laboratory test results supporting design.

1.3 QUALITY ASSURANCE

- A. Perform Work according to State of Ohio, ODOT standards as applicable.
 - 1. State of Ohio Department of Transportation Construction and Materials Specifications Guide shall be used as a reference for all applicable materials, construction conditions, operations, and finished products, etc.
- B. Mixing Plant: Conform to State of Ohio, ODOT standard.
- C. Obtain materials from same source throughout.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. When ambient air temperature is below **50** degrees F, obtain Architect approval prior to proceeding with Work.
- B. Place bitumen mixture when temperature is not more than 15 degrees F below bitumen suppliers bill of lading and not more than maximum specified temperature.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Subgrade: ODOT Item 204.
 - 1. Compact the subgrade materials that have a maximum dry density of 100 to 105 pounds per cubic foot to not less than 102 percent of maximum dry density. Compact all other subgrade materials to not less than 100 percent of maximum dry density. Determine the maximum dry density using AASHTO T99, AASHTOT T272, or test section method in Supplement 1015.
- B. Aggregate Base Course: ODOT Item 304.
 - 1. 98% of the material's maximum dry density as determined by the modified Proctor Test (AASHTOT-180 or ASTM D-1557)
- C. Asphalt Concrete Base Course: ODOT Item 301.
- D. Tack Coat for Chip & Seal Primer: ODOT Item 702.04
 1. ASTM D2027, MC-3000; medium curing, cutback asphalt.
- E. Tack Coat: ODOT Item 407.1. Use one of following types: 702.04 RS-1, SS-1, SS-1h, CRS-1, CSS-1, or CSS-1h; or 702.13
- F. Intermediate Asphalt Surface: ODOT Item 448, Type 1, medium duty.
- G. Asphaltic Concrete Surface Course: ODOT Item 448, Type 1, medium duty.
- H. Sealcoat: ASTM D244; ASTM D 2939
 - 1. Asphalt Emulsion Pavement Sealer with mineral/sand filler, polymer additive, water.

- I. Spot Primer: Oil spot primer formulated to ensure adhesion of pavement sealer to oil, gas, grease, and chemical stained areas on asphalt pavement.
- J. Crack Seal: ODOT Item 423.
 - 1. Type II; mixture of PG 64-22 certified binder and polyester fibers; hot applied type. Modified, single component, rubber/asphalt joint and crack sealant. Formulated for sealing asphalt cracks.
- K. Reinforcing Fabric: ODOT Section 457 Heavy Duty, high strength pavement repair geocomposite membrane for the reinforcements of pavement joints and cracks. PavePrep by Crafco or Equal.
 - 1. Top Layer: heat resistant, high strength woven polyester reinforcing fabric
 - 2. Binder/Intermediate Layer: Flexible, high density asphalt mastic bitumen
 - 3. Bottom Layer: non-woven heat resistant polyester fabric.
 - 4. Size: 12 inches wide x 50' roll
 - 5. Tensile Strength: ASTM D412, Die C: 2000 psi min.
 - 6. Elongation: ASTM D412 Die C: 20% min.

2.2 EQUIPMENT

- A. Milling Unit: Type for intended purpose as follows:
 - 1. Self-propelled; wheel base sufficient to maximize leveling action.
 - 2. Capable of loosening pavement material to thicknesses identified.
- B. Compactor: 3 ton minimum steel wheeled vibratory rollers

PART 3 EXECUTION

3.1 **PREPARATION**

- A. General:
 - 1. Install Work in accordance with ODOT and City of Dayton standards, including all base and preparation.
 - 2. Scheduling: Schedule and manage work to minimize cold joints in the paving system. Coordinate requirements with Owner prior to mobilizing on the job.
 - 3. Clean all existing surfaces and remove any foreign debris.
 - 4. Ensure positive drainage to storm drains/ catch basins throughout. Provide leveling course as required to attain proper drainage [confirm conditions with Owner prior to proceeding].
- B. Mechanically sweep, blow, or scrub pavement surfaces immediately prior to commencement of Work. Clean pavement surfaces of all loose foreign matter. Verify surfaces are dry.
- C. Protect existing improvements, adjacent finishes, overhanging trees, and plant life from heat damage by individual shielding and water spray.
- D. Protect manhole covers and frames, catch basin covers and frames.

3.2 ASPHALT REPAIRS

A. General Requirements for Repairs:

- 1. Call 811 before you dig.
- 2. The area and depths for asphalt repairs are displayed and listed on the Defect/Treatment Map and Treatment List. Each contractor bidding is responsible for verifying all dimensions. Every patch will be milled to the excavated depth stated on the Defect Treatment Map and Treatment List unless otherwise modified by the Owner. The subgrade will be proof rolled to ensure stability prior to placement of asphalt. Weak areas will be reported to the Owner. All finished patches must be level with the existing surface and possess only 90 degree angles. Finished surface must not trap or hold water on or adjacent to new patch. Contractor will be responsible to maintain positive drainage across all repaired areas. Price will include removal from site of all excavated materials to an approved off-site location. If any edges

break during construction, edges will be re-cut square and replaced with full depth asphalt per specification. If any cracking of the sub-base or base asphalt occurs during the lay down of wearing course you are to inform the Owner immediately. No raveling of the finished surface will be accepted.

3. All asphalt pavement materials are to meet or exceed state department of transportation standards. These standards are referenced in the Asphalt Materials Table.

