



Parcs
Canada

Parks
Canada

TECHNICAL SPECIFICATIONS

LACHINE CANAL NATIONAL HISTORIC SITE OF CANADA

PART 2 LANDSCAPING OF QUAI DE TRANSBORDEMENT BASSIN DU NOUVEAU HAVRE

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PART 1 - GENERAL

1.1 Use of Terms

- .1 Departments or Client: Canada represented by the Parks Canada Agency under the Ministry of Environment of the Government of Canada.
- .2 Departmental Representative: The Property Manager of the unit of the navigable waters of Canada, Parks Canada Agency, or his authorized representative.
- .3 Plans and specifications: all of the call for tenders documents including the specifications, the plans and any drawing and addenda sent subsequently regarding the same structure.

1.2 Interpretation

- .1 Words, terms and abbreviations having a known technical or professional meaning shall be understood according to this meaning in these specifications and these drawings.
- .2 The dimensions indicated in the drawings or borne or represented by a module or lines, arrows or otherwise, shall have priority over the drawings.
- .3 Priority shall be given to the drawings on the largest scale. Likewise, the applicable specifications and drawings shall always be the most recent version.
- .4 All incompatibilities between the specifications and the drawings shall be submitted in writing to the Departmental Representative, so that the latter may render an unappealable decision concerning them, also in writing.
- .5 The specifications and the drawings are complementary, such that whatever is required by one is also required by the other. The structure to be constructed, in accordance with the specifications and the drawings, shall constitute a complete structure in its essential parts, meaning that it shall include, in particular, all the items normally arising from the prescriptions of the specifications and the drawings, if these items are not all specifically mentioned. The Contractor shall not take advantage of any manifestly unintentional error or an omission it might find to the detriment of Canada. When the quality of the structure or the materials is not precisely indicated, the trade

concerned shall provide the best quality.

- 1.3 Request for Information
- .1 Any person interested who wishes to obtain technical or administrative information shall refer to the “Communications - Solicitation Period” clause of the Call for Tenders.
- 1.4 Work Covered by the Contract Documents
- .1 The Work covered by this contract mainly includes, but without limitation thereto:
- .1 Earthworks finishing and landscaping of loading docks.
- .2 In particular, the Work mainly includes, but without limitation thereto:
- .1 Construction of retaining walls with wooden benches and sidewalks;
- .2 The establishment of a stone dust aisle;
- .3 Supply and / or installation of street furniture (benches and trash baskets);
- .4 The embankment, profiling and final grading;
- .5 Planting trees and perennials;
- .6 Sodding of surfaces.
- 1.5 Work Schedule
- .1 The Contractor shall proceed diligently and establish its work schedule to complete the Work within 45 days after the contract award notice. The maximum period of project mobilization is 30 days. Only the commercial benches can be finalized after
The furnitures will be delivered at Parks Canada workshops located on Mill Street, Montreal.
- .2 The Contractor shall submit to the Departmental Representative, within 5 days after the contract award notice, a schedule indicating the various steps of the progress schedule and the projected completion date.
- .3 According to the work schedule and in a form acceptable to the Departmental Representative, provide the dates of submission of the shop drawings, the lists of materials and the samples within 5 days after the contract is awarded.
- 1.6 Inspection of the Site
- .1 Inspect the construction site to become familiar with the conditions of the project and in order to obtain all the necessary information for the proper performance of the contract. Ignorance of the site conditions shall in no case constitute a

valid reason for claiming a payment.

1.7 Permits, Orders,
By-laws and Regulations

- .1 The Contractor shall be required to procure the permits indispensable to the performance of the Work. It shall comply with all the provincial, municipal or federal by-laws and regulations, and any other statute or any other regulation pertaining to this Work. It shall be required to assume responsibility for any offence against the relevant laws, regulations and by-laws.
- .2 The Contractor shall assume (at its own expense) all the obligations regarding the safety measures required by the Quebec Act respecting occupational health and safety, and all the expenses arising from such obligations.

1.8 Existing Services

- .1 Before interrupting services, inform the Departmental Representative and the utility companies concerned and obtain the necessary authorizations.

1.9 Contaminated Soil

- .1 For all the work area, the decontamination of soils have been executed previously.

1.10 Materials Supplied
by Canada

- .1 Wastebaskets. Quantity: 3.
The Contractor shall coordinate in advance with the Departmental Representative to pick up wastebaskets at the Parks Canada workshops located on Mill Street, Montréal.

1.11 Use of the Site
by the Contractor

- .1 The Contractor shall have full access within the limits of the Lachine NHSC for the work area concerned.

1.12 Work Schedules

- .1 The Contractor in charge of the Work shall observe suitable work schedules (e.g., from 7:30 a.m. to 7:00 p.m., Monday to Friday) in order to limit the risks of disturbing the residents and the public. The applicable municipal by-laws shall be observed.

1.13 Transportation and Traffic

- .1 Transportation of materials and heavy vehicle traffic shall be limited to the hours and areas permitted by Ville de Montréal to avoid inconvenience to the residents and the public.
- .2 Heavy machinery traffic preferably shall be limited to the authorized work period.

- 1.14 Siting of Structures
- .3 Traffic on the site will be done so as not to damage the newly paved bike path.
 - .1 The Contractor shall observe the following procedure for siting of the structures to be constructed:
 - .1 Site the alignments, levels and reference points for the structures to be constructed, according to the geometry and elevations indicated in the plans;
 - .2 Perform a joint inspection with the Departmental Representative to optimize the profile of the finished land in order to adapt it to the existing conditions, accounting for the existing structures, existing trees and good drainage, etc.;
 - .3 In case of non-compliance of structures sited by the Contractor, any rework shall be at the Contractor's expense.
 - .4 The georeferenced CAD plan will be made available to the Contractor.
- 1.15 Detour traffic from the bike path
- 1 The cycle track will be closed to traffic during the construction period. Traffic should be diverted to the southern shore of the Lachine Canal between the Wellington Bridge and Lock 3.
 - .2 The Contractor shall ensure that traffic detours for the bike path (already in place) are always sufficient and in place before the mobilization site.
 - .3 The detour plan must provide all barriers and signage necessary to ensure safety for the public.
 - .4 The plan must be consistent with the requirements of the MTQ.
- 1.16 Payment
- .1 Notwithstanding any other article of the specifications, the Contractor shall be remunerated according to an overall lump sum price for all of the Work shown and described in the plans and specifications, Part A of the Tender Form, excluding the unit prices submitted in Part B of the Tender Form.
- 1.17 Existing pile of soils
- .1 An existing pile of clean soil, the level of contamination is less than A criteria according to MDDEP and consistent with the use Residential / Parks in CCME, should be used to complete the final grading of the site.

PART 2 - PRODUCTS

.1 Not used.

