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**PARKS CANADA**

**Fort Chambly – North-East Wall  
Reconstruction**

**TENDER ISSUE**

**TECHNICAL SPECIFICATIONS**

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**PARKS CANADA**

**Fort Chambly**

**North-East Wall Reconstruction**

**TECHNICAL SPECIFICATIONS**

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**END OF SECTION**

**Part 1            General**

**1.1                RELATED REQUIREMENTS**

- .1        Section 01 33 00 Submittal Procedures.
- .2        Section 01 29 00 Payment Procedures

**1.2                WORK PERIOD**

- .1        The period stipulated in the contract for the performance of work includes the winter period (the months of December, January, February, March, April and May). The Contractor shall take into account a reasonable time within the period of work for weather that prevent or hinder the performance of work. The Contractor shall also make the necessary arrangements to allow completion of the work in the winter.
- .2        If, during the work, serious causes of delays occur beyond its control, the Contractor may request in writing to the Departmental Representative for a time extension providing its reasons. Applications must reach the Departmental Representative at least one month before the expiry of the stipulated period.
- .3        In cases of force majeure and for reasons acceptable to Departmental Representative, the duration of the extension is determined, and the new deadline is recorded by contract amendment.
- .4        Neither the acceptance by the Departmental Representative to change the time stipulated in the contract nor the submission by the Contractor of an accelerated schedule, or the application and execution of unforeseen or additional work or any other cause non-compliance of the stipulated period can be an excuse for the Contractor to claim damages resulting from extension of the work if the Department has not slowed or stopped on its own and explicitly the work of the Contractor.

**1.3                WORK SCHEDULE**

- .1        Work shall be completed Monday to Friday between 6:00 am and 6:00 pm. Depending on the reasons and justifications, the Work could be allowed outside of this period, upon request two (2) weeks in advance.

**1.4                WORK COVERED BY CONTRACT DOCUMENTS**

- .1        Work of this Contract for the construction of retaining walls to the northeast wall, located at Fort Chambly, Chambly, Quebec, comprises, but is not limited to:
  - .1        Construction of reinforced concrete retaining walls behind the existing retaining wall between station 0+50m to station 0+74m and between station 0+160m to station 0+168m. Installation of drainage pipes in the existing wall.
  - .2        Installation of temporary supports, as required, to ensure the stability of the existing wall during construction.
  - .3        Installation of temporary excavation shoring between station 0+160m and station 0+168m in order to limit the excavated area.
  - .4        Dismantling of the existing fence and relocation of the existing fence on top of the north-east retaining wall between station 0+00 m and station 0+74m.

Installation of steel grating on the reinstalled fence. Removal of the top of the existing foundations below ground level.

- .5 Dismantling and reinstallation of the existing chain link fence to allow work between station 0+160m and station 0+168m.
- .6 Clearing and grubbing of the shrubs between station 0+00m and station 0+74m.
- .7 Mature tree cutting and clearing and grubbing of the shrubs to allow work between station 0+160m and station 0+168m.
- .8 Implementation of protection measures for the existing manholes and combined sewer pipes during construction.
- .9 Implementation of traffic control measures.
- .10 Implementation of the environmental protection measures.
- .11 Cleaning and maintenance of the site during and at the end of the Work.

### **1.5 CONTRACT METHOD**

- .1 Construct Work under a single contract with unit price or lump sum price for the work packages identified in the Contract Item List and as identified in section 01 29 00 Payment Procedures. All unit prices and lump sum prices are stipulated prices; the Contractor is committed to completing the work at this price, gain or loss.

### **1.6 WORK BY OTHERS**

- .1 Work of Project executed prior to start of the Work of this Contract, and which is specifically excluded from this Contract:
  - .1 Archeological surveys.
- .2 Work of Project which will be executed after completion of Work of this Contract, and which is specifically excluded from this Contract:
  - .1 Complete removal of the existing fence foundations;
  - .2 Topsoil and seeding.

### **1.7 WORK SEQUENCE**

- .1 Construct Work in a manner to provide for continuous public usage, with the exception of the areas identified in the Contract that must be fenced and protected.

### **1.8 CONTRACTOR USE OF PREMISES**

- .1 Limit use of premises for Work, for storage and access, as identified in the Contract, to allow:
  - .1 Owner occupancy;
  - .2 Public usage.
- .2 Co-ordinate use of the premises under direction of the Departmental Representative.
- .3 Contractor vehicle circulation shall be limited to the access paths indicated in the Contract.
- .4 Pathways within the work zone will be closed to users (pedestrians, cyclists, vehicles). The Contractor is responsible for the necessary signage and fencing to close the paths.

- .5 The Contractor shall develop a protection plan for the pedestrian areas and shall present it to the Departmental Representative for approval 14 days prior to the beginning of the Work.
- .6 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .7 Remove or alter existing work to prevent injury or damage to portions of existing work which remain.
- .8 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by the Departmental Representative.
- .9 At completion of the Work, the existing work shall be in equal or better condition than that which existed before new work started.

#### **1.9 OWNER OCCUPANCY**

- .1 Owner will occupy premises during entire construction period for execution of normal operations.
- .2 Co-operate with Owner in scheduling operations to minimize conflict and to facilitate Owner usage.

