

Part 1 General

1.01 RELATED REQUIREMENTS

- .1 Section 02 41 19.14 - Selective Demolition for Minor Works
- .2 Section 02 82 00.01 - Asbestos Abatement – Type 1 Precautions
- .3 Section 02 82 00.02 - Asbestos Abatement – Type 2 Precautions
- .4 Section 02 50 00 - Site Remediation
- .5 E2 - Excavation Assessment
- .6 E3 - Asbestos Assessment

1.02 DEFINITIONS

- .1 Dangerous Goods: Product, substance, or organism specifically listed or meets hazard criteria established in Transportation of Dangerous Goods Regulations.
- .2 Hazardous Material: Product, substance, or organism used for its original purpose; and is either dangerous goods or material that will cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into the environment.
- .3 Hazardous Waste: Hazardous material no longer used for its original purpose and that is intended for recycling, treatment or disposal.
- .4 Hazardous Building Material: Component of a building or structure that will cause adverse impact to environment or adversely affect health of persons, animals, or plant life when altered, disturbed or removed during maintenance, renovation or demolition.
- .5 Workplace Hazardous Materials Information System (WHMIS): Canada-wide system designed to give employers and workers information about Hazardous Materials used in workplace. Under WHMIS, information on Hazardous Materials is provided on container labels, material safety data sheets (MSDS), and worker education programs. WHMIS is put into effect by combination of federal and provincial laws.

1.03 REFERENCE STANDARDS

- .1 Canadian Construction Association
 - .1 Mould Guidelines for the Canadian Construction Industry, CCA 82-2004
 - .2 Standard Construction Document CCA 82 “Mould Guidelines for the Canadian Construction Industry” (2004 – further referred to herein as “CCA 82”).
- .2 Department of Justice, Government of Canada
 - .1 Halocarbon Regulations, 2003 (FHR 2003)
 - .2 PCB Regulations (SOR/2008-273)
 - .3 Transportation of Dangerous Goods Act, 1992
 - .4 Transportation of Dangerous Goods Regulations (SOR/2001-286)
- .3 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS)
- .4 Government of of Manitoba
 - .1 The Dangerous Goods Handling and Transportation Act C.C.S.M. c. D12
 - .1 Hazardous Waste Regulation, M.R. 195/2015

- .2 The Workplace Safety and Health Act, RSM 1987, c.W210
- .3 Workplace Safety and Health Regulation, M.R. 217/2006

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data for hazardous materials to be used by Contractor to complete the Work:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets, and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two copies of WHMIS MSDS in accordance with Section 01 35 29 - Health and Safety Requirements to Contract Administrator for each hazardous material required prior to bringing hazardous material on site.
 - .3 Submit Hazardous Materials Management plan to Contract Administrator that identifies hazardous materials, usage, location, personal protective equipment requirements, and disposal arrangements.
 - .4 Construction/Demolition Waste Management:
 - .1 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating percentage of construction/demolition wastes were recycled or salvaged
 - .5 Low-Emitting Materials: Submit listing of adhesives and sealants used in building, comply with VOC and chemical component limits or restrictions requirements.

1.05 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle hazardous materials to complete the Work in accordance with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: Deliver hazardous materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Transport hazardous materials and wastes in accordance with Transportation of Dangerous Goods Act, Transportation of Dangerous Goods Regulations, Manitoba's The Dangerous Goods Handling and Transportation Act and other applicable provincial regulations.
- .4 Storage and Handling Requirements:
 - .1 Co-ordinate storage of hazardous materials to be used to complete the Work with Contract Administrator and abide by internal requirements for labelling and storage of materials and wastes.
 - .2 Store and handle hazardous materials and wastes in accordance with applicable federal and provincial laws, regulations, codes, and guidelines.
 - .3 Store and handle flammable and combustible materials in accordance with National Fire Code of Canada requirements.
 - .4 Keep no more than 45 litres of flammable and combustible liquids such as gasoline, kerosene and naphtha for ready use.
 - .1 Store flammable and combustible liquids in approved safety cans bearing the Underwriters' Laboratory of Canada or Factory Mutual seal of approval.
 - .2 Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes requires the written approval of the Contract Administrator.
 - .5 Transfer of flammable and combustible liquids is prohibited within buildings.