PART 3 - EXECUTION

.1 Not used.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Requirements .1 Particular requirements for inspection and testing to be carried out by the laboratory designated by the Departmental Representative are specified under various sections of the Specifications.
- 1.2 Appointment and Payment .1 The Departmental Representative will appoint and pay for the services of a testing laboratory, except as follows:
- .1 Inspections and testing required by laws, ordinances, rules, regulations or orders of public authorities.
 - .2 Inspections and testing performed exclusively for the Contractor's convenience.
 - .3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
 - .4 Mill tests and certificates of compliance.
 - .5 Tests to be carried out by the Contractor under the supervision of the Departmental Representative.
- .2 Where tests or inspections by the designated testing laboratory reveal work not in accordance with contract requirements, the Contractor must pay the cost of additional tests or inspections as required by the Departmental Representative to verify the acceptability of the corrected work.
- 1.3 Contractor's Responsibilities .1 Provide labour, equipment and facilities to:
- .1 Provide access to Work for inspection and testing;
 - .2 Facilitate inspections and tests;
 - .3 Make good work disturbed by inspections and tests;
 - .4 Allow laboratory personnel to store material and cure test samples.
- .2 Notify the Departmental Representative five days in advance of operations to allow for assignment of laboratory personnel and scheduling of tests.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to the testing laboratory.
- .4 Pays costs of uncovering and making good work that is covered before required inspection or testing is completed and approved by the Departmental Representative.

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 Section Content

- .1 Shop drawings and material data safety sheets. Product and work samples.

1.2 Administrative

- .1 Submit promptly and in orderly sequence, so as to avoid delays in the execution of the Work, the submittals required by the Departmental Representative for approval. Failure to submit in ample time is not considered sufficient reason for extension of execution time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work for which submittals are required until a review of all submittals is completed.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information are not produced in SI metric units, converted values are accepted.
- .5 Review submittals prior to submission to the Departmental Representative. This review by the Departmental Representative represents that necessary requirements have been or will be determined and verified, and that each submittal has been checked and coordinated with requirements of the Work and contract documents. Submittals not stamped, signed, dated and identified in respect of the specific project will be returned without being examined and considered rejected.
- .6 Notify the Departmental Representative in writing, at the time of submission, of any deviations from requirements of the contract documents, stating the reasons for such deviations.
- .7 Ensure that field measurements and affected adjacent work are coordinated.
- .8 The Contractor's responsibility for errors and omissions in submissions is not relieved by the Departmental Representative's review of submittals.
- .9 The Contractor's responsibility for deviations in submissions from requirements of contract documents is not relieved by the

Departmental Representative's review.

- .10 Keep one reviewed copy of each submission on site.
 - .11 The submittals must preferably be in PDF format.
- 1.4 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 the Contractor to illustrate details of a portion of the Work.
 - .2 Submit shop drawings bearing the stamp and signature of a qualified professional engineer registered or licensed in the Province of Quebec, Canada.
 - .3 Shop drawings must indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for the completion of the Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of the section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
 - .4 Allow 5 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 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.
 - .6 Make changes in shop drawings the Departmental Representative may require, consistent with the contract documents. When resubmitting, notify the Departmental Representative in writing of any revisions other than those requested.
 - .7 Accompany submissions with a transmittal letter, 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 Other pertinent data.

- .8 Submissions must include the following:
 - .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 the Contractor's authorized representative certifying the approval of submissions, the verification of field measurements and compliance with contract documents;
 - .5 Details of appropriate portions of the 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 of shop drawings and product data.

- .10 Submit six (6) paper copies or one electronic copy in PDF format of shop drawings requested in the 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 the specification sections and as requested by the Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.

- .12 Submit six (6) paper copies or one (1) electronic copy in PDF format of test reports for requirements requested in the specification sections and as required by the Departmental

Representative.

- .1 Report signed by the authorized official of the testing laboratory that materials, products or systems identical to the materials, products or systems to be provided as part of the Work have been tested in accordance with specified requirements.
 - .2 Testing must be conducted within three (3) years of the contract award for the project.
- .13 Submit six (6) paper copies or one (1) electronic copy of certificates for requirements requested in the specification sections and as requested by the Departmental Representative.
- .1 Statements printed on manufacturer's letterhead and signed by a responsible official of the manufacturer attesting that the products, materials and systems provided meet specification requirements.
 - .2 Certificates must be dated after the award of the project contract and indicate the project title.
- .14 Submit six (6) paper copies or one (1) electronic copy of the manufacturer's instructions for requirements in the specification sections and as requested by the Departmental Representative.
- .1 Pre-printed material describing installation of products, materials and systems, including special notices and material safety data sheets concerning impedances, hazards and safety precautions.
- .15 Submit six (6) paper copies or one (1) electronic copy of the manufacturer's field reports for requirements requested in the specification sections and as requested by the Departmental Representative.
- .1 Documentation of the testing and verification actions taken by the manufacturer's representative to confirm compliance of the products, materials or systems with the manufacturer's instructions.
- .16 Submit six (6) paper copies or one (1) electronic copy of operation and maintenance data for requirements requested in the specification sections and as requested by the Departmental Representative.
- .17 Delete information not applicable to the Work.
- .18 Supplement standard information to provide details applicable

to the Work.

- .19 If, upon review of the shop drawings by the Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, the printed copies will be returned and fabrication and installation of the Work may proceed. If shop drawings are rejected, the noted copies will be returned and re-submission of corrected shop drawings, through the same procedure indicated above, must be performed before fabrication and installation of the Work may proceed.

1.5 Samples

- .1 Submit for review three (3) samples as requested in the respective specification sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to the Departmental Representative.
- .3 Notify the Departmental Representative in writing, at the time of submission, of deviations in samples from the requirements of the contract documents.
- .4 Where colour, pattern or texture is a criterion, submit the full range of samples.
- .5 Adjustments made on samples 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.
- .6 Make changes in samples which the Departmental Representative may require, consistent with the contract documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed work will be verified.

1.6 Progress Photographs

- .1 Submit progress photographs to the Departmental Representative, if required.

1.7 Certificates and Transcripts

- .1 Immediately after the award of the contract, submit transcriptions of insurance policies to the Workers'

Compensation Board.

- .2 Submit transcription of insurance policies immediately after the award of 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 Section Content .1 This section includes the necessary measures to ensure the health and safety of the public and personnel, as well as environmental protection, throughout the project.
- 1.2 Related Section .1 Section 01 33 00 - Submittal Procedures
- 1.3 References .1 Canada Labour Code, Part II, Canada Occupational Safety and Health Regulations
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
- .1 Material Safety Data Sheets (MSDS)
- .3 Province of Quebec
- .1 An Act Respecting Occupational Health and Safety, R.S.Q. 1997 (updated 26 July 2005)
- 1.4 Submittals .1 Submit the site-specific Health and Safety Plan to the Departmental Representative, as required by law or regulations, within at least (10) days prior to commencement of the Work. The plan must be updated when the course of the Work differs from the Contractor's initial forecasts. After receipt of the plan and at any time during the Work, the Departmental Representative reserves the right to demand that the plan be modified or completed to better reflect the Work. The Contractor must then make the necessary correctives before beginning the Work.
- .2 Submit the required documents and samples in accordance with section 01 33 00 - Submittal Procedures.
- .3 Submit to the Departmental Representative a copy of the health and safety reports carried out on site by the Contractor's authorized representative.
- .4 Submit, within twenty-four (24) hours, one (1) copy of the directions or reports prepared by federal, provincial and territorial health and safety inspectors.

