

PARKS CANADA AGENCY

Saint-Anne-de-Bellevue Canal NHS – Fence installation for
securing of the downstream pier

SPECIFICATIONS VARIOUS WORK

PUBLIC WORKS AND
GOVERNMENTAL SERVICES CANADA

Prepared and verified by:



Philippe Murphy-Laverdière, engineer
Project manager, PWGSC

Prepared by:

Jérémie Houle, junior engineer
Assistant project manager, PWGSC

Project no: R.077243.510 (PWGSC)
August 2019

Downstream pier securing
Projet no R.077243.510 (PWGSC)
August 2019

Page 1 of 1

TABLE OF CONTENTS

<u>DIVISION 01</u>	<u>GENERAL REQUIREMENTS</u>	<u>Number of pages</u>
01 11 01	Work related general information	5
01 29 00	Payment procedures	3
01 33 00	Submittal procedures	5
01 35 29.06	Health and safety requirements	20
01 35 43	Environmental procedures	11

Part 1 General

1.1 WORK SUMMARY

.1 Purpose of the contract:

.1 Fence installation for securing of the downstream pier

The work covered by this contract includes but is not limited to:

.2 Content of the work:

.1 Mobilization in the work area shown on plans

.2 Dismantling, re-using and disposition of the existing fence

.3 Moving of the tables in the area shown on plans

.4 Supply and installation of the partially new fence with the recovered existing fence components.

.5 Rehabilitation of all areas where the contractor worked / circulated as before the work.

1.2 CONSTRUCTION SCHEDULE

.1 The Contractor shall proceed diligently and commence work preparation as soon as his contract is issued by the Department.

.2 To carry out work of (*Fence installation for securing of the downstream pier*), begin work no sooner than October 21st 2019, one week after the closing of the waterway, and complete the work no later than December 1st 2020 including the rehabilitation of the site.

.3 The bidder to whom the Department proposes to award the contract shall submit, within a reasonable period of time by the Departmental Representative, a schedule indicating the various stages of completion and the expected completion date.

.4 According to the schedule of work and in a form acceptable to the Departmental Representative, provide within ten (10) working days of contract award, submission dates for shop drawings, material lists and samples.

.5 Revisions to the progress of work, based on the submitted schedule, will be made at the discretion of the Departmental Representative. The schedule will be updated weekly by the Contractor with the cooperation and approval of the Departmental Representative.

1.3 WORK SCHEDULE

.1 The Contractor responsible for the work must respect appropriate working hours (from 7:00 am to 5:00 pm, Monday to Friday, for a 45-hour week) in order to limit the risk of disturbing residents and the public. The applicable municipal regulations must be followed. Taking measurements of the elements for finalizing shop drawings

1.4 PROTECTION OF EXISTING WORKS

.1 Special attention must be paid by the contractor to avoid damaging existing structures and access.

- .2 The Contractor must refer to the documents attached to the specifications for all special clauses concerning the protection of existing utilities services near the work areas.
- .3 The Contractor is solely responsible for any damage to existing infrastructure and will have to restore it according to the requirements of the Departmental Representative and in compliance with the latest standards in force. All costs associated with the engagement of experts, if any, and the restoration of any deteriorated items are at the expense of the Contractor.

1.5 USE OF A CRANE FOR THE TRANSPORT OF MATERIALS AND EQUIPMENTS

- .1 The Contractor is strongly advised to use a crane to carry out the transport over the lock of the materials and equipment necessary for the completion of work.
- .2 The Contractor must provide a lifting plan signed and sealed by an engineer before being authorized to mobilize a crane on the work site.
- .3 The Contractor must respect the particular constraints related to the use of a crane (maximum load, distance of the supports, mobilization area, etc.) as specified in the documents relating to.

1.6 PARTICULAR ASPECT OF THE SAINTE-ANNE-DE-BELLEVUE LOCK

- .1 The operation dates of the Sainte-Anne-de-Bellevue lock are as follows:
 - .1 Mai 18th 2019 to October 14th 2019;
 - .2 Mai 16th 2020 to October 12th 220.
- .2 At any time during the navigation season, no major impediment to the waterway will be tolerated when the lock is in operation (see website to consult the navigation and operation schedule: <https://www.pc.gc.ca/en/lhn-nhs/qc/annedebellevue>).

1.7 SITE OCCUPANCY BY CONTRACTOR

- .1 Restrict use to areas identified by Departmental Representative for work and storage. More specifically, the contractor must compulsorily mobilize his equipment, storage areas and trailer at the location specified in the plans.
- .2 Entry of materials, equipment and workers shall not be to the detriment of site operations. The island sector will not be in operation for the duration of the works.
- .3 Do not unduly accumulate materials, equipment or material stored or stacked so as not to clutter the premises. Move those that interfere with the work of the Departmental Representative or other contractor.

1.8 MEASUREMENT FOR PAYMENT

- .1 Advise Departmental Representative in good time of operation to permit measurement for payment.

1.9 SITE INSPECTION

- .1 In order to become familiar with the conditions of the project and to obtain all the information necessary for the proper performance of the contract, examine the site of the work. Ignorance of the conditions of the premises will not constitute, in any case, a valid reason to claim an additional payment.

1.10 IMPLANTATION OF WORK

- .1 The fence implantation for the securing of the downstream pier (part A) must be validated jointly between the Contractor and the Departmental Representative on the site before the start of the work. This validation will be made following the underground electrical conduit localization in the sector of the new fence to be installed.

1.11 CLEANING

- .1 Clean the work area as the work progresses. At the end of each shift, and more often if requested by the Departmental Representative, clear the site of waste, stack materials and equipment for reuse, and perform general cleaning of the site. PCA docks must be free of debris at the end of each day's work.
- .2 Upon completion, remove scaffolding, temporary protection and surplus materials / materials. Repair all damage observed at this stage.
- .3 Clean the areas affected by the work under the contract so that they find a state equivalent to at least that existing prior to the work, to the satisfaction of the Departmental Representative.

1.12 SURPLUS MATERIALS AND WASTES

- .1 The Contractor must transport and dispose of all off-site waste from his site at his own expense, at a site approved by the appropriate authorities.
- .2 The contractor is solely responsible for the consequences (damages, claims, etc.) related to the disposition of the rejects and claims that may follow. The owner is not responsible for the disposal of waste materials.

1.13 CLIMATE CONDITIONS

- .1 The contractor will not be able to claim any additional amount for adverse weather conditions including work in winter. It will have to plan its work according to the conditions likely to be met at the time of the realization and to include in its bid the amounts which may be necessary for the resumption of the deficient works caused by the climatic conditions.

1.14 HISTORICAL/ARCHAEOLOGICAL CONTROL

- .1 The work area is considered an important historical site, which contains many archaeological resources. If an archaeological discovery is made during the work, notify the Departmental Representative immediately and wait for written directions before continuing work on the discovery site.

