

## **PART 1 GENERAL**

### **1.1 General and Related Work**

- .1 Read this Section in conjunction with all drawings and all other Sections so as to comply with the requirements of Division 1 and the General Conditions of the Contract.
- .2 Related work specified elsewhere:  
  
Section 02 82 00.01 Asbestos Abatement – Type 1 Procedures
- .3 Site Conditions identifies all known hazardous building materials within the Project Area. The information provided is for general reference only. Each Contractor must confirm existing conditions on site prior to tender close:
  - .1 The specification fulfils the requirements of Section 30 of the Ontario Occupational Health and Safety Act.
  - .2 The specification fulfils the requirements of the Section 10 of Ontario Regulation 278/05.
- .4 The Outline of Work identifies the location and quantities of hazardous building materials to be removed as part of this project:
  - .1 It is the intent that work prescribed this Section will result in the removal of all hazardous materials as outlined and the decontamination of all surfaces or materials which may have been or become contaminated by hazardous materials either during or prior to work of this Contract.

### **1.2 Site Conditions**

- .1 Refer to the report entitled “Revised Hazardous Building Materials Assessment (Preconstruction), Murray Centennial Public School, 654 County Road 40, Trenton, Ontario”, dated May 8, 2024, prepared by Pinchin Ltd., file number 335495.031.
- .2 Refer to Drawing HM-01 for the locations of identified hazardous materials.
- .3 Asbestos:
  - .1 The following materials have been confirmed to contain asbestos:
    - .1 Caulking, containing chrysotile asbestos, in the following locations:
      - .1 Exterior Fascia of the 1972 phase of construction (Location 81)
    - .2 Transite, asbestos cement pipe, in the following locations:
      - .1 Classroom 114-2(Location 50)
      - .2 Classroom 114-3(Location 51)
      - .3 Kindergarten 121(Location 52)
    - .3 Parging cement, containing chrysotile asbestos, is present on pipe fittings in the following locations:
      - .1 Storage (Location 19)
      - .2 May be present behind solid finishes

- .4 Vinyl floor containing chrysotile asbestos in the following locations:
  - .1 Electrical Room (Location 8)
  - .2 Multi-Purpose room (Location 12)
  - .3 Storage (Location 19)
- .5 Drywall with drywall joint compound containing chrysotile asbestos is present as wall finish in the following locations:
  - .1 Multi-Purpose room (Location 12)
- .1 Light green paint containing chrysotile asbestos is present as wall finish on concrete block walls in the following locations:
  - .1 Storage (Location 19)
- .2 The following materials are presumed to contain asbestos:
  - .1 Mastic under tiles (Location 77)
- .3 Thinset under ceramic tiles in the following locations:
  - .1 Corridor H4 (Location 34)
  - .2 Kindergarten 115(Location 39)
  - .3 Corridor H5(Location 48)
  - .4 Washroom 120A(Location 73)
  - .5 Washroom 121A(Location 74)
  - .6 2014 Phase construction (Location 77)
- .4 Terrazzo flooring in the following locations:
  - .1 Corridor H4(Location 34)
  - .2 2014 Phase construction (Location 77)
- .5 Asbestos cement boards (Transite) in the following locations:
  - .1 Exterior wall (Location 81)
  - .2 2014 addition (Location 89)
- .6 Mastics associated with chalkboards and tackboards in the following locations:
  - .1 Classroom 114-1(Location 40)
  - .2 Classroom 114-2(Location 50)
  - .3 Classroom 114-3(Location 51)
  - .4 Kindergarten 121(Location 52)
  - .5 Kindergarten 120(Location 53)
- .7 The following materials have been confirmed to not contain asbestos, based on sampling or material composition:
  - .1 Acoustic ceiling tiles
  - .2 Caulking, where not otherwise specified
  - .3 Firestopping
  - .4 Duct mastics
  - .5 Exterior texture coat
  - .6 Paints where not otherwise specified
  - .7 Sink mastics

- .4 Lead:
  - .1 The following paint finishes have been confirmed to contain significant concentrations of lead:
    - .1 Red on steel beams (0.32%)
    - .2 White paint on concrete block walls (0.019%)
    - .3 White paint on masonry (0.13%)
    - .4 Light green paint on concrete block walls (1.6%)
  - .2 The following paint finishes have been confirmed to contain insignificant concentrations of lead:
    - .1 Dark blue paint on doors (0.0088%).
    - .2 White paint on drywall (<0.0063).
    - .3 Off-white paint on concrete block walls (<0.00013).
- .5 Mercury:
  - .1 The following building materials are presumed, or have been confirmed, to contain mercury:
    - .1 Fluorescent light bulbs
- .6 Silica:
  - .1 The following building materials are presumed, or have been confirmed, to contain silica:
    - .1 Poured and pre-cast concrete
    - .2 Masonry and mortar
    - .3 Ceramic tiles and grout
    - .4 Stone (roof ballast)
    - .5 Terrazzo
- .7 Polychlorinated Biphenyls:
  - .1 PCBs are not present in the work area.
- .8 Mould:
  - .1 Mould growth was not found during the assessment.
- .9 Remaining designated substances including arsenic, acrylonitrile, benzene, coke oven emissions, ethylene oxide, isocyanates, vinyl chloride monomer, are not typically found in building materials in a composition/state that is hazardous and are not presumed to be present within the Work Areas.
- .10 General Building Conditions:
  - .1 Heat and smoke detectors to remain live throughout work.
  - .2 Sprinklers to remain live throughout work.

