

PART 1 - GENERAL

1.1 References

- .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.

1.2 Summary

- .1 Section Includes:
 - 1. Procedures for demolition and removal of existing building elements
 - 2. Salvaged items.
 - 3. Salvaged material.

1.3 Standard

- .1 Comply with Ontario Building Code, Part 8, Construction Safety Measures at Construction and Demolition sites, and Provincial requirements.
- .2 Comply with both ANSI A10.6 and NFPA 241.

1.4 Definitions

- .1 Demolition: Rapid destruction of building following removal of hazardous materials. Dismantle or demolish items and transport off-site to be properly disposed of by the Contractor. Contractor will assume ownership of the item(s) as approved by Departmental Representative.
 - .2 Relocate: Existing items of construction that are identified for relocation on the plans or by the Owner's Representative. Relocated items to a specified location. Items must be fully functional during the relocated periods.
 - .3 Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or recycled.
 - .4 Remove and Salvage: Detach items from existing construction and deliver them to Owner or identified party ready for reuse.
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| | .5 | Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or recycled. Contractor must provide protection from damage to remaining items. |
| | .6 | 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>1.5 Asbestos</u> | .1 | Demolition of spray or trowel applied asbestos can be hazardous to health. Should material resembling spray or trowel-applied asbestos be encountered, stop work and notify Departmental representative immediately. Do not proceed until written instructions have been received from Departmental Representative. |
| <u>1.6 Protection</u> | .1 | Prevent movement, settlement, or other damage to adjacent structures, utilities, and parts of building to remain in place:
.1 Provide bracing and shoring as required and as indicated. |
| | .2 | Take precautions to support affected structures and, if the safety of the portion of the building being demolished appears to be endangered, cease operations and notify the Departmental Representative. |
| | .3 | Protect building systems, services and equipment. |
| | .4 | Provide temporary fencing, dust screens, covers, railings, supports and other protection as specified in Section: 01 56 00 - Temporary Barriers and Enclosures. |
| | .5 | Store materials to be reused, recycled and handling and salvaged in locations as directed by Department Representative. |
| | .6 | Unless specified otherwise, materials for removal become Contractor's property. |
| | .7 | Protect, stockpile and store salvaged items. |
| | .8 | Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility. |
| | .9 | Protect surface drainage, mechanical and electrical from damage and blockage. |
| | .10 | Support affected structures. If safety of building is |
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endangered, cease operations and immediately notify Department Representative.

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| <u>1.7 Submittals</u> | <ul style="list-style-type: none">.1 Submittals in accordance with Section 01 33 00 - Submittal Procedures..2 Proposed Dust Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate..3 Schedule of Site Demolition Activities: Indicate the following:<ul style="list-style-type: none">.1 Detailed sequence of demolition and removal work, with starting and ending dates for each activity..2 Coordination for shut-off, capping and continuation of utility services..3 Locations of temporary protection and means of egress and maintain access to site daily activities..4 Coordination of use of premises. |
| <u>1.8 Shop Drawings</u> | <ul style="list-style-type: none">.1 Before proceeding with demolition or breaking out of load bearing walls or of other walls requiring shoring, provide to authority having jurisdiction shoring and underpinning drawings prepared by Registered Professional Engineer showing proposed method. |
| <u>1.9 Health and Safety</u> | <ul style="list-style-type: none">.1 Contractor shall provide Health and Safety Plan.<ul style="list-style-type: none">.1 Ensure construction occupational health and safety in accordance with requirements of Section 01 35 29.06 - Health and Safety Requirements. |
| <u>1.10 Notice</u> | <ul style="list-style-type: none">.1 Notify Departmental Representative before disrupting building access or services at least two (2) full working days in advance of disruption. This also includes, but is not limited to:<ul style="list-style-type: none">.1 Work generating fine particulates (paint, dust) that may affect the operation of smoke detectors,.2 Alterations to the fire alarm system,.3 Alterations to the sprinkler system. |

PART 2 - PRODUCTS

<u>2.1 Not Used</u>	.1	Not Used.
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PART 3 - EXECUTION

<u>3.1 Preparation</u>	.1	Inspect site with Departmental Representative and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain:
	.2	Locate and protect utilities. Preserve active utilities traversing site in operating condition.
<u>3.2 Demolition, Salvage and Disposal</u>	.1	Remove parts of existing building to permit new construction.
	.2	Remove items to be reused, store as directed by the Departmental representative and reinstall under appropriate section of specification.
	.3	Dispose of removed materials, except where specified otherwise, in accordance with authority having jurisdiction.
<u>3.3 Equipment</u>	.1	Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.
<u>3.4 Mechanical Demolition</u>	.1	Existing Utilities: Locate, identify, disconnect, and seal or cap off indicated utilities serving site and structures to be demolished. 1. Arrange to shut off indicated utilities with utility companies. 2. If utility services are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary utilities that maintain continuity of service to other sites. 3. Cut off pipe or conduit as per Mechanical drawings and specifications. 4. Comply with all utility company and municipal requirements for capping, shutting off or altering existing utilities.
	.2	Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent any unexpected movement or collapse of existing construction being demolished. .1 Submit Engineer stamped shoring and reshoring drawings.