- .5 Submit, within twenty-four (24) hours, one (1) copy of both incident and accident reports.
- .6 Provide the Departmental Representative with the Material Safety Data Sheets (MSDS) and documentation pertaining to any chemical substance the Contractor or its representative intends to bring to the site.
- .7 The Departmental Representative will review the work Site Health and Safety Plan prepared by the Contractor and provide the latter with comments within five (5) days after receipt of the plan. The Contractor will revise its Health and Safety Plan as appropriate and resubmit it to the Departmental Representative no later than five (5) days after receiving the Departmental Representative's observations.
- .8 The Departmental Representative's review of the Contractor's final Health and Safety Plan should not be construed as approval and does not reduce Contractor's overall responsibility for construction health and safety.
- .9 Medical surveillance: Where prescribed by legislation, regulation or a safety program, submit certification of medical surveillance for site personnel prior to commencement of the Work. Ask the Departmental Representative for additional certification for any new site personnel.
- .10 On-site Contingency and Emergency Response Plan: State standard operating procedures to be implemented during emergency situations.
- .11 Checklist of components to be inspected on a daily basis; description of corrections made.
- .12 Information on personnel training and activities, including the following:
 - .1 The name of the persons and their replacements who are responsible for health and safety issues, on-site risks and the use of individual protection equipment.
 - .2 Work methods that may contribute to reducing health and safety risks; non-hazardous use of technical control methods and on-site equipment; medical surveillance requirements, including recognition of symptoms and signs potentially indicating overexposure to hazards or

risks; site-specific elements of the Health and Safety Plan.

- 1.5 Filing of Notice .1 Before commencement of the Work, file the Notice of Project with the competent authorities. One (1) copy must be submitted to the Departmental Representative.
- 1.6 Assessment of Risks/Hazards .1 Perform site-specific safety risk/hazard assessment related to the execution of the Work.
- 1.7 Meetings .1 Schedule and administer a health and safety meeting with the Departmental Representative before the commencement of Work and ensure its management.
- 1.8 Regulatory Requirements .1 Perform the Work in accordance with the regulatory requirements of the agencies responsible for applying laws and regulations.
- 1.9 Project/Site Conditions .1 Work at the site will involve contact with:
.1 Contaminated soils;
.2 Large concrete parts.
.3 Zones that are flooded and subject to flooding.
.4 Usual risks for this type of site.
- 1.10 General Requirements .1 Develop a written site-specific Health and Safety Plan based on a risk/hazard assessment prior to commencement of site work and continue to implement, maintain and enforce the plan until final demobilization of personnel from the site. The Health and Safety Plan must address project specifications.
.2 The Departmental Representative may respond in writing where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
.3 The exemption or substitution of any provision, in whole or in part, of the Health and Safety guidelines prescribed in this section or the revised site-specific Health and Safety Plan must be submitted in writing to the Departmental Representative. The Departmental Representative will give notification in writing as to whether it accepts these changes or requires improvements.
- 1.11 Responsibility .1 Be responsible for the health and safety of the persons on site,

for the property on site, for the protection of persons adjacent to it as well as the environment, to the extent that they may be affected by the conduct of the Work.

- .2 Comply with and enforce employees' compliance with the safety requirements of contract documents, applicable federal, provincial, territorial and local statutes, regulations and ordinances, and with the site-specific Health and Safety Plan.

1.12 Compliance Requirements

- .1 Comply with the Regulation respecting information on controlled products.
- .2 Comply with the Canada Labour Code, Canada Occupational Safety and Health Regulations.
- .3 Comply with the Occupational Health and Safety Act, R.R.Q.

1.14 Posting of Documents

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

1.15 Correction of
Non-compliance

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

1.16 Blasting

- .1 Blasting is prohibited at all times.

1.17 Power Actuated Devices

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

1.18 Work Stoppage

- .1 Give precedence to the health and safety of the public and site personnel and to the protection of the environment over cost and schedule considerations for the 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 Related Sections .1 Sections 01 33 00 - Submittal Procedures; Section 31 23 10 - Excavating, Trenching and Backfilling
- 1.2 Definitions .1 Pollution and environmental protection: presence of chemical elements or agents, physical or biological, which have a harmful effect on the health and well-being of persons, which alter important ecological balances for humans and impair species that play a significant role for them or which degrade the aesthetic, cultural or historical characteristics of the environment.
- .2 Environmental protection: prevention/control of pollution and stress on the habitat and the environment during construction. The prevention of pollution and environmental damage covers the protection of soils, water, air, biological and cultural resources; it also includes management of visual aesthetics, noise, solid, chemical and gaseous wastes, radiant energy, radioactive materials and other pollutants.
- 1.3 Submittals .1 Submit required submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prior to the commencement of construction activities or the delivery of materials to the site, submit an environmental protection plan to the Departmental Representative for review and approval purposes. The plan must provide a complete overview of known or potential environmental problems to be solved during construction.
- 1.4 Fire .1 Fires and the burning of wastes on the site are prohibited.
- 1.5 Waste Elimination .1 It is not permitted to eliminate wastes or volatile materials such as solvent naphtha, oils and paint solvents by discharging them into a watercourse, storm sewer or sanitary sewer.
- 1.6 Drainage .1 Provide an action plan against sediment erosion and transportation that complies with provincial regulations. This

plan must be presented to the Departmental Representative in accordance with the requirements set out in Section 013300. This plan must indicate the methods to be implemented, including monitoring of the Work and the production of reports, to ensure that the actions taken comply with federal, provincial and municipal laws and regulations.

- .2 A plan to prevent the pollution of rainwater may replace the action plan against sediment erosion and transportation.
- .3 Ensure necessary temporary drainage and pumping to keep excavations and the site dry.
- .4 It is not permitted to pump water containing suspended particulates into a watercourse, a sewer network or an evacuation or drainage system.
- .5 Ensure evacuation or elimination of water containing suspended particulates or harmful substances in accordance with the requirements of local authorities.

1.7 Site Clearing and Plant Protection

- .1 Not used

1.8 Work Near Watercourses

- .1 It is not permitted to use construction materials in watercourses.
- .2 Do not extract borrow materials from the bed of watercourses without the Departmental Representative's authorization.
- .3 Do not unload cut, waste material or rubbish into watercourses.
- .4 Do not convey logs or other construction materials from one side to the other of watercourses.

1.9 Pollution Prevention

- .1 Maintain temporary installations designed to prevent erosion and pollution, and which are installed under this Contract.
- .2 Ensure the control of emissions produced by tools and equipment, in accordance with the requirements of local authorities.
- .3 Build temporary enclosures to prevent sanding materials and other foreign materials from contaminating air and watercourses beyond the application zone.
- .4 Spray dry materials and cover trash to keep the wind from

raising dust or scattering rubbish. Eliminate dust on temporary roads.

1.10 Preservation of Historical
/Archaeological Character

- .1 Develop a plan defining procedures for identifying and protecting wetlands and known historical, archaeological, cultural and biological resources on the site, and/or defining other procedures to follow in the event of the unexpected discovery of such elements, whether on or near the site, during construction.
- .2 The plan must indicate the methods for ensuring protection of known or discovered resources, as well as communication lines between the personnel, the Contractor and the Departmental Representative.

1.11 Archaeology

The Lachine Canal NHSC is considered an archaeological site of national importance. The Contractor must collaborate with Canada when remains are discovered.

