ASBESTOS ABATEMENT
PROJECT MANUAL

Carnow Conibear Project Numbers: A139670108, A139670111

FOR: Rockford Public Schools
501 7th Street
Rockford, Illinois 61104

AT:

Eisenhower Middle School
3525 Spring Creek Road
Rockford, Illinois 61107

Riverdahl School
3520 Kishwaukee Street
Rockford, Illinois 61109

PROJECT: Asbestos Abatement of Flooring Materials and Casework/Lab Tables

ENVIRONMENTAL CONSULTANT:

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March 21, 2018

CARNOW CONIBEAR

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ASBESTOS ABATEMENT FOR INTERIOR AREAS

Eisenhower Middle School
Riverdahl Elementary School

March 21, 2018

SECTION 02131 - ASBESTOS ABATEMENT FOR INTERIOR SCHOOL AREAS

PART 1 - GENERAL

1.1 Introduction: Asbestos abatement in interior building spaces, covered walkways or porticos connecting buildings, and on outdoor mechanical systems which condition indoor air (such as air handling units, air conditioners, cooling towers, etc.) is governed by rules established by the Illinois Department of Public Health (IDPH). This specification section addresses or references the requirements for complying with IDPH, OSHA, and EPA NESHAP asbestos rules. Each and every rule requirement may not be restated in detail since trained, accredited, and licensed contractors and individuals are required for this work and are presumed to be familiar with the relevant laws and rules. Full regulatory compliance is required, and is a part of the contract, whether specifically stated herein or not.

Exterior building spaces are not subject to IDPH rules unless the abatement procedures involve interior spaces of the building. Roofing, window replacement, exterior transite sheeting, asbestos siding, asbestos-containing paint, caulking, glazing, flashings, cements, or other products installed on the building exterior are subject to OSHA and NESHAP rules which, in many cases are less rigorous than IDPH requirements. Abatement of these items is specified in separate, related specification sections.

1.2 Definitions: In addition to the terms listed below, all definitions in the laws and regulations listed in Section 1.5 are incorporated by reference, whether or not restated herein.

A. Abatement Contractor (AC) means the entity responsible for performing the work in this section and has the training and accreditation to competently perform the work. This entity will obtain and maintain licenses required for the indoor work in this section.

B. Asbestos Abatement Supervisor, hereinafter referred to as "supervisor" means a person retained by the AC, who supervises asbestos abatement workers. This person must be trained, accredited, and licensed as required, and must also meet OSHA "competent person" criteria for asbestos abatement.

C. Asbestos Project Manager (APM) is the individual that performs asbestos abatement project oversight, acts on behalf of the Rockford Public Schools or its agents on the project, and performs "Project Manager" duties as defined by IDPH asbestos regulations.

D. Rockford Public Schools means the owner of the property and the authority ordering the work specified herein.

E. HEPA Filter means a High Efficiency Particulate Air filter capable of trapping 99.97% percent of particles greater than 0.3 micrometers in mass median aerodynamic equivalent diameter.

F. IDPH means the Illinois Department of Public Health.

G. Carnow Conibear & Assoc., Ltd. means the entity with overall responsibility for the

environmental aspects of the project, including design, organization, direction, and control as well as investigations, assessments, and supervision of project managers.

H. Plasticize means to apply plastic sheeting over surfaces or objects to protect them from contamination or water damage.

I. PPE (Personal Protection Equipment) means the protective suits, head and foot covers, gloves, respirators and other items used to protect persons from asbestos or other hazards.

J. RCRA means the Resource Conservation and Recovery Act and associated regulations.

K. SDS means Safety Data Sheet, required by OSHA for any chemicals in the workplace that that could be expected to cause an exposure to workers during normal use or in emergency situations.

L. TCLP means the Toxicity Characteristic Leaching Procedure as specified in EPA 530/SW-846, Test Methods for Evaluating Solid Waste: Physical/Chemical Methods 3rd edition, November 1986.

M. Work Area means the area or areas where asbestos abatement is being conducted.

1.3 Scope of Work: Refer to Environmental Scope and Drawings included in Appendix B and C.

1.4 Work Included

A. The work includes all labor, equipment, materials, and supplies necessary to perform the Scope of work in the Documents by the procedures described herein. The contractor, by submitting a bid for the work, represents itself as knowledgeable and expert in the performance of the work, and includes all things usually and customarily necessary to provide a complete and finished job, whether specifically mentioned or not.

B. Removal of friable and non-friable asbestos-containing materials listed in the Documents, including pre-cleaning, moving of furnishings, establishing regulated areas, isolating the work areas, protection of adjacent areas, containment when required, cleanup and decontamination to the specified clearance levels, proper packaging and disposal of wastes, and all other steps necessary to complete the scope of work.

C. Repair or replacement of damaged surfaces, fixtures, or furnishings to restore them to their pre-existing condition to the satisfaction of the Project Manager.

D. When the Documents include lead and asbestos abatement items in the same spaces, they should be performed in the sequence and combinations that produce the most efficient results, minimize concentrated lead waste volume, and produce the least amount of total waste. That sequence will generally be:

1. Cleanup of lead dust, flakes, chips, and residues most likely to fail a TCLP test. If

both lead and asbestos debris are present and mixed together, they may be cleaned up and disposed together.

2. Cleanup and removal of failed or delaminated friable asbestos-containing debris, if any.
3. Removal of friable asbestos materials and cleanup of visible residues.
4. Removal of lead-bearing architectural components.
5. Removal of non-friable asbestos items. If both asbestos and lead are on the same components, for example lead paint and asbestos-containing glazing compound, the components may be removed and disposed with both the lead and asbestos-bearing items intact.
6. Removal of lead-based paint, coatings, or surfacing material.
7. Final cleanup and decontamination of the work space. Final air clearance (asbestos) and wipe samples (lead) may be performed concurrently.
8. When lead and asbestos final decontamination processes are combined, the more stringent cleanup procedures will apply for both.
9. Waste disposal.

    a. Hazardous waste: loose paint flakes, chips, and dust; lead-specific cleaning supplies; contaminated soil; combined final decontamination supplies; disposable suits, gloves, head covers, and foot covers; other items that fail a TCLP or other RCRA test.
    b. Special waste: friable asbestos-containing waste materials and lead-contaminated waste that has passed TCLP or other RCRA tests.
    c. Construction and demolition (C&D) debris: lead-bearing architectural components; concrete and lumber with or without tile or mastic attached; demolition debris, and other general wastes.
    d. All asbestos-containing or lead-bearing wastes, regardless of classification, shall be disposed in a landfill approved by the IEPA to accept asbestos-containing or lead-bearing waste materials.

E. Compliance with all applicable laws, regulations, standards, and these specifications. In the case of a conflict, the contractor will comply with the most stringent.

F. Contractor is required to fully comply with IDPH rules and these specifications unless a variance is granted by IDPH. Any variances obtained by Carnow Conibear will be listed in the Documents.

G. All licenses, accreditations, permits, fees, notifications, reports, or other documents required by law, regulation, this specification, or the Documents.

H. Provide project closeout documentation to the APM within thirty (30) days after final clearance. This documentation shall include, but is not limited to, items listed in paragraph 1-7, Submittals.

1.5 Laws, Regulations and Standards

A. The following laws, regulations, and standards are incorporated by reference:

1. 105 ILCS 105: Illinois Asbestos Abatement Act
2. 77 Ill. Adm. Code 855: Asbestos Abatement for Public and Private Schools and

Commercial and Private Buildings in Illinois
3. 29 CFR 1910: US OSHA General Industry Standards
4. 29 CFR 1926: US OSHA Construction Standards
5. 29 CFR 1926.1101: US OSHA Asbestos Construction Standards
6. ASHARA: US EPA Asbestos School Hazard Abatement Reauthorization Act
7. 40 CFR Part 61: US EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP), 11/90 revision
8. 40 CFR 763 Subpart E: US EPA Asbestos Hazard Emergency Response Act (AHERA) Rules
9. 40 CFR 763 Subpart E: US EPA Asbestos Model Accreditation Plan (MAP): Appendix C -Interim Final Rule

1.6 Assessment, Monitoring, Testing and Analysis

A. Carnow Conibear will perform inspection, testing and design services prior to the start of work, and during the project, and will perform testing, inspection, and monitoring services during the work and upon its completion:

1. Prior to the start of the work

   a. Carnow Conibear shall identify suspect materials and confirm their asbestos content through review of the school's historical documentation, management plan or by testing.
   b. Carnow Conibear will design the project and address any design changes if requested by the Owner.
   c. Carnow Conibear shall collect background air samples (as necessary) before conditions are disturbed. Background samples will be analyzed by PCM.
   d. Review and approve the pre-abatement submittals submitted by the AC.

2. During the work, Carnow Conibear shall:

   a. Enter the work area at least every two hours to inspect the work procedures and work area integrity.
   b. Maintain a daily log to record the day's events, problems, corrective actions.
   c. Collect air samples inside and outside the work area, and in the breathing zone of representative persons.
   d. Carnow Conibear will stop the work if airborne asbestos concentrations outside the work area exceed 0.01 f/cc. The work may restart when the source of fiber release has been identified and corrected. Contractor will be responsible for cleaning and decontaminating the outside area if caused by the asbestos abatement activities.
   e. Observe/document smoke testing of the containment by the contractor.
   f. Review original worker licenses and maintain weekly submittals from the AC.
   g. Notify Carnow Conibear's project designer if design changes are needed before execution.

3. Upon completion of the work, Carnow Conibear shall:

a. Inspect for visible debris. Contractor shall be required to re-clean the area or portions of areas until no visible debris remains and the work area is dry.

b. Perform aggressive clearance testing by Transmission Electron Microscopy (TEM) when the ACM in a work area is 260 linear feet, 160 square feet, or 35 cubic feet of volume or more, as required by AHERA and IDPH Section 855.170. The sample set shall include at least 5 inside samples, 5 outside samples, 2 field blanks and 1 sealed blank. **Note:** Large complicated, or multi-floor contiguous work areas connected by corridors, stairways, or other connections shall be tested using additional inside the work area samples. For clearance of multiple mini containments containing a total removal quantity greater then160 square feet or 260 linear feet, a combined PCM/TEM final clearance procedure may be used. The first part of the procedure shall involve the collection and analysis of one PCM sample from within each mini containment. The second part shall involve the collection and analysis of five (5) TEM samples within the mini containments having the highest PCM analysis results. If there are five or fewer mini containments to be sampled, then only TEM sampling shall be conducted. A minimum of five (5) TEM samples shall be collected. All requirements of 40 CFR 763 Subpart E, Appendix A shall apply.

c. Perform aggressive clearance testing by Phase Contrast Microscopy (PCM) when the ACM in a work area is less than 260 linear feet, 160 square feet, or 35 cubic feet of volume.

d. Collect and analyze samples in accordance with AHERA Appendix A procedures and IDPH rule section 855.470.

e. Prepare and submit the IDPH "Project Manager's Summary Report Form" within 10 days of final clearance.

f. Prepare and submit the Project Manager Report to the IDPH within 60 working days of clearance testing. The final Project Manager is responsible for completion of the project report.