3.5 Sequences of Operation

- .1 Removal:
 - .1 Remove items as indicated.
 - .2 Do not disturb items designated to remain in place.
- .2 Removal From Site
 - .1 Interim removal of stockpiled material will be required by the Departmental Representative, if it is deemed to interfere with operations of other contractors.
 - .2 Remove stockpiles of like materials by an alternate disposal option once collection of that material is complete.
 - .3 Only dispose of specified material by selected alternative disposal option as provided by Departmental Representative for own use. Do not dispose of these materials in a landfill or a waste stream destined for landfill.
 - .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
 - .5 All material, waste and material destined for alternate disposal must be hauled to authorized disposal facilities listed in waste reduction workplan:
 - .1 Deviation from waste reduction work plan must be approved in writing by Departmental Representative.
- .3 Salvage:
 - .1 Carefully dismantle items containing materials for salvage and stockpile salvaged materials at locations as indicated as specified herein.
 - .2 Locate stockpiled materials convenient for use in new construction to eliminate double handling wherever possible.

3.6 Restoration

- .1 Restore areas and existing works outside areas of demolition to conditions that existed prior to commencement of work.
- .2 General: Promptly repair damage to adjacent construction caused by demolition operations.

3.7 Cleanup

- .1 Upon completion of work, remove debris, trim surfaces and leave work site clean.
- .2 Use only 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.

END OF SECTION

PART 1 – GENERAL

1.1 References

- .1 Definitions:
 - .1 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, include but not limited to: poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or materials that endanger human health or 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 Waste Audit (WA): detailed inventory of materials in building. Involves quantifying by volume/weight amounts of materials and wastes generated during construction, demolition, deconstruction, or renovation project. Indicates quantities of reuse, recycling and landfill;
 - .4 Waste Reduction Workplan (WRW): written report which addresses opportunities for reduction, reuse, or recycling of materials. WRW is based on information acquired from WA.
- .2 Reference Standards:
 - .1 Canadian Standards Association (CSA International)
 - .1 CSA S350-M1980 (R2003), Code of Practice for Safety in Demolition of Structures;
 - .2 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations;
 - .3 Province of Ontario
 - .1 Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990 April 2012;
 - .4 National Building Code of Canada (NBC), Part 8 – Safety Measures at Construction and Demolition Sites (2005).

1.2 Administrative Requirements

- .1 Pre-Installation Meetings:
 - .1 Convene pre-installation meeting 1 week prior to beginning work of this Section, with Department Representative in accordance with Section 01 31 19 - Project Meetings to:
 - .1 Verify project requirements;
 - .2 Verify existing site conditions adjacent to demolition work;
 - .3 Co-ordination with other construction subtrades;
 - .2 Ensure key personnel attend;
 - .3 WMC must provide verbal report on status of waste diversion activity at each meeting;
 - .4 Department Representative will provide verbal notification of change to meeting schedule established upon contract award 24 hours prior to scheduled meeting.
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| | .2 | Scheduling: |
| | .1 | Employ necessary means to meet project time lines without compromising specified minimum rates of material diversion; |
| | .1 | In event of unforeseen delay notify Department Representative. |
| <u>1.3 Action and Informational Submittals</u> | .1 | Submit in accordance with Section 01 33 00 - Submittal Procedures and Section 01 74 21 - Construction/Demolition Waste Management Disposal. |
| | .2 | WMC is responsible for fulfillment of reporting requirements. |
| | .3 | Prior to beginning of Work on site submit detailed Waste Reduction Workplan in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal and indicate: |
| | .1 | Descriptions of and anticipated quantities of materials to be salvaged reused, recycled and landfilled; |
| | .2 | Schedule of selective demolition; |
| | .3 | Number and location of dumpsters; |
| | .4 | Anticipated frequency of tippage; |
| | .5 | Name and address of waste facilities. |
| | .4 | Submit copies of certified receipts from authorized disposal sites and reuse and recycling facilities for material removed from site upon request of Department Representative. |
| | .1 | Written authorization from Department Representative is required to deviate from facilities listed in Waste Reduction Workplan. |
| <u>1.4 Quality Assurance</u> | .1 | Regulatory Requirements: Ensure Work is performed in compliance with applicable Provincial and Municipal regulations. |
| <u>1.5 Existing Conditions</u> | .1 | If material resembling spray or trowel applied asbestos or other designated substance listed as hazardous be encountered in course of demolition, stop work, take preventative measures, and notify Department Representative immediately. Proceed only after receipt of written instructions have been received from Department Representative. |
| | .2 | Structures to be demolished are based on their condition, at time of examination prior to tendering. |
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PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 Demolition .1 Do Work in accordance with Section 01 35 29.06 – Health and Safety Requirements.

.2 Prevent movement, settlement, or damage to adjacent structures, utilities, and parts of building to remain in place. Provide bracing and shoring required.

.3 Keep noise, dust, and inconvenience to occupants to minimum.

.4 Protect building systems, services and equipment.

.5 Provide temporary dust screen, covers, railings, supports and other protection as required.

3.2 Partial Demolition
Salvage And Disposal .1 Remove parts of existing building to permit new construction. Sort materials into appropriate piles for recycling.

.2 Refer to demolition drawings and specifications for item to be salvaged for reuse.

.3 Dispose of removed materials, to appropriate recycling facilities except where specified otherwise, in accordance with authority having jurisdiction.

.4 Protect building systems, services and equipment.

.5 Provide temporary dust screen, covers, railings, supports and other protection as required.

3.3 Cleaning .1 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

.1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

END OF SECTION