- .1 Access and collaboration
 - .1 Cooperate with and comply with all directives from the Departmental Representative during excavation work, so as to avoid any loss of archaeological information on the site.
 - .2 Facilitate access to the Work and collaborate with archaeologists on duty, as needed, and whose role is to guide the Contractor in preventing any loss of archaeological information and collecting information on discovered remains.
 - .3 Allow archaeologists to proceed with archaeological examinations and surveys.
- .2 Archaeological discoveries
 1. If the Contractor believes it has made an archaeological discovery during the Work, it must promptly notify the Departmental Representative and wait for the latter's written directives before continuing with the Work at the discovery site.
 - .2 Remains and antiquities and other elements presenting historical, archaeological or scientific interest, such as cornerstones, commemorative plaques, tablets and other objects (remnants, objects or fragments of objects) found on the site or in zones to be excavated or demolished, remain the property of Canada. Protect any such property and obtain directives from the Departmental

Representative in this regard.

- .3 Work stoppage
 - .1 Provide periods of interruption in mechanical excavation work for each half-day of excavation, where work is suspended at no additional cost. The Contractor's required collaboration in the archaeological work includes one (1) period of work interruption of 4 hours to allow sufficient time for archaeological surveys, as the case may be.
 - .2 If discoveries require a work stoppage extending beyond the time allotted, the Contractor shall assign the machinery to other work to allow continuation of the archaeologists' work. If reassignment is impossible, the Contractor will be compensated.
- .4 Manual excavations for archaeological purposes
 - .1 Given the potential for archaeological discoveries, manual excavations may be required. In such case, the Contractor will be compensated.
- .5 Protection of remains and works
 - .1 During excavations, the Contractor shall take all reasonable precautions to protect any discovered remains and clear them for examination by archaeologists. Canada will not tolerate any deviation in this respect. If the Contractor causes any remains to deteriorate through its negligence, it shall be held responsible and Canada will assess the impacts.
 - .2 During demolition work, take all necessary precautions to ensure protection of adjacent works not slated for demolition. Carry out demolitions progressively and in a controlled manner. Carefully demolish items in which materials are to be recovered for future use. If works are damaged during the Work, promptly notify the Departmental Representative.

- 1.12 Notice of Non-Compliance .1 The Departmental Representative shall issue a written notice of non-compliance to the Contractor whenever a determination is made of non-compliance with a federal, provincial or municipal law, regulation or permit, or with any other component of the Environmental Protection Plan implemented by the Contractor.
- .2 After receiving a notice of non-compliance, the Contractor shall propose corrective actions to the Departmental Representative and implement them with the latter's approval.
- .3 The Departmental Representative shall order the Work to be stopped until satisfactory corrective actions are taken.
- .4 No additional extension or adjustment shall be granted in respect of 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

PART 1 - GENERAL

1.1 Section Content

- .1 This section includes all the facilities necessary for the project, namely:
 - .1 Storage on-site storage of materials, equipment and tools, sanitary installation, signaling construction, cleaning
 - .2 Ineligible: parking on site. An area designated first Richmond Street.

1.2 Related Sections

- .1 Sections 01 33 00 - Submittal Procedures

1.3 References

- .1 Canadian Standards Association (CSA International)
 - .1 CSA-A23.1/A23.2-[04], Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete
 - .2 CSA-0121-[M1978(R2003)], Douglas Fir Plywood
 - .3 CAN/CSA-Z321-F96 (C2001), Signs and Symbols for the Occupational Environment

1.4 Submittals

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.5 Installation and Removal

- .1 Prepare a site plan indicating the proposed location and dimensions of the area to be fenced and used by the Contractor, the avenues of ingress/egress to the fenced area and details of the fence installation.
- .2 Identify areas which have to be gravelled to prevent tracking of mud.
- .3 Indicate use of supplemental or other staging area.
- .4 Provide construction facilities in order to execute work expeditiously.
- .5 Remove from site all such work after use.

1.6 Construction Parking

- .1 It is not allowed to be parked on site.
- .2 Develop suitable access roads to the site and maintain.

- .3 Protect the oil coating the bike path and the surrounding area. The method of protection shall be submitted in writing and approved by the Departmental Representative.
 - .4 Clean tracks and roads if equipment machinery has been used on it.
 - 1.7 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 a manner that causes the least interference with work activities.
 - .3 The general maintenance and fuel supply of engines and the handling and storage of hydrocarbons must be performed outside the Parks Canada site at a minimum distance of 30 metres from the shore.
 - 1.8 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.
 - 1.9 Construction Signage
 - .1 Not used
 - 1.10 Cleaning
 - .1 Perform daily clean-up operations in accordance with Section 01 74 11 - Clean-up.
 - .2 Remove construction debris, waste materials and packaging materials from the work site daily.
 - .3 Clean dirt or mud tracked onto paved or surfaced roadways.
 - .4 Store materials resulting from demolition activities.

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 Section Content

- .1 Cleaning to be done during execution of the Work.

1.2 References

- .1 Public Works Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC)-ID: R0202D, Title: General Conditions "C", in effect as of May 14, 2004.

1.3 Site Cleanliness

- .1 Maintain the site in tidy condition, free from any accumulation of waste products and debris, including those generated by subcontractors.
- .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 the site.
- .3 Clear snow and ice from access to the building. Bank/pile snow in areas designated by the Departmental Representative.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for the disposal of waste and debris.
- .5 Provide on-site containers for the collection of waste materials and debris.
- .6 Provide and use marked separate bins for recycling.
- .7 Store volatile waste in covered metal containers, and remove from premises at the end of each working day.
- .8 Use only cleaning materials recommended by the manufacturer of the surface to be cleaned, and as recommended by the cleaning material manufacturer.
- .9 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

1.4 Final Cleaning

- .1 When the Work is substantially performed, remove surplus products, tools, construction machinery and equipment not required for the performance of the remaining Work.

- .2 Remove waste products and debris and leave the site clean and suitable for occupancy.
 - .3 Prior to the final inspection, remove surplus products, tools, construction machinery and equipment.
 - .4 Remove waste products and debris, including those generated by subcontractors.
 - .5 Remove waste materials from the 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 the disposal of waste and debris.
 - .7 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments and walls.
 - .8 Clean lighting reflectors, lenses, and other lighting surfaces.
 - .9 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
 - .10 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
 - .11 Remove dirt and other disfigurements from exterior surfaces.
 - .12 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.
 - .13 Remove snow and ice from access to the building.
- 1.5 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 Sections Includes .1 Section includes the information for closeout submittals, including :
- .1 Submittals, format, contents – each volume, recording actual site conditions, equipment and systems, materials and finishes, spare parts, maintenance materials, special tools, storage, handling and protection, warranties and bonds.
- 1.2 Related Sections .1 Section 01 33 00 – Submittal Procedures.
- 1.3 Submittals .1 Submittals : in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prepare instructions and data using personnel experienced in maintenance and operation of described products.
 - .3 Copy will be returned after final inspection with the Departmental Representative's comments.
 - .4 Revise content of documents as required prior to final submittal.
 - .5 Two (2) weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, four (4) final copies of operating and maintenance manuals in English and French.
 - .6 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
 - .7 Furnish evidence, if requested, for type, source and quality of products provided.
 - .8 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
 - .9 Pay costs of transportation.
- 1.4 Format .1 Organize data as instructional manual.

- .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 mm x 279 mm with spine and face pockets.
- .3 When multiple binders are used correlate data into related consistent groupings. Identify contents of each binder on spine.
- .4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5 Arrange content by process flow, under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .9 Provide one (1) 1:1 scaled CAD file “dwg” format on CD of the work completed in the park. This file must include the overall underground components for future localization, and the overall surface features. This information will be used for the production of “as-built” plans.

