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FAX

DATE:03/05/24	JOB # 2238
RE: Heat Pump Replacement at	
Oak Terrace Housing Complex for the	
Naugatuck Housing Authority	
Addendum #2	

**PLEASE COMPLETE SECTION BELOW AND FAX OR EMAIL BACK TO
 860-677-8534 OR ATARPILL@QAMARCH.COM**

Received (Addendum #2)

CONTRACTOR : _____

SIGNED : _____ Date: _____

NUMBER OF PAGES INCLUDING COVER PAGE: 17

FROM: Andrew Tarpill, AIA

If the attached is incomplete, kindly notify us at once.



Heat Pump Replacement at Oak Terrace Housing Complex for the Naugatuck Housing Authority

Addendum #2

03/05/24

General/Clarifications

Plan Holders List (See Attached)

BID EXTENSION (ONE WEEK)

BIDS DUE:

11:00am on Tuesday, March 19, 2024

Town Hall, Borough of Naugatuck
Accounting Department
229 Church Street
Naugatuck, CT 06770

Bid Question Extension

Questions will be taken up to **12:00 pm on 03/11/24**

Final Addendum, if necessary, will be issued by **2:00 pm on 03/12/24**

Mock up Unit

Contractor will be required to complete one mock up unit to set the standard for the remainder of the project. This will be in a one bedroom unit.

Electric Heat Control Box

See photos below for a similar representation of the Electric Heat Control Box with relays & outdoor air controller. The preferred mounting is with outdoor air controller inside the enclosure. If outdoor air controller is externally mounted the knob is to be removed once the temperature is set.

Wage Rates Update

If required updated wage rates will be sent out via addendum no later than end of day on March 12, 2024

Changes to Specifications

028213 Asbestos Abatement **(ADD)** Spec Section in its entirety (attached)

Changes to Drawings

M1.0

Single-Zone and Multi-Zone Split System Schedules

(DELETE)

The provision of a TAZ-MS303W 3-pole disconnect switch for each indoor unit as indicated in Note #3.

E1.0

Electrical Floor Plans

(DELETE)

Delete the service switch shown at each indoor unit on Detail 2/E1.0.

E1.1

Electrical Floor Plans

(DELETE)

The service switch shown at each indoor unit on Details 1/E1.1 and 2/E1.1.



- E1.2 Electrical Floor Plans
(DELETE) The service switch shown at each indoor unit on Detail 2/E1.2.
- E1.3 Electrical Floor Plans
(DELETE) The service switch shown at each indoor unit on Detail 2/E1.3.
- E1.4 Electrical Floor Plans
(DELETE) The service switch shown at each indoor unit on Detail 1/E1.4.

RFI Questions

-
- Question #1 What is the Retainage percentage?
- Answer #1 **5%**
-
- Question #2 What is the estimated Start + Completion date?
- Answer #2 **Estimate the first week of April for contract signing. You will then have 270 days to complete the project from the issuance of the notice to proceed from the owner's rep.**
-
- Question #3 Will Maintenance be required on the units once installed?
- Answer #3 **A maintenance contract is not part of this bid submission**
-
- Question #4 Is a project schedule required with our bid?
- Answer #4 **Not required with bid however a schedule will be required at time of contract signing**
-
- Question #5 How many copies of our proposal do you need us to provide?
- Answer #5 **1 original, no additional copies are required**
-
- Question #6 In reference to Section 2, Page 4, Paragraph 7, the completion time to execute the project SOW is 270 calendar days. The allowable on-site working schedule is M-F 8am to 5pm. This would leave ~ 194 days to complete 194 units. We would like clarification on the number of units that the owner intends to, or plans to make available on a given workday. Will the owner allow work to be "in progress" in more than one unit at a time?
- Answer #6 **Contractor will be allowed access to up to 4 units at a time. As the project progresses the number of units the contractor will have access to may be adjusted based on contractor's performance.**
-

Question #7

In reference to sheet drawing M.1 – 4, one-bedroom units, where two indoor heads are required. Please provide further detail on condensate piping to grade for the indoor head located on the opposite side of the building. For instance, would it be acceptable to transition from flexible condensate tubing to sch 40 PVC after exiting the building, then pipe to grade leaving the PVC exposed, but affixed to the building? Or will the condensate pipe need to be concealed even where refrigerant lines do not exist no matter on condensate piping material used?