B. The Contractor shall provide OSHA compliance air monitoring to determine exposures to its employees in accordance with OSHA 29 CFR 1926.1101. Frequency of testing will comply with OSHA requirements for the anticipated and actual exposure levels.

1. A written Exposure Assessment may be provided prior to the start of the work to determine the requirements for respiratory protection and frequency of OSHA monitoring for each type of activity. The contractor should note that a Negative Exposure Assessment (NEA) may be possible for many tasks. For interior work, this would allow reduced OSHA monitoring frequency.
2. Analysis may be performed on site.

C. Credentials required for testing and analysis of PCM final clearance air samples:

1. Accreditation by AIHA or AAR; or
2. Participation in the Proficiency Analytical Testing (PAT) program.
3. Certification of individual qualification to read samples on site when on site analysis is performed.

1.7 Submittals by the Contractor

A. To IDPH, IEPA (If Applicable), and Carnow Conibear at least 10 working days before commencement of work:

1. Asbestos Notification on current form, including inspector license number and landfill permit number.
2. Written permission from building owner authorizing contractor to commence abatement.
3. Building owner asbestos abatement notification to building occupants and users.

B. To Carnow Conibear at least five days prior to commencement of Work:

1. Documentation of arrangements of transport and disposal, landfill name and location, handling procedures and PPE at the landfill, prepared and signed by the landfill.
2. Drawings or sketches for layout and construction of isolation barriers and decontamination units.
3. Respirators: NIOSH approvals and manufacturer certification of HEPA filtration for cartridges
4. Manufacturers' certifications that all HEPA vacuums, negative air pressure equipment, and other local exhaust ventilation equipment conform to ANSI Z9.2-79
5. Written notifications to rental companies for any rental equipment used.
6. Results of any performance tests for encapsulants, if applicable.
7. OSHA Exposure Assessment, if available.
8. Laboratory and analyst credentials for contractor OSHA samples.
9. Safety Data Sheets (SDS) for chemicals used on site.
10. Work Plan and Schedule.

C. To Carnow Conibear on the first day of abatement work:

1. Original contractor, supervisor, and worker licenses along with a copy each.
2. Initial Course Accreditation and current refresher accreditation for each supervisor and worker.
2. Physician's Written Opinions for workers and supervisors.
3. Fit test documentation for all employees, agents.

D. To Carnow Conibear weekly (or as necessary) during the abatement work:

1. Job progress reports detailing abatement activities, progress compared to schedule, problems and actions taken, injury reports, and equipment breakdowns.
2. Waste Shipment Records.
3. Work site Entry logs.
4. Manometer readable tape for negative pressure differentials for each negative pressure worker enclosure or a log of digital readout.
5. Filter Change logs for respirators, HEPA vacuums, negative air machines, and other engineering controls.
6. OSHA compliance air monitoring data.
7. Worker license and certification log.

E. Prior to beginning work, the AC shall submit required notifications to applicable regulatory agencies and receive an Owners Authorization and Notice to Occupants from Rockford Public Schools for buildings where asbestos abatement will take place. The AC will provide copies of all regulatory notices to Carnow Conibear for review prior to sending such notices to each regulatory authority. The AC shall not begin a project until such notices are provided to Rockford Public Schools and/or Carnow Conibear.

PART 2 - PRODUCTS

2.1 Tools and Equipment: All tools and equipment shall at least conform to minimum industry standards and IDPH regulations.

A. Equipment:

1. Negative Air Machines shall provide HEPA filtration and conform to ANSI Z9.2 fabrication criteria.
2. Respirators shall be NIOSH approved for use with lead, asbestos, or other contaminants anticipated in the work.
3. Contractor is fully responsible for complying with OSHA rules for other Safety equipment, such as hard hats, safety harnesses, eye protection, gloves, footwear, and any other safety devices used on the site.
4. Pressure differential manometer with readable tape shall be provided by the contractor, including calibration documentation.

B. Tools:

1. Shovels and scoops shall be rubber or plastic, suitable for use in a plasticized containment. Metal shovels are not permitted.
2. Scrapers, brushes, utility knives and other hand tools shall be of good quality and suitable for the intended uses. The contractor shall keep an ample supply on hand for the completion of the work.
3. Power tools such as, but not limited to saws, pneumatic chisels, brushes, sanders, and needle guns shall be equipped with shrouds and HEPA-filtered local exhaust systems to capture released particles.
4. Buffers are not permitted.

2.2 Materials: All materials shall at least conform to minimum industry standards and IDPH regulations.

A. Installed materials which become a part of the work such as, but not limited to, encapsulants shall be of good quality, non-lead-bearing, free of asbestos, and conform to the respective reinstallation specification sections prepared by others.

1. Contractor shall ensure that encapsulants and sealants used as primers, basecoats, or covering existing materials are compatible with the respective existing or reinstallation materials and their manufacturers' warranties.
2. Encapsulants for surfaces to which fireproofing will be applied (beams, columns, floor or roof decks, other structural members) shall be tested and rated as a

component of the fireproofing system and listed in the UL Fire Resistance Directory with the specific fireproofing material to be installed.

B. Abatement materials

1. Fire-retardant Poly sheeting for all applications shall be 6 mil nominal thickness for critical seals, floors, ceilings and drop cloths, and 4 mil for walls.
2. Tape shall be 2" or 3" duct tape or other waterproof tape suitable for joining poly seams and attaching poly sheeting to surfaces.
3. Spray adhesives shall be non-flammable and free of methylene chloride solvents.
4. Disposal bags shall be 6 mil.
5. Disposable suits, hoods, and foot coverings shall be TYVEK or similar.
6. Solvents shall be compatible with any primers, mastics, adhesives, paints, coatings, or other surfacing materials to be installed following their use.

PART 3 - EXECUTION

3.1 Employee Training, Qualification and Medical Screening

A. Supervisors and Workers shall be trained, accredited, and licensed in accordance with IDPH rules.

1. Contractor shall keep copies of licenses and most recent annual refresher training certificate at the jobsite at all times for all contractor personnel.
2. An IDPH- licensed supervisor (competent person) shall be present at the worksite at all times when work under this section is being conducted.
3. Current fit testing documentation.

B. Medical Screening. All contractor personnel shall have a current medical examination in accordance with OSHA requirements. Copies of the Physician's Written Opinions shall be kept on site.

3.2 Permissible Exposure Limits

A. The OSHA permissible exposure limit (PEL) for worker exposure to airborne asbestos is 0.1 f/cc as an 8-hour time-weighted average (TWA).

B. The OSHA short term excursion limit for worker exposure to airborne asbestos is 1.0 f/cc for a 30 minute sample.

C. The permissible level of airborne fibers in areas adjacent to the work area is 0.01 f/cc or background level, whichever is higher, as determined by phase contrast microscopy (PCM).

1. Work shall immediately cease in any work area where the airborne fiber concentrations exceed this level.

2. The source of outside contamination shall be determined, and corrective measures (e.g. wet cleaning, changes in work practices, negative pressure containment) will be implemented to prevent recurrence.
3. The contractor shall be responsible for cleanup of contamination in adjacent areas caused by the asbestos abatement activities at no additional cost to the building owner.

3.3 Exposure Assessment and Monitoring

A. The Contractor shall make an assessment of the airborne exposures. Assessment shall conform to OSHA requirements and may be based upon:

1. Initial monitoring of representative workers who the contractor believes are exposed to the greatest airborne concentrations of asbestos, or
2. Past monitoring (within the past 12 months) or objective data for conditions closely resembling the processes, type of material, control methods, work practices and environmental conditions to be used for this project, or
3. In the absence of an exposure assessment, the contractor shall perform the work in full negative pressure containment with Type C pressure-demand respirator with auxiliary SCBA escape bottle.

B. The contractor shall perform personal monitoring in accordance with the following requirements:

1. Initially, to establish an exposure assessment when past monitoring or objective data are not available for an initial determination.
2. Periodically if the exposures are, or are expected to be, below the PEL.

a. Whenever there has been a change of equipment, process, control, personnel, or a new task has been initiated that may affect employee exposures, the exposure assessment shall be updated, and monitoring shall be reinstituted if exposures are unknown or are expected to exceed the PEL.

3. Daily, if exposures are above the PEL.

3.4 Respiratory Protection

A. Respiratory protection shall be worn by all persons potentially exposed to airborne asbestos fibers from the start of the abatement project until all areas have passed clearance air monitoring, in accordance with all applicable regulations incorporated by reference in 1.5 A.

B. Contractors must have a respiratory protection program in compliance with all applicable regulations incorporated by reference in 1.5 A.

3.5 Hygiene Practices

A. Eating, drinking, smoking, chewing gum or tobacco, and applying of cosmetics are not allowed in the work area.

B. All persons entering the work area are required to wear appropriate PPE, and follow the entry and exit procedures posted in the Personnel Decontamination Enclosure System.

C. Personal Protection Equipment (PPE) shall include:

1. Full body disposable suits, headgear, and footwear.
2. Gloves.
3. Safety glasses
4. Hardhats.
5. Non-disposable footwear and clothing shall remain in the work area and shall be disposed of as contaminated waste when the job is completed.
6. Authorized visitors shall be provided with suitable PPE.

3.6 Prohibited Activities

A. Dry removal or dry sweeping.

B. Use of compressed air for cleaning.

C. Use of high speed power tools not equipped with a HEPA-filtered local exhaust system.

D. The abatement contractor shall not execute abatement activities without asbestos abatement design drawings that have been signed by an IDPH licensed Asbestos Designer are on the job site. Any and all changes to containment layout and placement shall not be executed until revised design drawings that have been approved and signed by an IDPH licensed Asbestos Designer are on the job site.

E. Buffers cannot be used to remove mastic.

3.7 Work Area Isolation and Preparation

A. General Preparation. Contractor shall:

1. Post:

a. Caution signs meeting the specifications of OSHA 29 CFR 1926.1101 (k)(6) at any location and approaches to a location where airborne concentrations of asbestos may exceed ambient background levels.
b. Decontamination and work procedures in equipment rooms and clean rooms.
c. EPA NESHAP asbestos rules (40 CFR Part 61, subparts A & M) in the clean room.
d. OSHA Asbestos Construction Standards (29 CFR 1926.1101) in the clean room.
e. Entry and Exit Log

f. List of telephone numbers in the clean room for:

1) local hospital and/or local emergency squad.
2) school security office (if applicable).
3) owner representative reachable 24 hours per day.
4) contractor's headquarters.
5) architects or consultants directly involved in the project.

2. Secure the work area from entry by unauthorized persons.
3. Separate Work Areas from Occupied Areas

a. Seal off all doorways and corridors which will not be used for passage during work.
b. Install IDPH required separation barriers per section 855.430 (a) in all openings larger than 4 ft by 8 ft, consisting of wood or metal framing, a sheathing material such as plywood or drywall at least 5/8" thick on the work side, and double-layer 6-mil poly, both sides. Edges shall be caulked at the floor, ceiling, walls, and fixtures to form an air-tight seal.
c. If the school is not totally occupied (see Section 855.430), the sheathing material may be omitted.