1.5 Contents – Each Volume

- .1 Table of Contents: provide title of project;
 - .1 Date of submission; names.
 - .2 Addresses, and telephone numbers of Departmental Representative and Contractor with name of responsible parties.
 - .3 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete

inapplicable information.

- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

1.6 Recording Actual
Site Conditions

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual,] provided by the Departmental Representative.
- .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.

1.7 Equipment and Systems

- .1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

1.8 Materials and Finishes

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-Protection and Weather-Exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

1.9 Spare Parts

- .1 Provide spare parts, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to location as directed; place and store.
- .4 Receive and catalogue items. Submit inventory listing to the Departmental Representative. Include approved listings in Maintenance Manual.
- .5 Obtain receipt for delivered products and submit prior to final payment.

1.10 Maintenance Materials

- .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to location as directed; place and store.
- .4 Receive and catalogue items. Submit inventory listing to the Departmental Representative. Include approved listings in Maintenance Manual.
- .5 Obtain receipt for delivered products and submit prior to final payment.

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- 1.11 Special Tools
- .1 Provide special tools, in quantities specified in individual specification section.
 - .2 Provide items with tags identifying their associated function and equipment.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items. Submit inventory listing to the Departmental Representative. Include approved listings in Maintenance Manual.
- 1.12 Storage, Handling and Protection
- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
 - .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
 - .3 Store components subject to damage from weather in weatherproof enclosures.
 - .4 Store paints and freezable materials in a heated and ventilated room.
 - .5 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- 1.13 Warranties and Bonds
- .1 Develop warranty management plan to contain information relevant to Warranties.
 - .2 Minimum warranty is of twelve (12) months following completion of Work.
 - .3 Warranty management plan to include required actions and documents to assure that Canada receives warranties to which it is entitled.
 - .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
 - .5 At completion of Work, submit warranty information made available during construction phase, to the Departmental Representative, for approval prior to each monthly pay estimate.
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- .6 Assemble approved information in binder and submit upon acceptance of work. Organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
 - .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten (10) days after completion of applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized (if needed).
 - .5 Co-execute submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
- .7 Except for items put into use with Canada's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
- .8 Conduct joint twelve (12) month warranty inspection, measured from time of acceptance, by Departmental Representative.
- .9 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
- .10 Respond in a timely manner to oral or written notification of required construction warranty repair work.
- .11 Written verification will follow oral instructions. Failure to respond will be cause for the Departmental Representative to proceed with action against Contractor.

PART 2 - PRODUCTS

2.1 Not Used .1 Not used.

PART 3 - EXECUTION

3.1 Not Used .1 Not used.

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 01 33 00 – Documents and Samples to Submit

1.2 Scope of Work

- .1 The work related to this section includes the supply of materials, equipment, and labour for the realization of the metal work.
- .2 This work includes the supply, fastening, assembly, painting, on-site transportation, and installation of all the necessary elements to complete the work.
- .3 The work also includes the supply and installation of all the hardware and assembly bolts.
- .4 The work includes and is not limited by:
 - .1 The supply and installation of galvanized shape steel used as backrest structure for the seat wall, as illustrated in the plans and details.
 - .2 The supply and installation of galvanized steel rods to anchor the wooden beams of the seat wall.

1.3 References

- .1 The quality of the steel must correspond to the requirements set out by the CAN/CSA-G40.21-92 standard.
- .2 Execute the steel work according to the CAN/CSA-S16.1-1-1992 and CAN/CSA-S136-M89 standards.
- .3 Execute the welding work in according to the ACNOR W59-1989 standard.
- .4 Employ welders who are certified under the ACNOR W47.1-1992 standard.

1.4 Shop Drawings

- .1 Submit the shop drawings according to the section 01 33 00 – Documents and Samples to Submit, at least one (1) week before beginning the work.
- .2 The shop drawings must properly indicate the quality of the materials, all the fastening and mounting details, including the sections, notches, assembly, holes, bolts, and weldings. Use the symbols indicated in the norm ACNOR W59-M1984 to represent the weldings.
- .3 Provide installation plans.
- .4 As per the request of the Departmental Representative, submit the description of the work methods, the order of assembly, and the type of materials planned for the work. Even if all elements have been properly filled out, and all documents have been approved, the Contractor remains entirely responsible for the use of the methods and equipment, as well as for the execution methods and security measures.

1.5 Assembly

- .1 Prior to beginning the shop drawings, the Contractor must provide to the Departmental Representative the typical calculations needed for the assembly of the main elements.
- .2 Ensure that the assembly details conform to the norm CAN/CSA-S16-1-M89.

1.6 Quality Control : General

- .1 The Contractor must ensure that the materials, fabrication, and mounting will be submitted to a quality control inspection in order to verify their conformity with the plans, specifications, or other pertinent norms.
- .2 In the instance where the materials or works that have already been inspected are found to be defective, the Contractor is still responsible to modify or replace the non-conforming works at his own expense.

PART 2 - PRODUCTS

2.1 Materials

- .1 Triangular shaped of welded steel 80mm wide x 10mm thick.
- .2 Welding materials: conform to the CAN/CSA-W59-M1989 standard.
- .3 Bolts and anchoring bolts: conform to the ASTM A307-82a standard / CSA G40.20/G40.21, galvanized steel grande 300W
- .4 Anchor rods galvanized steel 12mmØ, variable lengths / CSA G40.20/G40.21, galvanized steel grande 300W
- .5 Stainless steel bolt body A-316

2.2 Fabricating Elements

- .1 Fabricate the steel elements conforming to the norm CAN/CSA-S16.1-M89 and according to the shop drawings.
- .2 Fabricate the elements in a manner so that they are square, aligned, upright, and at the precise required dimensions so that the joints are fastened tight and securely.
- .3 Unless otherwise indicated, fabricate material with steel.
- .4 Constituent parts of the structure/work: Assemble according to the indications.
- .5 When possible, adjust and assemble elements in the workshop.
- .6 Perform welds continuously over the length of the joint, filed or grinded.
- .7 The visible attachment pieces must be from the same material, colour, and finish as the material to which it is being attached.

2.3 Galvanising

- .1 Galvanise all the metal work in the workshop, prior to delivery on site.
- .2 Galvanize by hot immersion with zinc coating of 600 gr/m.ca., conforming to the CAN/CSA-G164 standard.
- .3 Galvanizing for on-site modifications only – the existing handrails. Apply a coating of «Galvacon» or an approved equivalent.

PART 3 - EXECUTION

3.1 Assembly

- .1 The assembly must either be welded or bolted with high-strength bolts with controlled tightening. All welding must be performed in the workshop.
- .2 Tighten the bolts with the help of instruments adapted to the required bolts.

3.2 Mounting

- .1 Mount the metal elements in a manner so that they are square, plumb, aligned and adjusted with precision.
- .2 The work must be adjusted and assembled in the workshop, and ready to put in place.
- .3 No cuts or piercings are authorized on site unless the Departmental Representative gives written authorisation.
- .4 Mount the steel components in conforming with the norm CAN/CSA-S16.1-M89 and according to the shop drawings.
- .5 Prior to mounting, damaged parts must be adjusted or replaced. Dirty pieces must be cleaned, to the satisfaction of the Departmental Representative and according to the directives.
- .6 Assembly tolerances and requirements are those which are recommended by the CAN/CSA-S16.1-M89 standard.
- .7 No mounting is tolerated that must be performed by force, with the help of weights or pulling systems for elements that do not have the precisely required length or as a result of mounting errors. Only wooden mallets can be used to put together the elements.
- .8 Once the installation is completed, retouch any scratched or burnt surfaces, bolts, nuts, weldings done on site, using a primer paint.