#### **1.10 EXISTING SERVICES**

- .1 Submit an isolation request to the City of Chambly, with Departmental Representative in copy, to the attention of Martin Desroches, one (1) week before the start of the excavation work to isolate the combined sewer overflow at station 0+58m approximately. It should be noted that the isolation will not prevent the sewer from overflowing during major rain events.
- .2 Contractor shall inform and provide access to the City of Chambly for inspection of the existing combined sewer overflow prior to backfilling.
- .3 Notify the Departmental Representative and utility companies of intended interruption of services and obtain required permission.
- .4 Establish location and extent of service lines in work zone before starting the Work. Notify the Departmental Representative of findings.
- .5 Where unknown services are encountered, immediately advise the Departmental Representative and confirm findings in writing.
- .6 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off the services in a manner approved by authorities having jurisdiction.
- .7 Record locations of maintained, re-routed and abandoned service lines.

#### **1.11 DOCUMENTS REQUIRED**

- .1 Maintain at job site, one copy of each document as follows:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.

- .4 Reviewed Shop Drawings.
- .5 List of Outstanding Shop Drawings.
- .6 Change Orders.
- .7 Other Modifications to Contract.
- .8 Field Test Reports.
- .9 Copy of Approved Work Schedule.
- .10 Health and Safety Plan and Other Safety Related Documents.
- .11 Other documents as specified.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not used.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES**

- .1    Owner/Contractor Agreement.
- .2    Standard Acquisition Clauses and Conditions (SACC) manual published by Public Works and Government Services Canada (PWGSC).

**1.2                METHOD OF PAYMENT**

- .1    Method of payment:
  - .1    The necessary material supply, labour, tools, equipment, protection, transportation, customs, administration fees, profits, financing, etc. to execute the Work are included in the following items, unless otherwise noted.
  - .2    Will be taken into account for purposes of measurement, the materials actually incorporated in the work and accepted by Departmental Representative.
  - .3    The items presented in the Contract Item List are the following:
    - .1    Site organization: This item is paid on a lump sum basis to offset all expenses necessary for the execution of the Work and the costs not part of other items in the Contract Item List, in accordance with the specifications. The price covers, but is not limited to:
      - .1    Contractor's field offices with services as required (heating and ventilation, electricity, water, furnishings, telephone, internet, etc...).
      - .2    Sanitary facilities.
      - .3    Platforms and scaffolding.
      - .4    Insurance and mobilisation and demobilisation.
      - .5    All that is described in section 01 74 11 Cleaning.
      - .6    Coordination required with the City of Chambly and other stakeholders, including obtaining the required permits to complete the Work.
      - .7    Maintenance of the site and site access.
      - .8    All that is described in section 01 35 29 Health and Safety Requirements and that is not included as part of the other items listed in the Contract Item List.
      - .9    Costs of surveying, stake-out of the work area and expenses not charged to other items in the Contract Item List.
      - .10    Site security costs (if required).
      - .11    Land leasing and/or storage costs for material storage.
      - .12    Protection of existing public utilities during the Work and environmental control.
      - .13    Payment of the site organization shall be prorated based on estimates of the work performed. However, a minimum of 25% shall be paid with the first progress payment.

- .2 Field office for Departmental Representative
  - .1 Measurement for the supply of a field office, its utilities, services and associated equipment shall be by the week for the duration of the work. The Contractor shall also be paid for any portion of a week as one week. Measurement for payment will be made when all utilities and services have been provided.
  - .2 Payment shall be full compensation for all labour, equipment and materials required to supply and maintain a field office.
  - .3 Contractor shall bear all expenses in connection with the above facilities, including but not limited to:
    - .1 Service and connection charges for utilities and services.
    - .2 Heating and ventilating costs.
    - .3 Supply of bottled water.
    - .4 Supply of furnishings.
    - .5 Supply of steps or stairs so as to provide proper access to field office.
    - .6 The provision of at least five (5) parking spaces adjacent to field office, with at least a gravel surface.
    - .7 Winter maintenance (snow removal, sanding).
    - .8 Removal of the field office, clean-up and reinstatement of the area occupied by the field office.
- .3 Traffic control plan
  - .1 Traffic control performed within contractual deadlines is paid on a lump sum basis. The price covers the costs of signage plans, signaling devices, labour, transportation, supply and installation of signs for the duration of the work, commissioning, closing and reopening of the roads and pedestrian pathways, the necessary modifications during the work, covering and uncovering signs, access road maintenance, dismantling, regular maintenance of roads, and all incidental expenses.
  - .2 Cost of traffic control also covers the compensation for the person in charge of the traffic control and its representatives, the staff assigned to the installation of traffic control, the staff assigned to the maintenance of traffic control required by the Contractor's or sub-contractors' activities, required equipment, travel, signalisation adjustments made by the traffic control team, and all incidental expenses.
  - .3 Payment of traffic control plan shall be prorated based on estimates of the work performed. However, a minimum of 25% shall be paid with the first progress payment.
- .4 Environmental protection
  - .1 Payment for environmental protection measures is on a lump sum basis. The price covers the supply of material, labour and all incidental expenses.