Existing Conditions: Line hide is only present where the refrigerant lines exit the building and travel into the soffit ~ 18". The existing condensate pipes are either flexible to grade NOT concealed or terminated at ~ 6'

Answer #7

The same note used to indicate to conceal exposed pipes in Mitsubishi "Line-Hide" for the indoor unit nearest to the outdoor unit shall also apply to the indoor unit on the opposite side of the building. The "Line-Hide" is to extend from the underside of the soffit to within 12" above grade. Condensate piping is to be concealed in "Line-Hide" even where refrigerant pipes do not exist. Flexible condensate tubing may be used. All pipe and conduit/wiring penetrations through the exterior wall shall be sealed weather-tight.

Question #8

Can you provide a manufacturer and part number for the weatherproof service disconnect with surge protection to be used at the new outdoor units?

Answer #8

Mars #83916. As part of the contractors bid, provide ten (10) replacement surge modules (Mars #83914) to Owner for attic stock.













End of Addendum #2

Naugatuck HA – Heat Pump Replacements at Oak Terrace

Plan Holders

Date	Company	Contact
2/28/24 11:22 am Order Completed 	Action Construction 45 Bever Brook Rd Danbury, CT 06810	Bradford Signor Tel: 800 370-9536 bradsignor@proton.me
2/26/24 9:55 am Order Completed 	Barry Associates, Inc. 17 Halls Mill Road Preston, CT 06365	John Barry Tel: 860-889-8943 Fax: 860-886-9586 john@bassoc.com
2/16/24 2:56 pm Order Completed 	Construct Connect 3825 Edwards Rd. Ste 800 Cincinnati, OH 45209	Plan Acquisition Tel: 8003642059 Fax: 866-570-8187 content@constructconnect.com
2/23/24 2:02 pm Order Completed 	Dodge Data & Analytics 2860 South State Hwy 161 - Suite 160 - #501 Ste 160 #501 Grand Prairie, TX 75052	Josie Castillo Tel: 8443263826 Fax: 6099647447 william.fleming@construction.com
2/23/24 3:22 pm Order Completed 	Local Choice HVAC 150 New Britain Ave Unionville, CT 06085	James Dooley Tel: 8605003577 james@localchoicehvac.com
2/23/24 3:59 pm Order Completed 	Sav-Mor Cooling & Heating Inc 231 CAPTAIN LEWIS DR Southington, CT 06489	Cindy Tessman Tel: 8606219959 office@savmorct.com
2/22/24 3:07 pm Order Completed 	Vaz Quality Works 179 WILLIAM ST BRIDGEPORT, CT 06608	Mark Engengro Tel: 2033365229 marke@vazqualityworks.com
2/22/24 11:11 am Order Completed 	wtech22 Heating and Cooling 18 Botsford Pl. Trumbull, CT 06611	Wilson Sanchez Tel: 2035409973 wsanchez@wtech22.com

SECTION 02 82 13 – ASBESTOS REMOVAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. General Provisions of Contract, including General Supplementary Conditions, shall apply to this Section.
- B. Fuss & O’Neill, Inc. (Fuss & O’Neill) Asbestos Operations & Maintenance Program Table 1A List of Known Asbestos Containing Materials (Attachment A).

1.2 PROJECT CONTACTS

- A. The asbestos removal Contractor (the “Contractor”) will regard the Naugatuck Housing Authority (the “Owner”) and QA+M architecture (the “Architect”) direction as authoritative and binding as provided herein, in matters particularly, but not limited to the following:
 - 1. Approval of work areas
 - 2. Review of monitoring results – Contractor do conduct appropriate OSHA compliance air sampling in vacant units as baseline and coordinate with Owner/Architect
 - 3. Completion of the various segments of work
 - 4. Final completion of the removal
 - 5. Submission of data
 - 6. Daily field punch list items
- B. The State of Connecticut-licensed Asbestos Consultant – Project Designer for this project is Kathleen C. Pane (License No.000191).