3.3 Elimination of marks and stains on the exposed steel

- .1 All identification and assembly markings must not be visible once the structure has been mounted.
- .2 All marks caused by the erection of the structure or other paint or chalk marks must be eliminated, to the satisfaction of the Departmental Representative.

END OF SECTION

PART 1 - GENERAL

- 1.1 References
- .1 Canadian Standards Association (CSA International)
 - .1 CSA B111-1974, Wire Nails, Spikes and Staples
 - .2 CSA O80 Series-F97, Wood Preservation.
 - .3 CSA O86-01, Engineering Design in Wood
 - .2 Environmental Choice Program (ECP)
 - .1 ECP-76-98, Surface Coatings
 - .3 National Lumber Grades Authority
 - .1 NLGA Standard Grading Rules for Canadian Lumber [2000]
 - .4 Canadian Standards Association (CSA)
 - .1 CSA O80 Series-[F97], Wood Preservation
 - .5 CSA-O80.201-[M89], Standard for Hydrocarbon Solvents for Preservatives. (This Standard covers hydrocarbon solvents for preparing solutions of preservatives. This is not part of a series and is not a standalone specification.)
- 1.2 Related Sections
- .1 Section 01 33 00 - Submittal Procedures
 - .2 Section 05 50 00 - Metal works
- 1.3 Quality Assurance
- .1 Lumber identification: by grade stamp of an agency certified by the Canadian Lumber Standards Accreditation Board (CLSAB). Wood pieces must be number 1 quality or greater.
- 1.4 Submittal procedures and samples
- .1 Product Data
 - .1 Submit product data requirements and specifications and the manufacturer's documentation for products in accordance with Section 01 33 00 – Submittal procedures.
 - .2 Submit two copies of the relevant MSDS WHMIS (Workplace Hazardous Materials Information System) in accordance with Section 01 33 00 – Submittal procedures. Indicate the volatile organic compounds (VOCs).
 - .1 For finishes, coating, paints and printing.
 - .2 Shop drawings
 - .1 Submit shop drawings in accordance with Section 01 33 00

– Submittal procedures.

- .2 Shop drawings shall indicate or show materials, web thickness, finishes, connections, joints, method of anchorage and the number of anchors, supports, elements building, details and accessories.

- .3 Samples

- .1 Submit samples in accordance with Section 01 33 00 – Submittal procedures. Samples must be clearly identified and their origin.
 - .1 For all visible wood components, submit a sample of acceptable size to judge the quality of wood.
 - .2 For all visible wood components, submit a sample with the protection finish.

- 1.5 Waste Management and Disposal

- .1 Separate and recycle waste materials.
- .2 Dispose of wood cut-offs at the nearest wood recycling facility.
- .3 Divert reusable materials for reuse at the nearest used building materials facility.
- .4 Divert unused preservatives and fire retardant materials to a special wastes depot.

PART 2 - PRODUCTS

- 2.1 Materials

- .1 Construction lumber
 - .1 Timber in accordance with CAN / CSA 0141 standard and classification rules for Canadian lumber NLGA, oven dried at maximum moisture content of 8%.
 - .2 The wood finish is the Douglas fir (BC fir) number 1 quality or upper and will be used for the following components :
 - .1 Wood decking for sidewalks and bench seats : 38mm X 140mm
 - .2 Beams for walls : 235mm X 235mm
 - .3 Bench backrest : 64mm X 235mm
 - .4 Wood pieces to finish de back and sides of the backrest: 19mm X 140mm
 - .3 The wooden structure is wood treated SPF grade 2 / standard and will be used for the following components :

- .1 Sidewalk and seats deck structure : 89mm X 89mm
- .2 Structure for the bench backrest : 38mm x 89mm
- .2 Accessories
 - .1 All exposed hardware parts, bolts, nuts, washers, screws and other parts must be made of stainless steel and anti-theft device.
 - .2 All not apparent hardware parts, bolts, nuts, washers, screws and other parts must be conform to CSA B111 and ASTM A307 standards and must be hot-dip galvanized according to CAN / CSA G164 standard steel.
 - .3 Hardware parts unspecified must ensure the stability, solidity and permanence of the building to the satisfaction of the Departmental Representative.
- .3 Wood protection
 - .1 All untreated wood will be covered (according to the manufacturer's instructions) with the Cabot Semi-Transparent Deck & Siding Stains No. 0300 Series or approved equivalent.
- .4 Precast concrete paver
 - .1 Precast concrete pavers 100mm thick X 125mm width X 250mm length. Concrete pavers are used as brick seat for wooden beams of 235mm X 235mm.

PART 3 - EXECUTION

3.1 Construction

- .1 Implement and mark the work location and approval prior to installation.
- .2 Do constructions in accordance with the requirements of the plans.
- .3 Wooden constructions must respect the architectural qualities suggested on plans.
- .4 Elements must be straight, square, plumb, precisely aligned with rigid joints and assemblies. Adequately predict the possible stresses in assemblies. Skylights should be evenly spaced.
- .5 Unless otherwise indicated, use timber one length to minimize the number of joints.

- .6 Boards visible finish must be planed and sanded to provide a smooth surface roughness. The planks must be cut square.
- .7 Install elements joist camber up.
- .8 Apply preservative on the ends cuts when the use of treated lumber is specified.

3.2 Adjustments

- .1 Construction works must be done according to the plans and specifications, however, the contractor should expect that some adjustments will be made based on site conditions and, unless otherwise indicated, these adjustments are part of the work and do not affect the contract price.

3.3 Assembly

- .1 Assemble, anchor, fasten, tie and brace elements to ensure their strength and rigidity.
- .2 Install pieces of wood and make sure that no mark or stamp is visible on the surface.
- .3 Make the required holes in wood pieces before installing screws, bolts or anchor bolts.
- .4 For the implementation of wood walls, seat the 235mm X 235mm beams on precast concrete pavers installed approximately every 900mm center to center. Concrete pavers are placed on a layer of compacted MG20.
- .5 Use the number of screws and anchor bolts required to ensure a permanent construction.
- .6 Embed all exposed elements such as anchors, bolts, nuts and other fasteners to make sure they are flush and not hanging.

3.4 Storage

- .1 Store the unused wood to weather-protected and securely fastened to avoid warping.

3.5 Wood protection

- .1 Apply two (2) coats on all faces of "finished Semi-Transparent Deck & Siding Stains No. 0300 Series of Cabot brand or approved equivalent," according to the manufacturer's instructions. Let the first coat dry completely before applying the second.

END OF SECTION

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 01 33 00 - Submittal Procedures

1.2 References

- .1 Cahier des charges et des devis généraux “Infrastructures routières - Construction et réparations” (CCDG) , Ministère des Transports du Québec. [General Specifications - Road Infrastructure - Construction and Repair]
- .2 Bureau des normes du Québec BNQ 1809-300

1.3 Samples

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide the Departmental Representative with access to source and processed material for sampling.
- .3 Pay cost of sampling and testing of aggregates which fail to meet specified requirements.

