

PART 1 - GENERAL

- | | | |
|------------------------|----|---|
| <u>1.1 SUMMARY</u> | .1 | Related Sections.
.1 Section 01 74 21 -Construction /
Demolition Waste Management & Disposal. |
| <u>1.2 REFERENCES</u> | .1 | Canadian Council of Ministers of the
Environment (CCME). |
| | .2 | Department of Justice Canada (Jus).
.1 Canadian Environmental Assessment Act
(CEAA), 1995, c. 37.
.2 Canadian Environmental Protection Act,
1999 (CEPA), c. 33. |
| | .3 | Health Canada/Workplace Hazardous Materials
Information System (WHMIS).
.1 Material Safety Data Sheets (MSDS). |
| | .4 | Transport Canada (TC).
.1 Transportation of Dangerous Goods Act,
1992 (TDGA), c. 34. |
| <u>1.3 DEFINITIONS</u> | .1 | Demolition: rapid destruction of building
following removal of hazardous materials. |
| | .2 | Hazardous Materials: dangerous substances,
dangerous goods, hazardous commodities and
hazardous products, may include but not
limited to: asbestos PCB's, CFC's, HCFC's
poisons, corrosive agents, flammable
substances, ammunition, explosives,
radioactive substances, or other material
that can endanger human health or well being
or environment if handled improperly. |
| <u>1.4 SUBMITTALS</u> | .1 | Submittals in accordance with Section
01 33 00 - Submittal Procedures. |
| | .2 | Shop drawings.
.1 Submit for approval drawings, diagrams
or details showing sequence of demolition
work and supporting structures and
underpinning, where required by authorities
having jurisdiction. |
-

- | | |
|--------------------------------------|--|
| 1.4 SUBMITTALS
(Cont'd) | .2 (Cont'd)
.2 Submit drawings stamped and signed by qualified professional engineer registered or licensed in New Brunswick, Canada.

.3 Hazardous Materials: provide description of Hazardous Materials and Notification of Filing with proper authorities prior to beginning of Work as required. |
| 1.5 QUALITY
ASSURANCE | .1 Regulatory Requirements: ensure Work is performed in compliance with CEPA, CEAA, TDGA, and Department of Environment and Local Government of New Brunswick.

.2 Site Meetings.
.1 Convene pre-installation meeting one week prior to beginning on-site installations in accordance with Section 01 32 16.07 - Construction Progress Schedules - Bar (GANTT) Chart to:
.1 Verify project requirements.
.2 Review installation conditions.
.3 Co-ordination with other building subtrades.
.4 Review manufacturer's installation instructions and warranty requirements.
.2 Arrange for site visit with Departmental Representative to examine existing site conditions adjacent to demolition work, prior to start of Work.
.3 Hold project meetings every month.
.4 Ensure key personnel attend.
.5 Departmental Representative will provide written notification of change to meeting schedule established upon contract award 24 hours prior to scheduled meeting.

.3 Health and Safety.
.1 Do construction occupational health and safety in accordance with Section 01 35 29 - Health and Safety Requirements.

.4 Sustainable Requirements. |
| 1.6 DELIVERY,
STORAGE
HANDLING | .1 Storage and Protection. .1 Protect in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling. |

1.6 DELIVERY,
STORAGE
HANDLING
(Cont'd)

- .1 (Cont'd)
 - .2 Protect existing items designated to remain and items designated for salvage. In event of damage to such items, immediately replace or make repairs to approval of Departmental Representative at no cost to Departmental Representative.
 - .3 Remove and store materials to be salvaged, in manner to prevent damage.
 - .4 Store and protect in accordance with requirements for maximum preservation of material.
- .2 Waste Management and Disposal.
 - .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.
 - .2 Divert excess materials from landfill to site approved by Departmental Representative.
 - .3 Separate for reuse and recycling and place in designated containers waste in accordance with Waste Management Plan.
 - .4 Place materials defined as hazardous or toxic in designated containers.
 - .5 Handle and dispose of hazardous materials in accordance with CEPA, TDGA, Regional and Municipal, regulations.
 - .6 Label location of salvaged material's storage areas and provide barriers and security devices.
 - .7 Ensure emptied containers are sealed and stored safely.
 - .8 Source separate for recycling materials that cannot be salvaged for reuse including wood, metal, concrete and asphalt, and gypsum.
 - .9 Remove materials that cannot be salvaged for reuse or recycling and dispose of in accordance with applicable codes at licensed facilities.

1.7 SITE CONDITIONS

- .1 Site Environmental Requirements.
 - .1 Perform work in accordance with Section 01 35 43 - Environmental Procedures.
 - .2 Ensure that selective demolition work does not adversely affect adjacent watercourses, groundwater and wildlife, or contribute to excess air and noise pollution.