1.3 SCOPE OF WORK

- A. Work outlined in this Section includes all work necessary for the removal, packaging, transporting, and disposing of asbestos-containing joint compound associated with gypsum board and asbestos impacted materials during the heat pump replacement (the “Work”) at Oak Terrace Housing Complex located at 53 Conrad Street, Naugatuck, Connecticut (the “Site”). This Work under this Contract includes but is not limited to asbestos removal in the areas that will be impacted by the work.
- B. Heat pump replacement will occur in 194 units. There is a mix of efficiency and one bedroom units. Along with replacement of the heat pumps there will be a unit heat relay box installed in the closet to control the use of the heat pump and the existing electrical heaters. This will switch between the heat pump and the electric heaters based on outdoor air temperature.

1.4 USE OF THE CONTRACT DOCUMENTS

- A. All work shall comply with the Contract Documents and with applicable codes, laws, regulations, and ordinances wherever applicable. The most stringent of all the foregoing shall govern the Work.

- B. It is not intended that the Specifications show every detail of the Work, but the Contractor shall be required to furnish within the Contract Sum all material and labor necessary for the completion of the Work in accordance with the intent of this Specification.
- C. In case of ambiguity among the Contract documents, the more stringent requirement as determined by the Owner and Architect shall prevail.
- D. The Work of this Contract includes making modifications as necessary, subject to approval by the Owner in consultation with the Architect to correct any conflicts.
- E. All items not specifically mentioned in the Specifications, but implied by trade practices to complete the Work, shall be included.

1.5 SITE EXAMINATION

- A. It is understood that the Contractor has examined the Site and made their own estimates of the facilities and difficulties attending the execution of the Work and has based their price thereon.
- B. Except for unforeseeable concealed conditions as determined by the Owner/Architect, the Contractor shall make no claim for additional cost due to the existing conditions at the Site.

1.6 CONTRACTOR QUALIFICATIONS

- A. All bidders shall submit a record of prior experience with similar projects, listing no less than three completed projects in the past year, with all projects of similar size and scope. The Contractor shall list the experience and training of the project supervisor and all on-site personnel.
- B. The Contractor selected must have employees with current (within a year work the work is performed) asbestos awareness training in compliance with OSHA.

1.7 TESTING LABORATORY SERVICES

- A. The Contractor shall submit to the Owner/Architect the name; address and qualifications of proposed laboratories intended to be utilized for air sample analysis as required by this Section.

1.8 ADDITIONAL GENERAL REQUIREMENTS

- A. The Contractor shall employ a competent supervisor with at least three years of experience on projects of similar scope and magnitude who shall be responsible for all work involving asbestos removal as described in the specifications and defined in applicable regulations and have full-time daily supervision of the same. The Supervisor shall be the competent person as defined by OSHA regulations.
- B. If required by federal, state, local, and any other authorities having jurisdiction over such work, the Contractor shall allow the work of this contract to be inspected. The Contractor shall immediately notify the Owner and Architect and shall maintain written evidence of such inspection for review by the Owner and Architect.
- C. The Contractor shall incur the cost of all fines resulting from regulatory non-compliance as issued by federal, state, and local agencies. The Contractor shall incur the cost of all work requirements

mandated by federal, state, and local agencies as a result of regulatory non-compliance or negligence.