### **1.3 Outline of Work**

- .1 Coordinate the following items with the Owner's Project Manager and the Construction Manager, including but not limited to electrical isolations, GFI connection, water connections, HVAC and exhaust ventilation system isolation, bin placement, schedule, disconnects, etc.
- .2 Refer to the Contract Drawings prepared by Moffet & Duncan Architects Inc. for the extent of construction work and the Work Areas.
- .3 Refer to Drawing HM-01 for the extent of the Abatement Work Area(s).
- .4 Using Type 1 procedures prescribed in the Sections identified in Related Work, remove, and dispose of the following:
  - .1 Asbestos-containing caulking in the following locations:
    - .1 Exterior Fascia of the 1972 phase of construction (Location 81), approximately 70 linear feet.
- .5 Refer to Specification Sections identified in the Related Work for specified personnel protective measures for the safe handling, removal, and clean-up of hazardous materials in each phase or work area.
- .6 Visit the site prior to tender close to confirm the location and extent of any hazardous building materials or materials contaminated by hazardous materials.
- .7 Without disturbing hazardous materials, perform removals where required, prior to abatement work:
  - .1 Maximize waste diversion by use of resale of building materials, or recycling.
- .8 Maintain emergency and fire exits from Abatement Work Area, or establish alternative exits satisfactory to Provincial Fire Marshall and local authorities having jurisdiction. Maintain extra routes from occupied areas. Place emergency exit signs at locations to clearly mark exit route. Seal emergency exit doors so as not to impede use of door during emergency evacuation.
- .9 Remove and dispose of as appropriate waste, building components, materials and items contaminated by hazardous materials that cannot be effectively cleaned.
- .10 Encapsulation will not be permitted where removal of building materials or structures scheduled for demolition will facilitate access to the asbestos materials in question.
- .11 Final clean work area to remove visible signs of asbestos and other hazardous materials, other debris or settled dust.
- .12 Unless otherwise specified, the handling, removal, clean-up or repair of hazardous materials or surfaces contaminated with hazardous materials is to be performed following wet removal techniques.

### **1.4 Schedule**

- .1 Provide necessary manpower, supervision, equipment, and materials to maintain and complete the project on schedule.
- .2 Work Hours:
  - .1 Coordinate all work, scheduling, and phasing with the Owner.
- .3 Provide 48 hours written notice to the Abatement Consultant of any request to work outside normal working hours. Obtain written approval before proceeding.

## 1.5 Definitions

- .1 Abatement Consultant: Owner's Representative providing Site Review and air monitoring.
- .2 Abatement Contractor: Contractor or sub-contractor performing work of this section.
- .3 Abatement Work Area: Area where work takes place which will, or may, disturb hazardous materials.
- .4 Amended Water: Water with wetting agent added for the purpose of reducing surface tension to allow thorough wetting of materials.
- .5 Asbestos: Any of the fibrous silicates defined in Regulation 278/05 including: actinolite, amosite, anthophyllite, chrysotile, crocidolite and tremolite.
- .6 Asbestos-Containing Material (ACM): Material identified under Site Conditions including any debris, overspray, fallen material and settled dust.
- .7 Authorized Visitors: Building Owner, Abatement Consultant, or designated representative, and persons representing regulatory agencies.
- .8 Competent Worker: A worker who is qualified because of knowledge, training and experience to perform the work, is familiar with Regulation 278/05 and the Occupational Health and Safety Act and has knowledge of the potential or actual danger to health and safety in the work.
- .9 Contaminated Waste: Material identified under Site Conditions, including fallen material, settled dust, other debris and materials or equipment deemed to be contaminated by the Abatement Consultant.
- .10 Curtained Doorway: Doorway consisting of two (2) overlapping flaps of rip-proof polyethylene arranged to permit ingress and egress from one room to another while permitting minimal air movement between rooms.
- .11 DOP Test: A testing method used to determine the integrity of the Negative Pressure unit or vacuum using a Dispersed Oil Particulate (DOP) or Poly Alpha Olefin (PAO) HEPA filter leak test. This test is to be conducted on site where units are to be installed. Refer to the Environmental Abatement Council of Canada (EACC) DOP/PAO Testing Guideline 2013 or ANSI/ASME N510-2007.