- .6 Transfer flammable and combustible liquids away from open flames or heat-producing devices.
- .7 Solvents or cleaning agents must be non-flammable or have flash point above 38 degrees C.
- .8 Store flammable and combustible waste liquids for disposal in approved containers located in safe, ventilated area. Keep quantities to minimum.
- .9 Observe smoking regulations, smoking is prohibited in areas where hazardous materials are stored, used, or handled.
- .10 Storage requirements for quantities of hazardous materials and wastes in excess of 5 kg for solids, and 5 litres for liquids:
 - .1 Store hazardous materials and wastes in closed and sealed containers.
 - .2 Label containers of hazardous materials and wastes in accordance with WHMIS.
 - .3 Store hazardous materials and wastes in containers compatible with that material or waste.
 - .4 Segregate incompatible materials and wastes.
 - .5 Ensure that different hazardous materials or hazardous wastes are stored in separate containers.
 - .6 Store hazardous materials and wastes in secure storage area with controlled access.
 - .7 Maintain clear egress from storage area.
 - .8 Store hazardous materials and wastes in location that will prevent them from spilling into environment.
 - .9 Have appropriate emergency spill response equipment available near storage area, including personal protective equipment.
 - .10 Maintain inventory of hazardous materials and wastes, including product name, quantity, and date when storage began.
 - .11 When hazardous waste is generated on site:
 - .1 Co-ordinate transportation and disposal with Contract Administrator.
 - .2 Comply with applicable federal, provincial and municipal laws and regulations for generators of hazardous waste.
 - .3 Use licensed carrier authorized by provincial authorities to accept subject material.
 - .4 Before shipping material obtain written notice from intended hazardous waste treatment or disposal facility it will accept material and it is licensed to accept this material.
 - .5 Label containers with legible, visible safety marks as prescribed by federal and provincial regulations.
 - .6 Only trained personnel handle, offer for transport, or transport dangerous goods.
 - .7 Provide photocopy of shipping documents and waste manifests to Contract Administrator
 - .8 Track receipt of completed manifest from consignee after shipping dangerous goods. Provide photocopy of completed manifest to Contract Administrator

- .9 Report discharge, emission, or escape of hazardous materials immediately to Contract Administrator and appropriate provincial authority. Take reasonable measures to control release.
- .12 Ensure personnel have been trained in accordance with Workplace Hazardous Materials Information System (WHMIS) requirements.
- .13 Report spills or accidents immediately to Contract Administrator. Submit a written spill report to Contract Administrator within 24 hours of incident.
- .5 Include provisions for Work of this Section in Waste Reduction Workplan as outlined in Section 01 74 21 – Construction/Demolition Waste Management and Disposal.

Part 2 Products

2.01 MATERIALS

- .1 Description:
 - .1 Bring on site only quantities hazardous material required to perform Work.
 - .2 Maintain MSDS in proximity to where materials are being used. Communicate this location to personnel who may have contact with hazardous materials.

Part 3 Execution

3.01 HAZARDOUS MATERIALS ABATEMENT

- .1 Scope of Abatement Activities:
 - .1 An Excavation Assessment and an Asbestos Assessment for the Work area has been performed.
 - .1 Abatement shall be conducted to handle, alter, remove and/or dispose of hazardous building materials as identified in the assessments in accordance with applicable regulations, guidelines, standards and/or best practices for such work, and as follows:
 - .1 Petroleum Hydrocarbons (PHCs):
 - .1 In accordance with the Excavation Assessment, PHCs were identified in the soils beneath the floor slabs, surrounding the existing bus lifts.
 - .2 Abatement of identified PHCs is to be conducted as part of the Work of this Contract. Refer to Section 02 50 00 - Site Remediation.
 - .2 Asbestos-Containing Materials (ACMs):
 - .1 In accordance with the Asbestos Report, ACMs were observed in cementitious piping.
 - .2 Abatement of identified or unidentified ACMs is to be conducted as part of the Work of this Contract. Refer to
 - .1 Section 02 82 00.01 - Asbestos Abatement – Type 1 Precautions.
 - .2 Section 02 82 00.02 - Asbestos Abatement – Type 2 Precautions
 - .2 Abatement procedures will be administered by cash allowance.

- .2 Unexpected Discovery of Hazardous Materials:
 - .1 If materials which are required to be handled, altered, removed and/or disposed, are suspected to contain hazardous materials, all work in the areas that may disturb the material shall be stopped.
 - .2 Samples of the suspect material will be collected and submitted for laboratory analysis.
 - .3 Requirements for special precautions will be assessed by the Contract Administrator and if hazardous building materials are discovered, abatement procedures will be communicated to the Contractor.
 - .4 Abatement procedures will be administered by cash allowance.
- .3 Contractor is responsible for reviewing plans, specifications and reports such that they understand the locations and amounts of hazardous materials that will be impacted by the Work of this contract, and such that appropriate plans and budgets can be included in their overall bids.

3.02 CLEANING

- .1 Progress Cleaning: Clean in accordance with Section 01 74 11 – Cleaning. Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 – Cleaning.
- .3 Waste Management: Separate waste materials for reuse and recycling.
 - .1 Dispose of hazardous waste materials in accordance with applicable federal and provincial acts, regulations, and guidelines.
 - .2 Recycle hazardous wastes for which there is approved, cost effective recycling process available.
 - .3 Send hazardous wastes to authorized hazardous waste disposal or treatment facilities.
 - .4 Burning, diluting, or mixing hazardous wastes for purpose of disposal is prohibited.
 - .5 Disposal of hazardous materials in waterways, storm or sanitary sewers, or in municipal solid waste landfills is prohibited.
 - .6 Dispose of hazardous wastes in timely fashion in accordance with applicable federal and provincial regulations.
 - .7 Minimize generation of hazardous waste to maximum extent practicable. Take necessary precautions to avoid mixing clean and contaminated wastes.
 - .8 Identify and evaluate recycling and reclamation options as alternatives to land disposal, such as:
 - .1 Hazardous wastes recycled in manner constituting disposal.
 - .2 Hazardous waste burned for energy recovery.
 - .3 Lead-acid battery recycling.
 - .4 Hazardous wastes with economically recoverable precious metals.

END OF SECTION