B. 4" – 6" thickness Asphalt Patch

- 1. Call 811 before you dig. Provide Owner with confirmation number.
- 2. Mill specified area and dispose of excavated materials at an authorized dump site.
- 3. Proof roll subgrade and notify Owner of "soft spots" prior to backfill.
- 4. Re-compact subgrade prior to backfill.
- 5. Prep and apply Tack Coat as needed to vertical perimeter and base of patch area.
- 6. Install 2"-4" compacted layer of base asphalt. Compact using 3 ton or greater vibratory rollers if patch size and location allows for roller access.
- 7. Install 2" compacted layer of surface asphalt. Compact using 3 ton or greater vibratory rollers if patch size and location allows for roller access.
- 8. Seal all edges of patch using non-tracking sealant.

C. New Asphalt Paving: 2 1/2" base course, 1 1/2" wear course

- 1. Remove existing paving complete including aggregate base if applicable.
- 2. Adjust sub-grade elevations to prep for new asphalt paving and to match adjacent elevations of parking lot.
- 3. Install new compacted aggregate base course.
- 4. Notify Owner of any subgrade deficiencies requiring undercut.
- 5. Upon approval of Owner, repair soft areas with appropriate depth asphalt per patch specification and using specific materials that meet or exceed ODOT standards.
- 6. NOTE: Contractor responsible to maintain positive drainage across entire lot. Contact Owner for additional directive as needed by existing conditions.
- 7. Prime entire area with Tack Coat at a rate of 0.10 Gallons/SY.
- 8. Machine install 2 1/2" of finished compacted thickness base course asphalt over primed area. Minimum thickness of finished, compacted pavement to be 2 1/2" and asphalt tonnage yield should be based on 2 1/2" compacted minimum thickness. Tickets will be collected at end of each day and final tonnage yield must be within 5% of expected 2 1/2" fully compacted yield.
- 9. Apply RS-2 or CRS-2 asphalt emulsion uniformly to existing surfaces at a rate of 0.40 to 0.50 gal/yd2.
- 10. Machine install 1 1/2" of finished compacted thickness surface asphalt over primed area. Minimum thickness of finished, compacted pavement to be 2" and asphalt tonnage yield should be based on 1 1/2" compacted minimum thickness. Tickets will be collected at end of each day and final tonnage yield must be within 5% of expected 1 1/2" fully compacted yield.
- 11. Compact using 3 ton or greater vibratory rollers.
- 12. Seal all edges of paved area where matched to existing asphalt surfaces using non-tracking sealant.
- 13. Reset all signage, repin parking blocks; replace all speed bumps per existing.
- 14. Repaint per existing layout unless otherwise specified.

D. 1 1/2" Asphalt Overlay with full milling

- Mill specified asphalt area 1 1/2" and dispose of grindings at an authorized dump site.
 a. Profile mill as required for grade / plane modifications.
- 2. NOTE: Contractor responsible to maintain positive drainage across entire lot. Contact Owner for additional directive as needed by existing conditions.
- 3. Mill butt joints and/or adjust elevations of drainage structures as necessary to provide for proper drainage per slope tolerances noted above. All areas abutting catch basins must

allow for full 1 1/2" compacted thickness of finished overlay and allow for positive drainage into structures. No tapered edges will be permitted and no ponding will be accepted.

- 4. Provide power sweeper and vacuum truck to ensure clean area for asphalt work.
- 5. Proof roll subject area, mark soft pockets, areas of excess yielding, and any other area that requires further compaction.
 - a. Notify Owner of any subgrade deficiencies requiring undercut.
 - b. Upon approval of Owner, repair soft areas with appropriate depth asphalt per patch specification and using specific materials that meet or exceed ODOT standards.
- 6. Prime entire area with Tack Coat at a rate of 0.10 Gallons/SY.
- 7. Machine install leveling course as necessary to remove any low spots.
- 8. Machine install 1 1/2" of finished compacted thickness surface asphalt over primed area. Minimum thickness of finished, compacted pavement to be 1 1/2 inches and asphalt tonnage yield should be based on 1 1/2 inches compacted minimum thickness. Tickets will be collected at end of each day and final tonnage yield must be within 5% of expected 1 1/2 inch fully compacted yield.
- 9. Compact using 3 ton or greater vibratory rollers.
- 10. Seal all edges of paved area where matched to existing asphalt surfaces using non-tracking sealant.
- 11. Reset all signage, repin parking blocks; replace all speed bumps per existing.
- 12. Repaint per existing layout unless otherwise specified.

3.3 ASPHALT MAINTENANCE REPAIRS

A. Crack Sealing

- 1. All Longitudinal, transverse and block cracks are to be thoroughly cleaned using compressed air lance as necessary. Remove all vegetation and debris from cracks. Clean lot of all debris.
 - a. Notify Owner in advance if size [width or depth] of crack exceeds the manufacturer's recommendations for crack fill. Request directive to proceed.
- 2. Seal cracks per ASTM D3405/D6690
- 3. All fatigue crack areas are to be circled by filling perimeter of area. Do not fill interior of any fatigue (alligator) crack areas.