- .2 During the excavation work, an archaeologist hired and paid by the Departmental Representative will be ready to move to the site to determine if there are any archaeological discoveries.
- .3 Before the start of the excavation work, notify the Departmental Representative within 72 hours to ensure the presence of a ministry archeologist.
- .4 The Contractor shall facilitate access to the archaeologist's site and ensure his cooperation in obtaining the desired information.
- .5 In order to complete the archaeological surveys, the Contractor shall provide in his contract, at his own expense, 30 minute stops per half-day of excavation work. Unused shutdown periods will be commutable and usable for a longer break, if necessary and strictly for the same reasons.
- .6 The Contractor shall provide two (2) extended shutdown periods of four hours each in the event of unexpected discoveries requiring an extended shutdown beyond thirty minutes as previously described. The four-hour periods can be used as needed and combined to allow for longer stops. The Contractor must take into account these shutdown periods when drawing up his tender and may not, therefore, claim additional payment due to the application of the said shutdown periods.
- .7 If discoveries require an extended shutdown beyond the allowed time, the Contractor shall assign personnel and machinery to other work, to allow the continuation of archaeological work. If reallocation is not possible, the Contractor will be compensated subject to the approval of the Departmental Representative as to the time and cost actually and directly caused by this situation.
- .8 Given the potential for archaeological discoveries, manual excavations may be required. The presence of archaeological resources may also need to slow down the pace of excavation, in order to identify certain types of remains without damaging them. In such a case, the Contractor will be compensated subject to the approval of the Departmental Representative as to the time and cost actually and directly caused by this situation.
- .9 The Contractor shall take all reasonable precautions during excavations to protect any vestige uncovered and to release it for examination by archaeologists. Canada will not tolerate any derogation in this regard. If the Contractor negligently spoils any vestige, it will be held responsible and Canada will consider the implications.
- .10 Provide a plan that defines the procedures for the identification and protection of known historic wetlands, historic, archaeological, cultural and biological resources on the work site, and / or defines other procedures to be followed in case of unexpected discovery of such elements, on the site or in the area nearby, during construction.
- .11 The plan must include methods to ensure the protection of known or discovered resources, as well as communication channels between the Contractor's personnel and the Departmental Representative

- .12 Any historical / archaeological items discovered at the excavation site must be returned to the Departmental Representative.
- .13 In the event of accidental discoveries of cultural resources made in the absence of an archaeologist, it is imperative that the Contractor suspend work in the immediate area of the discovery and notify the Departmental Representative.
- .14 In the event that the Departmental Representative authorizes the demolition of archaeological items on the site, the Contractor must take the necessary precautions to ensure the protection of adjacent archaeological works that are not to be demolished. The demolition of the elements must be carried out gradually and in a controlled manner after the archaeological surveys have been completed. If works are damaged during work, notify the Departmental Representative immediately.

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 SCHEDULE OF VALUES

- .1 Provide schedule of values supported by evidence as Department Representative may reasonably direct and when accepted by Department Representative, be used as basis for applications for payment.
- .2 Include statement based on schedule of values with each application for payment.
- .3 Support claims for products delivered to Place of Work but not yet incorporated into Work by such evidence as Department Representative may reasonably require to establish value and delivery of products.

1.2 DEFINITION OF LUMP SUM AMOUNT

- .1 The price is a lump sum, that is, the contractor agrees to do the work for that single price at a loss or gain. The lump sum amount for any work must therefore compensate for all work, disbursements, expenses, payments, direct and indirect costs, profits and all responsibilities, obligations, acts, facts, omissions and / or errors attributable to the contractor for this book.
- .2 It follows that, for the same lump sum amount, the contractor must provide the materials, labor, tools, equipment and accessories required to perform the work.
- .3 The lump sum amount also includes the transportation and implementation of materials, as well as all corporate overhead, administration, insurance, contributions, interest, rents, taxes and other incidental expenses.
- .4 It must include losses and damages that may result from the nature of the work, fluctuation of prices and wages, business risks, strikes, delays not attributable to the Department, accidents, action elements of nature and any other fortuitous event.

1.3 COST BREAKDOWN

- .1 At the request of the Departmental Representative, provide a detailed cost breakdown of the contract, also indicating the overall contract price. The detailed cost breakdown must be submitted no later than five (5) working days after contract award, and before the kick-off meeting. Once approved by the Departmental Representative, the cost breakdown will be used as a basis for calculating installments.
 - .1 Site organization, including all other work and materials that are not integral to other items in the cost breakdown, but are necessary for the complete execution of the work.
 - .2 Installation of the fence, including the removal and partial retrieval of the existing fence, as well as all labor and related equipment necessary for the complete execution of the work.
 - .3 Relocation of tables.

.4 Rehabilitation of the areas impacted by works

1.4 SUBSTANTIAL PERFORMANCE OF WORK

- .1 Prepare and submit to Department Representative comprehensive list of items to be completed or corrected and apply for a review by Department Representative to establish Substantial Performance of Work or substantial performance of designated portion of Work. Failure to include items on list does not alter responsibility to complete Contract.
- .2 No later than 10 days after receipt of list and application, Department Representative will review Work to verify validity of application, and no later than 7 days after completing review, will notify Contractor if Work or designated portion of Work is substantially performed.
- .3 Department Representative: state date of Substantial Performance of Work or designated portion of Work in certificate.
- .4 Immediately following issuance of certificate of Substantial Performance of Work, in consultation with Department Representative, establish reasonable date for finishing 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 ADMINISTRATIVE PROCEDURES

- .1 Unless otherwise specified, submit to the Departmental Representative the submittals listed for review. Submit promptly, in orderly and in accordance with the established schedule in such a manner as to not cause delay in the 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 submittals until their 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, the converted values are acceptable.
- .5 Review submittals prior to their 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 the requirements of the Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered as rejected.
- .6 Notify the Departmental Representative, in writing at the time of submission, identifying any deviations from the requirements of Contract Documents and stating the reasons for deviations.
- .7 Ensure the accuracy of the measures taken on site in relation to the adjacent structures affected by the work.
- .8 The Contractor's responsibility for errors and omissions in submission is not relieved by the Departmental Representative's review of submittals.
- .9 The fact that the documents and samples submitted are reviewed by the Departmental Representative does not release the Contractor from its responsibility to transmit samples meeting the requirements of the contract documents.
- .10 Keep one reviewed document copy of each submission on site.

1.2 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 The shop drawings shall indicate, among other things, the materials (concrete, reinforcement bars, structural steel, etc.) to be utilized as well as the methods of construction, handling 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.

- .3 Allow ten (10) days for the Departmental Representative's review of each submission.
- .4 Adjustments made on the shop drawings by the Departmental Representative are not intended to change the Contract Price. If adjustments affect the value of the Work, state such in writing to the Departmental Representative prior to proceeding with the Work.
- .5 Make changes in the shop drawings as the Departmental Representative may require, consistent with the Contract Documents. When resubmitting, notify the Departmental Representative in writing of the revisions other than those requested.
- .6 Accompany the submissions with a transmittal letter, in two (2) copies, containing the following:
 - .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 Any other pertinent data.
- .7 Submissions shall include the following:
 - .1 Creation date and revision dates;
 - .2 Project title and number;
 - .3 Name and address:
 - .1 Subcontractor;
 - .2 Supplier;
 - .3 Manufacturer.
 - .4 The Contractor's stamp, signed by the Contractor's authorized representative certifying the approval of submissions, verification of field measurements and compliance with the Contract Documents;
 - .5 The details of appropriate portions of the Work as applicable:
 - .1 Materials and manufacturing;
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances;
 - .3 Setting or erection details;
 - .4 Characteristics such as power, flow or capacity;
 - .5 Performance characteristics;
 - .6 Reference Standards;
 - .7 Operational mass;
 - .8 Wiring diagrams;
 - .9 Single-line diagrams and block diagrams;
 - .10 Relationship to adjacent work.
- .8 After the Departmental Representative 's review, distribute copies of shop drawings and product data.

- .9 Submit three (3) printed copies and one (1) electronic digitally authenticated copy (PDF/A format) of shop drawings for each requirement as prescribed in the technical specification sections and as the Departmental Representative may reasonably request.
- .10 If no shop drawing is required due to the use of a standard production product, submit three (3) printed copies and one (1) electronic copy (PDF format) of the manufacturer's documentation or datasheets as prescribed in the technical specification sections and as requested by the Departmental Representative.
- .11 Submit three printed copies or one (1) electronic copy (PDF format) of test reports for requirements as prescribed in the specification sections and as requested by the Departmental Representative.
 - .1 Report signed by authorized official of testing laboratory that material, product or system is identical to material, product or system to be provided, has been tested in accord with the specified requirements;
 - .2 Certificates must bear a date after the contract award and indicate the name of the project.
- .12 Submit three printed copies or one (1) electronic copy (PDF format) of certificates for requirements as prescribed in the specification sections and as requested by the Departmental Representative.
 - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of the product, system or material attesting that the product, system or material meets the specification requirements.
 - .2 Certificates must be dated after the contract award and indicate the name of the project.
- .13 Submit three printed copies or one (1) electronic copy (PDF format) of the manufacturer's instructions for requirements as prescribed in the specification sections and as requested by the Departmental Representative.
 - .1 Pre-printed document describing the installation method of the product, system or material, including the special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .14 Submit three (3) printed copies or one (1) electronic copy (PDF format) of the on-site Manufacturer's Field Reports for requirements as prescribed in the specification sections and as requested by the Departmental Representative.
 - .1 Reports of testing and verification actions taken by the manufacturer's representative to confirm the compliance of products, materials, equipment or systems installed to the manufacturer's standards or instructions.
- .15 Submit three (3) printed copies or one (1) electronic copy (PDF format) of the Operation and Maintenance Data for requirements as prescribed in the specification sections and as requested by the Departmental Representative.
- .16 Delete information not applicable to the project.
- .17 Supplement standard information to provide all details applicable to the project.
- .18 If upon review by the Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, the 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 the corrected shop drawings, through the same procedure indicated above, must be performed before the fabrication and installation of Work may proceed.