- | | | |
|--|----|--|
| <u>3.1 PREPARATION
(Cont'd)</u> | .3 | Notify and obtain approval of utility companies before starting demolition. |
| <u>3.2 REMOVAL OF
HAZARDOUS WASTES</u> | .1 | Remove contaminated or dangerous materials defined by authorities having jurisdiction, relating to environmental protection, from site and dispose of in safe manner to minimize danger at site or during disposal. |
| <u>3.3 REMOVAL
OPERATIONS</u> | .1 | Remove items as indicated. |
| | .2 | Do not disturb items designated to remain in place. |
| | .3 | Removal of Pavements, Curbs and Gutters:
.1 Square up adjacent surfaces to remain in place by saw cutting or other method approved by Departmental Representative.
.2 Protect adjacent joints and load transfer devices.
.3 Protect underlying and adjacent granular materials. |
| | .4 | Prevent contamination with base course aggregates, when removing asphalt pavement for subsequent incorporation into hot mix asphalt concrete paving, |
| | .5 | Stockpile topsoil for final grading and landscaping.
.1 Provide erosion control and seeding if not immediately used. |
| | .6 | Disposal of Material.
.1 Dispose of materials not designated for salvage or reuse on site as instructed by Departmental Representative at authorized facilities. |
| <u>3.4 STOCKPILING</u> | .1 | Label stockpiles, indicating material type and quantity. |
| | .2 | Designate appropriate security resources/measures to prevent vandalism, damage and theft. |
-

- 3.4 STOCKPILING
(Cont'd)
- .3 Locate stockpiled materials convenient for use in new construction to eliminate double handling wherever possible.
 - .4 Stockpile materials designated for alternate disposal in location which facilitates removal from site and examination by potential end markets, and which does not impede disassembly, processing, or hauling procedures.

- 3.5 REMOVAL FROM
SITE
- .1 Remove stockpiled material as directed by Departmental Representative, when it interferes with operations of project.
 - .2 Remove stockpiles of like materials by alternate disposal option once collection of materials is complete.
 - .3 Dispose of materials not designated for alternate disposal in accordance with applicable regulations.
 - .1 Disposal Facilities: approved and listed in Waste Reduction Workplan.
 - .2 Written authorization from Departmental Representative is required to deviate from disposal facilities listed in Waste Reduction Workplan.

- 3.6 CLEANING
- .1 Remove debris, trim surfaces and leave work site clean, upon completion of Work
 - .2 Use cleaning solutions and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.

PART 1 - GENERAL

1.1 RELATED
REQUIREMENTS

- .1 Section 23 05 23.01 - Valves - Bronze.
- .2 Section 23 23 00 - Refrigerant Piping.
- .3 Section 23 31 13.01 - Metal Ducts - Low Pressure to 500 Pa.
- .4 Section 23 33 00 - Air Duct Accessories.
- .5 Section 23 82 21 - Incremental Heating and Cooling Units.
- .6 Section 26 05 00 - Common Work Results for Electrical.
- .7 Section 26 53 00 - Exit Lights.

1.2 REFERENCES

- .1 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.
 - .2 Reference Standards:
 - .1 Canadian Environmental Protection Act, 1999 (CEPA 1999)
 - .1 Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149).
 - .2 Department of Justice Canada (Jus)
 - .1 Transportation of Dangerous Goods Act, 1992 (TDG Act) 1992, (c. 34).
 - .2 Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286).
 - .3 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
-

1.2 REFERENCES
(Cont'd)

- .2 (Cont'd)
- .3 (Cont'd)
 - .1 Material Safety Data Sheets (MSDS).
 - .4 National Research Council Canada Institute for Research in Construction (NRC-IRC)
 - .1 National Fire Code of Canada-2010.

1.3 ACTION AND
INFORMATIONAL
SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for hazardous materials 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 01 35 43 - Environmental Procedures to Departmental Representative for each hazardous material required prior to bringing hazardous material on site.

1.4 DELIVERY,
STORAGE AND
HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
 - .2 Delivery and Acceptance Requirements: deliver 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, and applicable provincial regulations.
 - .1 When exporting hazardous waste to another country, ensure compliance with Export and Import of Hazardous Waste and Hazardous Recyclable Materials Regulations.
 - .4 Storage and Handling Requirements:
-

1.4 DELIVERY,
STORAGE AND
HANDLING
(Cont'd)

- .4 (Cont'd)
- .1 Co-ordinate storage of hazardous materials with Departmental Representative 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 Departmental Representative.
 - .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.
-

1.4 DELIVERY,
STORAGE AND
HANDLING
(Cont'd)

- .4 (Cont'd)
- .10 (Cont'd)
- .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 Departmental Representative.
 - .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 Departmental Representative.
-

- | | |
|--|--|
| 1.4 DELIVERY,
STORAGE AND
HANDLING
(Cont'd) | .4 (Cont'd)
.10 (Cont'd)
.8 Track receipt of completed
manifest from consignee after
shipping dangerous goods. Provide
photocopy of completed manifest to
Departmental Representative.
.9 Report discharge, emission,
or escape of hazardous materials
immediately to Departmental
Representative 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 Departmental
Representative. Submit a written spill
report to Departmental Representative
within 24 hours of incident. |
|--|--|

PART 2 - PRODUCTS

- | | |
|----------------------|--|
| <u>2.1 MATERIALS</u> | .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

- | | |
|---------------------|---|
| <u>3.1 CLEANING</u> | .1 Progress Cleaning: clean in accordance with
Section 01 74 11 - Cleaning.
.1 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. |
|---------------------|---|
-

3.1 CLEANING
(Cont'd)

- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .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 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.