4. Separate occupied areas from secured areas

a. Install IDPH barriers per section 855.430 (b)

B. Interior Preparation.

1. Shut down and lock out electric power to all work areas. Provide temporary power from an outside source with ground-fault circuit interrupter (GFCI) at the source.
2. Shut down and isolate heating, cooling, and ventilating air systems. Remove HVAC filters, package and dispose as asbestos waste. (Need to discuss filter removal and disposal in light of replacement costs and clarify that this applies when work happens in a mech system and not in classrooms)
3. Pre-clean movable objects with HEPA vacuums or wet cleaning and remove from the work area to a location designated by the EC *or Owner where friable ACBM is involved.*
4. Pre-clean fixed items which must remain in the work area with HEPA vacuums or wet cleaning where friable ACBM is involved.
5. Wrap all fixed objects and equipment which will remain in the work area with a minimum of one layer of six mil poly.
6. Remove/protect carpeting per environmental scope sheets.
7. Pre-clean the work area with HEPA vacuums or wet cleaning.
8. Seal off all windows, corridors, doorways, skylights, ducts, grilles, diffusers, and other penetrations or openings in walls, ceilings and floors with 6-mil poly and tape.
9. Cover floors with two layers of fire-retardant 6-mil poly with seams staggered and taped, and extending 12" up walls. Cover walls with two layers of 4-mil poly, with each wall poly overlapping each floor poly layers by 12".
10. Asbestos materials shall not be disturbed during the preparation phase.
11. Suspended ceilings shall remain in place until preparation phase is complete. Remove/protect ceiling tile per environmental scope sheets.
12. Maintain emergency and fire exits.

13. Install a five chamber Worker Decontamination Enclosure System, consisting of clean room, shower room, and dirty room separated by airlocks at least 3' wide, all with curtained doorways, of sufficient size to serve the size of the crew, and with all features required by IDPH rules.

    a. Where a remote decon unit is used (i.e. non-friable ACBM and TSI glovebag operations), the AC shall:

        1) set up the decon unit within the work area barriers
        2) establish a negative pressure of at least 0.02" water column (wc) between the dirty room and adjacent spaces, including the clean room
        3) provide at least 4 air changes per hour within the decon unit
        4) use a double suiting procedure where the workers proceed to the work area exit, HEPA-vacuum gross debris from their persons using a "buddy system" put on a clean suit (either over their dirty suit or after removing the dirty suit), assure that their footwear are free of ACM contamination, and follow a designated path to the remote decon unit.
        5) Once in the decon unit, follow normal decontamination procedures.

14. Install an Equipment Decontamination Enclosure System, consisting of a washing station and a holding area, with curtained doorways and a lockable door.
15. Maintain a negative pressure of at least 0.02" water column (wc) between each contained area and adjacent spaces 24 hours a day using negative air machines vented to the outside, from the start of abatement work to final clearance. Backup negative air machines shall be available onsite in case of machine failure.
16. Once operational, the system shall be inspected daily with smoke tubes by the contractor. Damages and defects will be repaired immediately upon discovery.

C. Exterior Preparation (for areas that interface with interior work)

1. 6 mil plastic sheeting shall be placed over the ground, foundation, or other surfaces below the abatement area.
2. Unauthorized entry shall be prevented by using appropriate barriers, such as warning tape, fencing, or other suitable barriers.
3. Nearby air intakes, grilles, and other openings into the building interior shall be sealed off with poly and tape.
4. The contractor shall be responsible for cleanup of any adjacent areas that become contaminated as a result of the abatement activities at no additional cost to the building owner.

3.8 Abatement Procedures

A. Removal:

1. Asbestos materials shall be adequately wetted and kept adequately wet during removal.

2. ACM waste shall be bagged or containerized as it is removed.
3. Work areas shall be kept wet until visible material is cleaned up.

B. Encapsulation:

1. Damaged or missing areas of existing materials shall be repaired with non-asbestos substitutes, where appropriate.
2. Loose or hanging ACM shall be removed using appropriate removal procedures.
3. Bridging encapsulants shall be applied in accordance with manufacturer's instructions.
4. Penetrating encapsulants shall be applied to penetrate existing materials to the substrate.
5. Encapsulants shall be applied with airless spray equipment.
6. Encapsulated ACM shall be labeled as asbestos to prevent future unprotected disturbance.

C. Enclosure:

1. Locations where openings for hangers, supports, framing, or other attachments must be made in the ACM must be misted with water and kept damp to reduce airborne fiber release. Tools used to drill, cut, or otherwise disturb the ACM during attachment installation shall be equipped with a HEPA-filtered local exhaust system.
2. Loose or hanging ACM shall be removed using removal procedures.
3. Damaged areas shall be repaired with non-asbestos materials.
4. Utilities or other items requiring access shall be relocated outside of the enclosure area. Once enclosures are installed, they shall not be opened or disturbed.
5. Enclosure materials shall be impact resistant and provide an airtight barrier.
6. Enclosures shall be labeled that they contain asbestos materials to prevent future unprotected disturbance.

3.9 Cleaning and Decontamination: Cleaning and decontamination of abatement areas, excluding glovebag areas, are as follows:

A. All visible accumulations of ACM, debris, tools, and unnecessary equipment shall be removed from the work area.

B. First clean:

1. Wet clean all surfaces and remove excess water.
2. Wait 12 hours before proceeding further to allow dust and fibers to settle.
3. Remove outer layer of poly and dispose as ACM waste.
4. Completion of First Clean shall be determined and documented by the EC.

C. Second clean:

1. Wet clean all surfaces and remove excess water.
2. Wait 12 hours before proceeding further to allow dust and fibers to settle.
3. Remove inner layer of poly and dispose as ACM waste.
4. Critical barriers on windows, doors, penetrations, and other openings shall

remain in place and negative air system shall remain in continuous operation until final clearance tests have passed.

5. Completion of Second Clean shall be determined and documented by the EC.

D. Third clean:

1. Wet clean all surfaces and remove excess water.
2. Wait 12 hours before proceeding further to allow dust and fibers to settle.
3. Remove all tools, cleaning materials, remaining wastes from the work area. Tools and equipment shall be cleaned before removal.
4. Third Clean shall be determined and documented by the EC.

E. Visual inspection: EC and contractor shall jointly inspect the work area for visible residue and excess water and, if observed, repeat the clean/12 hour wait cycle until residues are not detected and work area is dry.

F. Apply lock-down encapsulants where specified in the Documents.

G. EC will inform AC if the work area is ready for final clearance testing.

3.10 Final Clearance

A. Final clearance testing (aggressive methods) shall be performed after 12 hours have lapsed since the final cleaning, and when visual inspection has been completed and no visible water or condensation remains.

B. Work areas with 260 linear feet or 160 square feet or more of ACM shall be tested using aggressive sample collection methods and Transmission Electron Microscopy (TEM) analysis, as required by AHERA and IDPH Section 855.170. The sample set must include at least 5 inside samples, 5 outside samples, 2 field blanks, and 1 sealed blank. NOTE: Large, complicated, or multi-floor contiguous work areas connected by corridors, stairways, or other connections may be tested with a larger "inside" sample set rather than full, multiple TEM tests, so long as the inside sample distribution is reasonably representative of the work area conditions.

C. Work areas with less than 260 linear feet or 160 square feet may be tested using aggressive sample collection methods and analyzed by Phase Contrast Microscopy (PCM).

D. If final clearance test(s) fail, the AC is responsible for repeating the cleaning sequence as necessary until final clearance tests are successful. All expenses associated with the collection and analysis of additional final clearance tests are the responsibility of the AC.

3.11 Special Procedures: Less stringent requirements may apply in a number of cases.

A. Variances from IDPH Regulations. Variances may be requested and approved by the IDPH. These less stringent procedures may only be used when they have been requested by the Project Designer and approved by the IDPH on a case-by-case basis.

1. Variances that have been applied for the project will be listed in the Documents. These variances may or may not be approved by the IDPH.
2. The contractor is encouraged to request additional variances it believes will be beneficial to the project. Such requests shall be submitted to the Project Designer (Carnow Conibear) as a value engineering proposal which references the IDPH regulation section, describes the procedure variations, includes information which supports the efficacy and benefits of the alternative procedures, and offers appropriate cost savings.
3. Otherwise the contractor is required to fully adhere to the requirements of this specification. Failure to obtain a variance shall not constitute a change in the requirements of these documents.

B. Operations and Maintenance Procedures where minor areas of ACM must be disturbed for building repairs, such as drilling holes in walls or floors, cleaning small areas to allow installation of fixtures, smoke detectors, etc. The Documents will state if these procedures are allowed for a particular project or task.

1. Submit an asbestos notification to the IDPH for quantities over 3 linear or square feet.
2. Licensed abatement workers are required, but a licensed abatement contractor is not mandatory for work less than 3 linear or square feet.
3. Shut down heating, cooling, or ventilating air systems to prevent fiber dispersal to other areas.
4. Seal off openings in the work area, including windows, doorways, vents, and other openings with 6 mil poly sheeting and tape.
5. Lay an impermeable drop cloth under the work.
6. Wear appropriate PPE and at least a 1/2 mask APR respirator. Note that OSHA still requires an exposure assessment and respirators that are appropriate for the expected airborne fiber concentrations.
7. Use wet removal methods.
8. Wet clean work area, leaving no visible residue.
9. Package and dispose of asbestos-containing waste as specified in the waste disposal section.
10. Work shall be considered complete following inspection by Asbestos Project Manager and Post O&M Air Sampling <0.01 f/cc.

C. Glovebag Procedure. Glovebags may be used to remove pipe and duct insulation.

1. Normal IDPH Notification requirements apply to quantities of more than 3 linear or square feet.
2. Glovebag removal will require a single layer, 6 mil poly tent containment (mini-containment) with negative pressure air filtration.
3. Monitoring will be performed for each contained area by Carnow Conibear:

    a. 1 personal sample
    b. 1 area sample
    c. 1 area sample at each negative pressure machine exhaust

4. Glovebag construction shall be 6 mil poly with seamless bottom, suitable for the intended use (straight runs, fittings, elbows, vertical pipes, etc.) without modification.
5. At least two licensed workers shall perform glovebag operations.