PART 2 - PRODUCTS

2.1 Materials

- .1 Aggregate quality: sound, hard, durable material free from soft, thin, elongated or laminated particles, organic material, clay lumps or minerals, or other substances that would act in deleterious manner for the use intended.
- .2 Flat and elongated particles of coarse aggregate: in accordance with ASTM.
- .3 Fine aggregates satisfying requirements of applicable section to be one or blend of the following:
- .1 Natural sand;
 - .2 Manufactured sand;
 - .3 Screenings produced in crushing of quarried rock, boulders, gravel or slag.
- .4 Coarse aggregates satisfying requirements of applicable section

to be one of or blend of the following:

- .1 Crushed rock;
- .2 Gravel and crushed gravel composed of naturally formed particles of stone.
- .5 Specifications for sub-base
 - .1 Gravel, sand or crushed stone used as a sub-base must meet gradation specifications for MG 20.
- .6 Specifications for base (MG 20)
 - .1 The granular material MG 20 (20-0) used as topping and the granular material used as sub-base must meet gradation specifications for MG 20 (20-0).

Grading ranges of MG 20 (20-0)

Sieve designation	Granular materials in reserve % passing	Granular materials after complete placement ⁽¹⁾ % passing
31.5 mm	100	100
20 mm	90 - 100	90 – 100
14 mm	68 - 93	68 – 93
5 mm	35 - 55	35 – 60
1.25 mm	17 - 38	19 – 38
315 µm	8 - 17	9 – 17
80 µm	2.0 - 5.0	2.0 - 7.0

⁽¹⁾ After complete placement means after compacting at the site.

- .7 Class B materials stored on site to be used as foundation for grass surfaces.
- .8 Specifications for granular materials class A (MG 112) used in foundation turf.

Grading ranges of MG112

Sieve designation	Granular materials in reserve % passing	Granular materials after complete placement ⁽¹⁾ % passing
31,5	100	100
4,75	100-35	100-35
0,08	0-10	0-10

⁽¹⁾ After complete placement means after compacting at the site.

- 2.2 Source Quality Control
- .1 Inform the Departmental Representative of the proposed source of aggregates and provide access for sampling at least two (2) weeks prior to commencing production.
 - .1 Provide also an eco toxicological analysis demonstrating the equipment complies with the standard and Residential Parks CCME.
 - .2 Backfill cannot be delivered on site before the approval of the Departmental Representative.
 - .2 If, in the opinion of the Departmental Representative, materials from the proposed source do not meet, or cannot reasonably be processed to meet, specified requirements, locate an alternative source or demonstrate that material from the source in question can be processed to meet specified requirements.
 - .3 Notify the Departmental Representative two (2) weeks before any change in the source of supply of aggregates.
 - .4 Acceptance of the material at source does not preclude future rejection if it fails to conform to the requirements specified, lacks uniformity, or if its field performance is found to be unsatisfactory.

PART 3 - EXECUTION

- 3.1 Preparation
- .1 Topsoil stripping
 - .1 Not applicable.
 - .2 Processing
 - .1 Process aggregate uniformly using methods that prevent contamination, segregation and degradation.
 - .2 Blend aggregates, if required, to obtain gradation requirements, percentage of crushed particles, or particle shapes, as specified. Use methods and equipment approved by the Departmental Representative.
 - .3 Wash aggregates, if required to meet specifications. Use only equipment approved by the Departmental Representative.
 - .4 When operating in stratified deposits, use excavation equipment and methods that produce uniform, homogeneous aggregate.

- .3 Handling
 - .1 Handle and transport aggregates to avoid segregation, contamination and degradation.
 - .4 Stockpiling
 - .1 Stockpile aggregates on site in locations as indicated unless directed otherwise by the Departmental Representative. Do not stockpile on completed pavement surfaces.
 - .2 Stockpile aggregates in sufficient quantities to meet Project schedules.
 - .3 Stockpiling sites need to be level, well drained, and of adequate bearing capacity and stability to support stockpiled materials and handling equipment.
 - .4 Except where stockpiled on acceptably stabilized areas, provide compacted sand base not less than 30 mm in depth to prevent contamination of aggregate. Stockpile aggregates on ground but do not incorporate bottom 300 mm of pile into the Work.
 - .5 Separate different aggregates by strong, full depth bulkheads, or stockpile far enough apart to prevent intermixing.
 - .6 Do not use intermixed or contaminated materials. Remove and dispose of rejected materials as directed by the Departmental Representative within 48 hours of rejection.
 - .7 Uniformly spot-dump aggregates delivered to stockpile in trucks and build up stockpile as specified.
 - .8 Do not cone piles or spill material over edges of piles.
 - .9 Do not use conveying stackers.
 - .10 During winter operations, prevent ice and snow from becoming mixed into stockpile or in material being removed from stockpile.
- 3.2 Cleaning
- .1 Leave aggregate stockpile site in tidy, well drained condition, free of standing surface water.

END OF SECTION

PART 1 - GENERAL

- | | |
|--|--|
| <p><u>1.1 Measurement for
Payment Purposes</u></p> | <p>.1 All excavations, trenching and backfilling shall be paid for unit price basis according a progress of the work.</p> |
| <p><u>1.2 References</u></p> | <p>.1 American Society for Testing and Materials International (ASTM)</p> <p>.1 ASTM C 117-04, Standard Test Method for Material Finer Than 0.075 mm (No.200) Sieve in Mineral Aggregates by Washing</p> <p>.2 ASTM C 136-05, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates</p> <p>.3 ASTM D 422-632002, Standard Test Method for Particle-Size Analysis of Soils</p> <p>.4 ASTM D 698-00ae1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³) (600 kN-m/m³)</p> <p>.5 ASTM D 1557-02e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³) (2,700 kN-m/m³)</p> <p>.6 ASTM D 4318-05, Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils</p> <p>.2 Canadian General Standards Board (CGSB)</p> <p>.1 CAN/CGSB-8.1-[88], Sieves, Testing, Woven Wire, Inch Series</p> <p>.2 CAN/CGSB-8.2-[M88], Sieves, Testing, Woven Wire, Metric</p> <p>.3 Canadian Standards Association (CSA)/CSA International</p> <p>.1 CAN/CSA-A3000-[03], Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).</p> <p>.1 CSA-A3001-[03], Cementitious Materials for Use in Concrete</p> <p>.2 CSA-A23.1/A23.2-[04], Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete</p> <p>.4 U.S. Environmental Protection Agency (EPA)/Office of Water</p> <p>.1 EPA 832R92005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices</p> |

1.3 Definitions

.5 Cahier des clauses et devis généraux “Infrastructure routière - Construction et réparation” (CCDG), Ministère des Transports du Québec. [General Clauses and Specifications - Road Infrastructure - Construction and Repair.]

.1 Excavation classes: One class of excavation will be recognized; common excavation lower than criterion A or the CCME standard for residential/park use.

.1 Common excavation: excavation of materials of whatever nature, which are not included under definitions of rock excavation.

.2 Unclassified excavation: excavation of deposits of whatever character encountered in the Work.

.3 Topsoil

.1 Material capable of supporting good vegetative growth and suitable for use in top dressing, landscaping and seeding.

.2 Material reasonably free from subsoil, clay lumps, brush, objectionable weeds, and other litter, and free from cobbles, stumps, roots, and other objectionable material larger than fifteen (15) millimetres.

.4 Waste material: excavated material unsuitable for use in the Work or surplus to requirements.