- .12 **Fitting:** Individual segments or pieces of a mechanical service line which may include but is not limited to the hangers, tees, elbows, joints, valves, unions, etc.
- .13 **Friable Material:** Material that when dry can be crumbled, pulverized or powdered by hand pressure and includes such material that is crumbled, pulverized or powdered.
- .14 **HEPA:** High Efficiency Particulate Aerosol filter that is at least 99.97 percent efficient in collecting a 0.3 micrometre aerosol.
- .15 **Milestone Site Review:** Site Review of the Abatement Work Area at a defined point in the abatement operation.
- .16 **Non-Friable Material:** Material that when dry cannot be crumbled, pulverized or powdered by hand pressure.
- .17 **Occupied Area:** Any area of the building or adjoining space outside the Abatement Work Area.
- .18 **Personnel:** All Contractor's employees, sub-contractors employees, supervisors.
- .19 **PCM:** Phase Contrast Microscopy.
- .20 **Remove:** Remove means remove and dispose of (as applicable type of waste) unless followed by other instruction (e.g. remove and turn over to Owner).
- .21 **TEM:** Transmission Electron Microscopy.

## **1.6 Regulations and Guidelines**

- .1 Comply with Federal, Provincial, and local requirements, provided that in any case of conflict among those requirements or with these Specifications, the more stringent requirements shall apply. Work shall be performed under regulations in effect at the time work is performed.
- .2 Where regulations are not present, follow accepted industry standards and applicable Guideline documents.
- .3 Regulations and Guidelines include but are not limited to the following:
  - .1 Ministry of Labour, Immigration, Training and Skills Development Occupational Health and Safety Act Regulations for Construction Projects including Revised Statutes of Ontario 1990, Chapter 0.1 and Ontario Regulation 278/05.
  - .2 Ministry of the Environment and Climate Change Regulation for the disposal of waste, including R.R.O. 1990, Reg. 347 as amended.
  - .3 Regulation 490/09 Designated Substances.
  - .4 Ministry of Labour, Immigration, Training and Skills Development, Guideline, Silica on Construction Projects, 2011.

## **1.7 Quality Assurance**

- .1 Removal and handling of hazardous materials is to be performed by persons trained in the methods, procedures, and industry practices for Abatement.
- .2 Ensure work proceeds to schedule, meeting all requirements of this Specification.
- .3 Complete work so that at no time airborne dust, visible debris, or water runoff contaminate areas outside the Abatement Work Area.
- .4 Any contamination of surrounding area (indicated by visual Site Review or air monitoring) shall necessitate the clean-up of affected area, and in the same manner applicable to an Abatement Work Area at no cost to the Owner.
- .5 All work involving electrical, mechanical, carpentry, glazing, etc., shall be performed by licensed persons experienced and qualified for the work required.

## **1.8 Supervision**

- .1 Provide on site for each work shift, a Shift Superintendent(s), who has authority regarding all aspects related to manpower, equipment, and production.
- .2 Supervisory personnel must hold a recognized certificate proving attendance at an asbestos removal training course (2-day minimum duration) and have performed supervisory functions on at least five (5) other asbestos abatement projects of similar size and complexity.
- .3 At all times during work, the Shift Superintendent(s) must be on site. Failure to comply with this requirement will result in a stoppage of all work, at no cost to the Owner.
- .4 Replace supervisory personnel, with approved replacements, within three (3) working days of a written request from the Owner. Owner reserves the right to request replacement of supervisory personnel without explanation.
- .5 Do not replace supervisory personnel without written approval from the Owner.

## **1.9 Instruction and Training**

- .1 Instruction and training must be provided by a competent person.
- .2 All workers completing Type 1 asbestos abatement must be trained in compliance with Section 19 of O.Reg. 278/05.

### **1.10 Notification**

- .1 Before commencing work, notify orally and in writing, an inspector at the office of the Ontario Ministry of Labour, Immigration, Training and Skills Development nearest the project site, where required.
- .2 Inform all trades on site of the presence and location of hazardous materials identified in the Contract documents.
- .3 Notify the Owner or Owner's Representative, the Joint Occupational Health and Safety Committee and the Provincial Ministry of Labour, Immigration, Training and Skills Development, if suspected asbestos-containing materials not identified in the contract documents are discovered during the course of the work. Stop work in these areas immediately.
- .4 Notify Sanitary Landfill site as per O.Reg. 347/90 as amended.

### **1.11 Submittals**

- .1 Submit, to Pinchin, prior to starting work:
  - .1 Provincial Workers' Compensation Board Clearance Certificate.
  - .2 Insurance certificates.
  - .3 Copy of Company Health and Safety Policy and applicable programs.
  - .4 Ministry of Labour, Immigration, Training and Skills Development Notice of Project form.
  - .5 Copy of Certificate of Approval for disposal of hazardous materials waste and location of landfill.
- .2 Submit, to Pinchin, the following information regarding personnel prior to starting work:
  - .1 Resumes of the supervisory personnel.
  - .2 Proof in the form of a certificate that supervisory personnel have attended a training course on asbestos removal or are certified as supervisors under the Ministry of Training, Colleges and Universities course 253S.
  - .3 Written statement that personnel have had instruction on hazards of exposure to hazardous materials identified within this scope, the use of respirator, protective clothing, worker and waste decontamination procedures, and all aspects of work procedures and protective measures.
  - .4 WHMIS training certificates for all personnel.
  - .5 Certificate proving that each worker on site has been fit tested for the respirator appropriate for the work being performed.