6. Workers shall wear full body PPE and at least a 1/2 mask APR respirator. Note here, too, that OSHA still requires an exposure assessment and respirators that are appropriate for the expected airborne fiber concentrations.
7. Prior to use, all loose or damaged material adjacent to the operation shall be wrapped in two layers of 6 mil poly or otherwise be rendered intact.
8. Work Practices shall include:

    a. installation to completely cover the circumference of pipe or other structure. Pipe insulation diameter shall not exceed 1/2 the bag working length above the glove sleeves.
    b. smoke test for leaks and seal any leaks prior to use.
    c. glove bag shall be single use and not moved once it is placed.
    d. wet removal methods on the materials to be removed and wet cleaning to remove all visible ACM from the pipe or structure surfaces.
    e. not to be used on surfaces having temperatures greater than 150°F.
    f. spray down the interior surfaces of the bag, substrate, and removed ACM.
    g. first and second cleaning, waiting at least 12 hours following each cleaning.
    h. wet down remaining ACM surfaces or seal with encapsulant.
    i. seal off the lower portion of the bag containing the ACM waste by twisting several times and sealing with tape.
    j. collapse glovebag with a HEPA vacuum.
    k. slip a 6 mil poly waste disposal bag over the glovebag, detach the bag from the pipe, and gooseneck-seal it in the waste disposal bag.
    l. dispose in accordance with this specification.

D. Resilient Floor Covering. Removal of resilient floor covering may only be performed when Gross Removal is not specifically required by the Project Designer or Project Documents. Intact removal of resilient vinyl floor coverings shall be by IDPH Licensed Asbestos Workers supervised by an IDPH licensed Supervisor using heat guns, infrared heat machines or other methods that remove the floor covering in whole pieces. Buffing machines may not be used for removal of mastic. The contractor shall insure that no damage is caused to the area or equipment below the floor. Abatement procedures are as follows:

1. Submit the Floor Tile Project Notice at least 10 working days prior to the beginning of all asbestos resilient floor covering abatement projects.
2. Post signs so that the work area cannot be entered from any direction without observing a sign.
3. Isolate the work area from areas to remain occupied.
4. Install barriers of six mil plastic sheeting sealed with duct tape at all openings in the work area. Openings larger than 4' x 8' may include wood constriction barriers.
5. Install a curtained doorway at the entry to the work area, lock out electrical power to the room and supply required power with ground fault interruption protected circuits.
6. Wear, as a minimum, half-faced dual cartridge NIOSH-approved respirators and double disposable suits.
7. Remove floor covering without causing breakage. Work will stop if breakage occurs and removal will be completed by gross removal at the contractors cost.
8. Dispose of floor covering and debris as asbestos waste.

9. HEPA vacuum the work area thoroughly following completion of the removal.
10. HEPA vacuum surface of protective clothing and dispose of clothing as asbestos waste.
11. Personal air monitoring will be performed by the contractor in accordance with OSHA during ALL intact floor tile/mastic removal operations.

3.12 Waste Disposal and Equipment Load-out

A. Preparing equipment for load-out.

1. Seal openings to prevent escape of internal contamination; or open up equipment, remove filters, and make equipment interiors accessible for cleaning and decontamination.
2. HEPA vacuum and wet wipe all equipment before removal

B. Packaging asbestos wastes:

1. All asbestos-containing wastes, including removed ACM and debris, containment poly, critical barrier materials, suits, respirator filters, vacuum and negative air machine HEPA filters, water filters, and other asbestos-containing items shall be properly packaged for disposal.
2. Use double 6 mil plastic bags with "gooseneck" seal, or other impermeable containers.
3. Wrap large or irregular items in 2 layers of 6 mil poly sheeting, seal with tape, and affix required labeling.
4. Sharp, jagged, or other items (floor tiles, screws, nails, metal debris, wood etc.)that may puncture poly shall be packaged in rigid impermeable containers such as drums or boxes, or wrapped in burlap or other protective covering before sealing in double bags or double layers of 6 mil poly.
5. Label containers:
   a. OSHA warning label.
   b. DOT performance-oriented hazardous material label.
   c. Name and address of generator and abatement location.

C. Removing items from the work area:

1. Packaged asbestos wastes, non-porous debris (such as ceiling grid, doors, hardware, and other items that can be decontaminated), and equipment shall be wet cleaned, moved into the equipment decontamination enclosure system, cleaned a second time, and moved into the holding area.
2. Containers and equipment shall be removed from the holding area by workers in clean PPE and respirators who enter from the uncontaminated side (outside). The equipment decontamination enclosure system shall not be used to enter or exit the work area.
3. Waste shall be placed in a cart and covered. A plastic runner shall be placed on the floor to the waste storage area. The loaded cart shall be carefully taken to and unloaded into the enclosed waste storage container.

D. Storage of packaged asbestos wastes shall be in a completely enclosed dumpster or other suitable container that can be secured. The secured area shall be kept locked at all times to prevent unauthorized access.

E. Shipment of items from the project.

1. Decontaminated tools and equipment may be shipped by normal carrier to warehouse, another jobsite, or other destination.
2. For asbestos wastes:

   a. Line shipping container with 6 mil poly prior to loading packaged asbestos wastes.
   b. Post NESHAP placards during loading.
   c. Persons performing loading operations shall wear PPE and respirators.
   d. Containers and packages shall be tightly packed together to prevent shifting during transport. Large components or heavy items shall be secured to prevent shifting, and shall not be stacked on top of bags.
   e. Execute the NESHAP-required Waste Shipment Record (WSR) to be signed by the generator, transporter, and landfill. All WSRs shall be returned to Carnow Conibear within 30 days of shipment.
   f. ACBM waste shall be transported from the work site directly to the landfill.

F. Disposal of packaged asbestos wastes.

1. Only landfills approved and permitted by Illinois for accepting asbestos wastes may be used for disposal.

3.13 Demobilization

A. Carnow Conibear shall inspect the work area for evidence of visible debris prior to releasing the area for tear-down. Detection of contamination will require additional cleaning and re-testing of the work area.

B. Remove critical barriers and seals.

C. Restore previously-removed items, if specified in the Documents:

1. Re-mount fixtures and other previously dismounted objects.
2. Return moveable objects to their original locations.
3. Install new filters in HVAC systems where filters were previously removed.
4. Re-establish electric systems and other utilities that were shut down or locked out.

D. A punch list walk-through shall be conducted for each cleared work area within two working days of clearance testing by Carnow Conibear, contractor, and school official. All punch list items shall be completed within five working days of walk through.

ATTACHMENT:

Appendix A Additional Design Details
Appendix B Environmental Scope of Work Drawings

END OF SECTION

SPECIFICATION SECTION 02133

GENERAL DUST, FUME AND ODOR CONTROL

Eisenhower Middle School
Riverdahl Elementary School

March 21, 2018

SECTION 02133

GENERAL DUST, FUME AND ODOR CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. Dust and fume emission control is required to maintain a healthful learning environment for students, maintain good public relations with neighbors and employees, prevent damage, minimize cleaning and maintenance costs, and to comply with regulations and laws. All contractors (including subcontractors, lower-tier subcontractors, and suppliers) who perform work or provide services at Rockford Public Schools facilities are required to control dust and fume emissions from their operations and/or activities.

1.2 DEFINITIONS

A. In addition to the terms listed below, all definitions in the laws and regulations specified elsewhere in this Section are incorporated by reference, whether or not restated herein.

B. Board Authorized Representative means the entity responsible for overall project coordination and completion.

C. Rockford Public Schools District 205 (RPS205) means the owner of the property and the authority ordering the work specified herein.

D. HEPA Filter means a High Efficiency Particulate Air filter capable of trapping 99.97% percent of particles greater than 0.3 micrometers in mass median aerodynamic equivalent diameter.

E. IDPH means the Illinois Department of Public Health.

F. Managing Environmental Consultant (MEC) means the entity that assembles the overall documents and bid package, approves the completed work, designs the environmental work, maintains the documents, conducts oversight, and reviews the environmental work, submittals, and reports.

G. SDS means Safety Data Sheets, required by OSHA for any chemical in the workplace that that could be expected to cause an exposure to workers during normal use or in emergency situations.

H. Plasticize means to apply plastic sheeting over surfaces or objects to protect them from contamination or water damage.

I. Personal Protective Equipment (PPE) means the protective suits, head and foot covers, gloves, respirators and other items used to protect persons from potential hazards.

J. Work Area means the area or areas where work is being conducted.

1.3 WORK INCLUDED

A. The work includes the control of all nuisance or noxious dust, vapors, fumes, odors or emissions caused by construction, demolition, renovation, restoration, or related activities including, but not limited to sawing, cutting, grinding, sanding, abrading, sweeping, crushing, scraping, gluing, prying, plowing, heating, finishing, painting, welding, torch cutting or burning, or any other related processes at RPS205 facilities that can create noxious dust, fumes or odors.

B. No visible emissions or unreasonable odors shall be permitted outside the work area.

C. All products to be used at RPS205 facilities that could potentially emit dusts, fumes, vapors or odors, etc. shall be submitted to the RPS205 Environmental Coordinator, MEC and/or Board Authorized Representative with accompanying SDS for approval prior to the use of the product.

1.4 LAWS, REGULATIONS, AND STANDARDS.

A. The Contractor is responsible for compliance with all applicable federal, state, county and municipal laws, regulations and ordinances including, but not limited to, those listed below, which are incorporated by reference.

B. The following laws, regulations and standards are incorporated by reference:

1. 29 CFR 1910: US OSHA General Industry Standards.
2. 29 CFR 1926: US OSHA Construction Standards.
3. 40 CFR Part 61: USEPA National Emissions Standards for Hazardous Air Pollutants (NESHAP).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 BARRIERS OR WORK AREA ISOLATION

A. Contractors shall prevent the spread of dust, fumes and odors from their immediate work areas by:

1. Erecting dust-tight barriers between indoor work areas and adjacent occupied areas. Construction barriers may be used for this purpose if suitably constructed to prevent dust, fume or odor migration.

2. Closing and or covering windows, intake vents, louvers, or other building openings in the immediate vicinity of outdoor work, sufficient to prevent dust, fume or odor migration into the building interior. If such openings cannot be adequately sealed by closing, then poly sheeting, tape, or other impermeable covers shall be used.
3. The contractor shall provide a filtered, local exhaust system for the isolated work area.

B. Contractor is prohibited from creating other hazardous or uncomfortable conditions for building occupants, such as very hot, humid, cold, or other conditions created by ventilation system alterations or blockages, closed or open windows in hot or cold weather conditions.

C. Contractor is responsible for making itself familiar with building conditions and shall take care to isolate its work area in such a manner that building occupant activities and comfort are not unreasonably disrupted.

3.2 DUST, FUME AND ODOR CONTROL

A. Dust, fume or odor release shall be prevented by a suitable means, including but not limited to:

1. Tools equipped with shrouds, HEPA filter equipped vacuum pickups.
2. Alteration, shut down, or isolation of building ventilation systems in the immediate work vicinity.
3. Shrouding around work activities.
4. Shrouding stages, scaffolds, or other work platforms.
5. Local exhaust ventilation systems exhausted to the outside of the building.
6. Wet work methods.

B. It is the Contractor's responsibility to select the means and methods it considers most suitable to achieve dust, fume and odor control.

C. In the event that dust or fumes escape from the work area or create dirty conditions or contamination to nearby building spaces or grounds, the Contractor is responsible for all costs associated with the cleaning, testing and/ or repair deemed necessary by the Board Authorized Representative.