3.4 SCHEDULES

A. Refer to Drawings for extent and type of paving repair or replacement.

SECTION 32 01 26 - CONCRETE PAVING REHABILITATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Repair and replacement of existing concrete paving as identified on Drawings.
 - 2. Parking Lot accessories

1.2 SYSTEM DESCRIPTION

A. Paving and Base: Designed for Parking.

1.3 SUBMITTALS

- A. Product Data:
 - 1. Submit product information for concrete, cement, and aggregate materials.
 - 2. Submit mix design with laboratory test results supporting design.

1.4 QUALITY ASSURANCE

- A. Perform Work according to State of Ohio, ODOT standards as applicable.
 - 1. State of Ohio Department of Transportation Construction and Materials Specifications Guide shall be used as a reference for all applicable materials, construction conditions, operations, and finished products, etc.
 - 2. Perform Work in accordance with ACI 330.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Subgrade: ODOT Item 204.
 - 1. Compact the subgrade materials that have a maximum dry density of 100 to 105 pounds per cubic foot to not less than 102 percent of maximum dry density. Compact all other subgrade materials to not less than 100 percent of maximum dry density. Determine the maximum dry density using AASHTO T99, AASHTOT T272, or test section method in Supplement 1015.
- B. Aggregate Base Course: ODOT Item 304 [304.01 and 304.02].
 - 1. 98% of the material's maximum dry density as determined by the modified Proctor Test (AASHTOT-180 or ASTM D-1557)
- C. Concrete: ODOT Item 452 Nonreinforced Portland cement concrete pavement [transportation center]
- D. Concrete: ODOT Item 499.
 - 1. Class QC 1, 4,000 PSI design strength at 28 days; 2,000 Coulombs maximum Permeability; Cement Content minimum 520 lb.; well –graded aggregate
 - 2. Maximum slump 4 inches.
 - 3. Air Content: 6% +/- 2%; ASTM C260
- E. Cement: ASTM C150 Normal Type I Portland type, gray color.
- F. Fine and Coarse Aggregates: ASTM C33, Class 4S.
- G. Water: ASTM C94, potable, Clean, not detrimental to concrete without deleterious amounts of chloride ions.

2.2 ACCESSORIES

A. Forms: Wood or steel material, profiled to suit conditions; conform to ACI 301.

- B. Joint Filler: ASTM D1751; Asphalt impregnated wood fiberboard.
- C. Dowels/Reinforcing Steel: ASTM A615; Epoxy Coated steel Grade 60, deformed billet bars. ODOT Item 709.
- D. Reinforcement Mesh: 6x6-W4.0xW4.0 welded wire reinforcement
- E. Liquid Surface Sealer: Penetrating Silane/Siloxane Sealer; clear, non-yellowing UV resistant; vapor permeable.
- F. Curing Compound: ASTM C309, white pigmented water based liquid membrane.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify gradients and elevations of base.
- B. Verify compacted base is ready to support paving and imposed loads.
- C. Moisten substrate to minimize absorption of water from fresh concrete.
- D. Sawcut and remove existing concrete to allow installation of new concrete as indicated.

3.2 FORMING

- A. Place and secure forms to correct location, dimension, and profile. Secure forms to allow the placement of concrete to be continuous and true.
- B. Place joint filler in joints, vertical in position, in straight lines. Secure to formwork.
- C. Place control joints at maximum 30 foot intervals. Align joints.
- D. Place joint filler between paving components and other appurtenances.
- E. Chamfer outside corners and edges of permanently exposed concrete. 3/4" chamfer

3.3 PLACING CONCRETE

- A. Place concrete in accordance with ACI 330.
- B. Place reinforcement to achieve pavement and concrete alignment as appropriate.
- C. Check with electronic level that the correct slopes have been achieved to provide drainage.
- D. Do not disturb reinforcement or formwork components during concrete placement.
- E. Place concrete continuously between predetermined joints.
- F. Apply surface sealer per manufacturer's instructions.

3.4 CONCRETE REPAIRS

A. General Requirements for Repairs:

- 1. The dimensions and depths for concrete repairs are displayed and listed on the Drawings. Each contractor bidding must be responsible for verifying all dimensions. Every patch will be saw cut with 90 degree angles and excavated to the depth stated on the Drawings or as needed to proposed subgrade depth beneath the finished grade. The subgrade will be proof rolled to ensure stability when going full depth. Proper subgrade compaction is CRITICAL. Weak areas will be reported to the Owner.
- 2. All finished patches will be level with the existing surface and rectangular in shape. If any edges break during construction, they will be re-cut and replaced with full depth concrete per specification. No slumping or cracking of the finished surface will be accepted. Price will include the removal of all excavated materials to an approved off-site location.

3. All concrete pavement materials are to meet or exceed state department of transportation [ODOT] standards. These standards are referenced in the Concrete Materials Table.

B. 4" Concrete Patch [Typical Concrete Walk Replacement]

- 1. All Concrete Repairs to conform to ACI 330.
- 2. Call 811 before you dig. Provide Owner with confirmation number.
- 3. Saw cut and excavate specified area and dispose of excavated materials at an authorized dump site.
- 4. Core drill 4" into any adjacent/existing slab every 2' on center and at midpoint of existing slab thickness. Install 0.5" Diameter rebar.
- 5. Form as needed for installation of new concrete area.
- 6. Install 4" layer of 4000 psi Concrete.
- 7. Finish concrete surface to client's preference / match existing conditions/finish.
- 8. Saw cut joints in proper pattern and at proper depth to prevent curing cracks. All cracking which occurs after curing are to be sealed by contractor at contractor's expense. Excessive cracking could constitute job rejection.