- .19 The review of shop drawings by the Public Works and Government Services Canada (PWGSC) Representative is for the sole purpose of ascertaining the conformance with the general concept.
 - .1 This review shall not mean that PWGSC approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting, and such review shall not relieve the Contractor of the responsibility for errors or omissions in the shop drawings or of the responsibility for meeting the requirements of the construction and Contract Documents.
 - .2 Without restricting general scope of the foregoing, the Contractor is responsible for the dimensions to be confirmed and correlated at the work site, for information that pertains solely to the fabrication processes or to techniques of construction and installation and for co-ordination of the Work of sub-trades.

1.3 SAMPLES

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

1.4 MOCK-UPS

- .1 Erect mock-ups in accordance with section « 01 45 00 - Quality Control ».

1.5 PHOTOGRAPHS SHOWING THE PROGRESS OF WORK

- .1 Submit photographs showing progress in accordance with Section 01 32 33 - Construction Photographs.

1.6 CERTIFICATES AND TRANSCRIPTS

- .1 Submit documents required by the Health and Safety at Work Act immediately after the contract award.

Part 2 PRODUCTS

2.1 NO OBJECT

.1 No object.

Part 3 EXECUTION

3.1 NO OBJECT

.1 No object.

END OF SECTION

Partie 1 General

GENERAL NOTE: in this section the term “site” includes all the facilities located at the site where the work is taking place (construction site, buildings, access, infrastructure, parkings, bays, etc.).

1.1 REFERENCES

- .1 Province of Québec
 - .1 Loi sur la santé et la sécurité du travail L.R.Q., c. S-2.1 (Act respecting occupational health and safety).
 - .2 Code de sécurité pour les travaux de construction L.R.Q., c. S-2.1, r.4 (Safety code for the construction industry).

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Make submittals in accordance with Section [01 33 00 - Submittal Procedures].
- .2 Submit to Departmental representative, [and the CNESST] the site-specific prevention program, as outlined in the article “GENERAL REQUIREMENTS”, at least 10 days prior to the start of work.
- .3 Departmental representative will review Contractor’s site-specific prevention program and provide comments to Contractor within 10 days after receipt of the document. Revise plan as appropriate and resubmit to Departmental representative within 5 days after receipt of comments from Departmental representative. Departmental representative reserves the right not to authorize the start of work on the construction site as long as the content of the prevention program is not satisfactory. The Contractor shall then update his prevention program and resubmit it to the Departmental representative if the scope of work changes or if the working methods of the Contractor differ from his initial plans or for any other applicable new condition.
- .4 Departmental representative’s review of Contractor’s site-specific prevention program should not be construed as approval of the program and does not reduce the Contractor’s overall responsibility for construction Health and Safety during the work.
- .5 Submit copies of Contractor’s authorized representative’s construction site health and safety inspection reports to Departmental representative, [determine frequency, but at least once a week].
- .6 Submit to Departmental representative within 24 hours a copy of any inspection report, correction notice or recommendation issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit to Departmental representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard.

The investigation report shall contain at least the following:

1. date, time and place of accident;
 2. name of sub-contractor involved in the accident;
 3. number of persons involved and condition of wounded;
 4. witness identification;
 5. detailed description of tasks performed at the time of the accident;
 6. equipment being used to accomplish the tasks performed at the time of the accident;
 7. corrective measures taken immediately after the accident;
 8. causes of the accident;
 9. preventive measures that have been put in place to prevent a similar accident.
- .8 Submit to Departmental representative WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittals [01 47 15 - Sustainable Requirements: Construction] and Section [02 81 01 - Hazardous Materials]. Contractor must also keep one copy of these documents on the construction site.
- .9 Medical Surveillance: where prescribed by legislation, regulation or prevention program, submit certification of medical surveillance for construction site personnel prior to commencement of Work, and submit additional certifications for any new construction site personnel to Departmental representative.
- .10 Submit to Departmental representative an on-site Emergency Response Plan at the same time as the prevention program. The Emergency Response plan must contain the elements listed in the article "GENERAL REQUIREMENTS" of this section.
- .11 Submit to Departmental representative copies of all training certificates required for the application of the prevention program, in particular (if applicable) for the following:
- .1 first aid in the workplace and cardiopulmonary resuscitation;
 - .2 work likely to release asbestos dust (mandatory for all work where asbestos is present);
 - .3 work in confined spaces (mandatory for all work in confined spaces);
 - .4 lockout-tagout procedures (mandatory for all work requiring lockout);
 - .5 safely operating forklift trucks (mandatory for all forklift usage);
 - .6 safely operating elevating work platforms (mandatory for the use of all elevating platforms);
 - .7 any other requirement of Regulations or the safety program.
- In addition, the certifications of the *Cours de santé et sécurité générale pour les chantiers de construction* (General Health and Safety Training for Construction Sites) shall be available on demand on the construction site.
- .12 Engineer's plans and certificates of compliance: Contractor must submit to the Departmental representative and to the *Commission des normes, de l'équité, de la santé et de la sécurité du travail* (CNESST) a copy signed and sealed by engineer of all plans and certificates of compliance required pursuant to the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry) or by any other legislation or regulation or by any other clause in the specifications or in the contract. The

Contractor must also submit a certificate of conformity signed by an engineer once the facility for which these plans were prepared has been completed and before a person uses the facility. A copy of these documents must be available on site at all times.

1.3 FILING OF NOTICE OF CONSTRUCTION SITE OPENING

- .1 Notice of construction site opening shall be submitted to the CNESST before work begins. A copy of such notice and acknowledgment of receipt from the CNESST shall be submitted to Departmental representative.

At the completion of all the work, a notice of construction site closing shall be submitted to the CNESST, with a copy to Departmental representative.

- .2 The Contractor shall assume the role of being the Principal Contractor in the limits of the construction site and elsewhere where he must execute work within the framework of this project. The Contractor shall recognize the responsibility of being the Principal Contractor of the project and identify himself as such in the notice of the construction site opening he provides to the CNESST.
- .3 The Contractor shall accept to divide and identify the construction site adequately in order to define time and space at all times throughout the course of the project.

1.4 HAZARD ASSESSMENT

- .1 The contractor must perform construction site specific safety hazard assessment related to project.

1.5 MEETINGS

- .1 Schedule and administer Health and Safety meeting with Departmental representative prior to commencement of Work.
- .2 Contractor's representative with decision power must attend any meetings at which construction site safety and health issues are to be discussed.

1.6 REGULATORY REQUIREMENTS

- .1 Do the Work in accordance with Section [01 41 00 - Regulatory Requirements].
- .2 Comply with all legislation, regulations and standards applicable to the construction site and its related activities.
- .3 Comply with specified standards and regulations to ensure safe operations on a site containing hazardous or toxic materials.

1.7 COMPLIANCE REQUIREMENTS

- .1 Comply with the *Loi sur la santé et la sécurité du travail* (L.R.Q., c. S-2.1) (Act Respecting Occupational Health and Safety) and the *Code de sécurité pour les travaux de construction* (S-2.1, r. 4.) (Safety code for the construction industry) in addition to respecting all the requirements of this specification manual.