END OF SECTION

APPENDIX A

ADDITIONAL DESIGN DETAILS

ASBESTOS ABATEMENT WORK

ROCKFORD PUBLIC SCHOOLS
EISENHOWER MIDDLE SCHOOL & RIVERDAHL ELEMENTARY SCHOOL
ABATEMENT OF FLOORING MATERIALS AND LAB TABLES/CASEWORK/FUME HOOD

APPENDIX A: ADDITIONAL DESIGN DETAILS

Additional Design Details

1. The contractor is responsible for verifying quantities in the field before bidding. Any questions about the scope or clarifications shall be obtained from the Project Designer prior to bidding. Any interpretations of the design documents shall only be made by the Project Designer.

2. The abatement contractor is responsible for all security to the work area(s) during the environmental abatement activities.

3. Abatement contractor shall execute the NESHAP required Waste Shipment Record (WSR) for ALL waste to be signed by the generator, transporter and landfill. All WSRs shall be returned to the MEC within 30 days of shipment.

4. Contractor shall label bags and/or containers for asbestos waste with the following information:

    1. Generator Name
    2. Contractor Name
    3. Project Location
    4. Month and year of contract work.

    EC shall secure sample of label and retain as part of daily log/final report.

5. The contractor shall follow the design as it pertains to the drawings. Any deviations from the drawings must be requested in writing, no less than ten days prior to commencement of abatement activities, and signed off by Project Designer and sent to IDPH prior to any work activities.

6. Contractor to erect separation/construction barriers in a manner that will secure work areas from access by unauthorized personnel, confine any necessary decontamination units, associated water and electrical hook ups, water filtration, water discharge, negative air exhaust, etc.

7. Contractor NOT responsible for the removal, relocation and replacement of area/room contents or casework necessary to complete this project. All furniture, room contents, casework and personal items shall be removed by district prior to mobilization.

8. This project is scheduled for Rockford Public Schools Summer Break 2018.

ASBESTOS ABATEMENT WORK

ROCKFORD PUBLIC SCHOOLS
EISENHOWER MIDDLE SCHOOL & RIVERDAHL ELEMENTARY SCHOOL
ABATEMENT OF FLOORING MATERIALS AND LAB TABLES/CASEWORK/FUME HOOD

APPENDIX A: ADDITIONAL DESIGN DETAILS

Project and Building Information for IDPH Notifications

Rockford Public Schools – Eisenhower Middle School

IDPH Building ID#	04-101-2050-1006
Building Address	3520 Kishwaukee Street Rockford, Illinois 61109
Building Size	Approx. 100,000 SF
Age of Building	
Number of Floors	2
Owner	Rockford Public Schools - District 205 501 7th Street, Rockford, Illinois 61104 Contact: Mr. Guy Carynski Environmental Health and Safety Coordinator Phone: 1-815-378-3771
Project Designer	Rod Harvey, PE, CIH, CSP 100-1548
Project Manager	To Be Determined Call CCA at time of Notification
Air Sampling Professional	To Be Determined Call CCA at time of Notification
Building Inspector ID#	Mr. Evan Christian IDPH# 100-19466 Mr. Brian Barry IDPH # 100-11167
Name of Analytical Lab	CEI Labs

Rockford Public Schools – Riverdahl Elementary School

IDPH Building ID#	04-101-2050-2051
Building Address	3520 Kishwaukee Street Rockford, Illinois 61109
Building Size	Approx.60,000 SF
Age of Building	Approx. 60 years
Number of Floors	1
Owner	Rockford Public Schools - District 205 501 7th Street, Rockford, Illinois 61104 Contact: Mr. Guy Carynski Environmental Health and Safety Coordinator Phone: 1-815-378-3771
Project Designer	Rod Harvey, PE, CIH, CSP 100-1548
Project Manager	To Be Determined Call CCA at time of Notification
Air Sampling Professional	To Be Determined Call CCA at time of Notification
Building Inspector ID#	Mr. Evan Christian IDPH# 100-19466
Name of Analytical Lab	CEI Labs

APPENDIX B

ENVIRONMENTAL SCOPE OF WORK FORMS

Eisenhower Middle School
Riverdahl Elementary School

March 21, 2018

ENVIRONMENTAL SCOPE
ROCKFORD PUBLIC SCHOOLS

Environmental Consultant: Carnow, Conibear & Assoc., Ltd. Date: March 21, 2018

Project # A139670108

School Building: Eisenhower Middle School; 3525 Spring Creek Rd., Rockford, Illinois 61107

Room ID/Name: Main Office Areas

Substrate	Component	Walls				Floor	Ceiling	Response Action	Comments
		N	E	S	W				
Any	Floor Tile and Mastic					X		**ASBESTOS ABATEMENT** Removal and disposal per Specification 02132.	Work in this location scheduled for RPS205 Summer Break 2018. Gross removal and disposal of carpet, floor tile and mastic. Includes all layers.

Designer: Rod Harvey, PE, CIH, CSP
IDPH License #100-1548

CARNOW CONIBEAR

ENVIRONMENTAL SCOPE
ROCKFORD PUBLIC SCHOOLS

Environmental Consultant: Carnow, Conibear & Assoc., Ltd. Date: March 21, 2018

Project # A139670108

School Building: Eisenhower Middle School; 3525 Spring Creek Rd., Rockford, Illinois 61107

Room ID/Name: Room 240

Substrate	Component	Walls				Floor	Ceiling	Response Action	Comments
		N	E	S	W				
Any	Floor Tile and Mastic					X		**ASBESTOS ABATEMENT** Removal and disposal per Specification 02132.	Gross removal and disposal of floor tile and mastic. Includes all layers.
Any	Laboratory Tables, Casework, Fume Hood					X		**ASBESTOS ABATEMENT** Removal and disposal per Specification 02132.	Gross removal and disposal of asbestos containing table tops and fume hoods. Casework, student lab tables, demonstration table, etc. all to be demolished by abatement contractor and discarded. Demolition of bookshelf in storage room included. All other casework in storage room to remain. Abatement Contractor is responsible for the disconnection of plumbing and electrical utilities associated with tables, casework, etc.

Designer: Rod Harvey, PE, CIH, CSP
IDPH License #100-1548

CARNOW CONIBEAR

ENVIRONMENTAL SCOPE
ROCKFORD PUBLIC SCHOOLS

Environmental Consultant: Carnow, Conibear & Assoc., Ltd. Date: March 21, 2018

Project # A139670108

School Building: Eisenhower Middle School; 3525 Spring Creek Rd., Rockford, Illinois 61107

Room ID/Name: Room 228

Substrate	Component	Walls				Floor	Ceiling	Response Action	Comments
		N	E	S	W				
Any	Floor Tile and Mastic					X		**ASBESTOS ABATEMENT** Removal and disposal per Specification 02132.	Gross removal and disposal of floor tile and mastic. Includes all layers.

Designer: Rod Harvey, PE, CIH, CSP
IDPH License #100-1548

CARNOW CONIBEAR

ENVIRONMENTAL SCOPE
ROCKFORD PUBLIC SCHOOLS

Environmental Consultant: Carnow, Conibear & Assoc., Ltd. Date: March 21, 2018

Project # A139670108

School Building: Eisenhower Middle School; 3525 Spring Creek Rd., Rockford, Illinois 61107

Room ID/Name: 1st and 2nd Floor Corridors

Substrate	Component	Walls				Floor	Ceiling	Response Action	Comments
		N	E	S	W				
Any	Floor Tile and Mastic					X		**ASBESTOS ABATEMENT** Removal and disposal per Specification 02132.	Non-friable removal of floor tile and mastic. If non-friable remove methods are utilized in applicable areas, (specification section 3.11 D) AC shall be responsible for the isolation of the work area(s) with critical seals, signage and the security of the work areas to eliminate access by unauthorized personnel. HEPA filtered negative air machines shall be set up within the work areas and run continuously through the completion of all non-friable work.

Designer: Rod Harvey, PE, CIH, CSP
IDPH License #100-1548

CARNOW CONIBEAR

ENVIRONMENTAL SCOPE
ROCKFORD PUBLIC SCHOOLS

Environmental Consultant: Carnow, Conibear & Assoc., Ltd. Date: March 21, 2018

Project # A139670111

School Building: Riverdahl School; 3520 Kishwaukee Street, Rockford, Illinois 61109

Room ID/Name: Interior – Corridor Flooring

Substrate	Component	Walls				Floor	Ceiling	Response Action	Comments
		N	E	S	W				
Any	Floor Tile and Mastic					X		**ASBESTOS ABATEMENT** Removal and disposal per Specification 02132.	Work in this location scheduled for RPS205 Summer Break 2018. Gross removal and disposal of carpet, floor tile and mastic. Includes all layers.

Designer: Rod Harvey, PE, CIH, CSP
IDPH License #100-1548

CARNOW CONIBEAR

ATTACHMENT C

GENERAL NOTES AND ENVIRONMENTAL DRAWINGS

Eisenhower Middle School
Riverdahl Elementary School

March 21, 2018

Eisenhower Middle School & Riverdahl Elementary School

3520 Kishwaukee Street,
Rockford, Illinois 61109

ASBESTOS ABATEMENT SCOPE OF WORK:

1. Gross removal and disposal of asbestos-containing carpet, floor tile, floor tile mastic, and associated leveling compound within a full containment work area under proper negative air pressure. Demolition of casework, fume hoods, and science tables in room 240 at Eisenhower.

GENERAL CONSTRUCTION / DEMOLITION NOTES:

1. Access to work areas and project phasing to be determined by building owner and coordinated with Carnow Conibear.

2. Locations shown are approximate only.

3. The Abatement Contractor shall protect existing, installed casework, electrical fixtures, etc. from damage.

4. Worker decontamination enclosure system shall be constructed in strict accordance with IDPH section 855.410. Clean room shall be sized to accommodate the needs of the work crew. Donning and Doffing of PPE outside of clean room is strictly prohibited.

5. Building Information:

Eisenhower Middle School

IDPH Building ID#	04-101-2050-1006
Building Address:	3520 Kishwaukee Street Rockford, IL 61109
Building Size:	Approx. 100,000 SF
Age of Building:	N/A
Number of Floors:	2 Levels

Riverdahl Elementary School

IDPH Building ID#	04-101-2050-2051
Building Address:	3520 Kishwaukee Street Rockford, IL 61109
Building Size:	Approx. 60,000 SF
Age of Building:	Approx. 60 years
Number of Floors:	2 Level

6. The School District to remove existing light fixtures or other ceiling mounted electrical equipment where required prior to asbestos abatement.

7. The Abatement Contractor to temporarily suspend or support any ceiling mounted items, or items above ceiling as necessary during the work.

8. The School District to hire a separate Contractor to remove and replace ramps and lockers within the work areas.

9. The School District to hire an electrician for the installation of temporary power panels required for abatement.

10. All work per specification section 02131 and applicable IDPH, IEPA, and OSHA rules and regulations.

11. Clean substrate following the removal of asbestos containing floor tile mastics. Contractor shall utilize Envirowash Formula 805 manufactured by Sentinel Products, Inc. or similar. Abatement Supervisor and Asbestos Project Manager shall document cleaning activities and products utilized in the required project logs.

