

Part 1 General

1.1 SUMMARY

- .1 This Section includes the following:
 - .1 Demolition and removal of selected portions of exterior building components or structural elements.
 - .2 Demolition of mechanical and electrical equipment.
 - .3 Demolition and removal of selected site elements.
 - .4 Repair procedures for selective demolition operations.
- .2 This section does not include the following:
 - .1 Removal of hazardous materials or asbestos abatement.
 - .2 Demolition of interior building components and finishes.
- .3 Drawings contain details that suggest directions for solving some of the major demolition and removal requirements for this project; the Contractor is required to develop these details further by submitting a demolition plan prepared by a professional engineer employed by the Contractor.

1.2 REFERENCE STANDARDS

- .1 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Protection Act (CEPA), 2012
 - .1 Hazardous Materials Information Review Act, 1985

1.3 DEFINITIONS

- .1 Demolish: Detach items from existing construction and legally dispose of them off site, unless indicated to be removed and salvaged or removed and reinstalled.
- .2 Remove and Salvage: Detach items from existing construction and deliver them to the Departmental Representative ready for reuse.
- .3 Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- .4 Existing to Remain: Existing items of construction that are not removed and that are not otherwise indicated as being removed, removed and salvaged, or removed and reinstalled.
- .5 Hazardous Substances: Dangerous substances, dangerous goods, hazardous commodities and hazardous products may include asbestos, mercury and lead, PCB's, poisons, corrosive agents, flammable substances, radioactive substances, or other material that can endanger human health or wellbeing or environment if handled improperly as defined by the Federal Hazardous Products Act (RSC 1985) including latest amendments.

1.4 ADMINISTRATIVE REQUIREMENTS

- .1 Coordination: Coordinate selective demolition work so that work of this Section adheres to aesthetic criteria established by the Drawings and specified dimensions with all

elements in planes as drawn, maintaining their relationships with all other building elements.

- .2 Coordination: Coordinate with the Departmental Representative for the material ownership as follows:
 - .1 Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Departmental Representative's property, demolished materials shall become the Contractor's property and shall be removed from Project site.
 - .2 Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to the Departmental Representative that may be encountered during selective demolition remain the Departmental Representative's property:
 - .1 Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to the Departmental Representative.
 - .2 Coordinate with the Departmental Representative's historical adviser, who will establish special procedures for removal and salvage.
- .3 Pre Demolition Meeting: Conduct a pre demolition meeting at Project site in accordance with requirements listed in Section 01 31 19– Project Meetings to confirm extent of salvaged and demolished materials; and to review the Contractor's demolition plan prepared by a professional engineer.

1.5 ACTION AND INFORMATION SUBMITTALS

- .1 Action Submittals: Provide the following submittals before starting any work of this Section:
 - .1 Schedule of Selective Demolition Activities: Coordinate with Section 01 32 16.19 Construction Progress Schedules - Bar (GANTT) Charts and indicate the following:
 - .1 Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
 - .2 Coordinate with the Departmental Representative's ongoing site operations, and limit the number of interruptions during regular business hours.
 - .3 Interruption of utility services.
 - .4 Coordination for shutoff, capping, and continuation of utility services.
 - .5 Use of elevator and stairs.
 - .6 Locations of temporary partitions and means of egress, including for others affected by selective demolition operations.
 - .7 Coordination with the Departmental Representative 's continuing occupancy of portions of existing building and of the Departmental Representative 's partial occupancy of completed Work.
 - .2 Demolition Plan: Submit a plan of demolition area indicating extent of temporary facilities and supports, methods of removal and demolition prepared by a professional engineer in accordance with requirements of Authority Having Jurisdiction, and as follows:

- .1 Proposed Dust Control and Noise Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. The Departmental Representative reserves the right to make modifications where proposed methods interfere with the Departmental Representative's ongoing operation
 - .2 Inventory: Submit a list of items that have been removed and salvaged after selective demolition is complete.
 - .3 Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
 - .4 Pre demolition Photographs: Submit photographs indicating existing conditions of adjoining construction and site improvements prior to starting Work. Include finish surfaces that may be misconstrued as damage caused by selective demolition operations.
- .2 Informational Submittals: Provide the following submittals when requested by the Departmental Representative:
- .1 Qualification Data: Submit information for companies and personnel indicating their capabilities and experience to perform work of this Section including; but not limited to, lists of completed projects with project names and addresses, names and addresses of architects and owners, for work of similar complexity and extent.