1.8 RESPONSIBILITIES

- .1 The Contractor must acknowledge and assume all the tasks and obligations which customarily devolve upon a principal Contractor under the terms of the *Loi sur la santé et la sécurité du travail* (L.R.Q., ch. S-2.1) (Act Respecting Occupational Health and Safety) and the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry).
- .2 The Contractor must be responsible for health and safety of persons on construction site, safety of property on construction site and for the protection of persons adjacent to construction site and the environment to the extent that they may be affected by conduct of the work.
- .3 No matter the size or location of the construction site, the Contractor must clearly define the limits of the construction site by physical means and respect all specific regulation requirements applicable in this regard. The means chosen to define the limits of the construction site must be submitted to the Departmental representative.
- .4 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 prevention Plan.

1.9 WORK PERFORMED BY EXTERNAL CONTRACTORS

- .1 Not used.

1.10 GENERAL REQUIREMENTS

- .1 Before undertaking the work, prepare a site-specific prevention program based on the hazards identified according to the article "HAZARD ASSESSMENT" and the article "RISKS INHERENT TO THE WORKSITE" in this section. Apply this program in its totality from the start of the project until demobilization of all personnel from the construction site. The prevention program shall take into consideration the specific characteristics of the project and cover all the work to be executed on the construction site.

The safety program must include at least the following:

- .1 company safety and health policy;
- .2 description of the stages of the work;
- .3 total costs, schedule and projected workforce curves;
- .4 flow chart of safety and health responsibilities;
- .5 physical and material layout of the construction site;
- .6 risk assessment for each stage of the work, including preventive measures and the procedures for applying them;
- .7 identification of the preventive measures relative to the specific risks inherent to the worksite indicated in the article "RISKS INHERENT TO THE WORKSITE";
- .8 identification of preventive measures for health and safety of employees and / or public works site as indicated in the article "SPECIFIC REQUIREMENTS FOR THE HEALTH AND SAFETY OF OCCUPANTS AND PUBLIC";
- .9 training requirements;
- .10 procedures in case of accident/injury;

- .11 written commitment from all parties to comply with the safety program;
- .12 construction site inspection checklist based on the preventive measures;
- .13 emergency response plan which shall contain at least the following:
 - .1 construction site evacuation procedures;
 - .2 identification of resources (police, firefighters, ambulance services, etc.);
 - .3 identification of persons in charge of the construction site;
 - .4 identification of the first-aid attendants;
 - .5 communication organizational chart (including the person responsible for the site and the Departmental representative);
 - .6 training required for those responsible for applying the plan;
 - .7 any other information needed, in the light of the construction site's characteristics.

If available the Departmental representative will provide the evacuation procedures to the Contractor who shall then coordinate the construction site procedure with that of the site and submit it to the Departmental representative.

- .2 Departmental representative may respond in writing, where deficiencies or concerns are noted in the prevention program and may request resubmission with correction of deficiencies or concerns.
- .3 In addition to the prevention program, during the course of the work the Contractor shall elaborate and submit to the Departmental representative specific written procedures for any work having a high risk factor of accident (for example: demolition procedures, specific installation procedures, hoisting plan, procedures for entering a confined space, procedures for interrupting electric power, etc.) or at the request of the Departmental representative.
- .4 The Contractor shall plan and organize work so as to eliminate the danger at source or ensure collective protection, thereby minimizing the use of personal protective equipment.
- .5 Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work to be executed.
- .6 All mechanical equipment (for example, but not limited to: hoisting devices for persons or materials, excavators, concrete pumps, concrete saws) shall be inspected before delivery to the construction site. Before using any mechanical equipment, the Contractor shall obtain a certificate of compliance signed by a qualified mechanic dated less than a week prior to the arrival of each piece of equipment on the construction site; the certificate shall remain on the construction site and transmitted to the Departmental representative on demand.
- .7 Ensure all inspections (daily, periodic, annual, etc.) for the hoisting devices for persons or materials required by the current standards are carried out and be able to provide a copy of the inspection certificates to the Departmental representative on demand.
- .8 The Departmental representative can at all times, if he suspects a malfunction or the risk of an accident, order the immediate stop of any piece of equipment and require an inspection by a specialist of his choice.

- .9 The Departmental representative must be consulted for the location of storing gas cylinders and tanks on the construction site.

1.11 RISKS INHERENT TO THE WORKSITE

- .1 In addition to the risks related to the tasks to be carried out, personnel responsible for the execution of the work on the construction site will be exposed to the following risks, inherent to the area where the work will be executed..

At the worksite there is in particular the presence of the following:

- .1 overhead power lines;
- .2 underground services (electricity, gas, steam, aqueduct, etc.);
- .3 trees and landscaping to be conserved and protected;
- .4 potentially unstable soils;
- .5 body of water nearby;
- .6 existing docks and docking system on the walls;
- .7 potentially unstable guardrails.

The Contractor shall process to a risk assessment of the site to validate this information and see if other risks are present on the site. He must include in its prevention program all risks that have been identified.

1.12 SPECIFIC REQUIREMENTS FOR THE HEALTH AND SAFETY OF OCCUPANTS AND PUBLIC

- .1 The worksite is occupied by employees and/or the public. The Contractor shall consider the following specific requirements for the protection of employees and / or the public:
 - .1 Carry out the work by managing the public who could circulate at the top of the railings;
 - .2 Close access to the public in the work area.

These requirements must be included in the Contractor's site-specific safety plan as well as any other measures provided by the Contractor to protect the health and safety of employees and / or the public on the site.

1.13 UNFORESEEN HAZARDS

- .1 Whenever a source of danger not defined in the specifications or identified in the preliminary construction site inspection arises as a result of or in the course of the work, the Contractor must immediately suspend work, notify the person responsible for health and safety on the construction site, take appropriate temporary measures to protect the workers and the public and notify Departmental representative, both verbally and in writing. Then the Contractor must do the necessary modifications to the prevention program or apply the security measures required in order to resume work.

1.14 PERSON IN CHARGE OF HEALTH AND SAFETY

- .1 When the hiring of a safety officer is not required or if this person is hired by the Departmental representative, the Contractor shall designate a competent person to

supervise and take responsibility for health and safety, no matter the size of the construction site or how many workers are present at the workplace. This person shall be on construction site at all times and be able to take all necessary measures to ensure the health and safety of persons and property at or in the immediate vicinity of the construction site and likely to be affected by any of the work. The Contractor shall submit the name of this person to the Departmental representative before the start of work.

1.15 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on construction site in accordance with Acts and Regulations of the Province, and in consultation with Departmental representative.
- .2 At a minimum, the following information and documents must be posted in a location readily accessible to all workers:
 - .1 notice of construction site opening;
 - .2 identification of principal Contractor;
 - .3 company OSH policy;
 - .4 site-specific prevention program;
 - .5 emergency plan;
 - .6 minutes of worksite committee meetings;
 - .7 names of worksite committee representatives;
 - .8 names of the first-aid attendants;
 - .9 action reports and correction notices issued by the CNESST.

1.16 INSPECTION OF THE CONSTRUCTION SITE AND CORRECTION OF NON-COMPLIANCES

- .1 Inspect the construction site and complete the construction site inspection checklist and submit it to the Departmental representative in accordance with the article "ACTION AND INFORMATIONAL SUBMITTALS" in this section.
- .2 Immediately take all necessary measures to correct any situations deemed non-compliant during the inspections mentioned in the previous paragraph or noticed by the authorities having jurisdiction or the Departmental representative or his agent.
- .3 Submit to Departmental representative written confirmation of all measures taken to correct the situation in case of non-compliance in matters pertaining to health and safety.
- .4 The Contractor shall give the safety officer or, where there is no safety officer, the person assigned to safety and health responsibilities, full authority to order cessation and resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and construction site workers and environmental protection take precedence over cost and scheduling considerations.
- .5 The Departmental representative or his agent may order cessation of work if the Contractor does not make the corrections needed to conditions deemed non-compliant in matters pertaining to health and safety. Without limiting the scope of the preceding articles, the Departmental representative may order cessation of work if, in his view, there is any hazard

or threat to the safety or health of construction site personnel or the public or to the environment.