1.9 PROJECT DESCRIPTION

- A. The base bid includes the removal, packaging, transporting, and disposing of asbestos-containing gypsum joint compound disturbed by the Work as identified herein conducted by workers meeting the requirements of OSHA Title 29 CFR, Part 1926.1101.
- B. The base bid includes the following ACM:

BASE BID – ACM

LOCATION	MATERIAL TYPE	ESTIMATED QUANTITY
Utility Closets in All Units to Accommodate New Heat Pump Install Except Units 4F, 10A and 10D	Asbestos joint compound on gypsum board	32 SF (three 2” x 4” holes per unit)

1.10 DEFINITIONS

- A. The following definitions relative to asbestos abatement apply:
 1. Abatement: Procedures to control fiber release from ACM; includes removal, encapsulation, and enclosure.
 2. Air Monitoring: The process of measuring the total airborne fiber concentration of an area, or a person.
 3. Amended Water: Water to which a surfactant (wetting agent) has been added.
 4. Architect: a person or firm professionally engaged in the design of certain large constructions other than buildings and the like.
 5. Asbestos: The name given to a number of naturally occurring fibrous silicates. This includes the serpentine forms and the amphiboles, and includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite, or any of these forms, which have been chemically altered.
 6. Asbestos-Containing Materials: For the purpose of this project design, an asbestos containing material is any building material categorized by EPA as a surfacing material, thermal system insulation, or miscellaneous that contains any amount of asbestos (as defined above) based on the analytical methodology adopted by the project designer for application to subject building materials at the Site.
 7. Asbestos Felt: A product made by saturating felted asbestos with asphalt, or other suitable bindery, such as a synthetic elastomer.
 8. Asbestos Fibers: Those particles with a length greater than five (5) microns and a length to diameter ratio of 3:1 or greater.
 9. Competent Person: As defined by OSHA Title 29 CFR, Part 1926.1101, a representative of the Contractor who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure. The Competent Person has authority to take prompt corrective measures, and to eliminate such hazards during asbestos removal.
 10. Fixed Object: Unit of equipment or furniture in the work areas that cannot be removed from the work area.

11. Friable Asbestos Materials: Any material that contains more than 1% asbestos by weight, that can be crumbled, pulverized, or reduced to powder by hand pressure.
12. HEPA Filter: High Efficiency Particulate Air (HEPA) filter in compliance with ANSI Z9.2 1979.
13. HEPA Vacuum Equipment: Vacuum equipment fitted with a HEPA filter system for filtering the effluent air from the unit.
14. Movable Object: Unit of equipment or furniture in the work area that can be removed from the work area.
15. NESHAP: National Emission Standards for Hazardous Air Pollutants regulations enforced by the EPA.
16. Owner: An employee or executive who has the principle responsibility for a process, program, or project.
17. Permissible Exposure Limit (PEL): The maximum total airborne fiber concentration to which an employee is allowed to be exposed. The new limit established by OSHA Title 29 CFR, Part 1926.1101 is 0.1 fibers per cubic centimeter (fibers/cc) as an eight (8)-hour time-weighted average (TWA), and 1.0 fibers/cc averaged over a sampling period of 30 minutes as an Excursion Limit. The Contractor shall be responsible for maintaining work areas in a manner that this standard is not exceeded.
18. Regulated Area: An area established by the employer to demarcate where Class I, II, and III asbestos work is conducted and any adjoining area where debris and waste from such asbestos work accumulate, and a work area within which total airborne fiber concentrations exceed, or there is a reasonable possibility that they may exceed the PEL.

1.11 SUBMITTALS

- A. The Contractor shall submit the following to the Owner/Architect in one complete package prior to the pre-construction meeting, and no later than 10 business days prior to the anticipated start of the Work:
 1. Submit a schedule to the Owner/Architect that defines a timetable for executing and completing the project, including work area preparations, removal, cleanup, decontamination.
 2. Submit the name and address of the hauling contractor and landfill to be used.
 3. Submit the current OSHA awareness training, medical evaluation and fit test for respirator use for who will be at the Site.
 4. Submit the qualifications of the air sampling professional/laboratory that the Contractor proposes to use for this project for this task.
 5. Submit a letter documenting an active Respiratory Protection Program for employees for the Work.
 6. Submit the proposed worker orientation plan that at a minimum includes a description of asbestos hazards and abatement methodologies, a review of worker protection requirements, and the outline of safety procedures.
 7. No work on the Site will be allowed to begin until the Owner/Architect as listed herein approves the Pre-Construction Submittals. Any delay caused by the Contractor's refusal or inability to submit this documentation in a timely manner does not constitute a cause for change order or a time extension.
- B. The Contractor shall submit the following to the Owner and Architect during the Work:

1. Copies of personal air sampling results. The Contractor shall be responsible for proper sample analytical review and personal protective equipment (PPE) selection and use. Records are retained solely for project record.
 2. Copies of training, fit test records, and medical records for new employees to start work (24 hours in advance) and prior to the new employee arriving at the Site.
- C. The Contractor shall submit the following to the Owner and Architect at the completion of the Work. The Owner reserves right to retain payment(s) until all items are received in completion:
1. Original final completed copies of the waste shipment records, signed by all transporters and the designated disposal site owner/operator.
 2. Contractor's logs (daily activity logs, daily sign in sheets, regulated work area sign-in sheets), and all worker training, medical records, and respirator fit test records.
 3. Copies of all OSHA personal air monitoring results.

1.12 REGULATIONS AND STANDARDS

- A. The Contractor shall be solely responsible for conducting this project and supervising all work in a manner that will be in conformance with all federal, state, and local regulations and guidelines pertaining to asbestos abatement, such as, but not necessarily limited to:
1. EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) Regulations (Title 40 CFR, Part 61, Subpart M);
 2. EPA Asbestos Hazards Emergency Response Act (AHERA) Regulations (Title 40 CFR, Part 763, Subpart E);
 3. OSHA Asbestos Regulations (Title 29 CFR, Parts 1910.1001 and 1926.1101);
 4. Department of Transportation (DOT) Hazardous Waste Transportation Regulations (Title 49 CFR, Parts 170 – 180); and
 5. Connecticut Department of Energy and Environmental Protection (CTDEEP) Regulations (Section 22a-209-8(i) and Section 22a-220 of the Connecticut General Statutes); and
 6. CTDPH Standards for Asbestos Abatement (Sections 19a-332a-1 to 19a-332a-16).

1.13 CONTRACTOR'S AIR SAMPLING RESPONSIBILITY

- A. The Contractor shall monitor total airborne fiber concentrations in the worker breathing zones and establish conditions and work procedures for maintaining compliance with OSHA Title 29 CFR, Parts 1910.1001 and 1926.1101.
- B. All air sampling results shall be provided to the Owner and Architect within 48-hours after sample collection. The Owner and Architect propose conducting work in vacant units for the Contractor to collect personal air samples in compliance with OSHA to establish the level of exposure and to assure engineering controls are established to allow work to occur while residents are in the units without any issue of exposure to the residents. Personal air samples shall be run throughout the duration of the work to document fiber levels. If an exceedance of 0.010 f/cc is documented the Contractor shall have the sample further analyzed for asbestos fibers (OSHA ID/160).
- C. All air sampling shall be conducted in accordance with methods described in OSHA Title 29 CFR, Parts 1910.1001 and 1926.1101.

1.14 PROPER WORKER PROTECTION

- A. This Section describes the equipment and procedures required for protecting workers against asbestos contamination and other workplace hazards except for respiratory protection.
- B. In accordance with OSHA Title 29 CFR, Part 1926, all workers shall receive a training course covering the dangers inherent in handling asbestos, the dangers of breathing asbestos dust, proper work procedures, and proper worker protective measures.
- C. The Contractor shall provide medical examinations for all workers who may encounter a total airborne fiber concentration of 0.1 fibers/cc or greater for an 8-hour TWA. In the absence of specific airborne fiber data, provide medical examinations for all workers who will enter the work area for any reason. Examination shall, at a minimum, meet OSHA requirements as set forth in Title 29 CFR, Part 1926. In addition, provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.
- D. The Contractor shall maintain control of and be responsible for access to all work areas to ensure the following requirements:
 - 1. Non-essential personnel are prohibited from entering the regulated area.
 - 2. All authorized personnel entering the regulated work area shall be equipped with properly fitted respirators and protective clothing.
 - 3. All personnel who are exiting from the wash station shall be properly decontaminated.
 - 4. Asbestos waste that is removed from the regulated work area must be properly secured and labeled in accordance with these Specifications. Asbestos waste removed from the regulated work area must be immediately secured and removed within 24 hours of the Work completion.
 - 5. Any material, equipment, or supplies that are removed from the regulated area shall be thoroughly cleaned and decontaminated by wet cleaning and/or HEPA vacuuming of all surfaces.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name and product technical description.
- B. Damaged or deteriorating materials shall not be used and shall be removed from the premises. Material that becomes contaminated with asbestos shall be decontaminated or disposed as asbestos waste.
- C. Surfactant (wetting agent) shall consist of 50 percent polyoxyethylene ether and 50 percent polyoxyethylene ester, or equivalent, and shall be mixed with water to provide a concentration of one ounce surfactant to five gallons of water or as directed by manufacturer.
- D. Removal encapsulant shall be non-flammable factory prepared penetrating chemical encapsulant. Usage shall be in accordance with manufacturer's printed technical data.
- E. The Contractor shall have available spray equipment capable of mixing wetting agent with water and capable of generating sufficient pressure and volume and having sufficient hose length to reach all areas with asbestos.