- .2 Payment of environmental protection measures shall be prorated based on estimates of the work performed.
- .5 Quality control by contractor
  - .1 Cost of quality control covers all that is described in Section 01 45 00 Quality Control such as Independent Inspection/Testing Agencies, providing equipment, access, labour and facilities in obtaining samples and materials, and all incidental expenses.
  - .2 Payment of quality control measures shall be prorated based on estimates of the work performed.
- .6 Steel interlocking pedestrian barriers
  - .1 Fences are paid by the metre. The price covers the supply of all materials and accessories, their transportation and their installation, removal of the fences when they are no longer required and transporting them offsite. The price also includes all incidental expenses.
- .7 Geotextile for temporary access road
  - .1 Geotextile is paid by the square metre according to the actual surface, without adding overlaps. The price covers the supply of the material, storage, handling, transportation, installation, assembly, fastening pins, commissioning, cleaning and leveling, and all incidental expenses.
  - .2 Price also covers removing the geotextile and cleaning the site at the end of the Work.
  - .3 Payment for the geotextile for temporary access road will be performed in two payments. 75% upon successful installation and 25% upon successful removal.
- .8 Granular pad for temporary access road, including installation and removal
  - .1 Granular materials for the granular pad of temporary access roads are paid by the ton.
  - .2 Price covers the supply of the material, crushing of the stone, loading, weighing, transportation, spreading, compacting, and includes all incidental expenses.
  - .3 Price also covers the removal and cleaning the site at the end of the Work.
  - .4 The payment for the granular pad will be performed in two payments: 70% upon successful installation and 30% upon removal.
- .9 Clearing and grubbing (shrubs)
  - .1 Clearing and grubbing of shrubs is paid by the square metre, measured along the slopes of the land. The price covers the required material and labour, as well as all incidental expenses.
- .10 Clearing and grubbing (trees)
  - .1 Clearing and grubbing of trees is paid per tree. The price covers the required material, labour and all incidental expenses.

- .11 Bracing of excavation
- .1 Bracing of excavation (shoring) is paid on a lump sum basis. The price includes the engineering design and fees, supply of material, labour, supply and installation of piles if required, supervision, removal of excavation bracing, as well as all incidental expenses.
- .12 Earth excavation and disposal
- .1 Earth excavation and disposal is paid by the cubic metre. The volume is determined prior to excavating by the average area method or by another method indicated on the drawings and specifications, by taking into account the existing grade and the theoretical earthwork lines. The original position of the existing grade shall be determined prior to removing tree stumps, and the volume of the stumps shall not be measured.
- .2 The price for earth excavation and disposal cover the loading, transportation, compaction the existing grade and the bottom course, removal of tree stumps and disposal, and all incidental expenses.
- .3 No excavation extending beyond the areas indicated on the plans and specifications shall be paid for. However, locally in the presence of rock excavation or if the Ministry decides to widen or deepen the excavated area, the quantities shall be determined on site and paid as earth or rock excavation, depending on the case.
- .13 Rock excavation
- .1 Volume of rock excavation is measured in its original position and is determined by the average area method, or by another method indicated on the drawings and specifications, down to the subgrade, and is paid by the cubic metre of excavated rock.
- .2 Price includes drilling, including drilling occurring below the foundation line, loading and transportation manual and mechanical scaling, disposal, and all incidental expenses.
- .3 All excavations occurring outside of the theoretical earthwork lines, except the areas which have been approved for widening and deepening, shall be paid for at the price of earth excavation when used.
- .14 Relocating existing fence with new steel grating and anchors, including removals of exposed foundations
- .1 Relocating the existing fence will be paid on a lump sum basis. The price covers removing the existing fence, demolishing the top of the existing foundations below ground surface, supply of all necessary materials and equipment, and their transportation and labour, disposal of materials, installation of anchors and non-shrink grout, reinstallation of the existing fence and installation of the new steel grating on the existing fence, as well as all incidental expenses.

- .2 Excess sections of the existing fence shall be salvaged. The price is included in the relocation cost and covers the precautions to take to salvage the existing fence and to deliver the fence to the Ministry's storage facility.
- .15 Dismantling and reinstallation of existing chain link fence
  - .1 Dismantling and relocation are paid on a lump sum basis. The price of this work covers the implementation for the dismantling of the existing chain link fence, temporary storage and protection thereof, and implementation for the reinstallation of the fence. It also includes any incidental expenses.
  - .2 Payment for the dismantling and reinstallation of the existing chain link fence is made in two installments: 30% following the successful dismantling and 70 % following the successful reinstallation.
- .16 Pipe and filter assemblies
  - .1 The pipe and filter assembly is paid on a lump sum basis. The price covers the supply of the drainage pipes, filters, geotextile, glue and cementitious grout, drilling the holes, performing the work, and all incidental expenses.
- .17 Concrete (footings, walls, lean concrete)
  - .1 Concrete is paid by the cubic metre. Quantities are calculated using the theoretical dimensions. The price covers:
    - .1 Supply of the concrete mix data sheets;
    - .2 Supply and installation of the materials, formwork, chamfers, preparation of existing surfaces to remain, performing the work, concrete curing, construction joints, control joints, correction, surface cleaning and concrete finishing;
    - .3 Supply of shoring, when required;
    - .4 Supply of steel plates for steel formwork, when required;
    - .5 Supply of anchors;
    - .6 Supply of structural steel sections;
    - .7 Supply of waterproofing membranes;
    - .8 Supply of waterproofing joints;
    - .9 All incidental expenses.
- .18 Steel reinforcement
  - .1 Reinforcing steel is paid by the ton according to the quantities installed in the formwork. The linear mass is determined according to the bar size as indicated in CSA G30.18 "Carbon Steel Bars for Concrete Reinforcement". The price covers the material supply, labour and installation of the reinforcing steel, and includes all incidental expenses. Only the support bars indicated on the drawings and specifications will be paid for at the unit price for steel reinforcement. All other support bars shall be included in the price of the work for which they are required.

