

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section includes methods and procedures for demolition of structures, parts of structures, basements and foundation walls.

1.2 RELATED SECTIONS

- .1 Section 01 35 44 - Environmental Protection Procedures.
- .2 Section 01 35 29 - Health and Safety Procedures
- .3 02 82 00.01 - Asbestos Abatement - Minimum Precautions.
- .4 02 82 00.02- Asbestos Abatement - Intermediate Precautions.
- .5 02 82 00.03 - Asbestos Abatement - Maximum Precautions.
- .6 02 83 10 - Lead-Based Abatement - Minimum Precautions.
- .7 02 85 00.02 - Mould Remediation

1.3 REFERENCES

- .1 Reference Standards:
 - .1 CSA International
 - .1 CSA S350-[M1980(R2003)], Code of Practice for Safety in Demolition of Structures.
 - .2 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Assessment Act (CEAA), 2012, c.19, s.52.
 - .2 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
 - .1 SOR/2003-2, On-Road Vehicle and Engine Emission Regulations.
 - .2 SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations.
 - .3 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.
 - .3 U.S. Environmental Protection Agency (EPA)
 - .1 EPA CFR 86.098-10, Emission standards for 1998 and later model year Otto-cycle heavy-duty engines and vehicles.

- .2 EPA CFR 86.098-11, Emission standards for 1998 and later model year diesel heavy-duty engines and vehicles.
- .4 LVM Maritime Testing.
 - .1 Hazardous Building Materials Survey, AAFC Crops and Livestock Research Centre, 440 University Avenue, Charlottetown, PEI, Buildings 7, 10, 14, 17 and 18, March 6, 2013.
- .5 Stantec Consulting Limited.
 - .1 Lead-Based Paint Sampling - AAFC Crops and Livestock Research Centre (Buildings #7 and #18), Charlottetown, PEI, August 9, 2013.
 - .2 Summary of Hazardous Materials - Buildings 7, 10, 14, 17, 18, August 2013.
- .6 AMEC (Available on Request).
 - .1 Soil Sampling Program, Buildings 7, 10, 14, 17, and 18 AAFC Crops and Livestock Research Centre (CLRC), 440 University Avenue, Charlottetown, Queens County, PEI, DFRP # 02024.
- .7 MGI Limited (Available on Request).
 - .1 Hazardous Building Materials Survey with Recommendations for Building Demolition and Petroleum Hydrocarbon Impact Assessment, AAFC Crops and Livestock Research Centre, Building 7 (5 Car Garage), Charlottetown, PEI, June 2004.
 - .2 Hazardous Building Materials Survey with Recommendations for Building Demolition and Petroleum Hydrocarbon Impact Assessment, AAFC Crops and Livestock Research Centre, Building 10 (Pea Viner Storage), Charlottetown, PEI, June 2004.
 - .3 Hazardous Building Materials Survey with Recommendations for Building Demolition and Petroleum Hydrocarbon Impact Assessment, AAFC Crops and Livestock Research Centre, Building 14 (Small Equipment Storage), Charlottetown, PEI, June 2004.
 - .4 Hazardous Building Materials Survey with Recommendations for Building Demolition and Petroleum Hydrocarbon Impact Assessment, AAFC Crops and Livestock Research Centre, Building 17 (Apple House), Charlottetown, PEI, January 2005.
 - .5 Hazardous Building Materials Survey with Recommendations for Building Demolition and

Petroleum Hydrocarbon Impact Assessment, AAFC
Crops and Livestock Research Centre, Building 18
(Horticulture Building), Charlottetown, PEI,
January 2005.

1.4 DEFINITIONS

- .1 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, may include but not limited to: poison, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health or well being or the environment if handled improperly.
- .2 Waste Management Co-ordinator (WMC): contractor representative responsible for supervising waste management activities as well as co-ordinating related, required submittal and reporting requirements.
- .3 Appendix "A": inventory of contaminated materials in buildings.