C. 6" Concrete Patch [Typical Concrete Drive Approach / Curb Cut Replacement]

- 1. All Concrete Repairs to conform to ACI 330.
- 2. Call 811 before you dig. Provide Owner with confirmation number.
- 3. Saw cut and excavate specified area and dispose of excavated materials at an authorized dump site.
- 4. Core drill 4" into any adjacent/existing slab every 2' on center and at midpoint of existing slab thickness. Install 0.5" Diameter rebar.
- 5. Form as needed for installation of new concrete area.
- 6. Install 6" layer of 4000 psi Concrete.
- 7. Finish concrete surface to client's preference / match existing conditions/finish.
- 8. Saw cut joints in proper pattern and at proper depth to prevent curing cracks. All cracking which occurs after curing are to be sealed by contractor at contractor's expense. Excessive cracking could constitute job rejection.

3.5 CONCRETE PAVING

A. 6" Concrete Paving

- 1. All Concrete Repairs to conform to ACI 330.
- 2. Call 811 before you dig. Provide Owner with confirmation number.
- 3. Install new 6" aggregate base over prepped sub-grade.
- 4. Form as needed for installation of new concrete area.
- 5. Place reinforcing mesh as indicated in details.
- 6. Install new 6" concrete paving.
- 7. Finish concrete surface to Owner's preference / match existing conditions/finish.
- 8. Saw cut joints in proper pattern and at proper depth to prevent curing cracks. All cracking which occurs after curing are to be sealed by contractor at contractor's expense. Excessive cracking could constitute job rejection.

3.6 CONCRETE CURB

A. Remove and Replace Concrete Barrier Curb

- 1. Excavate existing damaged curb, dispose of excavated materials at an authorized dump site.
- 2. Construct forms to install new curb identical in dimension, line and grade to existing curbing.
- 3. Use appropriate hand forms to match new curb identical to existing curbing.
- 4. Install 4000 psi Concrete.
- 5. Apply cure and seal product upon installation.
- 6. Backfill as necessary to restore adjacent areas in rear and face of curb to original condition.

B. Remove and Replace Concrete Curb and Gutter

- 1. Excavate existing damaged curb, dispose of excavated materials at an authorized dump site.
- 2. Construct forms to install new curb identical in dimension, line and grade to existing curbing.
- 3. Use appropriate hand forms to match new curb identical to existing curb.
- 4. Install 4000 psi Concrete.
- 5. Apply cure and seal product upon installation.
- 6. Backfill as necessary to restore adjacent areas in rear and face of curb to original condition.

3.7 PARKING LOT ACCESSORIES

A. Accessible Parking Signage: Provide and install signage in accordance with the detail drawings.

3.8 FINISHING

- A. Apply curing compound on exposed surfaces as applicable to conditions.
- B. Apply Surface Sealer on exposed surfaces.
- C. Paving Surfaces: Medium broom finish or as required to match existing conditions and finish.

SECTION 32 17 13 - PARKING BUMPERS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Precast concrete parking bumpers.

1.2 COORDINATION

A. Coordinate Work with pavement placement and parking striping.

1.3 SUBMITTALS

A. Product Data: Unit configuration, dimensions.

PART 2 PRODUCTS

2.1 CONCRETE BUMPERS

- A. Cement: ANSI/ASTM C150, portland Type I Normal; white color.
- B. Concrete Materials: ASTM C33; water and sand.
- C. Reinforcing Steel: ASTM A615/A615M, 60 ksi yield grade, deformed billet bars, uncoated finish, strength and size commensurate with precast unit design.
- D. Air Entrainment Admixture: ANSI/ASTM C260.
- E. Concrete Mix: Minimum 5,000 psi, 28-day strength, air entrained to 5 to 7 percent.
- F. Use rigid molds, constructed to maintain precast units uniform in shape, size and finish. Maintain consistent quality during manufacture.
- G. Embed reinforcing steel, and drill or sleeve for two dowels.
- H. Cure units to develop concrete quality, and to minimize appearance blemishes including nonuniformity, staining, or surface cracking.

2.2 CONFIGURATION

- A. Nominal Size: 5 inches high, 9 inches wide, 6 feet long.
- B. Profile: Manufacturer's standard; match existing if appropriate; provide drainage slots.

2.3 ACCESSORIES

A. Dowels: Cut Reinforcing Steel, unfinished; 1/2 inch diameter.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install units without damage to shape or finish. Replace or repair damaged units.
- B. Install units in alignment with adjacent Work.
- C. Fasten units in place with two dowels for each bumper.

3.2 SCHEDULE

A. Remove existing, install new parking bumpers where indicated and noted on drawings. Pin to asphalt after being set in position.

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SECTION 32 17 23 - PAVEMENT MARKINGS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Traffic lines and markings.
 - 2. Paint.

1.2 SUBMITTALS

- A. Product Data: Paint formulation for each type of paint.
- B. Manufacturer's Certificate: Products meet or exceed specified requirements.
- C. Test and Evaluation Reports: Submit source and acceptance test results according to AASHTO M247.
- D. Manufacturer's Instructions: Application temperatures, eradication requirements, application rate, line thickness, type of glass beads, bead embedment and bead application rate, and any other data on proper installation.