- .19 Pipe subdrain
- .1 The pipe subdrain is paid on a lump sum basis. The price covers the supply of materials (geotextile, filter material, perforated drain pipe), labour and equipment to perform the work, and includes all incidental expenses.
- .20 Backfill to structures with earth borrow
- .1 Backfilling with earth borrow is paid by the ton. The price covers purchasing the materials, deforestation, stripping the borrow site, extraction, dewatering, loading, weighing, construction of hauling path, transportation, spreading, compacting, restoration of the borrow site, and all incidental expenses.
- .21 Cold weather concreting - Type 1 protection – Provisional
- .1 Type 1 protection is paid by the square metre of surface of unformed new concrete and is covered by insulating material.
- .2 Item is only paid if the work is required based on the meteorological conditions as described in the Cahier des charges et devis généraux by the Ministère des transports de Québec, section 15.4.3.8.
- .22 Cold weather concreting - Type 2 protection – Provisional
- .1 Type 2 protection and concrete heating are paid by the square metre of new concrete in contact with the ground, formwork, construction joint of existing concrete as indicated on the drawings or existing concrete to remain.
- .2 Item is only paid if the work is required based on the meteorological conditions as described in the Cahier des charges et devis généraux by the Ministère des transports de Québec, section 15.4.3.8.
- .23 Heating of concrete constituents – Provisional
- .1 Heating of concrete constituents is paid by the cubic metre of concrete to be heated and the quantities are calculated based on the theoretical dimensions of new concrete as indicated on the drawings and specifications.
- .2 Item is only paid if the work is required based on the meteorological conditions as described in the Cahier des charges et devis généraux by the Ministère des transports de Québec, section 15.4.3.8.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1            Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                RELATED REQUIREMENTS**

- .1        Section 01 11 00 Summary of Work
- .2        Section 01 35 43 Environmental Procedures
- .3        Section 01 45 00 Quality Control
- .4        Section 01 35 29.06 Health and Safety Requirements

**1.2                ADMINISTRATIVE**

- .1        Submit to the Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2        Do not proceed with Work affected by submittal until review is complete.
- .3        Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4        Where items or information is not produced in SI Metric units, converted values are acceptable.
- .5        Review submittals prior to submission to the Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- .6        Notify the Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7        Verify field measurements and affected adjacent Work are co-ordinated.
- .8        Contractor's responsibility for errors and omissions in submission is not relieved by the Departmental Representative's review of submittals.
- .9        Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by the Departmental Representative's review.
- .10      Keep one reviewed copy of each submission on site.

**1.3                SHOP DRAWINGS AND PRODUCT DATA**

- .1        The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2        Submit drawings stamped and signed by professional engineer registered or licensed in the province of Quebec, Canada.
- .3        Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment,

indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.

- .4 Allow 7 days for the Departmental Representative's review of each submission.
- .5 Adjustments made on shop drawings by the Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to the Departmental Representative prior to proceeding with Work.
- .6 Make changes in shop drawings as the Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify the Departmental Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.
- .8 Submissions include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name and address of:
    - .1 Subcontractor.
    - .2 Supplier.
    - .3 Manufacturer.
  - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
  - .5 Details of appropriate portions of Work as applicable:
    - .1 Fabrication.
    - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
    - .3 Setting or erection details.
    - .4 Capacities.
    - .5 Performance characteristics.
    - .6 Standards.
    - .7 Operating weight.
    - .8 Wiring diagrams.
    - .9 Single line and schematic diagrams.
    - .10 Relationship to adjacent work.
- .9 After the Departmental Representative's review, distribute copies.

- .10 Submit one (1) electronic copy of shop drawings for each requirement requested in specification Sections and as the Departmental Representative may reasonably request.
- .11 Submit one (1) electronic copy of product data sheets or brochures for requirements requested in specification Sections and as requested by the Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .12 Submit one (1) electronic copy of test reports for requirements requested in specification Sections and as requested by the Departmental Representative.
  - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
  - .2 Testing must have been within three (3) years of date of contract award for project.
- .13 Submit one (1) electronic copy of certificates for requirements requested in specification Sections and as requested by the Departmental Representative.
  - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
  - .2 Certificates must be dated after award of project contract complete with project name.
- .14 Submit one (1) electronic copy of manufacturer's instructions for requirements requested in specification Sections and as requested by the Departmental Representative.
  - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .15 Submit one (1) electronic copy of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by the Departmental Representative.
- .16 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .17 Submit one (1) electronic copy of Operation and Maintenance Data for requirements requested in specification Sections and as requested by the Departmental Representative.
- .18 Delete information not applicable to project.
- .19 Supplement standard information to provide details applicable to project.
- .20 If upon review by the Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .21 The review of shop drawings by the Departmental Representative is for sole purpose of ascertaining conformance with general concept.
  - .1 This review shall not mean that the Department approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility

for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.