1.5 SUBMITTALS

- .1 Prior to beginning work on site, submit Environmental Impairment Liability Insurance.
- .2 Prior to beginning work on site provide qualifications of the abatement contractor.
- .3 Prior to beginning of Work on site, submit Structural Assessment Report indicating all structural concerns related to the condition of each building that require hazardous material removals prior to demolition (Appendix A1). Report is to include recommendations for stabilizing/supporting each building if required. Report is to be signed and stamped by a structural engineer.
- .4 Prior to beginning of Work on site submit a Demolition Waste Management and Disposal Plan indicating the following:
 - .1 Descriptions of and anticipated quantities of materials to be separated and sent for disposal to locations approved by Provincial authorities.
 - .2 Methods to be used to support/underpin structures to enable removal of hazardous materials, if required.
 - .3 Schedule and abatement of selective demolition.
 - .4 Number and location of dumpsters.
 - .5 Anticipated frequency of tippage.

- .6 Name and address of haulers and waste facilities.
- .5 Submit copies of certified weigh bills, bills of lading and receipts from authorized disposal sites and reuse and recycling facilities for all material removed from site on a weekly basis upon request of Departmental Representative or Consultant.
 - .1 Written authorization from Departmental Representative or Consultant is required to deviate from haulers, facilities, or receiving organizations listed.
- .6 Shop Drawings:
 - .1 Where required by authorities having jurisdiction, submit for review and approval demolition drawings, diagrams or details showing sequence of demolition work and methods of supporting structures and underpinning.

1.6 QUALITY ASSURANCE

- .1 Related sections 01 35 44 and Appendix A.
- .2 Meetings:
 - .1 It is advised that all bidders attend the scheduled site visit during the tender period to examine existing site conditions.
 - .2 Ensure key personnel such as site supervisor, project manager, and subcontractor representatives are present at the meeting.
 - .3 WMC must provide written verbal report on status of waste diversion activity at each meeting.
 - .4 Departmental Representative will provide verbal notification of change to meeting schedule established upon contract award 24 hours prior to scheduled meeting.

1.7 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate contaminated material as noted in Appendix A and/or as directed by Departmental Representative for disposal. Dispose of each waste stream in accordance with applicable provincial and federal regulations and requirements.
- .2 Non-contaminated material to be disposed of at an approved site.

- .3 Petroleum hydrocarbon contamination may be present in soil beneath or around building footprints at Building 10 and Building 18. There is staining on the top of the concrete floor slabs in these two buildings. Staining may also be present under concrete floors and on concrete footings at these locations. If identified, notify Departmental Representative or Consultant immediately. Environmental Protection Procedures in Section 01 35 44 should be followed to pressure wash the affected building materials prior to disposal with wash water collected and sent for disposal. Note that petroleum impacted building materials cannot be disposed of at a C&D site.
- .4 Pesticide residues are present on wood trim and wood shelving units in Building 18. These materials are to be removed from Building 18 prior to demolition and be sent for disposal at PEI Energy Systems Waste Plant located at 40 Riverside Dr. in Charlottetown, PE.
- .5 Air conditioning equipment containing refrigerants and potentially ozone depleting substances may be present below the collapsed floor in Building 17. If identified, notify Departmental Representative or Consultant immediately. Have any refrigerant in the air conditioning equipment removed by a licensed technician prior to disposal of the equipment.
- .6 Smoke detectors containing Americium - 241 are located throughout Building 18. They should be removed from the site prior to building demolition and then disposed of through a licensed hazardous waste contractor.

1.8 ENVIRONMENTAL PROTECTION

- .1 Ensure Work is done in accordance with Section 01 35 44 - Environmental Procedures. and Appendix "A".
- .2 Ensure that demolition work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.
- .3 Protect trees, plants and foliage on site and adjacent properties where indicated.
- .4 Prevent extraneous materials from contaminating air beyond application area, by providing temporary enclosures during demolition work.
- .5 Cover or wet down dry materials and waste to prevent blowing dust and debris. Control dust on all temporary roads.

- .6 Fires and burning of waste or materials is not permitted on site.
- .7 Do not bury rubbish waste materials.
- .8 Do not dispose of waste or volatile materials including but not limited to: mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers.
 - .1 Ensure proper disposal procedures are maintained throughout project.
- .9 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers, or onto adjacent properties.
- .10 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with authorities having jurisdiction and as directed by Departmental Representative or Consultant.

1.9 EXISTING CONDITIONS

- .1 If material resembling spray or trowel applied asbestos or other designated substance listed as hazardous other than those identified in Appendix A are encountered during the course of demolition, stop work, take preventative measures, and notify Departmental Representative or Consultant immediately. Proceed only after receipt of written instructions from Departmental Representative or Consultant.
- .2 Structures to be demolished are based on their condition on date that tender is accepted and at time of examination prior to tendering.

