

Use this Section where full containment will be required, or if a Contractor option, may be required, depending on the removal method(s) selected by the Contractor.

Do not use this Section if full containment procedures are normally not required for the removal procedures specified.

Edit this Section only in consultation with Infrastructure specialists in asbestos control procedures.

Use this Section in conjunction with Section 02 82 01 - Asbestos Control General Requirements, with Section 02 82 33 - Asbestos Removal, and with Section 02 82 15 - Asbestos Encapsulation.

This Specification Section contains:

- .1 This Cover Sheet
- .2 Specification Section Text:
 - 1. General**
 - 1.1 Intent
 - 1.2 Section Includes
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 - 3.4 Installation of Barriers
 - 3.5 Removal of Barriers

1. General

1.1 INTENT

- .1 Read this Section in conjunction with Section 02 82 01 - Asbestos Control General Requirements.

1.2 SECTION INCLUDES

- .1 This Section includes requirements for:
 - .1 isolation of asbestos control area from other building space, [and the exterior environment].
 - .2 measures to maintain asbestos fibre levels inside and outside of asbestos control areas to acceptable levels.
 - .3 measures to control transfer of materials and personnel in and out of asbestos control area, to minimize escape of asbestos fibres from the control area.

1.3 RELATED SECTIONS

- .1 Asbestos Encapsulation: Section 02 82 15.
- .2 Asbestos Removal: Section 02 82 33.

1.4 REFERENCE STANDARDS

SPEC NOTE: Edit this Article to suit applicable standards referenced in this section. Add or delete as required.

- 1. CAN/CGSB-51.34-M86 - Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
- .2 CSA O121-08 – Douglas Fir Plywood.
- .3 CSA-O141-05 (R2009) – Softwood Lumber.
- .4 CSA O151-09 – Canadian Softwood Plywood.
- .5 CSA O153-M1980 (R2008) – Poplar Plywood.
- .6 CSA O437 Series 93(R2011) – Standards on OSB and Waferboard
- .7 National Lumber Grades Authority (NGLA), latest edition – Standard Grading Rules for Canadian Lumber.

1.5 DEFINITIONS

- .1 Barrier: means construction designed to isolate and seal asbestos control area from remainder of building [and from the exterior environment] before, during, and after asbestos control work.

1.6 FIRE REGULATIONS

- .1 Comply with requirements of authority having jurisdiction over fire safety, including the following:
 - .1 locations of emergency and fire exits from the work area.
 - .2 on-site firefighting equipment.

2. Products

2.1 BARRIER MATERIALS

- .1 Sheet Material for Walls and Ceilings: polyethylene, to CAN/CGSB-51.34-M86, minimum 150 micrometre thick.
- .2 Sheet Material for Floors: sheet polyethylene, glass fibre reinforced, minimum 250 micrometre thick.
- .3 Dimension Board Lumber: to CAN/CSA-0141-05 (R2009) and graded in accordance with current National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber.
 - .1 Moisture Content: maximum 19% at time of installation.
 - .2 Surface Finish: S4S for members receiving finishes, S2S or S4S for members not receiving finishes.
- .4 Wood Panel Products:
 - .1 Canadian Softwood Plywood: to CSA 0151-09.
 - .2 Douglas Fir Plywood: to CSA 0121-08.
 - .3 Poplar Plywood: to CSA 0153-M1980 (R2008).
 - .4 Waferboard and Oriented Strand Board: to CSA 0437 Series 93(R2011).
- .5 Duct Tape: Good quality, water-resistant plastic type.

2.2 EQUIPMENT

- .1 Negative Air Units: two-stage HEPA filter system and accessories required to exhaust air to outside of building.

2.3 DECONTAMINATION FACILITIES

SPEC NOTE: *If tender documents provide detailed documentation required under Asbestos Control Plan, edit this article accordingly.*

- .1 Decontamination facilities shall include:
 - .1 clean change room.
 - .2 showers.
 - .3 asbestos waste transfer rooms.
 - .4 protective equipment storage.
 - .5 wash up station only.

SPEC NOTE: *If possible and practicable, specify Contractor's use of existing toilet facilities located outside asbestos control area. Specify in Division 01.*

- .2 Provide minimum number of entrances into decontamination facility from outside asbestos control work area.
- .3 Obtain [Province] [Environmental Consultant] approval of location and construction of decontamination facility prior to commencement of work.
- .4 Provide adequate facilities for storage of protective equipment in decontamination facility.
- .5 Hot and cold water supply lines shall have water shut-off valve located outside of asbestos control area.

2.4 NEGATIVE PRESSURE VENTILATION SYSTEM

- .1 Provide negative pressure ventilation system that is separate from building mechanical system. Confirm leak testing of equipment fitted with HEPA filters after filter installation has been completed with Dioctyl Phthalate (DOP) or Emery 3004 (a poly-alpha olefin) on site.
- .2 System shall include:
 - .1 make-up air drawn through decontamination facility.
 - .2 exhaust air vented to building exterior through negative air units.
- .3 System shall:
 - .1 be capable of changing total volume of air in the containment area four times per hour, and
 - .2 maintain a negative pressure of 5 Pa across the barrier between the clean area and the asbestos control area.

Plan No:
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- .4 Start operation of negative air system before beginning asbestos control work. Operate continuously until asbestos control work has been completed and fibre levels stabilize at levels acceptable to [Province] [Environmental Consultant].
- .5 Monitor condition of filters on a regular basis and replace filters as required to maintain air changes and negative pressure.
- .6 Provide separate makeup air ducting and combustion air ducting to prevent backdrafting or damage to boilers, hot water heaters or any other gas fired equipment that is required to remain operational during asbestos removal work.

3. Execution

3.1 HVAC SYSTEM DEACTIVATION

- .1 Shut down entire building HVAC system.
- .2 Seal openings to HVAC system to prevent asbestos fibres from entering system.
- .3 Coordinate mechanical system deactivation with Province.

OR

SPEC NOTE: Specify either "HVAC System Deactivation" or "HVAC System Isolation". Specify both only if project is phased and both are applicable.

3.1 HVAC SYSTEM ISOLATION

- .1 Shut down HVAC system to asbestos control area.
- .2 Seal openings to HVAC system to prevent asbestos fibres from entering system.
- .3 Coordinate mechanical system isolation with Province.

3.2 ELECTRICAL SYSTEM ISOLATION

- .1 Isolate electrical systems which will remain energized in the asbestos control area, with ground fault interrupters.
- .2 Use only ground fault protected electrical services for electrical equipment used in the asbestos control area.
- .3 Coordinate electrical system isolation with Province.

3.4 REMOVAL OF BARRIERS

- .1 Upon completion of asbestos control work, perform the following:
 - .1 HEPA vacuum and wash down the polyethylene sheets then spray the surfaces with an appropriate slow drying glue to seal down any invisible dust and fibers.
 - .2 remove polyethylene wall sheets when air-borne asbestos fibre concentration has reached an acceptable level. [Province] [Environmental Consultant] will advise when fibre concentrations are low enough to remove sheeting.
 - .3 carefully fold sheets with asbestos exposed side folded in. Dispose of as asbestos waste.
- .2 Remove other barrier materials from site.

END OF SECTION