- .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

#### **1.4 SAMPLES**

- .1 Submit for review samples in triplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to the Departmental Representative's site office.
- .3 Notify the Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by the Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to the Departmental Representative prior to proceeding with Work.
- .6 Make changes in samples which the Departmental Representative may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

#### **1.5 CERTIFICATES AND TRANSCRIPTS**

- .1 Immediately after award of Contract, submit the required documents to the Commission de la Santé et Sécurité au Travail (CCST).
- .2 Submit transcription of insurance immediately after award of Contract.

#### **Part 2 Products**

##### **2.1 NOT USED**

- .1 Not Used.

#### **Part 3 Execution**

##### **3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCES**

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Health Canada/Workplace Hazardous Material Information System (WHMIS)
- .3 Province of Quebec
  - .1 An Act Respecting Occupational Health and Safety, R.S.Q., c.S-2.1 (current edition) - Updated [2005].

**1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within seven (7) days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
  - .1 Results of site specific safety hazard assessment.
  - .2 Results of safety and health risk or hazard analysis for site tasks and operation [found in work plan].
- .3 Submit two (2) copies of Contractor's authorized representative's work site health and safety inspection reports to the Departmental Representative weekly.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit WHMIS MSDS - Material Safety Data Sheets.
- .7 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within seven (7) days after receipt of plan. Revise plan as appropriate and resubmit plan to the Departmental Representative within five (5) days after receipt of comments from the Departmental Representative.
- .8 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to the Departmental Representative.
- .10 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

**1.3 FILING OF NOTICE**

- .1 File Notice of Project with Provincial authorities prior to beginning of Work.
- .2 Contractor shall be responsible and assume the Principal Contractor role for each work zone location and not the entire complex. Contractor shall provide a written

acknowledgement of this responsibility with three (3) weeks of contract award. Contractor to submit written acknowledgement to CSST along with Ouverture de Chantier Notice.

- .3 Contractor shall agree to install proper site separation and identification in order to maintain time and space at all times throughout life of project.

#### **1.4 SAFETY ASSESSMENT**

- .1 Perform site specific safety hazard assessment related to project.

#### **1.5 MEETINGS**

- .1 Schedule and administer Health and Safety meeting with the Departmental Representative prior to commencement of Work.

#### **1.6 REGULATORY REQUIREMENTS**

- .1 Do Work in accordance with the authority requirements having jurisdiction over the work site.

#### **1.7 GENERAL REQUIREMENTS**

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

#### **1.8 RESPONSIBILITY**

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Contractor shall be the Principal Contractor as described in the Quebec Act Respecting Health and Safety code for the Construction for only their scope and areas of work as defined and described this project specification.
- .3 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

#### **1.9 COMPLIANCE REQUIREMENTS**

- .1 Comply with R.S.Q., c. S-2.1, an Act respecting Health and Safety, and c. S-2.1, r.4 Safety Code for the Construction Industry.

#### **1.10 UNFORSEEN HAZARDS**

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of the Province having jurisdiction and advise the Departmental Representative verbally and in writing.

**1.11 POSTING OF DOCUMENTS**

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of the Province having jurisdiction, and in consultation with the Departmental Representative.

**1.12 CORRECTION OF NON-COMPLIANCE**

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by the Departmental Representative.
- .2 Provide the Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

**1.13 BLASTING**

- .1 Blasting or other use of explosives is not permitted.

**1.14 POWDER ACTUATED DEVICES**

- .1 Use powder actuated devices only after receipt of written permission from the Departmental Representative.

**1.15 WORK STOPPAGE**

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not used.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES**

- .1    Definitions:
  - .1    Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.
  - .2    Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.

**1.2                ACTION AND INFORMATIONAL SUBMITTALS**

- .1    Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2    Before commencing construction activities or delivery of materials to site, submit Environmental Protection Plan for review and approval by the Departmental Representative.
- .3    Environmental Protection Plan must include comprehensive overview of known or potential environmental issues to be addressed during construction.
- .4    Address topics at level of detail commensurate with environmental issue and required construction tasks.
- .5    Include in Environmental Protection Plan:
  - .1    Name[s] of person[s] responsible for ensuring adherence to Environmental Protection Plan.
  - .2    Name[s] and qualifications of person[s] responsible for manifesting hazardous waste to be removed from site.
  - .3    Name[s] and qualifications of person[s] responsible for training site personnel.
  - .4    Descriptions of environmental protection personnel training program.
  - .5    Erosion and sediment control plan identifying type and location of erosion and sediment controls to be provided including monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws.
  - .6    Drawings indicating locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on site.
  - .7    Traffic Control Plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather.
    - .1    Plans to include measures to minimize amount of material transported onto paved public roads by vehicles or runoff.
  - .8    Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use.

- .1 Plan to include measures for marking limits of use areas and methods for protection of features to be preserved within authorized work areas.
- .9 Spill Control Plan to include procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
- .10 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
- .11 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, are contained on project site.
- .12 Contaminant Prevention Plan identifying potentially hazardous substances to be used on job site; intended actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.
- .13 Waste Water Management Plan identifying methods and procedures for management the discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines.
- .14 Historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands.
- .15 Pesticide treatment plan to be included and updated, as required.