ADDITIONAL DESIGN DETAILS:

1. The Abatement Contractor is responsible for verifying quantities in the field before bidding. Any questions about the scope or clarifications shall be obtained from the Project Designer prior to bidding. Any interpretations of the design documents shall only be made by the Project Designer.

2. The Abatement Contractor is responsible for all security to the work area(s) during the environmental abatement activities.

3. Rockford Public School District #205 will hire a General Contractor to provide any necessary lock-out of electrical power, any connections/disconnections for any temporary power, and any mechanical shutdowns needed by Abatement Contractor.

4. Abatement Contractor shall execute the NESHAP required Waste Shipment Record (WSR) for ALL ACM waste to be signed by the Generator, Transporter and Landfill. All WSRs shall be returned to the MEC within 30 days of shipment.

5. Abatement Contractor shall label bags and/or containers for asbestos waste with the following information:

   Generator Name
   Contractor Name
   Project Location
   Month and year of contract work.

6. The environmental scope of work drawings detail locations of decontamination units, separation barriers, negative air exhaust, etc. The Abatement Contractor shall follow the design as it pertains to the drawings. Any deviations from the drawings must be requested in writing, no less than ten days prior to commencement of abatement activities, and signed off by Project Designer prior to initiating any changes to the bid documents/drawings.

7. Abatement Contractor to erect separation barriers in a manner that will confine decontamination units, associated water and electrical hook ups, water filtration, water discharge, negative air exhaust, etc. If the water system connections cannot be isolated, then contractor shall disassemble system at the end of each work shift and place all equipment behind required barriers.

8. The worker and the waste decontamination units as shown on the drawings are typical and reflect the minimum required size. The Abatement Contractor is responsible for sizing these units as appropriate based on the number of workers and anticipated waste volume per phase.

9. Where abatement of flooring materials is specified, the Abatement Contractor is responsible for the removal of all layers of flooring, associated mastics and leveling compounds down to the lowest substrate.

10. Abatement Contractor responsible for the protection of exterior surfaces, i.e., landscaping, pavement, sidewalks from damage.

DRAWING HISTORY

NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	03/21/2018	J. Kalingasan	E. Christian	Issue for Bidding
2				
0				

CLIENT:
Rockford Public School District #205
501 7th Street
Rockford, IL 61104

PROJECT NAME:
Asbestos Abatement
Eisenhower Middle School
and
Riverdahl Elementary School

PROJECT DESIGNER: Rod Harvey
IDPH #: 100-01548

SHEET TITLE:
SCOPE OF WORK

DESIGNER SIGNATURE:

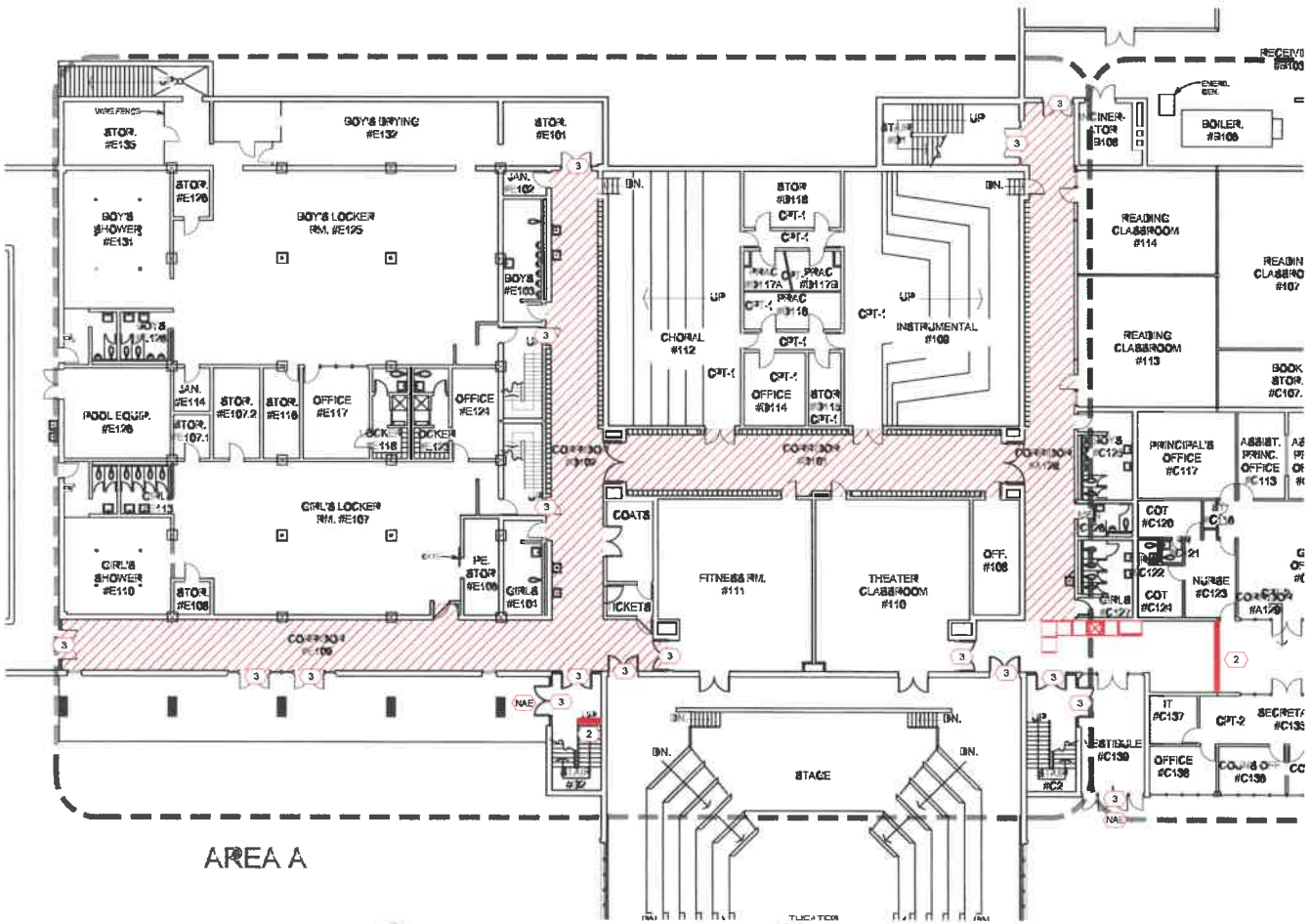
Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com

CARNOW CONIBEAR

CCA PROJECT NO.

DATE: March 21, 2018

SHEET NO.
ASB-0G



1 ASBESTOS ABATEMENT FIRST FLOOR PARTIAL PLAN

NOT TO SCALE

ASBESTOS ABATEMENT SCOPE OF WORK:

1. Gross removal and disposal of floor tile and floor tile mastic within a full containment work area under proper negative air pressure.
2. All work per Specification Section 02131 and all applicable IDPH, IEPA and OSHA regulations.

SCHEDULE:

1. Abatement Work to be started by May 30, 2018 to be completed by June 6, 2018

GENERAL NOTES:

1. Access to work areas and project phasing to be determined by building owner and general contractor.
2. Locations shown are approximate only. General contractor to determine and mark exact locations.
3. Worker decontamination enclosure system shall be constructed in strict accordance with IDPH section 855.410. Clean room shall be sized to accommodate the needs of the work crew. Donning and Doffing of PPE outside of clean room is strictly prohibited.

ASBESTOS ABATEMENT KEYNOTES

	Worker decontamination unit.
	Waste decontamination unit.
NAE	Negative Air Exhaust
1	Separation barrier per IDPH 855.430(a)
2	Separation barrier per IDPH 855.430(b) (with lockable door)
3	Contractor to secure door and control access
	Asbestos Abatement Gross Removal Area - Floor Tile and Mastic

KEY PLAN - FIRST FLOOR:

DRAWING HISTORY				
NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	03/21/2018	A. Rodriguez	E. Christian	
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CLIENT:
Rockford Public School District 205
1907 Kishwaukee Street
Rockford, Illinois 61104

PROJECT NAME:
Asbestos Abatement
Eisenhower Middle School
3525 Spring Creek Road
Rockford, Illinois 61107

PROJECT DESIGNER: Rod Harvey
IDPH #: 100-01548

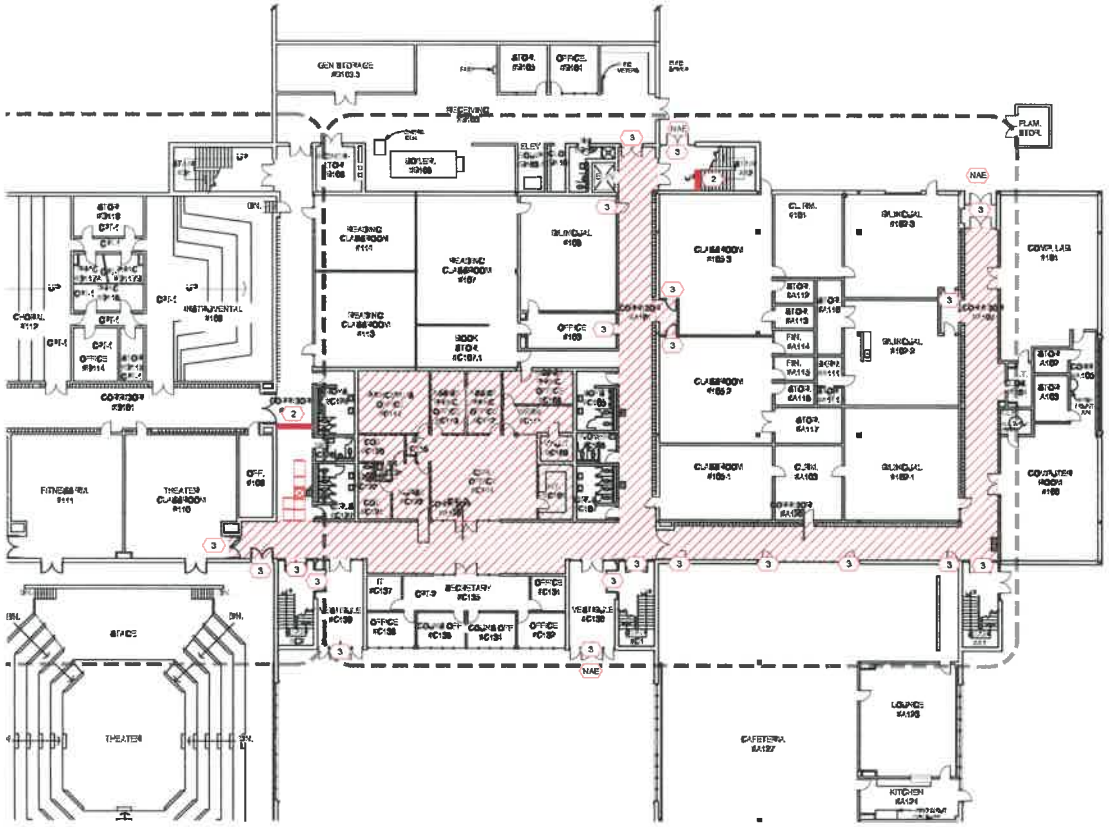
SHEET TITLE:
ASBESTOS ABATEMENT
1ST FLOOR - PHASE II

DESIGNER SIGNATURE

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
600 W. Van Buren St., Suite 500, Chicago, IL 60607
t: 312.782.4486 f: 312.782.5145
www.ccaltd.com

CARNOW CONIBEAR

CCA PROJECT NO. A139670106
DATE: March 21, 2018
SHEET NO. ASB-1



2 ASBESTOS ABATEMENT
FIRST FLOOR PARTIAL PLAN
NOT TO SCALE

ASBESTOS ABATEMENT SCOPE OF WORK:

1. Gross removal and disposal of floor tile and floor tile mastic within a full containment work area under proper negative air pressure.
2. All work per Specification Section 02131 and all applicable IDPH, IEPA and OSHA regulations.