- .6 Proof of training for the following site-specific hazards or conditions identified:
  - .1 Working at Heights.
  - .2 Elevated Work Platform.
- .3 Submit, to Pinchin, the following information regarding HEPA filtered devices prior to construction of enclosure or asbestos abatement:
  - .1 Performance data on HEPA filtered vacuums including DOP tests no more than 3 months old.
  - .2 Performance data on negative air units including DOP tests which must be no more than 3 months old if the unit is vented outdoors or which must be performed on site immediately prior to initial usage and when HEPA filters are changed if the unit is vented indoors.
  - .3 DOP tests to be performed by an independent testing company:
    - .1 DOP testing company is required to submit a detailed technical report of testing protocol, including Introduction, Methodology, Results, Conclusions, and Recommendations, including results of the Air-Aerosol Mixing Uniformity test as per ASME N510-1989 (1995).
    - .2 DOP testing company must also provide calibration certificates from an independent calibration firm or from the manufacturer of the testing equipment for both the aerosol photometer and the pressure gauge on the aerosol generator dated within 1 calendar year from the on-site testing date.
    - .3 DOP testing company must also provide the National Sanitation Foundation (NSF) certification name and number of the on-site technician performing the testing.
  - .4 Proof of calibration of DOP testing equipment.
- .4 Submit, to Pinchin, the following prior to isolating the work area:
  - .1 Safety Data Sheets for chemicals or material used in the course of the Abatement Project.
- .5 Submit, to Pinchin, the following upon completion of the work.
  - .1 Manifests, waybills, bills of lading etc. as applicable for each type of waste.

## **1.12 Insurance**

- .1 Maintain a Commercial General Liability Policy with an insurance company acceptable to Kawartha Pine Ridge District School Board. The intent of this policy is to hold Pinchin Ltd. and Kawartha Pine Ridge District School Board harmless as it relates to claims for Bodily Injury or Property Damage or both, relating to the contract. Commercial General Liability insurance shall be provided on an “occurrence” basis to cover injury or damage

(whether detected or not during the policy period) which happens during the policy period.

- .2 Maintain an Automobile or Fleet Policy, and Non-owned Automobile Policy with an insurance company acceptable to Kawartha Pine Ridge District School Board. The intent of these policies is to hold Kawartha Pine Ridge District School Board harmless as it relates to claims for Bodily Injury or Property Damage or both, relating to the contract.
- .3 Maintain a Pollution Liability Policy (asbestos liability policy or specific coverage under the CGL for asbestos abatement) with an insurance company acceptable to Kawartha Pine Ridge District School Board. The intent of this policy is to hold Kawartha Pine Ridge District School Board harmless as it relates to claims for Bodily Injury or Property Damage or both, relating to the contract. Pollution Liability shall be provided on an “occurrence” basis to cover injury or damage (whether detected or not during the policy period) which happens during the policy period. Without limiting the generality of the foregoing, the policy shall insure the operations of abatement and shall not contain any environmental and/or health hazard exclusions relating to remediation operations.
- .4 Forward all certificates to Kawartha Pine Ridge District School Board before work is commenced, showing Kawartha Pine Ridge District School Board as additional insured as their interest may appear.
- .5 Kawartha Pine Ridge District School Board may request a certified true copy of the policies.
- .6 The limits will not be less than:
  - .1 Commercial General Liability \$5,000,000.00
  - .2 Automobile \$2,000,000.00
  - .3 Pollution Policy \$5,000,000.00

### **1.13 Site Review**

- .1 From commencement of work until completion of clean-up operations, the Abatement Consultant is empowered by the Owner to inspect for compliance with the requirements of governing authorities, adherence to specified procedures and materials, and to inspect for final cleanliness and completion.
- .2 The Abatement Consultant is empowered by the Owner to order a shutdown of work when leakage of asbestos from the controlled work area has occurred or is likely to occur.
- .3 Any deviation from the requirements of the Specifications or governing authorities that is not approved in writing may result in a stoppage of work, at no cost to the Owner.

- .4 Additional labour or materials expended by the Contractor to rectify unsatisfactory conditions and to provide performance to the level specified shall be at no additional cost to the Owner.
- .5 Site Review and air monitoring performed as a result of Contractor's failure to perform satisfactorily regarding quality, safety, or schedule, shall be back-charged to the Contractor.
- .6 Facilitate Site Review and provide access as necessary. Make good work disturbed by Site Review and testing at no cost to the Owner.
- .7 Refer to the Sections identified in Related Work for specified milestone Site Reviews which are to take place at defined points throughout the abatement operation specific to each phase or work area.
- .8 Provide 24 hours written notice to the Abatement Consultant of any request for scheduling of milestone Site Reviews or transportation of waste through Occupied Areas.
- .9 The following Milestone Site Reviews may take place, at the Owner's cost, as outlined in each related specification section:
  - .1 Milestone Site Review - Visual Clearance
    - .1 Site Review of Abatement Work Area after completion of all abatement, but prior to application of lock-down agents or dismantling of enclosure.
- .10 Refer to the Sections identified in Related Work for specified milestone Site Reviews which are to take place at defined points throughout the abatement operation specific to each phase or work area.
- .11 Do not proceed with next phase of work until written approval of each milestone is received from the Abatement Consultant.