### **1.3 FIRES**

- .1 Fires and burning of rubbish on site is not permitted.

### **1.4 DRAINAGE**

- .1 Develop and submit Erosion and Sediment Control Plan (ESC) identifying type and location of erosion and sediment controls provided. Plan to include monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws.
- .2 Storm Water Pollution Prevention Plan (SWPPP) may be substituted for erosion and sediment control plan.
- .3 Provide temporary drainage and pumping required to keep excavations and site free from water.
- .4 Ensure pumped water into waterways, sewer or drainage systems is free of suspended materials.
- .5 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

### **1.5 SITE CLEARING AND PLANT PROTECTION**

- .1 Protect trees and plants on site and adjacent properties as indicated.

- .2 Protect trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of two (2) m minimum.
- .3 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage.
  - .1 Avoid unnecessary traffic, dumping and storage of materials over root zones.
- .4 Minimize stripping of topsoil and vegetation.
- .5 Restrict tree removal to areas designated by the Departmental Representative.

#### **1.6 WORK ADJACENT TO WATERWAYS**

- .1 It is prohibited to work in the watercourse.
- .2 Construction equipment to be operated on land only.
- .3 It is prohibited to use waterway beds for borrow material.
- .4 Waterways to be kept free of excavated fill, waste material and debris.

#### **1.7 POLLUTION CONTROL**

- .1 Maintain temporary erosion and pollution control features installed under this Contract.
- .2 Control emissions from equipment and plant in accordance with local authorities' emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area.
  - .1 Provide temporary enclosures where as directed by the Departmental Representative.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

#### **1.8 NOTIFICATION**

- .1 Departmental Representative will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.
- .2 Contractor: after receipt of such notice, inform the Departmental Representative of proposed corrective action and take such action for approval by the Departmental Representative.
  - .1 Take action only after receipt of written approval by the Departmental Representative.
- .3 Departmental Representative will issue stop order of work until satisfactory corrective action has been taken.
- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

**Part 2            Products**

**2.1                NOT USED**

- .1            Not Used.

**Part 3            Execution**

**3.1                CLEANING**

- .1            Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1            Leave Work area clean at end of each day.
- .2            Bury rubbish and waste materials on site where directed after receipt of written approval from the Departmental Representative.
- .3            Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.
- .4            Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .5            Waste Management: separate waste materials for reuse and recycling.
  - .1            Remove recycling containers and bins from site and dispose of materials at appropriate facility.

**END OF SECTION**

**Part 1 General**

**1.1 SPECIAL CONDITIONS**

- .1 Fort Chambly National Historic Site of Canada has been recognized by the Canadian government as being one of the sites with the highest heritage value. Therefore, all excavations carried out on this site, where the soil is thought to possibly contain archaeological remains, shall be supervised by an archaeologist selected by the federal government.
- .2 The work required along the existing soil retaining wall, located along the Richelieu River to the east of the Fort Chambly, is included in this section, due to the high probability of discovering archaeological remains during the excavation.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 ACCESS AND COLLABORATION**

- .1 Contractor shall collaborate and comply with the directions given by the Departmental Representative during the excavations to avoid losing any archaeological remains from the site.
- .2 Contractor shall provide access to the archaeologist to the site and collaborate with the archaeologist. The archaeologist or his representative will be on site, as required for the protection and registration of the archaeological remains. His role is to direct the Contractor to avoid losing archaeological information during the excavation and to gather all necessary information regarding the remains.
- .3 Contractor shall allow the team of archaeologists to proceed with the archaeological surveys and examinations.

**3.2 ARCHAEOLOGICAL SURVEYS**

- .1 Contractor shall notify the Departmental Representative, or the archaeologist or his representative in the absence of the Departmental Representative, of all archaeological findings (construction remains, objects and object fragments) on the site. The Contractor shall wait for further direction before resuming the Work in the area where the archaeological remains were found.
- .2 Remains, antiques and other elements which could be of historic, archaeological or scientific significance (remains, objects or object fragments) discovered on the site are the property of the Crown. The Contractor shall protect the discovered items and obtain directions from the Departmental Representative on how to proceed.

### **3.3 WORK STOPPAGES**

- .1 Contractor shall anticipate, at his own costs, work stoppages of 30 minutes per half day of excavation in the areas requiring the presence of an archaeologist (as described in section 1.1 of this specification). If unused, these stoppages may be accumulated and used at another time, if required. The Departmental Representative will keep track of all the unused time in agreement with the Contractor and the archaeologist.
- .2 For a work stoppage exceeding 30 minutes, the Departmental Representative will evaluate the implications and discuss with the Contractor. This may include resuming work in another location to allow the archaeologist to continue his work. If reallocating the Contractor to another area is not possible, the Contractor will be compensated by the banked hours, or if this has been exhausted, according to the agreement made during the first site meeting.

### **3.4 MANUAL EXCAVATION**

- .1 Taking into consideration the possibility of discovering archaeological remains, the Contractor is advised of the possibility of being required to conduct manual excavations, in order to protect the archaeological remains. In this case, the Contractor will be compensated as agreed upon during the first site meeting.