1.6 QUALITY ASSURANCE

- .1 Regulatory Requirements: Comply with governing environmental notification requirements and regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction and in accordance with the following:
 - .1 Federal Workers' Compensation Service.
 - .2 Government of Canada, Labour Program: Workplace Safety.
- .2 Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project:
 - .1 Conform to the provincial Occupational Health and Safety Act and Regulations.
 - .2 Conform to provincial Workers' Compensation Board Regulations.
 - .3 Conform to the local municipal bylaws and regulations governing this type of work.

1.7 SITE CONDITIONS

- .1 The Departmental Representative will occupy portions of building immediately adjacent to selective demolition area:
 - .1 Conduct selective demolition so that the Departmental Representative's operations will not be disrupted.
 - .2 Provide not less than 72 hours' notice to the Departmental Representative of activities that will affect the Departmental Representative's operations.

- .2 Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities and as follows:
 - .1 Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.
- .3 The Departmental Representative assumes no responsibility for condition of areas to be selectively demolished:
 - .1 Conditions existing at time of Pre Bid Site Review will be maintained by the Departmental Representative as far as practical.
 - .2 The Departmental Representative will remove items indicated prior to selective demolition:
- .4 Discovery of Hazardous Substances: It is not expected that Hazardous Substances will be encountered in the Work; immediately notify the Departmental Representative if materials suspected of containing hazardous substances are encountered and perform the following activities:
 - .1 Refer to Section 01 41 00– Regulatory Requirements for directives associated with specific material types.
 - .2 Hazardous materials will be as defined in the Hazardous Materials Act.
 - .3 Hazardous materials will be removed by the Departmental Representative before start of the Work.
 - .4 If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify the Departmental Representative. Hazardous materials will be removed by the Departmental Representative under a separate contract or as a change to the Work.
- .5 Storage or sale of removed items or materials on site will not be permitted.
- .6 Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
- .7 Maintain fire protection facilities in service during selective demolition operations.

Part 2 Products

2.1 MATERIALS

- .1 Temporary Support Structures: Design temporary support structures required for demolition work and underpinning and other foundation supports necessary for the project using a qualified professional engineer registered or licensed in province of the Work.
- .2 Repair Materials: Use repair materials identical to existing materials:
 - .1 If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - .2 Use materials whose installed performance equal or surpasses that of existing materials.

- .3 Comply with material and installation requirements specified in individual technical specification Sections.
- .4 Retain original installer or fabricator to patch the exposed Work listed below that is damaged during selective demolition, if possible. Engage another recognized experienced and specialized firm where it is not possible to retain original installer:
 - .1 Brick masonry.
- .3 Retained Materials: Retain items identified for re use in new construction.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify that utilities have been disconnected and capped.
- .2 Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- .3 Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- .4 Notify the Departmental Representative where existing mechanical, electrical, or structural elements conflict with intended function or design:
 - .1 Investigate and measure the nature and extent of conflict and submit a written report to the Departmental Representative.
 - .2 The Departmental Representative will issue additional instructions or revise drawings as required to correct conflict.
- .5 Engage a professional engineer to survey condition of building when removing elements that may result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- .6 Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

- .1 Coordinate existing services indicated to remain and protect them against damage during selective demolition operations in accordance with Section 01 35 16.
- .2 Locate, identify, disconnect, and seal or cap off indicated utilities serving areas to be selectively demolished.
 - .1 Arrange to shut off affected 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 bypass area of selective demolition and that maintain continuity of service to other parts of building.
 - .3 Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

- .4 Cut off pipe or conduit to a minimum of 25 mm below slab, and remove concrete mound.
- .3 Coordinate with Mechanical and Electrical Divisions for shutting off, disconnecting, removing, and sealing or capping utilities.
- .4 Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.
- .5 Existing Utilities:
 - .1 Demolish existing utilities and below grade utility structures that are within 1500 mm outside of footprint indicated for new construction; abandon utilities outside this area, fill abandoned utility structures with satisfactory soil materials.
 - .2 Demolish and remove existing utilities and below grade utility structures.