- F. Impermeable containers are to be used to receive and retain any asbestos-containing or asbestos contaminated materials until disposal at an acceptable disposal site. The containers shall be labeled in accordance with OSHA Title 29 CFR, Part 1926.1101(k)(8)(iii) [June 1, 2015 requirements]. Containers must be both air and watertight.
- G. Labels and signs, as required by OSHA Title 29 CFR, Part 1926.1101, will be used.
- H. Vacuum units, of suitable size and capacities for the project, shall have HEPA filter(s) capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter or larger.

PART 3 - EXECUTION

3.1 DECONTAMINATION SYSTEM

- A. The Contractor shall establish a wash station/decontamination system in compliance with OSHA adjacent to the regulated area.
- B. Occupied areas and/or building space not within the regulated work areas shall be separated by means of airtight barriers.

3.2 ASBESTOS REMOVAL

- A. Removal or intentional disturbance of asbestos-containing materials should only be conducted by certified and trained employees. Personal protective equipment (PPE) is always required when removing and/or disturbing asbestos-containing materials. PPE must be work in accordance with applicable OSHA regulations.
- B. It is anticipated that the appropriate removal method could be the use of a dust & slurry shroud attached to a HEPA vacuum. The Contractor may establish a similar method as long as approved by the Owner and Architect. The method utilized for the Work will prevent dust/debris migration and result in immediate waste security.
- C. If holes installed for the Work did impact asbestos joint compound, the holes shall be clean and left in a condition that they will not be further disturbed when wiring is snaked through, etc.

3.3 ASBESTOS DISPOSAL

- A. Asbestos-containing and/or asbestos-contaminated material disposal must be in compliance with requirements of, and authorized by the EPA, CTDEEP, and the State of Connecticut.
- B. Disposal approvals shall be obtained before commencing asbestos removal.
- C. Copies of all fully executed Waste Shipment Records (WSR) will be retained by the Owner as part of the project file. The Contractor shall document the specific amount of waste on each WSR, portion/location of the Site building it was generated from, and the type of waste. Upon receipt of the ACM waste, the landfill operator will sign the WSR, and the quantity of asbestos debris leaving the Site, and arriving at the landfill is documented for the Owner.

- D. All asbestos debris shall be transported in covered, sealed containers which are physically isolated from the driver by an airtight barrier. All vehicles must be properly licensed to meet DOT requirements.
- E. Any vehicles used to store or transport ACM will either be removed from the Site at night, or securely locked and posted to prevent disturbance.
- F. Any incident and/or accident that may result in spilling or exposure of asbestos waste outside the containment, on and off the property, and all related issues shall be the sole responsibility of the Contractor.