SCHEDULE:

1. Abatement Work to be started by June 7, 2018 to June 18, 2018

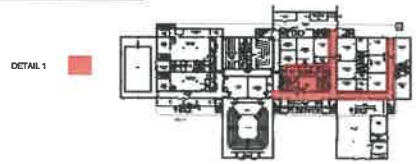
GENERAL NOTES:

1. Access to work areas and project phasing to be determined by building owner and general contractor.
2. Locations shown are approximate only.
3. Worker decontamination enclosure system shall be constructed in strict accordance with IDPH section 855.410. Clean room shall be sized to accommodate the needs of the work crew. Donning and Doffing of PPE outside of clean room is strictly prohibited.

ASBESTOS ABATEMENT KEYNOTES

	Worker decontamination unit.
	Waste decontamination unit.
NAE	Negative Air Exhaust
1	Separation barrier per IDPH 855.430(a)
2	Separation barrier per IDPH 855.430(b) (with lockable door)
3	Contractor to secure door and control access
	Asbestos Abatement Gross Removal Area

KEY PLAN - FIRST FLOOR:



DRAWING HISTORY				
NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	03/21/2018	A. Rodriguez	E. Christian	
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CLIENT:
Rockford Public School District 205
1907 Kishwaukee Street
Rockford, Illinois 61104

PROJECT NAME:
Asbestos Abatement
Eisenhower Middle School
3525 Spring Creek Road
Rockford, Illinois 61107

PROJECT DESIGNER: Rod Harvey
IDPH #: 100-01548

SHEET TITLE:
ASBESTOS ABATEMENT
1ST FLOOR - PHASE I

DESIGNER SIGNATURE

Carnow, Conibear & Assoc., Ltd.
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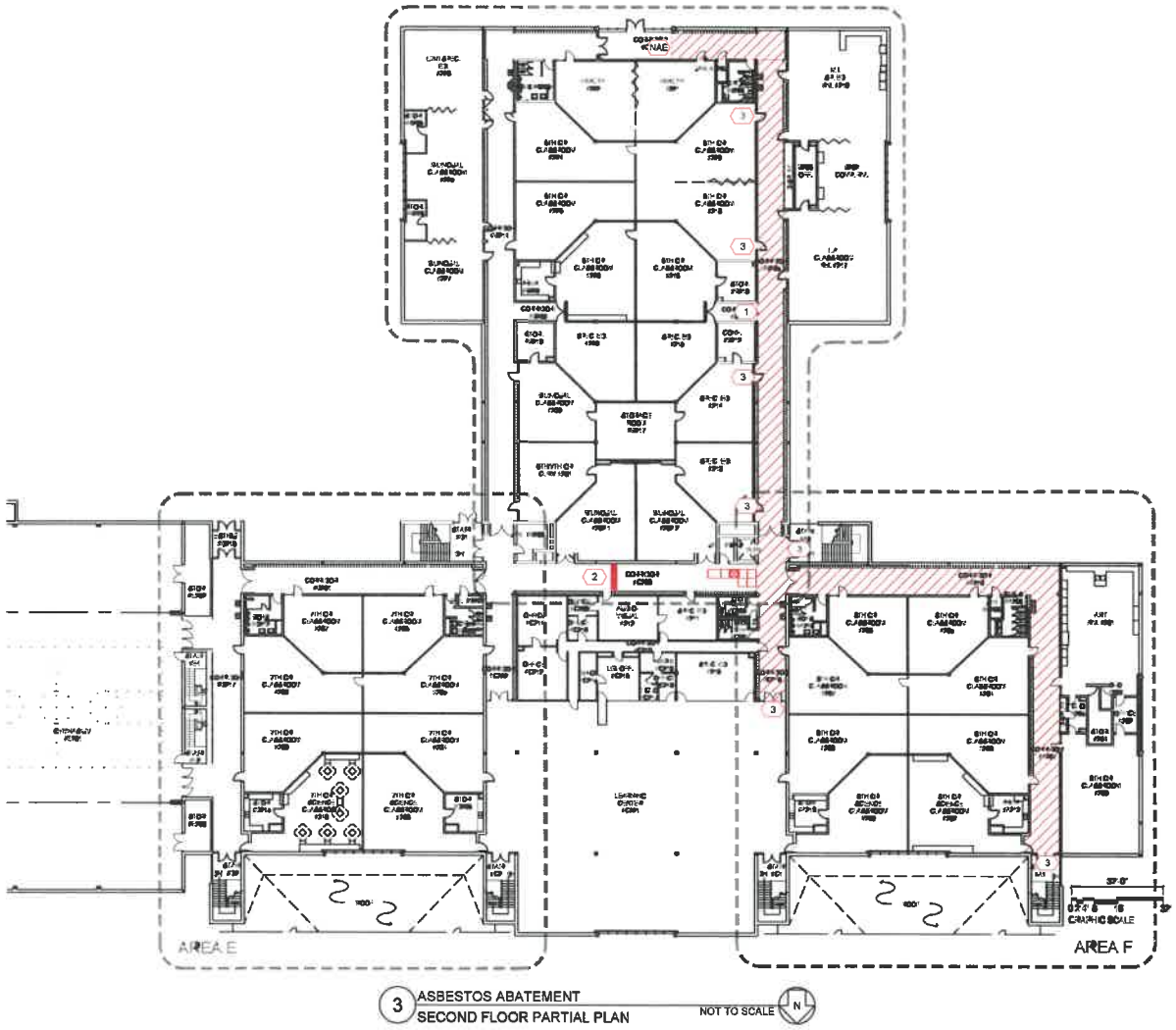
CARNOW CONIBEAR

CCA PROJECT NO.: A139670106
DATE: March 21, 2018
SHEET NO.: ASB-2



3 ASBESTOS ABATEMENT
SECOND FLOOR PARTIAL PLAN

NOT TO SCALE

ASBESTOS ABATEMENT SCOPE OF WORK:

1. Gross removal and disposal of floor tile and floor tile mastic within a full containment work area under proper negative air pressure.
2. All work per Specification Section 02131 and all applicable IDPH, IEPA and OSHA regulations.

SCHEDULE:

1. Abatement Work to be started by June 19, 2018 to July 2, 2018

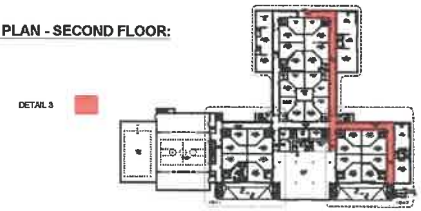
GENERAL NOTES:

1. Access to work areas and project phasing to be determined by building owner and general contractor.
2. Locations shown are approximate only. General contractor to determine and mark exact locations.
3. Worker decontamination enclosure system shall be constructed in strict accordance with IDPH section 855.410. Clean room shall be sized to accommodate the needs of the work crew. Donning and Doffing of PPE outside of clean room is strictly prohibited.

ASBESTOS ABATEMENT KEYNOTES

	Worker decontamination unit.
	Waste decontamination unit.
NAE	Negative Air Exhaust
1	Separation barrier per IDPH 855.430(a)
2	Separation barrier per IDPH 855.430(b) (with lockable door)
3	Contractor to secure door and control access
	Asbestos Abatement Gross Removal Area - Floor Tile and Mastic

KEY PLAN - SECOND FLOOR:



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NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	03/21/2018	A. Rodriguez	E. Christian	
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CLIENT:
Rockford Public School District 205
1907 Kishwaukee Street
Rockford, Illinois 61104

PROJECT NAME:
Asbestos Abatement
Eisenhower Middle School
3525 Spring Creek Road
Rockford, Illinois 61107

PROJECT DESIGNER: Rod Harvey
IDPH #: 100-01548

SHEET TITLE:
ASBESTOS ABATEMENT
2ND FLOOR - PHASE III

DESIGNER SIGNATURE

Carnow, Conibear & Assoc., Ltd.
Environmental Consulting Services
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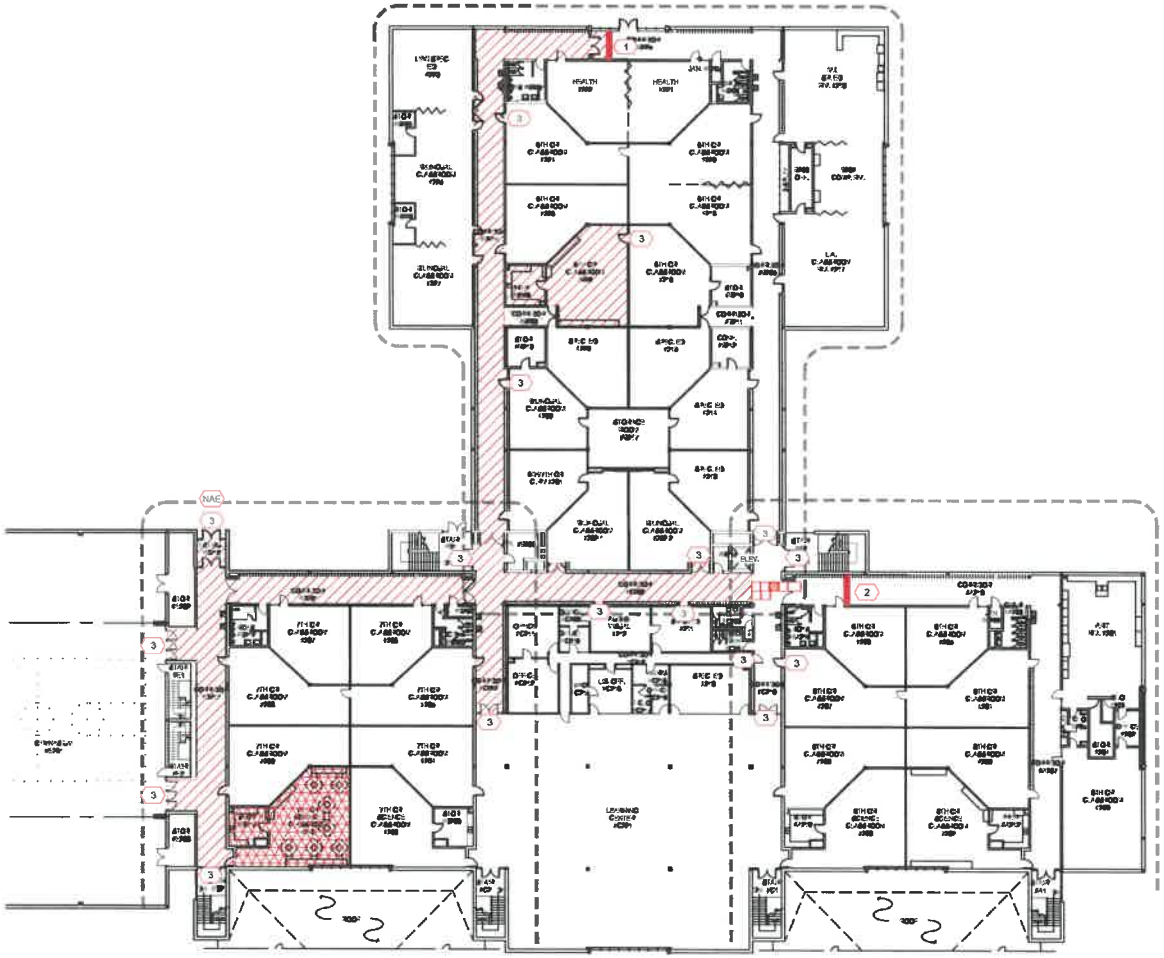
www.ccalld.com