3.3 PREPARATION

- .1 Conduct selective demolition and debris removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities:
 - .1 Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from the Departmental Representative and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - .2 Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - .3 Protect existing site improvements, appurtenances, and landscaping to remain.
 - .4 Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
- .2 Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain in accordance with Section 01 51 00, and as follows:
 - .1 Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - .2 Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - .3 Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - .4 Cover and protect furniture, furnishings, and equipment that have not been removed.
- .3 Provide temporary enclosures for protection of existing building and construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities in accordance with Section 01 52 00 - Construction Facilities.
 - .1 Provide temporary weather tight enclosure for building exterior.
 - .2 Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures.

- .3 Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
- .4 Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise in accordance with Section 01 51 00.
- .5 Provide and maintain shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished:
 - .1 Strengthen or add new supports when required during progress of selective demolition.

3.4 POLLUTION CONTROLS

- .1 Dust Control: Provide water mist, temporary enclosures or other suitable methods reviewed and accepted by the Departmental Representative to limit spread of dust and dirt. Comply with governing environmental protection regulations, and as limited below:
 - .1 Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
 - .2 Wet mop floors to eliminate tracking of dirt, wipe down walls and doors of demolition enclosure. Vacuum carpeted areas.
- .2 Remove and transport debris to prevent spillage on adjacent surfaces and areas.
- .3 Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- .4 Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.5 SELECTIVE DEMOLITION

- .1 Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - .1 Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - .2 Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - .3 Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - .4 Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame cutting operations. Maintain fire watch and portable fire suppression devices during flame cutting operations.

- .5 Maintain adequate ventilation when using cutting torches.
 - .6 Remove decayed, vermin infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - .7 Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - .8 Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - .9 Dispose of demolished items and materials promptly.
 - .10 Return elements of construction and surfaces that are to remain to condition existing before selective demolition operations began.
- .2 Comply with the Departmental Representative's requirements for using and protecting elevators, stairs, walkways, loading docks, building entries, and other building facilities during selective demolition operations.
 - .3 Removed and Salvaged Items:
 - .1 Clean salvaged items
 - .2 Pack or crate items after cleaning
 - .3 Identify contents of containers
 - .4 Store items in a secure area until delivery to the Departmental Representative.
 - .5 Transport items to a storage area designated by the Departmental Representative.
 - .6 Protect items from damage during transport and storage
 - .4 Removed and Reinstalled Items:
 - .1 Clean and repair items to functional condition adequate for intended re use. Paint equipment to match new equipment
 - .2 Pack or crate items after cleaning and repairing
 - .3 Identify contents of containers
 - .4 Protect items from damage during transport and storage
 - .5 Reinstall items in locations indicated
 - .6 Comply with installation requirements for new materials and equipment
 - .7 Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated
 - .5 Existing Items to Remain:
 - .1 Protect construction indicated to remain against damage and soiling during selective demolition
 - .2 Items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete
 - .6 Concrete:
 - .1 Demolish in small sections
 - .2 Cut concrete full depth at junctures with construction to remain and at regular intervals, using power driven saw, then remove concrete between saw cuts.

- .3 Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete indicated for selective demolition
- .4 Neatly trim openings to dimensions indicated
- .7 Concrete Slab Reinforcing:
 - .1 Locate location of reinforcing steel in concrete slabs prior to cutting or coring using non-destructive, non-ionizing radio frequency locators.
 - .2 Core concrete slabs to avoid reinforcing steel, electrical conduit or water pipes; adjust core location and coordinate with the Departmental Representative where slab features interfere with core drilling.
 - .3 Notify the Departmental Representative immediately for further instructions where coring or cutting will damage existing slab features.
- .8 Concrete Slabs on Grade: Saw cut perimeter of area to be demolished, then break up and remove.
- .9 Below Grade Construction: Demolish foundation walls and other below grade construction including; but not limited to, the following:
 - .1 Basements
 - .2 Foundation walls
 - .3 Footings
 - .4 Piles to a minimum of 300 mm below grade.
- .10 Masonry:
 - .1 Demolish in small sections
 - .2 Cut masonry at junctures with construction to remain, using power driven saw, then remove masonry between saw cuts
- .11 Air Conditioning Equipment: Remove equipment without releasing refrigerants.