END OF SECTION 02 82 13

ATTACHMENT A

Fuss & O'Neill, Inc. (Fuss & O'Neill) Asbestos Operations & Maintenance Program Table 1A List of Known Asbestos Containing Materials

**List of Known Asbestos Containing Materials (ACM)
Present at
Oak Terrace Housing Complex
53 Conrad Street
Naugatuck, Connecticut**

Materials included in Operations and Maintenance (O&M) Program:

The list of known and suspect asbestos – containing materials (ACM) included in Table 1A identifies the known ACM present at the Site that were not impacted during the renovation activities and Table 1B identifies the suspect ACM newly installed in the buildings at the Site.

Report should be referenced for locations and materials not containing asbestos.

Table 1A Known Asbestos Containing Materials

Material Type	Homogeneous Location(s)	Asbestos Content	Estimated Quantity	Comments
Oak Terrace Housing Complex				
Accessible and Inaccessible Mudded Insulation on Pipe Fittings	Throughout Community/Maintenance Building in wall cavities	8% Chrysotile	350 Fittings	Approximately 650 Fittings were removed from Units in Buildings 1-37 Kitchen and bathrooms during 2017 and 2018 renovation
12" x 12" White Floor Tile, 9"x 9" Tan Floor Tile, Black Floor Tiles Mastic; Includes Demolition of Cabinets, Radiators, Etc. As Necessary to Access Inaccessible materials	Throughout Community/Maintenance Building – Laundry Room	4% - 6 % Chrysotile	37,700 SF	Approximately 72,300 SF of Materials were removed from Units in Buildings 1-37 during 2017 and 2018 renovation; with the exception of Units 4F, 10A, 10D, 23A, 23F, and 25F
Yellow/Tan Joint Compound	Throughout Units in Buildings 1–37 with the exception of Units 4F, 10A, 10D, 23A, 23F, and 25F	4% Chrysotile	5,000 SF Quantity is amount of sheetrock	Material damaged in Units 28F and 31D Ceiling (~2 SF on each Unit); Unit 33D & 35D Wall to Kitchen (~3 SF on each Unit); and 34B & 34D wall at bedroom closet (~3 SF on each Unit) Approximately 15,000 SF of Material was removed from Units in Buildings 1-37 Kitchen and Bathrooms during 2017 and 2018 renovation

Material Type	Homogeneous Location(s)	Asbestos Content	Estimated Quantity	Comments
Chimney Flue Cement	Community/Maintenance Building – Furnace Room	2% Chrysotile	3 SF	Material not Included in the 2017 and 2018 Renovation Project
Exterior Grey Window Caulking Compounds	Throughout Community/Maintenance Building and Units in Buildings 1–19 – Exterior Window Systems	15% Chrysotile	325 Window Systems	Material not Included in the 2017 and 2018 Renovation Project
Exterior Tan Window Caulking Compounds	Throughout Units Building 10 – Exterior Window Systems	4% Chrysotile	18 Window Systems	Material not Included in the 2017 and 2018 Renovation Project
Exterior Tan Door Caulking Compounds	Throughout Units in Building 10 – Exterior Door Systems	4% Chrysotile	12 Door Systems	Material not Included in the 2017 and 2018 Renovation Project
Exterior Grey Door Caulking Compounds	Throughout Community/Maintenance Building and Units in Buildings 1–19 – Exterior Door Systems	5% Chrysotile	200 Door Systems	Material not Included in the 2017 and 2018 Renovation Project
Exterior Grey Expansion Joint Caulking Compounds	Throughout Community/Maintenance Building – Exterior	5% Chrysotile	200 LF	Material not Included in the 2017 and 2018 Renovation Project
Exterior Tan Vent Caulking Compounds		5% Chrysotile	3 Vent Systems	Material not Included in the 2017 and 2018 Renovation Project
Damp-proofing Tar/Mastic located behind Brick	Throughout Community/Maintenance Building and Units in Buildings 1–37 – Exterior Behind Brick	Assumed	Unknown	Material not Included in the 2017 and 2018 Renovation Project
Damp-proofing Tar/Mastic on Foundations	Throughout Community/Maintenance Building and Units in Buildings 1–37 – Exterior Behind Brick	Assumed	Unknown	Material not Included in the 2017 and 2018 Renovation Project

LF = Linear Feet, SF = Square Feet