#### **1.14 Worker Protection**

- .1 Instruct workers before allowing entry to the Abatement Work Area. Instruction shall include training in use of respirators, dress, showering, entry and exiting from an Abatement Work Area, and all other aspects of work procedures and protective measures.
- .2 Workers shall not eat, drink, chew gum or tobacco, vape or smoke in the Abatement Work Area.
- .3 Workers shall be fully protected at all times when possibility of disturbance of hazardous materials exists.
- .4 Provide soap, towels, and facilities for washing of hands and face, which shall be used by all personnel when leaving the Abatement Work Area.
- .5 Respiratory Protection
  - .1 Refer to each particular Section of the Specification for specified type of respiratory equipment specific to each phase or work area.

- .2 Respirators shall be:
  - .1 Certified by the National Institute of Occupational Safety and Health (NIOSH) or other testing agency acceptable to the Ministry of Labour, Immigration, Training and Skills Development.
  - .2 Fitted so that there is an effective seal between the respirator and the worker's face. Ensure that no person required to enter an Abatement Work Area has facial hair which affects the seal between respirator and face.
  - .3 Assigned to a worker for their exclusive use.
  - .4 Maintained in accordance with manufacturer's specifications.
  - .5 Cleaned, disinfected and inspected by a competent person after use on each shift, or more often if required.
  - .6 Repaired or have damaged or deteriorated parts replaced.
  - .7 Stored in a clean and sanitary location.
  - .8 Provided with new filters as necessary, according to manufacturer's instructions.
  - .9 Worn by personnel who have been fit checked by qualitative or quantitative fit-testing.
  - .10 Instruction on proper use of respirators must be provided by a competent person as defined by the Occupational Health and Safety Act.
- .3 Provide protective clothing, to all personnel which:
  - .1 Is made of a material that does not readily retain nor permit penetration of asbestos fibres.
  - .2 Consists of head covering and full body covering that fits snugly at the ankles, wrists and neck.
  - .3 Once coveralls are worn, treat and dispose of as contaminated waste.
  - .4 Is replaced or repaired if torn or ripped.
- .4 Use hard hats, safety footwear and other protective equipment and apparel required by applicable construction safety regulations.

### **1.15 Visitor Protection**

- .1 Provide clean protective clothing and equipment to Authorized Visitors.
- .2 Instruct Authorized Visitors in the use of protective clothing and Abatement Work Area entry and exit procedures.
- .3 Authorized visitors are required to be fit tested on respirators, prior to entering Abatement Work Area:
  - .1 Respirator worn must be compliant with Section 13 and Table 2 of O.Reg. 278/05.

### **1.16 Signage**

- .1 Asbestos Abatement Signs: Post signs at access points to the Abatement Work Area, stating at minimum, the following:
  - .1 There is an asbestos dust hazard.

- .2 Access to the work area is restricted to persons wearing protective clothing and equipment.
- .2 Vehicles, Bins and Asbestos Waste Containers: Post signs on both sides of every vehicle used for the transportation of asbestos waste and on every asbestos waste container. Signs must display thereon in large, easily legible letters that contrast in colour with the background the word “CAUTION” in letters not less than ten centimetres in height and the words:
  - .1 CONTAINS ASBESTOS FIBRES
  - .2 Avoid Creating Dust and Spillage
  - .3 Asbestos May be Harmful to Your Health
  - .4 Wear Approved Protective Equipment.
- .3 Place placards in accordance with Transportation of Dangerous Goods Act.

#### **1.17 Waste and Material Handling**

- .1 Waste bins must be placed on grade or in receiving.
- .2 All bins for hazardous materials must be covered and locked when waste transfer is not being performed.
- .3 Ensure redundant non-ACM, rubble, debris, etc. removed during contaminated work are treated, packaged, transported, and disposed of as appropriate waste.
- .4 Clean, wash and apply Post Removal Sealant to metal waste prior to removal from Abatement Work Area. Recycle metals.
- .5 Clean, wash and apply Post Removal Sealant to non-porous materials prior to disposal as clean waste. Obtain prior written approval from the Abatement Consultant for each individual type of material.
- .6 Clean and wash equipment prior to removal from Abatement Work Area if removed prior to completion.
- .7 Place all equipment, tools and unused materials that cannot be cleaned in Abatement Waste Containers.
- .8 As work progresses, and at regular intervals, transport the sealed and labelled waste containers from the Abatement Work Area to waste bin.

- .9 Place items in bins according to waste classification. Place asbestos waste, metals, non-asbestos waste, etc. in separate bins.
- .10 Removal of waste containers and decontaminated tools and materials from the Abatement Work Area shall be performed as follows:
  - .1 Remove any visible contamination from the surface of non-porous or cleanable waste being removed from the Abatement Work Area. If the item can be cleaned, remove it from the site as clean waste.
  - .2 Place waste or item in Waste Container and seal closed.
  - .3 Wet wipe outside of Waste Container.
  - .4 At the perimeter of the Abatement Work Area, place in second Waste Container. Seal closed.
  - .5 Remove waste containers and transport to appropriate bin.
- .11 Transport waste and materials via the predetermined routes and exits. Arrange waste transfer route with Owner. Use a closed, covered cart to transport through Occupied Areas.
- .12 Provide workers transporting waste with means to access full personal protective equipment and all tools required to properly clean up spilled material in the case of a rupture of a Waste Container.
- .13 Pick-up and drop off of garbage bin shall be at pre-approved times and must not interfere with the Owners operations.
- .14 Transport hazardous waste to landfill or waste transfer station licensed by the provincial Ministry of the Environment.
- .15 Cooperate with the provincial Ministry of the Environment inspectors and immediately carry out instructions for remedial work at dump to maintain environment, at no additional cost to the Owner.