1.3 QUALITY ASSURANCE

- A. Perform Work according to State of Ohio, ODOT standards.
- B. Manufacturer: Company specializing in manufacturing products specified in this Section with five years' experience.
- C. Applicator: Company specializing in performing Work of this Section with five years' experience.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Invert containers several days prior to use when paint has been stored more than two months. Minimize exposure to air when transferring paint. Seal drums and tanks when not in use.

1.5 AMBIENT CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by paint product manufacturer.
- B. Do not apply exterior coatings during rain or snow when relative humidity is outside humidity ranges, or moisture content of surfaces exceed those required by paint product manufacturer.
- C. Do not apply paint when temperatures are expected to fall below 50 degrees F for 24 hours after application.
- D. Volatile Organic Content (VOC). Do not exceed State or U.S. EPA maximum VOC on traffic paint.

1.6 WARRANTY

A. Furnish one-year manufacturer's warranty for traffic paints.

PART 2 PRODUCTS

2.1 PAINTED PAVEMENT MARKINGS

- A. Performance / Design Criteria:
 - 1. Paint Adhesion: Adhere to road surface forming smooth continuous film one minute after application.
 - 2. Paint Drying: Tack free by touch so as not to require coning or other traffic control devices to prevent transfer by vehicle tires within two minutes after application.

- B. Paint: Ready mixed, conventional and fast dry waterborne traffic paints, lead-free, non-toxic, NASSHTO Test Deck, minimum retroreflectance of 100 mcds, durability rating of 6 or more after in place for nine months; within following limits: Sherwin Williams, Pro-Park 113.80 or Equal.
 - 1. Volume Solids: 62 +/- 2%
 - 2. Weight Solids 77 +/- 2%
 - 3. VOC <50 g/L; <0.42 lb/gal

2.2 EQUIPMENT

- A. Continuous Longitudinal Line Application Machine:
 - 1. Dual-nozzle paint gun to simultaneously apply parallel lines of indicated width in solid or broken patterns or various combinations of those patterns.
 - 2. Pressurized bead gun to automatically dispense glass beads onto painted surface, at required application rate.
 - 3. Measuring device to automatically and continuously measure length of each line placed, to nearest foot.
 - 4. Device to heat paint for fast dry applications.
- B. Machine Calibration:
 - 1. Calibrate equipment to be in conformance with ODOT requirements as applicable.
 - 2. Paint Guns: Calibrate to simultaneously apply paint binder at uniform rates as specified with an allowable tolerance of plus or minus 1 mil.
 - 3. Bead Guns: Calibrate to dispense glass beads simultaneously at specified rate. Check guns by dispensing glass beads into gallon container for predetermined fixed period of time. Verify weight of glass beads.
- C. Other Equipment:
 - 1. For application of crosswalks, intersections, stop lines, legends and other miscellaneous items by walk behind stripers, hand spray or stencil trucks, apply with equipment meeting requirements of this Section. Do not use hand brushes or rollers.

PART 3 EXECUTION

3.1 PREPARATION

- A. Maintenance and Protection of Traffic:
 - 1. Prevent interference with marking operations and to prevent traffic on newly applied markings before markings dry.
 - 2. Coordinate access requirements with Owner prior to application of markings.
- B. Surface Preparation.
 - 1. Clean and dry paved surface prior to painting.
 - 2. Blow or sweep surface free of dirt, debris, oil, grease or gasoline.
 - 3. Spot location of final pavement markings as specified and as indicated by applying pavement spots 25 feet o.c.

3.2 APPLICATION

- A. Agitate paint for 1 to 15 minutes prior to application to ensure even distribution of paint pigment.
- B. Dispense paint at ambient temperature or heated as applicable to wet film thickness of 15 mils.
- C. Unless material is track free at end of paint application convoy, use traffic cones to protect markings from traffic until track free. When vehicle crosses a marking and tracks it or when splattering or over spray occurs, eradicate affected marking and resultant tracking and apply new markings.

3.3 TOLERANCES

A. Maximum Variation from Wet Film Thickness: 1 mil.

- B. Maximum Variation from Wet Paint Line Width: Plus or minus 1/8 inch.
- C. Maintain cycle length for skip lines at tolerance of plus or minus 6 inches per 40 feet and line length of plus or minus 3 inches per 10 feet.

3.4 FIELD QUALITY CONTROL

- A. Inspect for incorrect location, insufficient thickness, line width, coverage, retention, uncured or discolored material, and insufficient bonding.
- B. Repair lines and markings, which after application and curing do not meet following criteria:
 1. Incorrect Location: Remove and replace incorrectly placed patterns.
 - 2. Insufficient Thickness, Line Width, Paint Coverage, Glass Bead Coverage or Retention: Prepare defective material by acceptably grinding or blast cleaning to remove substantial amount of beads and to roughen marking surface. Remove loose particles and debris. Apply new markings on cleaned surface according to this Section.
 - 3. Uncured or Discolored Material, Insufficient Bonding: Remove defective markings according to this Section and clean pavement surface 1 foot beyond affected area. Apply new markings on cleaned surface according to this Section.
- C. Replace defective pavement markings as specified throughout warranted period. Replace markings damaged by anti-skid materials, chemical deicers, snow plowing or other loss of marking material regardless of cause. When markings are damaged by pavement failure or by Owner's painting, crack sealing, or pavement repair operations, Contractor is released from warranty requirements for damaged Work.
- D. Replace failed or defective markings in entire section of defective markings within 30 days after notification when any of following exists during warranty period:
 - 1. Marking is discolored or exhibits pigment loss, and is determined to be unacceptable by Owner.
 - 2. More than 15 percent of area of continuous line, or more than 15 percent of combined area of skip lines, within any 528 foot section of roadway is missing.
- E. Replace pavement marking material under warranty using original or better type material. Continue warranty to end of original warranty period even when replacement materials have been installed as specified.
- F. When eradication of existing paint lines is necessary, eradicate by shot blast or water blast method. Do not gouge or groove pavement more than 1/16 inch during removal. Limit area of removal to area of marking plus 1 inch on all sides. Prevent damage to transverse and longitudinal joint sealers, and repair any damage according to requirements in Section 32 12 16.