### **3.5 PROTECTION OF WORK AND REMAINS**

- .1 The Contractor shall take all reasonable precautions, during excavation and other work, to protect the remains and allow the archaeologist to examine them. No exemptions will be tolerated. If the Contractor negligently damages an archaeological remain, he will be held responsible and the Departmental Representative will determine the consequences.
- .2 In the case where the Departmental Representative orders the destruction of archaeological findings on the site, the Contractor shall take all the necessary precautions to protect the archaeological elements adjacent to the one being demolished. The demolition of these elements shall be done in a controlled manner after the archaeological surveys have been completed. If any work is damaged during the demolitions, the Departmental Representative shall be advised immediately.

**END OF SECTION**

## **Part 1           General**

### **1.1               REFERENCES**

- .1 Cahier des charges et devis généraux (CCDG) 2014 by the Ministère des transports du Québec.
  - .1 For earth borrow, CCDG Chapter 11.8.1.
  - .2 For material compaction, CCDG Chapter 11.9.
  - .3 For structures, CCDG Chapter 15.
  - .4 For concrete, CCDG Chapter 15.4.2.

### **1.2               DEFINITIONS**

- .1 Quality control, carried out by the Contractor, is the act of verifying if the quality of a product is in accordance with the specifications.
- .2 Quality assurance, carried out by the Departmental Representative, is the act of verifying that the quality control has been properly carried out.

### **1.3               INSPECTION**

- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by the Departmental Representative instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction.

### **1.4               INDEPENDENT INSPECTION AGENCIES**

- .1 Independent Inspection / Testing Agencies will be engaged by the Contractor for field testing services of material compaction and concrete, as part of the Contractor's quality control. These agencies shall carry out all tests indicated in the CCDG Chapter 11.8.1 and Chapter 15.4.2.
- .2 Independent Inspection/Testing Agencies will be engaged by the Departmental Representative if required for quality assurance purposes.
- .3 The Contractor shall supply the required materials to the Independent Inspection/Testing Agencies for the execution of the tests and inspections.
- .4 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.

- .5 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by the Departmental Representative at no cost to the Departmental Representative. Pay costs for retesting and reinspection.

## **1.5 ACCESS TO WORK**

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

## **1.6 PROCEDURES**

- .1 Notify appropriate agency and the Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

## **1.7 REJECTED WORK**

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If in the opinion of the Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by the Departmental Representative.

## **1.8 REPORTS**

- .1 Submit one (1) electronic copy of inspection and test reports to the Departmental Representative.
- .2 Provide copies to subcontractor of work being inspected or tested and to the manufacturer or fabricator of material being inspected or tested.

## **1.9 TESTS AND MIX DESIGNS**

- .1 Furnish test results and mix designs as requested.
- .2 Cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work will be appraised by the Departmental Representative and may be authorized as recoverable.

**1.10 MILL TESTS**

- .1 Submit mill test certificates as required in the Contract.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 INSTALLATION AND REMOVAL**

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Remove from site all such work after use.

**1.2 SITE STORAGE/LOADING**

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

**1.3 CONSTRUCTION PARKING**

- .1 Parking will be permitted on site provided it does not disrupt performance of Work.
- .2 Provide and maintain adequate access to project site.
- .3 Clean runways and taxi areas where used by Contractor's equipment.

**1.4 OFFICES**

- .1 Provide office heated to 22 degrees C, lighted 750 lx and ventilated, of sufficient size to accommodate site meetings and furnished with drawing laydown table.
- .2 Provide marked and fully stocked first-aid case in a readily available location.
- .3 Subcontractors to provide their own offices as necessary. Direct location of these offices.
- .4 Departmental Representative's Site office:
  - .1 Provide temporary office for the Departmental Representative.
  - .2 Inside dimensions minimum 5 m long x 3 m wide x 2.4 m high, with an adjacent office 3.6m long with the same width and height, and with floor 0.3 m above grade, complete with four (4) 50% opening windows and one lockable door.
  - .3 The office shall be supplied with electricity (115/230 volts).
  - .4 Insulate building and provide heating system to maintain 22 degrees C inside temperature at -20 degrees C outside temperature.
  - .5 Finish inside walls and ceiling with plywood, hardboard or wallboard and paint in selected colours. Finish floor with 19 mm thick plywood.
  - .6 Install electrical lighting system to provide min 750 lx using surface mounted, shielded commercial fixtures with 10 % upward light component.
  - .7 Provide private washroom facilities adjacent to office complete with flush or chemical type toilet, lavatory and mirror and maintain supply of paper towels and toilet tissue.
  - .8 Equip office with 1 m x 2 m table, a 1.2 m x 2.4 m table, 12 chairs, one rolling office chair, one garbage can, one water cooler, 6 m of shelving 300 mm wide, one 3 drawer filing cabinet, one plan rack and one coat rack with a shelf.

- .9 Maintain in clean condition.

## **1.5 EQUIPMENT, TOOL AND MATERIALS STORAGE**

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

## **1.6 SANITARY FACILITIES**

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

## **1.7 SITE OFFICE ELECTRICITY**

- .1 The Contractor may plug and unplug the two site offices to the existing electrical network, at his own cost and must pay the cost of the energy consumption.
- .2 The Contractor shall supply and install all the necessary material and equipment to connect to the electrical network.