## **1.18 Re-establishment of Objects and Systems**

- .1 Re-establish objects and items relocated by the Contractor's workforce to facilitate work.

## **PART 2 PRODUCTS AND FACILITIES**

### **2.1 Materials and Equipment**

- .1 Refer to the Sections identified in Related Work for specified materials, equipment, or facilities specific to each phase or work area.
- .2 Materials and equipment must be in good condition and free of debris and fibrous materials. Disposable items must be of new materials only.

- .3 Airless Sprayer: AC powered pressure washer that allows wetting agent to mix with water, uses no air or compressed air, and has a nozzle to regulate power and pressure.
- .4 Amended Water: Water with wetting agent added for purpose of reducing surface tension to allow thorough wetting of materials.
- .5 Asbestos Waste Container: A container acceptable to disposal site, Ministry of the Environment, and Ministry of Labour, Immigration, Training and Skills Development, comprised of the following:
  - .1 Dust tight.
  - .2 Suitable for the type of waste.
  - .3 Impervious to asbestos.
  - .4 Identified as asbestos waste.
- .6 HEPA Vacuum: Vacuum with necessary fittings, tools, and attachments. Discharged air must pass through a HEPA filter.
- .7 Polyethylene Sheeting: 6 mil (0.15 mm) minimum thickness unless otherwise specified, in sheet size to minimize joints.: 6 mil (0.15 mm) minimum thickness unless otherwise specified, in sheet size to minimize joints.
- .8 Post Removal Sealant (or Lockdown): Sealant that when applied to surfaces serves the function of trapping residual asbestos fibres or other dust. Product must have flame spread and smoke development ratings both less than 50. Product shall leave no stain when dry. Post Removal Sealant shall be compatible with replacement insulation or fireproofing where required and capable of withstanding service temperature of substrate. Apply to manufacturer's instructions.
- .9 Protective Clothing: Disposable coveralls complete with head covering and full body covering that fits snugly at the ankles, wrists and neck.
- .10 Rip-Proof Polyethylene Sheeting: 8 mil (0.20 mm) fabric made up from 5 mil (0.13 mm) weave and two (2) layers of 1.5 mil (0.05 mm) poly laminate or approved equal. In sheet size to minimize on-site seams and overlaps.
- .11 Sprayer: Garden type portable manual sprayer or water hose with spray attachment if suitable.
- .12 Tape: Duct tape or tape suitable for sealing polyethylene to surfaces under both dry and wet conditions in the presence of Amended Water.

- .13 Wetting Agent: Non-sudsing surfactant added to water to reduce surface tension and increase wetting ability.

### **PART 3 EXECUTION**

- .1 Refer to the Sections identified in Related Work for specified procedures for work area preparation, maintenance, site dismantlement, application of lock-down agent and all other procedures for the safe handling, removal, and clean-up of hazardous materials specific to each phase or work area.

### **END OF SECTION**

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**PART 1 GENERAL**

**1.1 General and Related Work**

- .1 Read this Section in conjunction with all drawings and all other Sections so as to comply with the requirements of Division 1 and the General Conditions of the Contract.
- .2 Requirements specified elsewhere:
  - .1 Section 02 81 00 Hazardous Materials – General Provisions

**1.2 Outline of Work**

- .1 Refer to Section 02 81 00 Hazardous Materials – General Provisions for the Outline of Work.
- .2 Refer to Drawings HM-01 for the extent of the Abatement Work Areas.
- .3 The intent of this Section is to provide safe work practices and procedures to govern the handling, removal, clean-up, and disposal of asbestos-containing materials (caulking) following Type 1 procedures, and Pinchin and Owner specific requirements.

**1.3 Personal Protection**

- .1 Protect all personnel at all times when possibility of disturbance of ACM exists:
  - .1 Provide non-powered half-face respirators with P100 high efficiency (HEPA) cartridge filters when requested by personnel.
  - .2 When requested by personnel, provide protective clothing.
- .2 Wear hard hats, safety shoes and other personal protective equipment required by applicable construction safety regulations.

**1.4 Site Reviews**

- .1 Refer to Part 1.13 Site Reviews in Section 02 81 00 – General Provisions.
- .2 The following Milestone Site Reviews are to be scheduled:
  - .1 Milestone Site Review - Visual Clearance

**PART 2 PRODUCTS AND FACILITIES**

- .1 Refer to Section 02 81 00.