3.5 PROTECTION

A. Protect painted pavement markings from vehicular and pedestrian traffic until paint is dry and track-free. Follow manufacturer's recommendations or use minimum of 30 minutes. Consider barrier cones as satisfactory protection for materials requiring more than two minutes dry time.

3.6 PAVEMENT MARKING APPLICATION / REQUIREMENTS

- A. Thoroughly clean pavement surface of all dirt and debris.
- B. Stripe new asphalt lot as indicated.
- C. Paint to be applied at a wet mil thickness of 15 mm, 1 coat.
- D. The all markings shall be applied with a commercial motorized striping machine.

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SECTION 32 90 00 - PLANTING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparation of soil and fertilizer.
 - 2. Placement of plant life.

1.2 SUBMITTALS

- A. Product Data: Submit list of plant material sources, data for fertilizer and other accessories.
- B. Comply with ANSI Z60.1, "American Standard for Nursery Stock," for trees, shrubs, ground covers, and plants.

1.3 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Include pruning objectives, types and methods; types, application frequency, and recommended coverage of fertilizer.

1.4 QUALIFICATIONS

- A. Nursery: Company specializing in growing and cultivating plant life specified in this section.
- B. Qualifications of workmen: Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the best methods for their installation and who shall direct all work performed under this section.
- C. Maintenance Services: Performed by installer.

1.5 WARRANTY

- A. Furnish two year warranty including one continuous growing season including coverage of plants from death or unhealthy conditions.
- B. Replacements: Plants of same size and species as specified, planted in next growing season, with new warranty beginning on date of replacement.

1.6 MAINTENANCE SERVICE

A. Maintain seeded areas and plant life for three months from Date of Substantial Completion. Seeded areas and plant life shall be well established and exhibit growth at the time of turn over to Owner.

PART 2 PRODUCTS

2.1 TREES, PLANTS, AND GROUND COVER

- A. Trees, Plants and Ground Cover: Species and size identified in Plant Schedule as indicated on Drawings, grown in climatic conditions similar to those in locality of the Work.
- B. Balled and Burlapped Shrubs: Well-shaped, fully branched, healthy, vigorous nursery-grown stock.
- C. Ground Covers and Plants: Established and well rooted in removable containers or integral peat pots.
- D. Fertilizer For Plantings: Fertilizer shall be 20-10-5 Agriform Planting tablets manufactured by Sierra Chemical Company, 1-408-263-8080 or equal and suitable for application with approved equipment. Delivered to the site in bags or other convenient containers, each fully

labeled, conforming to applicable State Fertilizer Law, and bearing the name, trade name or trademark, and warranty of the producer.

2.2 SOIL AND SOIL MODIFICATION MATERIALS

- A. Topsoil: ASTM D 5268, Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, free of subsoil, clay or impurities, plants, weeds and roots, free of stones 1 inch or larger. Equal to ODOT Item 653.
- B. Fertilizer: Fifty percent of elements derived from organic sources,
- C. Lime: ASTM C602, Class T agricultural limestone containing a minimum 80 percent calcium carbonate equivalent.
- D. Organic Mulch: Double shredded hardwood mulch.
- E. Weed-Control Barrier: Polypropylene or polyester nonwoven fabric.
- F. Organic Compost: leaf and mushroom compost to be added to mulch at 1 cubic yard per 5 cubic yards of mulch.
- G. Tree Gator Bags
- H. Weed-Control Additive: Preen weed control.

2.3 ACCESSORIES

- A. Mulching Material: Composted, double shredded hardwood bark, dark brown in color.
- B. Landscape fabric: doubly reinforced polypropylene fabric with a 28-mil thickness. Install under all new landscape areas.

2.4 UNDERGROUND STORM DRAINAGE

A. 4" or 6" corrugated drain piping, solid or perforated type. Connect to downspout boot and extend to storm water as designed.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify required underground utilities are in proper location.
- B. Prepare subsoil to eliminate uneven areas. Maintain profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- C. Scarify subsoil to depth of 6 inches.

3.2 PLACING TOPSOIL

- A. Spread topsoil to minimum depth of 6 inches. Rake smooth.
- B. Grade topsoil to eliminate rough, low or soft areas. Slope for positive drainage.
- C. Place topsoil into pits and beds intended for plant root balls to minimum thickness of 6 inches.
- D. At affected areas of the site, strip existing topsoil and stockpile for reuse. Spread as required to meet new grades.
- E. Provide additional fill as required to complete the work. Additional fill material shall be free of organic matter, rubbish, debris, and rocks greater than 4" diameter.