## **1.8 PROTECTION AND MAINTENANCE OF TRAFFIC**

- .1 Close roads and pathways which will be affected by the Work during construction.
- .2 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs.
- .3 Protect travelling public from damage to person and property.
- .4 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .5 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.
- .6 Construct access and haul roads necessary.
- .7 Dust control: adequate to ensure safe operation at all times.
- .8 Location, grade, width, and alignment of construction and hauling roads: subject to approval by the Departmental Representative.
- .9 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.
- .10 Provide snow removal during period of Work.
- .11 Remove, upon completion of work, haul roads designated by the Departmental Representative.

**Part 2            Products**

**2.1                NOT USED**

.1                Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1                Note Used.

**END OF SECTION**

**Part 1            General**

**1.1                PROJECT CLEANLINESS**

- .1        Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2        Remove waste materials from site at daily regularly scheduled times or dispose of as directed by the Departmental Representative. Do not burn waste materials on site.
- .3        Clear snow and ice from access roads, bank/pile snow in designated areas only.
- .4        Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5        Provide on-site containers for collection of waste materials and debris.
- .6        Provide and use marked separate bins for recycling.
- .7        Dispose of waste materials and debris off site.
- .8        Store volatile waste in covered metal containers, and remove from premises at end of each working day.

**1.2                FINAL CLEANING**

- .1        When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2        Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3        Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4        Remove waste products and debris other than that caused by Owner or other Contractors.
- .5        Remove waste materials from site at regularly scheduled times or dispose of as directed by the Departmental Representative. Do not burn waste materials on site.
- .6        Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7        Broom and clean the paved areas and other exterior surfaces; rake clean other surfaces of grounds.
- .8        Remove snow and ice from access roads.

**1.3                WASTE MANAGEMENT AND DISPOSAL**

- .1        Separate waste materials for reuse and recycling.

**Part 2            Products**

**2.1                NOT USED**

.1                Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1                Not Used.

**END OF SECTION**

## **Part 1 General**

### **1.1 EXTENT OF WORK**

- .1 From STA 0+00m to STA 0+50m, the Contractor shall proceed with close-cut clearing and grubbing of trees and bushes running longitudinally along the retaining wall so to leave the site in a state which will permit the seeding by others.
- .2 From STA 0+50m to STA 0+74m, the Contractor shall proceed with close-cut clearing of trees and bushes running longitudinally along the length of the retaining wall to allow the Work to proceed.
- .3 At STA 0+160m, the Contractor shall cut the isolated mature trees and proceed with close-cut clearing and grubbing of trees and shrubs along the length of the retaining wall to allow the Work to proceed.

### **1.2 DEFINITIONS**

- .1 Close-cut clearing consists of cutting off standing trees, brush, scrub, roots, stumps and embedded logs, removing at, or close to, existing grade and disposing of fallen timber and surface debris.
- .2 Clearing isolated trees consists of cutting off to not more than specified height above ground of designated trees, and disposing of felled trees and debris.
- .3 Grubbing consists of excavation and disposal of stumps and roots to not less than specified depth below existing ground surface.

### **1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Disposal site:
  - .1 The Contractor shall provide the address of the disposal site for the clearing and grubbing waste materials and debris. The disposal site shall be in accordance with the « Politique de protection des sols et de réhabilitation des terrains contaminés » of the MDDEFP.

### **1.4 QUALITY ASSURANCE**

- .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

### **1.5 STORAGE AND PROTECTION**

- .1 Prevent damage to trees, landscaping, natural features, bench marks, water courses and root systems of trees which are to remain.
  - .1 Repair damaged items to approval of the Departmental Representative.
  - .2 Replace trees designated to remain, if damaged, as directed by the Departmental Representative.

**1.6 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse and recycling.
- .2 Consider felled timber from which saw logs, pulpwood, posts, poles, ties, or fuel wood can be produced as saleable timber.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 PREPARATION**

- .1 Inspect site and verify with the Departmental Representative, items designated to remain.
- .2 Locate and protect utility lines: preserve in operating condition active utilities traversing site.
- .3 Keep roads and walks free of dirt and debris.
- .4 Protect the adjacent watercourse from dirt and debris.
- .5 Determine de delineate the topsoil storage area with the Departmental Representative.

**3.2 CLOSE CUT CLEARING**

- .1 Close cut clearing to ground level.

**3.3 ISOLATED TREES**

- .1 Cut off isolated trees as directed by the Departmental Representative at height of not more than 300 mm above ground surface.
- .2 Grub out isolated tree stumps.

**3.4 GRUBBING**

- .1 Remove and dispose of roots larger than 7.5 cm in diameter, matted roots, and designated stumps from indicated grubbing areas.
- .2 Grub out stumps and roots to not less than 200 mm below ground surface.
- .3 Fill depressions made by grubbing with suitable material and to make new surface conform to existing adjacent surface of ground.

**3.5 REMOVAL AND DISPOSAL**

- .1 Remove the cleared and grubbed materials off site to a disposal area in accordance with the « Politique de protection des sols et de réhabilitation des terrains contaminés » of the MDDEFP.

**3.6 FINISHED SURFACE**

- .1 Leave ground surface in condition suitable for immediate grading operations between STA 0+00m and STA 0+50m and permitting the stripping of the topsoil of the other areas, all to be approved by the Departmental Representative.

**3.7 CLEANING**

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**