**PART 3 EXECUTION**

**3.1 Site Preparation**

- .1 Moving of equipment, tools, supplies, and stored materials that can be performed without disturbing ACM will be performed by others.
- .2 Remove visible dust and friable material from all surfaces in the work area including those to be worked on, using HEPA Vacuums or wet wiping.
- .3 Install polyethylene drop sheets below areas of work.
- .4 Provide power from ground fault interrupt circuits.
- .5 Provide amended water for wetting ACM, and adequate method of wetting (garden sprayers, airless sprayers, etc.).
- .6 Without disturbing asbestos-containing materials, remove and dispose of non-hazardous

materials as clean waste prior to asbestos removal work, where possible.

### **3.2 Maintenance of Abatement Work Area**

- .1 Inspect polyethylene sheeting and ensure it is effectively sealed and taped. Repair damage and remedy defects immediately.
- .2 Maintain Abatement Work Area in tidy condition.
- .3 Remove any standing water on polyethylene drop sheet at the end of every shift.

### **3.3 Asbestos Removal - General**

- .1 Do not use powered tools or non-powered handheld tools.
- .2 Do not use compressed air to clean or remove dust or debris.
- .3 Do not break, cut, drill, abrade, grind, sand or vibrate ACM if it cannot be wetted. Type 2 procedures would be required if the material cannot be wetted due to hazard or damage.
- .4 Wet ACM prior to work and keep ACM wet throughout the removal process.
- .5 Frequently and at regular intervals during the work, clean up dust and waste using HEPA vacuums and/or wet sweeping or mopping.
- .6 Frequently and at regular intervals, place all waste in asbestos waste containers.
- .7 Immediately upon completion of work, clean area with HEPA vacuum and/or wet sweeping or mopping.

### **3.4 Asbestos Removal - Caulking**

- .1 Wet all material to be disturbed.
- .2 Undo fasteners if necessary to remove material.
- .3 Wet material if broken during work.
- .4 Use only non-powered hand-held tools to remove ACM.
- .5 Scrape to remove material adhered to substrate.
- .6 Place removed ACM directly into an asbestos waste container.

### **3.5 Abatement Work Area Dismantling**

- .1 Wash or HEPA vacuum equipment and tools used in contaminated Abatement Work Area to remove all asbestos contamination, or place in Asbestos Waste Containers prior to being removed from Abatement Work Area.
- .2 Place tools and equipment used in contaminated work site but not cleaned in polyethylene bags prior to removal from Abatement Work Area.
- .3 Clean polyethylene drop sheets which with HEPA vacuum or wet cleaning methods at completion of work.
- .4 Carefully roll polyethylene drop sheets toward the centre. As polyethylene is rolled away, immediately remove visible debris beneath with a HEPA vacuum.
- .5 Remove remaining polyethylene sheeting and tape.
- .6 Place polyethylene drop sheets, tape, disposal clothing and other contaminated waste in asbestos waste containers, wet wipe and place in second asbestos waste container.

### **3.6 Waste and Material Handling**

.1 Refer to Section 02 81 00.

**END OF SECTION**

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**LEGEND**

(X) PINCHIN LOCATION NUMBER

WORK AREA

OUTSIDE WORK AREA

ASBESTOS-CONTAINING MATERIALS:

CAULKING

NOT ALL KNOWN OR SUSPECTED ASBESTOS-CONTAINING BUILDING MATERIALS MAY BE DEPICTED ON THE DRAWING. REFER TO THE ASBESTOS ASSESSMENT REPORT FOR A COMPLETE LIST OF KNOWN AND SUSPECTED ASBESTOS-CONTAINING BUILDING MATERIALS.

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.

BASE PLAN PROVIDED BY CLIENT.



PROJECT NAME:

ASBESTOS SPECIFICATION

CLIENT NAME:

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

PROJECT LOCATION:

MURRAY CENTENNIAL PUBLIC SCHOOL  
654 COUNTY ROAD 40  
TRENTON, ONTARIO

FIGURE NAME:

GROUND FLOOR

PROJECT NUMBER:

335495.031

SCALE:

NOT TO SCALE

DRAWN BY:

DP

REVIEWED BY:

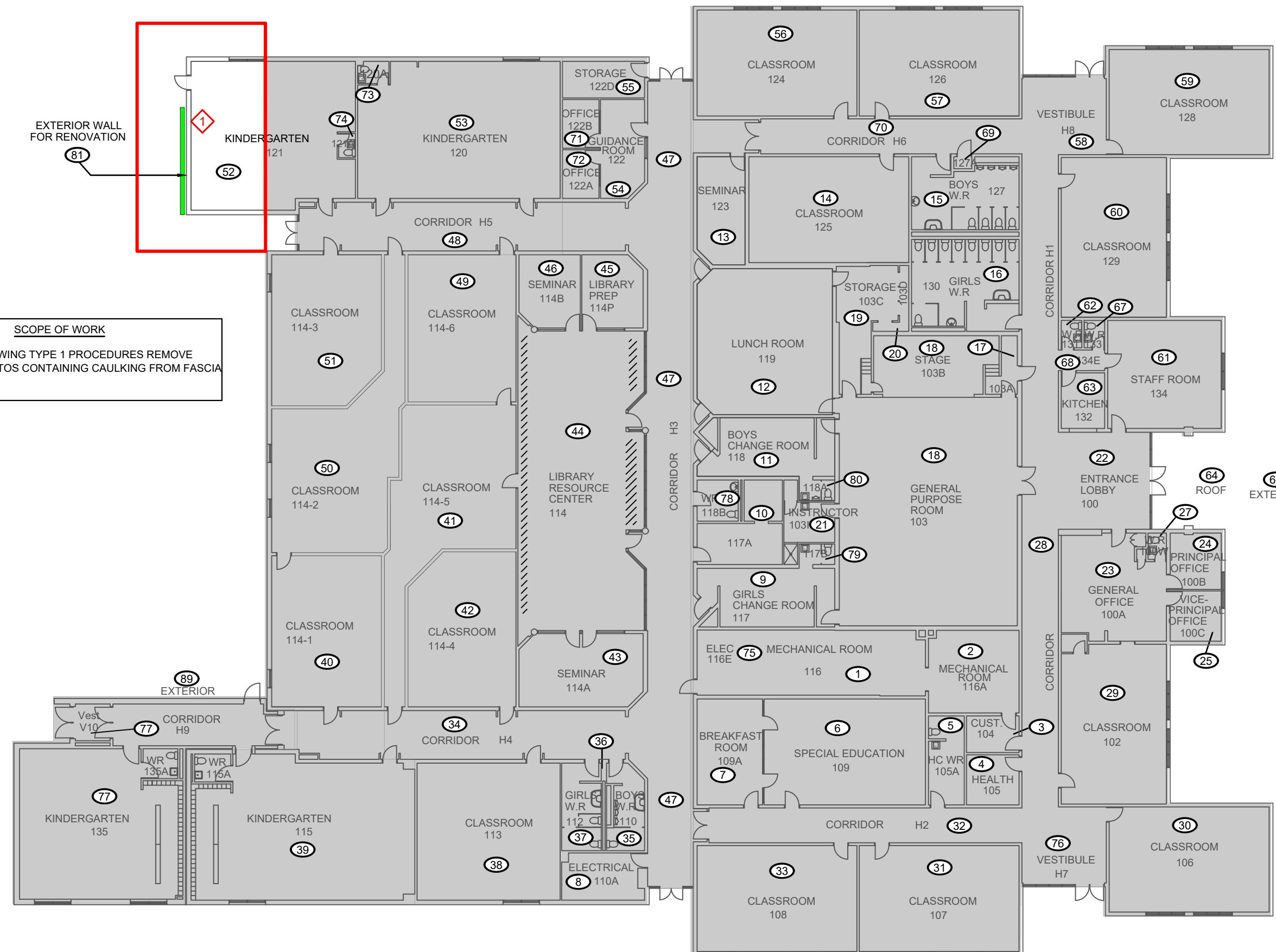
RN

DATE:

AUG 2024

FIGURE NUMBER:

HM-01



**SCOPE OF WORK**  
1 FOLLOWING TYPE 1 PROCEDURES REMOVE ASBESTOS CONTAINING CAULKING FROM FASCIA

EXTERIOR WALL FOR RENOVATION

81

1

KINDERGARTEN 121

52

74

KINDERGARTEN 120

48

CORRIDOR H5

71

72

OFFICE 122A

OFFICE 122B

GUIDANCE ROOM 122

STORAGE 122D

55

54

47

13

CLASSROOM 125

14

15

BOYS W.R. 127

16

GIRLS W.R. 130

17

18

STAGE 103B

19

20

STORAGE 103C

21

INSTRUCTOR 103

22

ENTRANCE LOBBY 100

23

GENERAL OFFICE 100A

24

PRINCIPAL OFFICE 100B

25

VICE-PRINCIPAL OFFICE 100C

26

CLASSROOM 128

27

STAFF ROOM 134

28

CORRIDOR H1

29

CLASSROOM 102

30

CLASSROOM 106

31

CLASSROOM 107

32

CORRIDOR H2

33

CLASSROOM 108

34

CORRIDOR H4

35

BOYS W.R. 110

36

SEMINAR 114A

37

GIRLS W.R. 112

38

CLASSROOM 113

39

KINDERGARTEN 115

40

CLASSROOM 114-1

41

CLASSROOM 114-5

42

CLASSROOM 114-4

43

SEMINAR 114A

44

LIBRARY RESOURCE CENTER 114

45

LIBRARY PREP 114P

46

SEMINAR 114B

47

CORRIDOR H3

48

CLASSROOM 114-6

49

CLASSROOM 114-3

50

CLASSROOM 114-2

51

CLASSROOM 114-3

52

KINDERGARTEN 121

53

KINDERGARTEN 120

54

OFFICE 122A

55

STORAGE 122D

56

CLASSROOM 124

57

CLASSROOM 126

58

VESTIBULE H8

59

CLASSROOM 128

60

CLASSROOM 129

61

STAFF ROOM 134

62

63

KITCHEN 132

64

ROOF

65

EXTERIOR

66

67

68

69

70

CORRIDOR H6

71

72

73

74

75

ELEC 116E

76

VESTIBULE H7

77

KINDERGARTEN 135

78

118B

79

80

81

EXTERIOR WALL FOR RENOVATION

89

EXTERIOR

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