3.3 PLANTING

A. Install landscape fabric at landscape beds. Install 3 inch mulch bed at all landscape areas.

- B. Set plants in pits or beds partly filled with prepared topsoil mixture. Backfill soil mixture.
- C. Saturate soil with water when pit or bed is half full of top soil and again when full.
- D. General:
 - 1. All plantings shall be done between the dates of March 1 and June 1 or September 1 and November 1. All other plantings to be done between the dates of June 2nd and August 31 to be Wilt Proofed (or equal) and a watering schedule shall be maintained by the Contractor until acceptance by Owner.
 - 2. Plant areas: Planting areas are pits, or prepared planting beds, for trees, shrubs and vines where indicated on the drawings.
 - 3. Topsoil for planting operations shall be furnished by the Contractor.
 - 4. The depth of planting areas is the depth below the finished grade.
- E. Shrub pits:
 - 1. Dig and prepare shrub pits or beds prior to planting to a minimum depth of 8".
 - 2. Width of the pits at least greater in diameter than their ball of earth or spread of roots.
 - 3. Add 21 gram 'Agriform' planting tablets, to planting pit, manufactured by Sierra Chemical Co. (1-408-263-8080) or equal. Backfill planting pit halfway with planting soil mixture and place tablet beside rootball about 1" from root tips. Do not place in bottom of hole. Follow manufacture's recommended application rates for size of plant installed.
 - 4. Set shrubs so as to allow sufficient depth. Properly set the crown of plant at the finished surface of the bed.
 - 5. Backfill topsoil about the roots and thoroughly settle by watering. Form a mound of earth around each shrub so as to produce a shallow saucer.
 - 6. Edge the bed in a neat line as directed and make sure an even 6" layer of topsoil remains over entire area.
 - 7. Dress all beds with a uniform 3" layer of finely shredded hardwood bark.
- F. Tree Gator Bags:
 - 1. Contractor to supply and install tree gator bags on all trees planted.
 - 2. Contractor to be responsible for proper filing and maintenance of tree gator bags until acceptance by owner.

3.4 MAINTENANCE

- A. Mow grass at regular intervals to maintain maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at each mowing. Contractor to maintain through at least 3 mowings.
- B. Contractor to water to prevent grass and soil from drying out.
- C. Control growth of weeds.

3.5 GUARANTEE PERIOD

- A. Guarantee period shall begin at the issuance of the Substantial Completion and shall end exactly two years from that date.
- B. At the conclusion of the guarantee period, a final inspection of the work will be made to determine the condition of the plant material. All plant material not in a healthy or 40% defoliated growing condition will be noted.
- C. Remove the material so noted from the site at the direction of the Architect and replace during the following planting season with the materials of like kind and size and in a manner specified for the original planting at no extra cost.
- D. Guarantee period also applies to replaced material.

SECTION 32 92 19 - SEEDING / SITE REPAIR

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Seeding and Site Repairs related to asphalt and concrete repair and replacement.

1.2 **DEFINITIONS**

A. Weeds: Vegetative species other than specified species to be established in given area.

1.3 SUBMITTALS

A. Product Data: Topsoil, Seed mix, fertilizer, mulch, and other accessories.

1.4 QUALITY ASSURANCE

A. Provide seed mixture in containers showing percentage of seed mix, germination percentage, inert matter percentage, weed percentage, year of production, net weight, date of packaging, and location of packaging.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

PART 2 PRODUCTS

2.1 SEED MIXTURE

- A. Seed Mixture: Green Velvet's Finest mixture, fescue or bluegrass to match existing and for soils conditions, sun/shade, etc. ODOT Item 659.
- B. Commercial Fertilizer for seed: Commercial-grade complete fertilizer, consisting of 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
- C. Slow-Release Fertilizer: Granular fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium; 5 percent nitrogen; 10 percent phosphorous; and 5 percent potassium; by weight.
- D. Straw Mulch: Clean, mildew- and seed-free salt hay or threshed straw.

2.2 SOIL AND SOIL MODIFICATION MATERIALS

- A. Topsoil: ASTM D 5268, Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, free of subsoil, clay or impurities, plants, weeds and roots, free of stones 1 inch or larger. Equal to ODOT Item 653.
- B. Fertilizer: Fifty percent of elements derived from organic sources,
- C. Lime: ASTM C602, Class T agricultural limestone containing a minimum 80 percent calcium carbonate equivalent.
- D. Organic Compost: leaf and mushroom compost to be added to mulch at 1 cubic yard per 5 cubic yards of mulch.
- E. Weed-Control Additive: Preen weed control.

2.3 ACCESSORIES

A. Mulching Material: Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are **not** acceptable.

2.4 SOURCE QUALITY CONTROL

- A. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt content, organic matter content, and pH value.
- B. Provide recommendation for fertilizer and lime application rates for specified seed mix as result of testing.
- C. Testing is not required when recent tests and certificates are available for imported topsoil. Submit these test results to testing laboratory. Indicate, by test results, information necessary to determine suitability.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify prepared soil base is ready to receive Work of this Section.

3.2 PLACING TOPSOIL

- A. Spread topsoil to minimum depth of 6 inches. Rake smooth.
- B. Grade topsoil to eliminate rough, low or soft areas. Slope for positive drainage.
- C. Place topsoil into pits and beds intended for plant root balls to minimum thickness of 6 inches.
- D. At affected areas of the site, strip existing topsoil and stockpile for reuse. Spread as required to meet new grades.
- E. Provide additional fill as required to complete the work. Additional fill material shall be free of organic matter, rubbish, debris, and rocks greater than 4" diameter.