CARNOW CONIBEAR

CCA PROJECT NO.
A139670108

DATE
March 21, 2018

SHEET NO.
ASB-3



4 ASBESTOS ABATEMENT
SECOND FLOOR PARTIAL PLAN

NOT TO SCALE

N

ASBESTOS ABATEMENT SCOPE OF WORK:

1. Gross removal and disposal of floor tile and floor tile mastic within a full containment work area under proper negative air pressure.
2. All work per Specification Section 02131 and all applicable IDPH, IEPA and OSHA regulations.
3. Demolition of lab tables, casework, fume hoods. Abatement Contractor responsible for disconnecting any plumbing or electrical utilities in room 240; bookshelf in storage room to be removed. All other casework in room 240 storage room to remain.

SCHEDULE:

1. Abatement Work to be started by July 3, 2018 and be completed by July 18, 2018

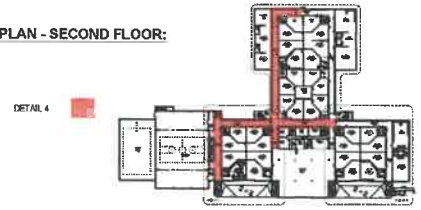
GENERAL NOTES:

1. Access to work areas and project phasing to be determined by building owner and general contractor.
2. Locations shown are approximate only. General contractor to determine and mark exact locations.
3. Worker decontamination enclosure system shall be constructed in strict accordance with IDPH section 855.410. Clean room shall be sized to accommodate the needs of the work crew. Donning and Doffing of PPE outside of clean room is strictly prohibited.

ASBESTOS ABATEMENT KEYNOTES

	Worker decontamination unit.
	Waste decontamination unit.
NAE	Negative Air Exhaust
1	Separation barrier per IDPH 855.430(a)
2	Separation barrier per IDPH 855.430(b) (with lockable door)
3	Contractor to secure door and control access
	Asbestos Abatement Gross Removal Area - Floor Tile and Mastic
	Asbestos Abatement Containment Area. No removal in this area
	Asbestos Abatement Gross Removal Area - Floor Tile, Mastic, Lab Table, Casework, and Fume Hood. Bookshelf in storage room to be removed. All other casework in storage room to be remain

KEY PLAN - SECOND FLOOR:



DRAWING HISTORY				
NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	03/21/2018	A. Rodriguez	E. Christian	
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CLIENT:
Rockford Public School District 205
1907 Kishwaukee Street
Rockford, Illinois 61104

PROJECT NAME:
Asbestos Abatement
Eisenhower Middle School
3525 Spring Creek Road
Rockford, Illinois 61107

PROJECT DESIGNER: Rod Harvey
IDPH #: 100-01548

SHEET TITLE:
ASBESTOS ABATEMENT
2ND FLOOR - PHASE IV

DESIGNER SIGNATURE:

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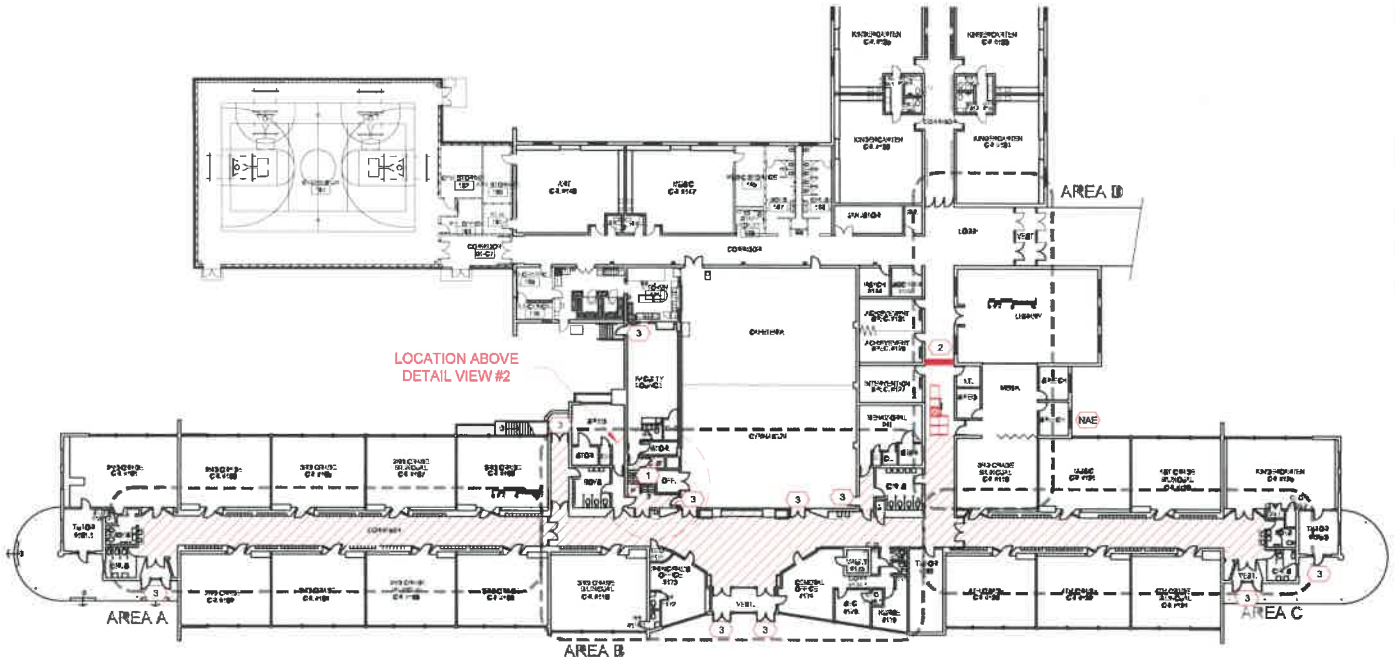
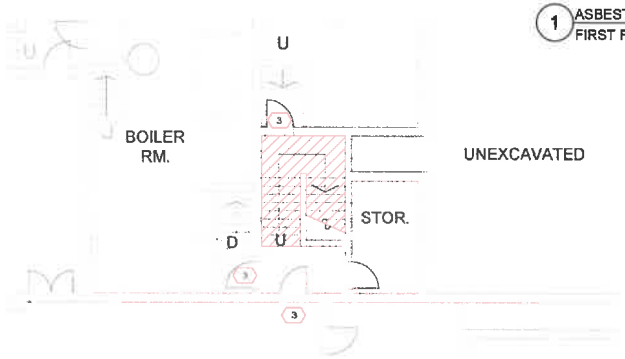
CARNOW CONIBEAR

CCA PROJECT NO.: A139670106
DATE: March 21, 2018
SHEET NO.: ASB-4



1 ASBESTOS ABATEMENT
FIRST FLOOR PARTIAL PLAN
NOT TO SCALE



2 ASBESTOS ABATEMENT
BASEMENT PARTIAL PLAN
NOT TO SCALE

ASBESTOS ABATEMENT SCOPE OF WORK:

1. Gross removal and disposal of asbestos-containing floor tile and associated mastics, carpeting, and leveling compound within a full containment work under proper negative air pressure.
2. All work per Specification Section 02131 and IDPH, IEPA and OSHA regulations.

SCHEDULE:

1. Abatement Work to be conducted after completion of work at Eisenhower

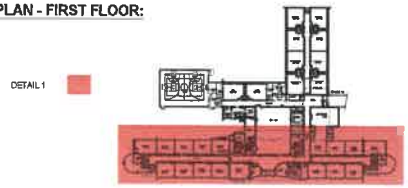
GENERAL NOTES:

2. Access to work areas and project phasing to be determined by building owner and general contractor.
3. Locations shown are approximate only. General contractor to determine and mark exact locations.
4. Worker decontamination enclosure system shall be constructed in strict accordance with IDPH section 855.410. Clean room shall be sized to accommodate the needs of the work crew. Donning and Doffing of PPE outside of clean room is strictly prohibited.

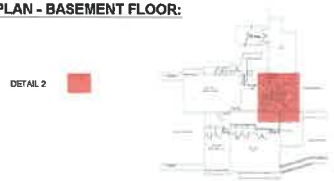
ASBESTOS ABATEMENT KEYNOTES

	Worker decontamination unit.
	Waste decontamination unit.
NAE	Negative Air Exhaust
1	Separation barrier per IDPH 855.430(a)
2	Separation barrier per IDPH 855.430(b) (with lockable door)
3	Contractor to secure door and control access
	Asbestos Abatement Gross Removal Area

KEY PLAN - FIRST FLOOR:



KEY PLAN - BASEMENT FLOOR:



DRAWING HISTORY

NO.	DATE	DRAWN BY:	CHECKED BY:	REMARKS
1	03/21/2018	A. Rodriguez	E. Christian	
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CLIENT:
Rockford Public Schools
501 7th Street
Rockford, Illinois 61104

PROJECT NAME:
Asbestos Abatement
Riverdahl Elementary School
3520 Kishwaukee Street
Rockford, Illinois 61109

PROJECT DESIGNER: Rod Harvey
IDPH #: 100-01548

SHEET TITLE:
Asbestos Abatement
First Floor

DESIGNER SIGNATURE

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Environmental Consulting Services
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CARNOW CONIBEAR

CCA PROJECT NO.
A139670111

DATE:
March 21, 2018

SHEET NO.
ASB-5