1.17 PREVENTION OF VIOLENCE

- .1 Health and safety management of Public Works and Government Services Canada construction sites includes the implementation of measures designed to protect the psychological health of all persons who access the construction site where the work is taking place. Consequently, in addition to physical violence, verbal abuse, intimidation and harassment are not tolerated on the construction site. Any person who demonstrates such actions or behaviors will receive a warning and/or could be definitely expelled from the construction site by the Departmental representative.

1.18 BLASTING

- .1 Not used.

1.19 POWDER ACTUATED DEVICE

- .1 Not used.

1.20 USE OF PUBLIC ROADS

- .1 Where it is necessary to encroach on a public road for operational reasons or to ensure the security of the workers, the occupants or the public (for example: the use of scaffolding, cranes, excavation work, etc.), the Contractor shall obtain at his own expense any authorizations and permits required by the competent authority.
- .2 The Contractor shall install at his own expense any signage, barricades or other devices needed to ensure the safety and security of the public and the Contractor's own facilities.

1.21 LOCKOUT-TAGOUT

- .1 For all work on electrically or otherwise energized equipment, the Contractor shall draw up and implement a general lockout-tagout procedure and submit it to the Departmental representative.
- .2 Supervisors and all workers concerned by work requiring lockout-tagout must have received training on lockout-tagout procedures by a recognized organization; Contractor shall submit training certificates to the Departmental representative.
- .3 Before starting the lockout-tagout procedure of a piece of equipment on an occupied site, Contractor must coordinate his work with the representative of the site if the interruption of the power sources can have an impact on the operations of the site or on its occupants.
- .4 Contractor must designate a qualified person as responsible for the lockout-tagout and must make sure that that person prepares a lockout-tagout data sheet for each piece of equipment involved. The lockout-tagout data sheet must be submitted to the Departmental representative at least 48 hours before the beginning of the work. The Departmental representative will review the data sheet with the representative of the site if the work takes place in an existing building. The data sheets for lockout-tagout must contain at least the following information:
 - .1 description of work to carry out;

- .2 identification, description and location of the circuit and/or ~~piece~~ of equipment to lockout-tagout;
- .3 identification of energy sources that feeds the ~~piece~~ of equipment;
- .4 identification of each cutout point;
- .5 sequence of lockout-tagout and the release of residual energy as well as the sequence of unlocking;
- .6 list of material needed for the lockout-tagout;
- .7 method of verification of zero energy implementation;
- .8 name and signature of the person who prepared the data sheet.

When required by the Departmental representative, Contractor must record all this information on the site's representative form.

- .5 At the time of lockout-tagout, the person responsible must date the data sheet and ensure that each worker involved in the work on the circuit/~~piece~~ of equipment to lockout-tagout puts his name on the data sheet and signs it.

1.22 ELECTRICAL WORK

- .1 Contractor shall ensure that all electrical work is executed by qualified employees in accordance with the provincial regulation respecting vocational training and qualification.
- .2 Contractor shall respect all requirements of standard CSA Z462 *Workplace Electrical Safety Standard*.
- .3 No repairs or alterations shall be carried out on any live equipment except where complete disconnection of the equipment is not feasible.
- .4 Contractor shall respect all requirements prescribed in paragraph "LOCKOUT-TAGOUT" in this section.
- .5 Contractor shall advise in writing the Departmental representative of all the work that cannot be done with de-energized equipment and obtain his authorization. Contractor shall demonstrate to the Departmental representative that it is impossible to do the work with de-energized equipment and provide all the information necessary to request and obtain an energized electrical work permit (indicate working procedures, arc flash hazard analysis, protective perimeter, protective equipment, etc.) before the beginning of the work, excluding for the exceptions indicated in standard CSA Z462 Workplace electrical safety.
- .6 The energized electrical work permit on must contain at least the following elements:
 - a. description of the circuit and equipment and its location;
 - b. justification for having to do the work in an energized condition;
 - c. description of safe work practices to apply;
 - d. results of the shock hazard analysis;
 - e. limit of the protective perimeter against electric shocks;
 - f. results of the arc flash hazard analysis;
 - g. description of the arc flash protection boundary;

- h. description of the personal protective equipment required;
- i. description of the means to limit access to unqualified persons;
- j. proof that an information session has been carried out;
- k. approval signature of the energized electrical work (by a person in authority or by the owner).

1.23 ASBESTOS EXPOSURE

- .1 It is not anticipated that the work covered by the present specifications involves the manipulation of materials containing asbestos; however, if the Contractor or the Departmental representative or his agent discover materials which are susceptible of containing asbestos, the Contractor must immediately stop the work and advise the Departmental representative. If more investigation demonstrates that the materials do contain asbestos, the Contractor shall comply with the following requirements.
- .2 Prior to starting any work likely to emit asbestos dust, the Contractor must:
 - .1 Provide a written procedure for the work, identifying the risk level of the work (low, moderate, high), as defined in section 3.23 of the *Code the sécurité pour les travaux de construction* S-2.1, r- 4, (Safety code for the construction industry). This procedure must take into account all the requirements of that section 3.23.
 - .2 Submit certificates that demonstrate that all workers involved in the work have received training on asbestos hazards and on the procedure required in the preceding paragraph.
 - .3 Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.24 FUNGAL CONTAMINATION

- .1 It is not anticipated that the work covered by the present specifications involves the manipulation of materials contaminated by mould; however, if the Contractor or the Departmental representative or his agent discover materials which are susceptible of being contaminated by mould, the Contractor must immediately stop the work and advise the Departmental representative. If more investigation demonstrates that the materials do contain mould, the Contractor shall comply with the following requirements.
- .2 Prior to starting any work where workers are likely to be in contact with materials contaminated by mould, the Contractor must:
 - .1 Provide a written procedure for the work which respects all the requirements of the *Code the sécurité pour les travaux de construction* S-2.1, r- 4, (Safety code for the construction industry), as well as the requirements indicated in the document “*Mould Guidelines for the Canadian Construction Industry*” published by the Canadian Construction Association (<http://www.cca-acc.com/documents/electronic/cca82/cca82.pdf>).
 - .2 Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.25 EXPOSURE TO SILICA

- .1 For any interior or exterior work generating silica, the Contractor must respect the following requirements, in addition to those in the *Code de sécurité pour les travaux de construction S-2.1, r.4* (Safety code for the construction industry).
 - .1 Work in wet environment or use tools with the inflow of water in order to reduce dustiness, if not, collect dust at the source and retain it with a high-efficiency filters not to propagate dust in the environment.
 - .2 Clean surfaces and tools with water, never with compressed air.
 - .3 Sand and pickle surfaces by using an abrasive containing less than 1% of silica (also called amorphous silica).
 - .4 Wear individual respiratory and ocular protection equipment during all the operations that could generate silica dust in accordance with the requirements of the *Code de sécurité pour les travaux de construction, S-2.1, r.4* (Safety code for the construction industry).
 - .5 Wear coveralls to prevent contamination outside the construction site.
 - .6 Do not eat, drink, or smoke in a dusty environment.
 - .7 Wash the hands and the face before drinking, eating or smoking.

1.26 SANDBLASTING

- .1 Prior to starting any sandblasting work, the Contractor must:
 - .1 Provide a written procedure of the work that meets the requirements of section 3.20. of the *Code de sécurité pour les travaux de construction, S-2.1, r.4* (Safety code for the Construction Industry).
 - .2 Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.
 - .3 All sanding and sandblasting work shall be done by using an abrasive containing less than 1% of silica.

1.27 LEAD-BASE PAINT REMOVAL

- .1 Not used.

1.28 EXPOSURE TO ANIMAL'S FECAL DROPPINGS

- .1 Not used.