3.6 CLOSEOUT ACTIVITIES

- .1 Patching and Repairs: Promptly repair damage to adjacent construction caused by selective demolition operations and as follows:
 - .1 Patch to produce surfaces suitable for new materials where repairs to existing surfaces are required,
 - .2 Completely fill holes and depressions in remaining existing masonry walls remain with an approved masonry patching material applied according to manufacturer's written recommendations.
 - .3 Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.
- .2 Demolition Waste Disposal: Arrange for legal disposal and remove demolished materials to accredited provincial landfill site or alternative disposal site (recycle centre) except where explicitly noted otherwise for materials being salvaged for re use in new construction and as follows:
 - .1 Promptly dispose of demolished materials.
 - .2 Do not allow demolished materials to accumulate onsite.

.3 Do not burn demolished materials.

END OF SECTION

Part 1 General

1.1 SUMMARY

- .1 This Section includes the following:
 - .1 Demolition and removal of selected portions of interior building components and finishes.
 - .2 Repair procedures for selective demolition operations.
- .2 This section does not include the following:
 - .1 Removal of hazardous materials or asbestos abatement.
 - .2 Demolition of exterior building components or structural elements.
 - .3 Mechanical or electrical equipment, except as required to make minor modifications to allow the work to be completed.
- .3 Drawings contain details that suggest directions for solving some of the major demolition and removal requirements for this project; the Contractor is required to develop these details further by submitting a demolition plan prepared by a professional engineer employed by the Contractor.

1.2 REFERENCE STANDARDS

- .1 American Society for Testing and Materials (ASTM):
 - .1 ASTM C475/C475M-15, Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
- .2 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Assessment Act (CEAA), 2012
 - .2 Canadian Environmental Protection Act (CEPA), 2012
 - .1 Hazardous Materials Information Review Act, 1985

1.3 DEFINITIONS

- .1 Demolish: Detach items from existing construction and legally dispose of them off site, unless indicated to be removed and salvaged or removed and reinstalled.
- .2 Remove and Salvage: Detach items from existing construction and deliver them to the Departmental Representative ready for reuse.
- .3 Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- .4 Existing to Remain: Existing items of construction that are not removed and that are not otherwise indicated as being removed, removed and salvaged, or removed and reinstalled.
- .5 Hazardous Substances: Dangerous substances, dangerous goods, hazardous commodities and hazardous products may include asbestos, mercury and lead, PCB's, poisons, corrosive agents, flammable substances, radioactive substances, or other material that can endanger human health or wellbeing or environment if handled improperly as defined by the Federal Hazardous Products Act (RSC 1985) including latest amendments.

1.4 ADMINISTRATIVE REQUIREMENTS

- .1 Coordination: Coordinate with the Departmental Representative for the material ownership as follows:
 - .1 Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain the Departmental Representative's property, demolished materials shall become the Contractor's property and shall be removed from Project site.
 - .2 Coordinate selective demolition work so that work of this Section adheres to aesthetic criteria established by the Drawings and specified dimensions with all elements in planes as drawn, maintaining their relationships with all other building elements.
 - .3 Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to the Departmental Representative that may be encountered during selective demolition remain the Departmental Representative's property:
 - .1 Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to the Departmental Representative.
 - .2 Coordinate with the Departmental Representative's historical adviser, who will establish special procedures for removal and salvage.
- .2 Pre Demolition Meeting: Convene pre-installation meeting 1 week prior to beginning work of this Section with the Contractor and the Departmental Representative in accordance with Section 01 31 19- Project Meetings to:
 - .1 Confirm extent of salvaged and demolished materials
 - .2 Review the Contractor's demolition plan
 - .1 Verify existing site conditions adjacent to demolition work
 - .2 Coordination with other construction sub trades
- .3 Hold project meetings every week.
- .4 Ensure key personnel attend.
- .5 WMC must provide written report on status of waste diversion activity at each meeting.
- .6 The Departmental Representative will provide written notification of change to meeting schedule established upon contract award 24 hours prior to scheduled meeting.

1.5 ACTION AND INFORMATION SUBMITTALS

- .1 Action Submittals: Provide the following submittals before starting any work of this Section:
 - .1 Schedule of Selective Demolition Activities: Coordinate with Section 01 32 16.19 - Construction Progress Schedules - Bar (GANTT) Charts and indicate the following:
 - .1 Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.