1.10 SCHEDULING

- .1 Employ necessary means to meet project time lines without compromising specified minimum rates of material diversion. In the event of unforeseen delay notify Departmental Representative or Consultant in writing.

Part 2 Products

2.1 EQUIPMENT

- .1 Equipment and heavy machinery:

- .1 On-road vehicles to meet applicable emission requirements as prescribed in CEPA-SOR/2003-2, On-Road Vehicle and Engine Emission Regulations.
- .2 Off-road vehicles to meet applicable emission requirements as prescribed in EPA CFR 86.098-10EPA CFR 86.098-11].
- .2 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

Part 3 Execution

3.1 PROTECTION

- .1 Prevent movement, settlement or damage of adjacent structures, services, walks, paving, trees, landscaping, adjacent grades parts of existing building to remain.
 - .1 Provide bracing, shoring and underpinning as required.
 - .2 Repair damage caused by demolition as directed by Departmental Representative at contractors expense
- .2 Support affected structures and, if safety of structure being demolished or adjacent structures or services appears to be endangered, take preventative measures, stop Work and immediately notify Departmental Representative or Consultant.
- .3 Prevent debris from blocking surface drainage system, elevators, mechanical and electrical systems which must remain in operation.

During building demolition, it is the responsibility of the contractor to develop a perimeter around the buildings which will be classified as the Work Area. All persons entering the work area must wear the required PPE outlined in the provided lead/mercury, and mould specifications. It is the responsibility of the contractors to ensure the air quality beyond the work area, satisfies the Health Canada National Ambient Air Quality Objectives (NAAQO).

3.2 PREPARATION

- .1 Protection of in-place conditions:
 - .1 Work in accordance with Section 01 35 44 - Environmental Procedures and Section 01 35 29 - Health and Safety Requirements.

.2 Surface Preparation:

- .1 Disconnect and cap electrical and telephone service lines entering buildings to be demolished.
 - .1 Post warning signs on electrical lines and equipment which must remain energized to serve other properties during period of demolition.
- .2 Disconnect and cap designated mechanical services.
 - .1 Sewer and water lines: remove to property line in accordance with authority having jurisdiction as directed by Departmental Representative or Consultant.
 - .2 Other underground services: remove and dispose of as directed by Departmental Representative.
- .3 Do not disrupt active or energized utilities traversing premises designated to remain undisturbed.
- .4 Remove rodent and vermin as required by Departmental Representative.

3.3 REMOVAL OF HAZARDOUS WASTE

- .1 Remove contaminated or Hazardous materials as defined in Appendix A1 from site and dispose of in safe manner according to applicable provincial and federal regulations and requirements.
- .2 Asbestos and lead leachate toxic paint must be removed by a certified Abatement Contractor.

3.4 DEMOLITION

- .1 Prior to start of demolition Work, brace/underpin/support structures as required to safely complete the work.
- .2 Prior to start of demolition remove contaminated or hazardous materials as listed in Appendix A1 from site and dispose of at designated disposal facilities in safe manner and in accordance with TDGA and other applicable requirements.
- .3 Demolish basement foundation walls to minimum of 300 mm below finished grade
- .4 Do not backfill areas until inspected by Departmental Representative.
- .5 Remove existing equipment, services, and obstacles where required.

- .6 At end of each day's work, leave Work in safe and stable condition.
- .7 Demolish to minimize dusting. Keep materials wetted as directed by Departmental Representative.
- .8 Contain fibrous materials (e.g. Insulation) to minimize release of airborne fibres while being transported within facility.
- .9 Only dispose of material specified by selected alternative disposal option as directed by Departmental Representative or Consultant.
 - .1 Additional disposal options to be provided by Departmental Representative or Consultant.

3.5 STOCKPILING

- .1 Label stockpiles, indicating material type and quantity.
 - .2 Designate appropriate security resources/measures to prevent vandalism, damage and theft.
 - .3 Stockpile materials designated for alternate disposal in location which facilitates removal from site.
 - .4 Supply separate, clearly marked disposal bins for categories of waste material identified above. Do not remove bins from site until inspected and approved by Departmental Representative. Please notify Departmental Representative prior to removal of bins from site.
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