1.29 RESPIRATORY PROTECTION

- .1 Contractor must ensure that all workers who must wear a respirator as part of their duties have received training for that purpose as well as fit testing of their respirator, in accordance with CSA Standard Z94.4 *Selection, use and care of respirators*. Submit the certificates of the fit testingS to the Departmental representative on demand.

1.30 FALL PROTECTION

- .1 Plan and organize work so as to eliminate the risk of fall at the source or ensure collective protection, thereby minimizing the use of personal protective equipment. When personal fall protection is required, workers must use a safety harness that complies with CSA standard CAN/CSA Z-259.10 M90. A safety belt must not be used as fall protection.
- .2 Every person using an elevating platform (scissors, telescopic mast, articulated mast, rotative mast, etc.) must have a training regarding this equipment.
- .3 The use of a safety harness is mandatory for all elevating platforms with telescopic, articulate or rotative mast.
- .4 Define the limits of the danger zone around each elevating platform.
- .5 All openings in a floor or roof must be surrounded by a guardrail or provided with a cover fixed to the floor able to withstand the loads to which it could be exposed, regardless of the size of the opening and the height of the fall it represents.
- .6 Everyone who works within two metres from a fall hazard of three metres or more must use a safety harness in accordance with the requirements of the regulation, unless there is a guardrail or another device offering an equivalent safety.
- .7 Despite the requirements of the regulation, the Departmental representative may require the installation of a guardrail or the use of a safety harness for specific situations presenting a risk of fall less than three metres.

1.31 SCAFFOLDINGS

In addition to the requirements of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Contractor who uses scaffoldings must respect the following requirements:

Foundation

1. Scaffoldings shall be installed on a solid foundation so that it does not slip or rock.
2. Contractors wishing to install scaffoldings on a roof, overhang, canopy or awning shall submit their calculations and loads, as well as plans signed and sealed by an engineer to the Departmental representative and obtain his authorization before beginning installation.

Assembly, bracing and mooring

1. All scaffoldings shall be assembled, braced and moored in accordance with the manufacturer's instructions and the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry).
2. Where a situation requires the removal of part of the scaffoldings (e.g., crosspieces), the Contractor shall submit to the Departmental representative an assembly procedure signed and sealed by an engineer certifying that the scaffolding assembled in that manner will allow the work to be done safely given the loads to which it will be subject.
3. For scaffoldings where the span between two supports is greater than three metres, the Contractor shall provide the Departmental representative an assembly plan signed and sealed by an engineer.

Protection against falls during assembly

1. Workers exposed to the risk of falling more than three metres shall be protected against falls at all times during assembly.

Platforms

1. Scaffolding platforms shall be designed and installed in accordance with the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry).
2. If planks are used, they shall be approved and stamped in accordance with section 3.9.8 of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry)
3. ScaffoldingS of four sections (or six metres) high or more shall have a full platform covering the entire surface between the putlogs every three metres high or fraction thereof, and the components of that platform shall not be moved at any time to create an intermediate landing.

Guardrails

1. A guardrail shall be installed on every landing.
2. Cross braces shall not be considered as guardrails.
3. If the platforms are not covering the entire surface between the putlogs, the guardrail must be installed just above the edge of the platform so that there is no empty horizontal space between the platform and the guardrail.
4. Where scaffoldingS has four sections (or six metres) high or more and full platforms are required, the guardrails shall be installed on each landing at the start of work and shall remain in place until the work is completed.

Access

1. The Contractor shall ensure that access to the scaffoldingS does not compromise worker safety.
2. Where the platforms of the scaffoldingS are comprised of planks, ladders shall be installed in such a way that planks extending beyond the platform do not block the way up or down.
3. Notwithstanding the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), stairs shall be installed on all scaffoldingS that have six or more rows of uprights or is six sections (or nine metres) high or higher.

Protection of the public and occupants

1. When scaffoldingS are installed in a zone accessible to the public, the Contractor shall take the necessary measures to prevent the public from having access to them and, if applicable, to the work or storage area located in the vicinity of these scaffolding.
2. Contractor must install covered walkways, nets or other similar devices to protect workers, the public and the occupants against falling objects. The means of protection must be approved by the Departmental representative.

Engineering plans

1. In addition to those required by the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Departmental representative reserves the right to require engineering plans for other types or configurations of scaffoldingS.
2. A plan signed and sealed by an engineer is required for all scaffoldingS that will be covered with a canvas, a tarpaulin or any other material that has wind resistance.
3. A certificate of conformity signed by an engineer is required in all cases where an engineering plan is required for the installation and this, before anybody uses the facility. A copy of these documents must be available on the construction site at all times.

1.32 **CONFINED SPACES**

- .1 Not used.

1.33 **EXCAVATION WORK**

In addition to the requirements of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Contractor who performs the digging of trenches or excavations must respect the following requirements:

1. Fill out the following form and submit it to the Departmental representative before beginning to excavation work.
2. Submit to the Departmental representative, as appropriate, the following documents:
 - a. plans and specifications, signed and sealed by an engineer, of the shoring needed to be installed for the excavation work; or
 - b. engineer's advice specifying the wall angles of the trench or excavation.



Excavation guidelines

N° _____ of _____

This directive is provided as an example by the Commission de la santé et de la sécurité du travail (CSST). It contains the main instructions that the employer should give to the person responsible for the work on the site and to the operator of the earth-moving machine.

Company name	
Project name	Project no.
Address of the site	Construction start date

Field survey

Chaining or axes : from _____ to _____ Attached plan Plan no. : _____

Working method to use

While making sure the excavation walls do not pose the risk of landslide

- dig and shore according to the plans and specifications of the engineer ;
- dig and shore using a trench box ;
- dig without shoring as long as one of the following conditions is respected:
 - rock is sound;
 - no worker goes down in the trench or excavation;
 - the walls are dug according to the engineer's advice.

Dimensions of excavation (Dig according to the following profile.)

	Minimum	Maximum
H Depth		
Wb Width at bottom		
Width at top		

Safety measures

Deposit the materials at a distance of at least 1.2 metre (4 feet) from top of walls.
 Do not allowed any vehicle to come closer than 3 metres (10 feet) from top of walls.

- Respect the engineer's plan concerning work in the proximity of an existing facility.
- Follow the location plan to locate the underground infrastructures.
- Install signaling devices prescribed in the traffic plan (barriers, visual references, etc.).
- Assign a flag person or more to control the flow of traffic.
- Respect the procedure prescribes for work near power lines.
- Provide protection devices for the workers, such as concrete crash barriers.

Name	Occupation	
Signature	Date	Telephone no.

Directive submitted to the responsible of the work on the site to the operator of the earth-moving machine

DIRECTIVES (0811-01)

1.34 LIFTING LOADS WITH CRANE OR BOOM TRUCK

- .1 Unless specified otherwise, the Contractor must prepare a hoisting plan and submit it to the Departmental representative for all lifting operations done with a crane or a boom truck at least 5 days before these lifting operations begin. The hoisting plan must contain at a minimum the information listed at the end of this article.
- .2 The hoisting plan must be signed and sealed by an engineer for the following lifting operations:
 - a) lifting of concrete panels;
 - b) lifting mechanical/electrical equipment on a roof or on the floor of a building;
 - c) lifting of loads encroaching on the public road;
 - d) lifting large dimensions or very heavy loads;
 - e) all other lifting operation, in accordance with the requirements of the Departmental representative.
- .3 In addition to the above requirements, the Contractor must plan the hoisting operations in a way as to avoid that the loads pass over the occupied zones on the site. When there is no alternative, the hoisting plan must absolutely be signed and sealed by an engineer and must guarantee the security of the occupants in that zone; the plan must also be approved by the Departmental representative. The Departmental representative can, if he deems necessary, require that the work be done at night or on weekends.
- .4 Upon the beginning of the work on the construction site, the Contractor must submit the list of the hoisting plans anticipated for the whole project to the Departmental representative. That list shall be updated as needed if changes occur during the work.
- .5 In addition to the mechanical service inspection certificate, the annual inspection certificate and the crane logbook must be aboard all cranes and boom truck cabs.
- .6 The entire lifting area shall be marked off to prevent the entry of non-authorized persons.
- .7 The Contractor shall carefully inspect all of the slings and lifting accessories and make sure that those in poor condition are destroyed and scrapped.
- .8 Compressed-gas cylinders shall be lifted with a basket specially designed for this purpose.