- .2 Coordinate with the Departmental Representative 's ongoing site operations, and limit the number of interruptions during regular business hours.
 - .3 Interruption of utility services.
 - .4 Coordination for shutoff, capping, and continuation of utility services.
 - .5 Use of elevator and stairs.
 - .6 Locations of temporary partitions and means of egress, including for others affected by selective demolition operations.
 - .7 Coordination with the Departmental Representative 's continuing occupancy of portions of existing building and of the Departmental Representative 's partial occupancy of completed Work.
- .2 Demolition Plan: Submit a plan of demolition area indicating extent of temporary facilities and supports, methods of removal and demolition prepared by a professional engineer in accordance with requirements of Authority Having Jurisdiction, and as follows:
 - .1 Proposed Noise Control and Dust Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. the Departmental Representative reserves the right to make modifications where proposed methods interfere with the Departmental Representative's ongoing operation
 - .2 Inventory: Submit a list of items that have been removed and salvaged after selective demolition is complete.
 - .3 Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
 - .4 Pre demolition Photographs: Submit photographs indicating existing conditions of adjoining construction and site improvements prior to starting Work. Include finish surfaces that may be misconstrued as damage caused by selective demolition operations.
 - .2 Informational Submittals: Provide the following submittals when requested by the Departmental Representative:
 - .1 Qualification Data: Submit information for companies and personnel indicating their capabilities and experience to perform work of this Section including; but not limited to, lists of completed projects with project names and addresses, names and addresses of architects and owners, for work of similar complexity and extent.

1.6 QUALITY ASSURANCE

- .1 Regulatory Requirements: Perform work as follows; use most restrictive requirements where differences occur between the municipal, provincial and federal jurisdictions:
 - .1 Provincial and Federal Requirements: Perform work in accordance with governing environmental notification requirements and regulations of the Authority Having Jurisdiction.
 - .2 Municipal Requirements: Perform hauling and disposal operations in accordance with regulations of Authority Having Jurisdiction.

- .2 Qualifications: Provide proof of qualifications when requested by the Departmental Representative:
 - .1 Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project:
 - .1 Conform to the provincial Occupational Health and Safety Act and Regulation.
 - .2 Conform to Workers' Compensation Board Regulations.
 - .3 Conform to City of local municipal bylaws and regulations governing this type of work.

1.7 SITE CONDITIONS

- .1 The Departmental Representative will occupy portions of building immediately adjacent to selective demolition area:
 - .1 Conduct selective demolition so that the Departmental Representative's operations will not be disrupted.
 - .2 Provide not less than 72 hours' notice to the Departmental Representative of activities that will affect the Departmental Representative's operations.
- .2 Maintain access to existing means of egress, walkways, corridors, exits, and other adjacent occupied or used facilities in accordance with Section 01 56 00:
 - .1 Do not close or obstruct means of egress, walkways, corridors, exits, or other occupied or used facilities without written acceptance from authorities having jurisdiction.
- .3 The Departmental Representative assumes no responsibility for condition of areas to be selectively demolished:
 - .1 Conditions existing at time of Pre Bid Site Review will be maintained by the Departmental Representative as far as practical.
 - .2 The Departmental Representative will remove indicated items prior to selective demolition:
- .4 Discovery of Hazardous Substances: It is not expected that Hazardous Substances will be encountered in the Work; immediately notify the Departmental Representative if materials suspected of containing hazardous substances are encountered and perform the following activities:
 - .1 Refer to Section 01 41 00– Regulatory Requirements for directives associated with specific material types.
 - .2 Hazardous materials will be as defined in the Hazardous Materials Act.
 - .3 Hazardous materials will be removed by the Departmental Representative before start of the Work.
 - .4 If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify the Departmental Representative. Hazardous materials will be removed by the Departmental Representative under a separate contract or as a change to the Work.

Part 2 Products

2.1 TEMPORARY SUPPORT STRUCTURES

- .1 Design temporary support structures required for demolition work and underpinning and other foundation supports necessary for the project using a qualified professional engineer registered or licensed in province of the Work.

2.2 DESCRIPTION

- .1 This section of the Work includes, but is not necessarily limited to, the following:
 - .1 Demolition, removal completely from site, and disposal of all identified components, materials, equipment and debris
 - .2 Selective demolition to allow new walls, bulkheads, ceilings and other materials to meet existing construction as indicated
 - .3 All material from demolition shall be removed from site immediately with no salvage, selling, sorting or burning permitted on site
 - .4 Retain items indicated on drawings for re use in new construction

2.3 DEBRIS

- .1 Make all arrangements for transport and disposal of all demolished materials from the site.