3.3 SEEDING

- A. Apply seed at a rate of 10 lb per 1000 sq ft, evenly in two intersecting directions.
- B. Immediately following seeding, apply agricultural mulch to a thickness of 1/8 inches.
- C. Apply water with fine spray immediately after each area has been mulched.

3.4 SEED PROTECTION

A. Identify seeded areas with stakes and string around area periphery.

3.5 MAINTENANCE

- A. Water to prevent grass and soil from drying out. Maintain until vigorously growing.
- B. Control growth of weeds. Apply herbicides. Remedy damage resulting from improper use of herbicides.
- C. Immediately reseed areas showing bare spots.
- D. Repair washouts or gullies.

3.6 SCHEDULE OF SITE REPAIR

- A. Backfill areas impacted by work with topsoil to match existing grade.
- B. Re-seed area impacted by work.
- C. Apply mulch/straw.
- D. Water and maintain seed until vigorously growing.

SECTION 32 92 23 - SODDING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparation of subsoil.
 - 2. Placing topsoil.
 - 3. Fertilizing.
 - 4. Sod installation.
 - 5. Maintenance.
- B. General: Restore all turf areas affected by site work with the installation of new sod.

1.2 **DEFINITIONS**

A. Weeds: Vegetative species other than specified species to be established in given area.

1.3 SUBMITTALS

- A. Product Data: Sod grass species, fertilizer, mulch, and other accessories.
- B. Test Reports: Indicate topsoil nutrient and pH levels with recommended soil supplements and application rates.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.

1.5 QUALITY ASSURANCE

A. Sod: Root development capable of supporting its own weight without tearing, when suspended vertically by holding upper two corners.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sod on pallets in rolls. Protect exposed roots from dehydration.
- B. Do not deliver more sod than can be laid within 24 hours.

1.7 COORDINATION

A. Coordinate with installation of underground sprinkler system piping and watering heads.

1.8 MAINTENANCE SERVICE

A. Maintain sodded areas immediately after placement until grass is well established and exhibits vigorous growing condition for two cuttings.

PART 2 PRODUCTS

2.1 SOD

- A. Sod: TPI Certified Nursery grown grade; cultivated grass sod; type indicated in this Section; with strong fibrous root system, free of stones, burned or bare spots; containing no more than 5 weeds per 1,000 sq ft.
 - 1. Green Velvet Turf Type Tall Fescue, blend of elite Turf Type Tall Fescue Varieties, with up to 10% Kentucky Bluegrass, drought tolerant.

2.2 SOIL MATERIALS

A. Topsoil: ASTM D 5268, Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, free of subsoil, clay or impurities, plants, weeds and roots, free of stones 1 inch or larger. Equal to ODOT Item 653.

2.3 ACCESSORIES

- A. Fertilizer: Commercial grade; recommended for grass, with fifty percent of elements derived from organic sources; of proportion necessary to eliminate deficiencies of topsoil.
- B. Water: Clean, fresh and free of substances or matter capable of inhibiting vigorous growth of grass.
- C. Wood Pegs: Softwood, sufficient size and length to anchor sod on slope.

2.4 HARVESTING SOD

- A. Machine cut sod and load on pallets according to TPI.
 - 1. Minimum 1/2 inch and maximum 1 inch topsoil base.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify prepared soil base is ready to receive Work of this Section.

3.2 PREPARATION OF SUBSOIL

- A. Prepare sub-soil and eliminate uneven areas and low spots.
- B. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- C. Remove foreign materials and undesirable plants and their roots. Do not bury foreign material beneath areas to be sodded.
- D. Remove contaminated subsoil.
- E. Scarify subsoil to depth of 3 inches where topsoil is to be placed.
- F. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.

3.3 LAYING SOD

- A. Moisten prepared surface immediately prior to laying sod.
- B. Lay sod immediately after delivery to Site to prevent deterioration.
- C. Lay sod tight with no open joints visible, and no overlapping; stagger end joints 12 inches minimum. Do not stretch or overlap sod pieces.
- D. Lay smooth. Align with adjoining grass areas.
- E. Place top elevation of sod 1/2 inch below adjoining paving, curbs.
- F. On slopes 6 inches per foot and steeper, lay sod perpendicular to slope and secure every row with wooden pegs at maximum 2 feet o.c. When using "big roll," lay sod parallel to slope. Drive pegs flush with soil portion of sod.
- G. Do not place sod when temperature is less than 32 degrees F.
- H. Water sodded areas immediately after installation. Saturate sod to 4 inches of soil.

- I. After sod and soil have dried, roll sodded areas to bond sod to soil and to remove minor depressions and irregularities.
- J. Roll before first watering.

3.4 MAINTENANCE

- A. Contractor to water sod until established.
- B. Mow grass at regular intervals to maintain at maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at each mowing. Contract to maintain until 1st 3 mowings.
- C. Neatly trim edges and hand clip where necessary.
- D. Immediately remove clippings after mowing and trimming.
- E. Water to prevent grass and soil from drying out.
- F. Roll surface to remove or irregularities.
- G. Control growth of weeds. Apply herbicides. Remedy damage resulting from improper use of herbicides.
- H. Immediately replace sod on areas showing deterioration or bare spots.
- I. Protect sodded areas with warning signs during maintenance period.

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