MINIMUM CONTENT OF HOISTING PLAN

- Sketch indicating at a minimum, the location of the crane, the surrounding facilities, the zone covered by the hoisting operations, the pedestrian's pathways and vehicular routes, the security perimeter, etc.
- Weight of loads
- DimensionS of loads

- List of hoisting devices and weight of each
- Total weight lifted
- Maximum height of obstacles to clear
- Height of loads lifting relative to the surface of the roof (in the case of loads to be placed on roofs)
- Use of guide cables
- Type of crane used
- Crane capacity
- Boom length
- Boom angle
- Crane's radius of action
- Deployment of stabilizers
- Percentage usage of the crane's capacity
- Verification confirmation of hoisting equipment
- Identification of the crane operator and the person responsible for the hoisting operations with date and signatures

1.35 HOT WORK

- .1 Not used.

1.36 ROOFING WORK

- .1 Not used.

1.37 STEEL STRUCTURE ERECTION OR DISMANTLING WORK

- .1 Not used.

1.38 WORK NEAR BODIES OF WATER

- .1 For all work done near a body of water (such as work above water, work on a wharf, work on the edge of a watercourse, etc.), the Contractor must respect the requirement of the following paragraphs in addition to those of *Code de sécurité pour les travaux de construction* (Safety code for the Construction Industry).
- .2 The Contractor must plan his work in a way to implement safety measures to prevent any worker from falling in the water. The use of these measures should be favoured over the wearing of a life jacket.
- .3 Submit the following documents to the Departmental representative before the beginning of the work:

- a) description of the body of water;
- b) description of the work done next to this body of water;
- c) plan of transportation on water adapted to the work and to the characteristics of the body of water;
- d) rescue plan adapted to the work and to the characteristics of the body of water;

Each of the document listed above must contain at a minimum the information required in section 11 of the Code de sécurité pour les travaux de construction (S-2.1, r.4) (Safety code for the Construction Industry).

If there is the possibility that all or part of the work can be done during the winter, the safety measures included in the documents required above must be adapted accordingly.

- .4 The Contractor must submit to the Departmental representative the certificate of training required in article 11.2 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry) for the following individuals:
 - a) the person assigned to prepare the documents required in the preceding paragraph; and
 - b) each person responsible for the transport or rescue operations
- .5 If the rescue plan stipulates the use of a vessel, the Contractor must submit to Departmental representative the competency card or certificate for the individuals in the rescue team for his work, issued by Transport Canada.
- .6 The Contractor must include in his weekly inspection checklist the devices required in the articles 11.4 and 11.5 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).
- .7 Ensure that a rescue vessel moored and in the water is available at each place where a worker may fall in the water. However, a vessel may serve more than one workplace on the same construction site provided the distance between any of these workplaces and the vessel is less than 30 m.
- .8 Where the construction site is a wharf, a pier, a quay or any similar structure, a ladder with at least two (2) rungs below the surface of the water shall be installed on the front of the structure every 60 m.

1.39 INTERIOR USE OF INTERNAL COMBUSTION ENGINES

- .1 Not used.

1.40 TEMPORARY HEATING

1. Not used.

1.41 WORK NEAR OVERHEAD POWER LINES

- .1 When there is an overhead power line in the work zone and that the Contractor chooses to apply paragraph b) of article 5.2.2 of the Code de sécurité pour les travaux de construction

(2.1, r.4) (Safety code for the Construction Industry), a copy of the agreement with the electrical power company and a copy of the work process, required in the article 5.2.2 b), must be submitted to the Departmental representative before the beginning of the work in relation to these documents.

1.42 HEALTH AND SAFETY SUBORDINATION AGREEMENT

Project: _____ **Address:** _____

EXTERNAL CONTRACTOR

I hereby agree to submit to the authority of (name of the Principal Contractor's business) _____, which is the Principal Contractor for the project indicated above during the entire duration of our work on the construction site. Accordingly, I confirm that I have reviewed the Principal Contractor's prevention program, and I agree to:

- inform my employees of the content of the Principal Contractor's prevention program and ensure that its content are complied with at all times;
- apply the prevention program that is specific to the activities that we carry out under this project;
- inform the Principal Contractor of my actions or dealings on the construction site and obtain the Principal Contractor's agreement before the start of work; and
- follow the health and safety directives provided by the representative of the Principal Contractor on the construction site and, depending on requirements, attend training sessions and health and safety meetings organized by the representative of the Principal Contractor.

Name of representative: _____

Name of business: _____

Description of work to be done on the construction site: _____

Approximate dates of work (start-end): _____

Signature: _____ Date: _____

PRINCIPAL CONTRACTOR

I hereby agree to allow the business (name of external contractor) _____ to perform the work under this project indicated above and, as Principal Contractor, to take the necessary steps to protect the health and safety of workers on the construction site. Should the Contractor repeatedly refuse or fail to comply with my directives, I agree to inform PWGSC's Departmental representative of this and to provide documentary evidence of my actions or dealings with the Contractor.

Name of representative: _____

Name of the Principal Contractor's business: _____

Signature: _____ Date: _____

Submit a completed and signed copy to PWGSC's Departmental representative

Part 1 GENERAL

1.1 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. Prevention of pollution and environmental damage covers the protection of soil, water, air, biological and cultural resources; it also includes the management of visual aesthetics, noise, solid, chemical, gaseous and liquid wastes, radiant energy, radioactive materials and other pollutants.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit two (2) copies of WHMIS MSDS in accordance with section 01 35 29.06 - Health and Safety Requirements.
- .3 Before the start of the construction activities or the delivery of materials and equipment on the site, submit an Environmental Protection Plan to the Departmental Representative for review and approval.
- .4 The Environmental Protection Plan must present a comprehensive overview of known or potential environmental issues to be solved during the construction.
- .5 The actions included in the Environmental Protection Plan shall be submitted in a level of detail that is consistent with the environmental issues and with the construction work to be performed.
- .6 The Environmental Protection Plan must include the following:
 - .1 The names of persons to ensure compliance with the plan.
 - .2 The names and qualifications of persons responsible for exit manifests of hazardous waste to evacuate the site.
 - .3 The names and qualifications of those responsible for the training of field personnel.
 - .4 A description of the training program for staff assigned to the environmental protection.
 - .5 An erosion prevention plan and sediment transport, indicating the measures that will be implemented, including construction supervision and reporting to ensure compliance of the measures with federal, provincial and municipal laws and regulations.

- .6 A plan of the work area, in accordance with Section 01 52 00 - Construction Facilities, showing the activities in each part of the construction zone and indicating the restricted use areas and the use prohibited areas.
- .7 A Contingency Plan for spills should include the procedures to implement, the instructions to follow and the reports required in case of an accidental spill of a controlled substance.
- .8 A Disposal Plan of non-hazardous solid waste, including the methods and disposal sites for these solid waste and debris from clearing of work.
- .9 An Air Pollution Prevention Plan outlining the actions to trap dust, debris, materials and waste within the site.
- .10 A Contamination Prevention Plan, indicating the potentially dangerous substances that will be used on the site, the measures to prevent these substances from being suspended in the air or from being introduced into the soil, as well as the detailed measures to be taken for the storage and handling of these substances in compliance with federal, provincial and municipal laws and regulations.
- .11 A Wastewater Management Plan, indicating the methods and procedures to be implemented for the management and disposal of waste water directly from construction activities, such as water used for curing concrete, water used for washing/cleaning, lowering of the groundwater, disinfection, hydrostatic testing and flushing of pipes.
- .12 A Designation and Protection Plan implemented for wetlands and historical, archaeological, cultural and biological resources.
- .13 All the mitigation measures set out in the following articles as well as the measures detailed in the Annex to these specifications.