2.4 EQUIPMENT

- .1 Provide all equipment required for safe and proper demolition of the building interiors indicated.

2.5 REPAIR MATERIALS

- .1 Use repair materials identical to existing materials:
 - .1 If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - .2 Use a material whose installed performance equals or surpasses that of existing material.
 - .3 Comply with material and installation requirements specified in individual Specification Sections.
- .2 Floor Patching and Levelling Compounds: Cement-based, trowel-able, self-levelling compounds compatible with specified floor finishes; gypsum based products are not acceptable for work of this Section.
- .3 Concrete Unit Masonry: Lightweight concrete masonry units, and mortar, cut and trimmed to fit existing opening to be filled. Provide standard hollow core units, square end units and bond beam units as indicated on drawings.
- .4 Prefinished Sheet Steel: Prefinished sheet steel, colour to match existing radiation cabinets, bent and profiled to match existing radiation cabinets.

- .5 Gypsum Board Patching Compounds: Joint compound to ASTM C475/C475M, bedding and finishing types thinned to provide skim coat consistency to patch and prepare existing gypsum board walls ready for new finishes in accordance with Section 09 21 16 – Gypsum Board Systems.
- .6 Hoarding and Dust Screens: Refer to Section 01 56 00 for stud framing and gypsum board sheathing materials.

2.6 EXISTING MATERIALS

- .1 Items to be retained for re use in new construction include items indicated supplemented as follows:
 - .1 Confirm with the Departmental Representative any materials that appear to be in re-usable condition prior to disposal.
 - .2 Confirm with the Departmental Representative any materials scheduled for re use that are not in re-usable condition prior to installation.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify that utilities have been disconnected and capped.
- .2 Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- .3 Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- .4 Notify the Representative Consultant where existing mechanical, electrical, or structural elements conflict with intended function or design:
 - .1 Investigate and measure the nature and extent of conflict and submit a written report to Representative Consultant.
 - .2 Representative Consultant will issue additional instructions or revise drawings as required to correct conflict.
- .5 Perform surveys as the work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

- .1 Identify and mark all equipment and materials identified to be retained by the Departmental Representative or to be re used in subsequent construction. Separate and store items to be retained in an area away from area of demolition and protect from accidental disposal.
- .2 Post warning signs on electrical lines and equipment that must remain energized to serve other areas during period of demolition.
- .3 Confirm that all electrical and telephone service lines entering buildings are not disconnected.
- .4 Do not disrupt active or energized utilities crossing the demolition site.

- .5 Provide and maintain barricades, warning signs, protection for workmen and the public during the full extent of the Work. Read drawings carefully to ascertain extent of protection required.
- .6 Mark all materials required to be re used, store in a safe place until ready for re installation.
- .7 Adjust all junction boxes, receptacles and switch boxes flush with new wall construction where additional layers to existing construction are indicated.
- .8 Remove permanent marker lines used or found on exposed surfaces and at surfaces indicated for subsequent finish materials. Mechanically remove permanent marker lines and associated substrates where permanent marker lines occur and patch surface. Sealing or priming over permanent marker lines is not acceptable.

3.3 CONCRETE SLAB REINFORCING

- .1 Locate location of reinforcing steel in concrete slabs prior to cutting or coring using non-destructive, non-ionizing radio frequency locators.
- .2 Core concrete slabs to avoid reinforcing steel, electrical conduit or water pipes; adjust core location and coordinate with Engineer where slab features interfere with core drilling.
- .3 Notify the Engineer immediately for further instructions where coring or cutting will damage existing slab features.

3.4 SELECTIVE DEMOLITION

- .1 Demolish and dismantle work in a neat and orderly manner and in strict accordance with all regulations.
- .2 At end of each day's work, leave Work in safe condition so that no part is in danger of toppling or falling.
- .3 Demolish in a manner to minimize dusting and to prevent migration of dust.
- .4 Selling or burning of materials on the site is not permitted.
- .5 Remove concrete bases by cutting and chipping, take precautions against slab cracking and degradation. Grind edges smooth, fill and make level with self levelling grout.
- .6 Fill all openings in concrete block walls with concrete masonry units, coursing to match existing, prepare ready to receive new finishes to match existing.
 - .1 Provide bond beams in new openings cut into existing concrete masonry unit walls.
 - .2 Provide finished end masonry units to patch and repair for new jamb sections in existing concrete masonry unit walls.
- .7 Fill all openings in gypsum board walls with gypsum board and steel framing to match existing, skim coat to make wall smooth and even.
- .8 Demolish existing carpet, resilient flooring and adhesive remnants as follows:
 - .1 Vacuum existing carpet thoroughly, prior to removal, using vacuum equipped with power head/sweeper.

- .2 Apply fine mist water spray to carpet as required to minimize dust generation during removal. Avoid spraying near electrical outlets.
- .3 Demolish existing carpet and resilient floor finishes, remove and dispose of off-site.
- .4 Remove adhesive to the greatest extent possible using scrapping tools and as follows:
 - .1 Do not use solvent based cleaners to remove adhesive remnants.
 - .2 Lightly shot blast or grind floor using machine designed for purpose to remove adhesive remnants.
 - .3 Vacuum floor ready for application of skim coating.
 - .4 Repair all slab depressions and damage with cementitious patching compound.
 - .5 Skim coat floor with minimum 1 mm thick cementitious floor underlayment compatible with new flooring materials.
- .5 Floor substrate shall be smooth, free from ridges and depressions, and adhesive remnants that could telegraph through resilient flooring materials and carpets.
- .6 Recycle materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .9 Demolish existing ceramic tile finishes. Remove setting bed or adhesive to the greatest extent possible using mechanical scrapping tools and as follows:
 - .1 Saw cut edge of tile for clean and even transition joint between existing tile to remain and new flooring materials
 - .2 Lightly shot blast or grind floor to remove remnants of setting materials
 - .3 Vacuum floor ready for application of skim coating
 - .4 Repair all slab depressions and damage with cementitious patching compound. Skim coat floor with minimum 1 mm thick cementitious floor underlayment compatible with new flooring materials
- .10 Demolish completely all ceiling panels and grid as indicated.
- .11 Remove all wall coverings scheduled for demolition. Patch and repair wall surfaces with skim coat of gypsum board joint compound leaving wall surfaces smooth and even ready for new wall finishes.
- .12 Patch and repair all walls, floor and ceilings damaged during demolition with material matching adjacent walls, prepare ready for new finishes.
- .13 Patch and repair all radiation cabinets, mechanical equipment and electrical fixtures damaged or exposed during demolition to match adjacent finished surfaces.

3.5 PATCHING AND REPAIRING

- .1 Floors and Walls:
 - .1 Where walls or partitions that are demolished extend from one finished area into another, patch and repair floor and wall surfaces in the new space.
 - .2 Provide a level and smooth surface having uniform finish colour, texture, and appearance.

- .3 Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform colour and appearance.
 - .4 Patch with durable seams that are as invisible as possible.
 - .5 Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 - .6 Where patching occurs in a painted surface, apply primer and intermediate paint coats over patch and apply final paint coat over entire unbroken surface containing patch. Provide additional coats until patch blends with adjacent surfaces.
 - .7 Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
- .2 Ceilings: patch, repair, or re hang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.6 PROTECTION

- .1 Prevent debris from blocking drainage inlets and systems and ground draining, and protect material and electrical systems and services that must remain in operation.
- .2 Arrange demolition and shoring work so that interference with the use of adjoining areas by the Departmental Representative and users is minimized.
- .3 Maintain safe access to and egress from occupied areas adjoining.
- .4 Provide and maintain fire prevention equipment and alarms accessible during demolition.

3.7 CLEANING

- .1 Waste Management: Separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal, and as follows:
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.
- .2 Divert excess materials from landfill to site approved Representative Consultant.
- .3 Promptly as the Work progresses, and on completion, clean up and remove from the site all rubbish and surplus material. Remove rubbish resulting from demolition work daily.
- .4 Maintain access to exits clean and free of obstruction during removal of debris.
- .5 Keep surrounding and adjoining roads, lanes, sidewalks, municipal rights of way clean and free of dirt, soil or debris that may be a hazard to vehicles or persons.
- .6 Transport material designated for alternate disposal using approved receiving organizations in accordance with applicable regulations.
- .7 Dispose of materials not designated for alternate disposal in accordance with applicable regulations.

END OF SECTION