1.3 FIRES

- .1 Fires and burning of wastes on the site is prohibited.
- .2 Take the necessary measures to ensure the supervision of work and the protection against fire, as instructed.

1.4 WASTE DISPOSAL

- .1 Dispose of all waste in accordance with regulation. Waste cannot be burned or buried on site.
- .2 No debris can be discharged in the aquatic environment. All debris accidentally introduced in the aquatic environment shall be removed as soon as possible.

1.5 DRAINAGE

- .1 Develop and submit an Erosion and Sediment Control Measure Plan, indicating the means that will be implemented, including the construction supervision and reports to ensure the compliance of these measures with the federal, provincial and local laws and regulations.

- .2 A Storm Water Pollution Prevention Plan can replace the Erosion and Sediment Control Measure Plan.
- .3 Provide drainage and temporary pumping necessary to keep the excavations and site dry.
- .4 Ensure that the water pumped to a stream, a sewer or a drain or drainage system does not contain suspended solids.
- .5 Ensure disposal or removal of water containing suspended solids or harmful substances in accordance with local authority requirements.

1.6 WORK ADJACENT TO WATERWAYS

- .1 Do not use construction equipment or snow in waterways.
- .2 Do not extract borrow material from stream bed.
- .3 Do not discharge cuttings, waste materials or debris into waterways.
- .4 Do not pour cement, concrete or wash water from these elements into waterways.
- .5 Hold waste so that it does not fly away.
 - .1 General maintenance, fuel supply, equipment cleaning and oils storage shall be conducted in locations where there is no risk of contamination of the water environment and at a distance of at least 30 meters of any body of water. If it is impossible to respect the distance requirement, the following conditions must be respected:
 - .1 The supply tank must be double-walled and installed on a watertight surface;
 - .2 The tank must be confined to an impermeable structure with a minimum volume equivalent to 150% of the tank capacity;
 - .3 A spill kit shall remain permanently near the tank and its content periodically checked.

1.7 POLLUTION CONTROL

- .1 Maintain temporary facilities to prevent erosion and pollution, and implemented under the present Contract.
- .2 Ensure control of emissions from the machinery and equipment as required by the local authorities.
- .3 Construct temporary shelters to prevent sanding materials and other foreign matter from contaminating air and waterways beyond application area.
- .4 Water dry material and cover waste to prevent wind-blown dust or debris. Suppress dust on the temporary roads.

1.8 NONCOMPLIANCE NOTIFICATION

- .1 A written notice of non-compliance will be issued to the Contractor by the Departmental Representative whenever a non-compliance with a federal,

provincial or municipal law, regulation or permit, or any other element of the environmental protection plan implemented by the Contractor, will be observed.

- .2 After the reception of the notice of non-compliance, the Contractor must propose corrective measures to the Departmental Representative, and must implement them with the approval of the latter.
- .3 The Departmental Representative will order the work stopped until satisfactory corrective actions are implemented.
- .4 No delay and additional costs and no adjustment will be awarded for the work stoppage.

Part 2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

Part 3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

ANNEXE

SPECIFIC MITIGATION MEASURES FOR THE PROJECT

EROSION CONTROL AND SEDIMENT TRANSPORT

- Limit the minimum necessary stripping, clearing, earthwork and leveling work areas.
- Put in place effective measures to limit the supply of sediment from the site to the aquatic environment and their maintenance (eg. Sediment barriers, berms, sediment trap, settling tank, temporary slope stabilization, deflecting water to vegetated areas). The measures must remain effective during the temporary closure of the site and during periods of flooding or heavy rainfall.
- Place the cuttings materials outside the natural high water. If required, contain or stabilize these materials (eg. Waterproof fabric, silt fence) to prevent sediment input to the aquatic environment.

DEBRIS MANAGEMENT

- Do not allow any debris in the aquatic environment. All accidentally introduced debris should be removed as soon as possible.

SITE RESORATION

- Return to the original state the bed and banks of water bodies affected by the work (size of the substrate, bed profile , etc.) following the demobilization of the site on all affected areas (books temporary access , etc.).
- Restore ditches damaged by machinery (flow gradient , shoulder slope , etc.).

PREPARATION AND SITE PLANNING

- Display adequate terrestrial ~~and aquatic~~ signage for users of the construction sector.
- Provide alternative routes and set up required signage around the site for the movement of personnel and pedestrians. ~~and vehicles~~

SUPPLY AND MATERIAL STORAGE

- Give priority to the storage of building materials on paved or concrete areas.
- Limit the storage of materials to previously defined areas.
- Avoid the storage of petroleum products and hazardous materials within 60 m of the shore.
- Ensure that no deleterious substance is immersed or released in an aquatic environment or disposed of in a location that could contaminate the aquatic environment, as required by section 36 (3) of the Fisheries Act and Section 5.1 of the Migratory Birds Convention Act, 1994.
- Store any potentially contaminated material on a sealed surface and cover it to prevent erosion by wind or surface runoff from particles.
- The materials imported to the site and put in place during the rehabilitation works must be clean and free from undesirable species.

ELIMINATION OF THE WASTE

- Dispose of all waste in accordance with regulations. These cannot be burned or buried on site.
- The hazardous residual materials are disposed in a site duly authorized by the MDDELCC.
- No debris will be released to the aquatic environment. Any debris accidentally introduced into the aquatic environment will be removed as soon as possible.
- If required, contaminated material will be stored in watertight containers and covered with tarpaulin to prevent contamination of the soil or the river.
- No new dangerous substances can be thrown away. At the end of the work, the contractor must take back all unused hazardous materials in order to leave the site perfectly clean.
- The Contractor must remove from the site all residual materials, hazardous materials, temporary installations, tools, equipment, machinery and materials found on site in order to leave it perfectly clean.

USE OF MACHINERY

- Avoid leaving the engine of the machinery that is not in use unnecessarily running.
- The equipment used is in good working order, clean and free of leaks. If not, they are immediately removed from the site.
- Limit the circulation of machinery to previously defined areas.
- Wherever possible, no equipment or machinery is left within 30 m of any watercourse or body of water outside working hours. If this is not possible, soil protection measures are provided under the equipment or machinery (retention bowl type).
- Only the use of construction machinery with hydraulic oil system (biodegradable) is allowed for work in water or within 15 m of water.
- The maintenance, refueling and cleaning of machinery and equipment containing petroleum products are carried out on a site designed for this purpose where there is no risk of contamination of soil and groundwater and surface water .
- Oil changes of mobile equipment are forbidden on the construction site, only emptying of non-mobile equipment is allowed. In this case, spill recovery equipment (retention type) or minimal soil protection (eg hydrophobic absorbent pads) are installed.
- Do not discharge water that has been in contact with fresh concrete, uncured cement or partially hardened cement (cleaning water from concrete mixers and other equipment) into the aquatic environment.
- Ensure that the machinery is clean and free of invasive species and weeds when it arrives at the site and maintain it in that state thereafter.
- Respect the work schedule established according to municipal regulations.
- Machinery, equipment and any vehicle are equipped with functional silencers at all times.
- Promote the use of equipment generating a low noise level.

ACCIDENT AND MALFUNCTIONS

- The Contractor must complete an Environmental Emergency Plan outlining the actions that will be taken in the event of environmental incidents.
- Have an accident repair kit on site at all times in order to be able to contain a spill.
- Employees working on the construction site will need to know the location of the kit and have access to it at all times, in addition to receiving training (if necessary) to be able to respond to a spill.
- Characterize soils, backfill materials, sediments or waters contaminated by an accidental spill and dispose of them in accordance with regulations.
- In the event of a spill, report the incident to the responsible authorities and intervene promptly. Contact Environment Canada Emergency Services (1-866-283-2333) and MDDELCC Terrestrial Services (1-866-694-5454).
- The contractor must ensure the use of equipment in good working order that has been maintained in order to reduce the risk of accidents.