.5 Borrow material: material obtained from locations outside area to be graded, and required for construction of fill areas or for other portions of the Work.

.6 Recycled fill material: material, considered inert, obtained from alternate sources and engineered to meet requirements of fill areas.

.7 Unsuitable materials

.1 Weak, chemically unstable, and compressible materials.

.2 Frost susceptible materials:

.1 Fine grained soils with plasticity index less than 10 when tested to ASTM D4318, and gradation within limits specified when tested to CCDG requirements.

.2 Table

Sieve Designation	Passing %
2.00 mm	[100]

0.10 mm [45 - 100]
0.02 mm [10 - 80]
0.005 mm [0 - 45]

.3 Coarse grained soils containing more than 20% by mass passing 0.075 mm sieve.

- 1.5 Submittals .1 Submit documents and samples in accordance with Section 01 33 00 – Submittal Procedures.
- 1.6 Quality Assurance .1 Qualification Statement: Submit proof of insurance coverage for professional liability.
- .2 Engage the services of a qualified professional engineer who is registered or licensed in Canada, in the Province of Quebec, to design and inspect cofferdams, shoring, bracing and underpinning required for the Work.
- .3 Do not use soil material until the written report of soil test results is reviewed and approved by the Departmental Representative.
- .4 Health and Safety Requirements
- .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- 1.7 Waste Management and Disposal .1 Separate waste materials for reuse and recycling.
- .2 Divert reusable excess aggregate materials to a recycling facility.
- 1.8 Existing Conditions .1 Buried services:
- .1 Before commencing the Work, verify the location of buried services on and adjacent to the site.
- .2 Arrange with appropriate authorities for relocation of buried services that interfere with execution of the work, and pay the costs of relocating services.
- .3 Remove obsolete buried services within 2 m of foundations and cap cut-offs with female plugs.
- .4 Size, depth and location of existing utilities and structures as indicated are for guidance only. Completeness and accuracy are not guaranteed.

- .5 Prior to beginning excavation work, determine the location and state of use of the buried utilities and structures and notify the Departmental Representative. The Departmental Representative will clearly mark such locations to prevent disturbance during the Work.
 - .6 Confirm locations of buried utilities by careful test excavations.
 - .7 Maintain and protect from damage, water, sewer, gas, electric, telephone and other utilities and structures encountered as indicated.
 - .8 Where utility lines or structures exist in the excavation area, obtain appropriate direction before re-routing or removing.
 - .9 Record the location of maintained, re-routed and abandoned underground lines.
- .3 Existing buildings and surface features:
- .1 Conduct, with the Departmental Representative, a condition survey of existing buildings, trees and other plants, lawns, fencing, service poles, wires, pavement, survey benchmarks and monuments which may be affected by the Work.
 - .2 Protect existing buildings and surface features from damage while Work is in progress. In the event of damage, immediately make the repair as directed by the Departmental Representative.

PART 2 - PRODUCTS

2.1 Materials

- .1 Fill: According to Section 31 05 17 - Aggregate Materials and the following requirements:
 - .1 Crushed, pit run or screened stone, gravel or sand.
 - .2 Gradations to be within the limits specified when tested to CCDG requirements.
- .2 Type 3 fill (Class B): selected material from excavation or other sources, approved by the Departmental Representative for the use intended, unfrozen and free of rocks larger than 75 mm, cinders, ashes, sods, refuse or other deleterious materials The contamination level is less than A.

.1

PART 3 - EXECUTION

3.1 Erosion and Sedimentation Control

- .1 Provide temporary erosion and sedimentation control measures to prevent soil loss that may result from rainwater runoff or windborne erosion and carrying of this soil to adjacent properties and walkways. These measures shall conform to the

requirements of the authorities having jurisdiction.

3.2 Site Preparation

- .1 Protect existing developed areas. Traffic is prohibited on existing developed areas (paving stone, stone dust trail, wooden deck).

3.3 Preparation/Protection

- .1 Keep excavations clean, free of standing water, and loose soil.
- .2 Where soil is subject to significant volume change due to change in moisture content, cover and protect to the Departmental Representative's approval.
- .3 Protect natural and man-made features required to remain undisturbed. Unless otherwise indicated or located in an area to be occupied by new construction, protect existing trees from damage.
- .4 Protect buried services that are required to remain undisturbed.

3.4 Stripping of Topsoil

- .1 Not used.

3.5 Stockpiling

- .1 Stockpile fill materials in areas designated by the Departmental Representative.
 - .1 Stockpile granular materials in such manner as to prevent segregation.
- .2 Protect fill materials from contamination.
- .3 Implement sufficient erosion and sediment control measures to prevent sediment release off construction boundaries and into water bodies.

3.6 Excavation

- .1 The excavation is limited to the implementation of infrastructure as illustrated on plan.
- .2 Excavation must not interfere with bearing capacity of adjacent foundations.
- .3 Dispose of surplus and unsuitable excavated material in an approved location on site or off site.
- .4 Do not obstruct the flow of surface drainage or natural watercourses.

- .5 Earth bottoms of excavations shall be undisturbed soil, level, free of loose, soft or organic matter.
 - .6 Hand trim, make firm and remove loose material and debris from excavations.
 - .1 Where material at the bottom of excavations is disturbed, compact the foundation soil to a density at least equal to that of the undisturbed soil.
- 3.9 Fill Types and Compaction
- .1 Use backfill as specified in the plans and specifications.
- 3.10 Backfilling
- .1 Areas to backfill must be free of debris, snow, ice, water and frozen ground.
 - .2 It is forbidden to use backfill material which is frozen or contain snow, ice or debris.
 - .3 Spread backfill in uniform layers not exceeding 300 mm compacted thickness to the levels indicated. Compacting each layer before applying the next layer.
 - .4 Backfill around structures
 - .1 Place the seat materials and recovery in accordance with the requirements set out elsewhere.
 - .2 Place layers of fill up simultaneously on both sides of the installed works to balance loads. The height difference between the embankments should not exceed 0.5 m.
 - .5 Conduct dimensionally stabilized embankments where indicated and where compaction can be made according to the standards.
 - .6 Consolidate and leveling the embankments dimensionally stabilized with internal vibrators.
- 3.11 Restoration
- .1 Upon completion of the Work, remove waste materials and debris, trim slopes, and correct defects as directed by the Departmental Representative.
 - .2 Install top soil and lawns as specified in the plans and specifications.
 - .3 Reinststate pavements, sidewalks, the bicycle path, trails and other facilities disturbed by excavation to the thickness, structure and elevation which existed before excavation.
 - .4 Clean and reinststate areas affected by the Work as directed by the Departmental Representative.

- .5 Protect newly graded areas from traffic and erosion and maintain them free of trash or debris.

END OF SECTION

PART 1 - GENERAL

- 1.1 Section Includes
- .1 Materials and installation of polymeric geotextiles used in revetments, breakwaters, retaining wall structures, filtration, drainage structures, roadbeds and railroad beds purpose of which is to:
 - .1 Separate and prevent mixing of granular materials of different grading.
 - .2 Act as hydraulic filters permitting passage of water while retaining soil strength of granular structure.
- 1.2 Related Sections
- .1 Section 01 33 00 - Submittal Procedures.
 - .2 Section 31 23 10 - Excavating, Trenching and Backfilling.
- 1.3 References
- .1 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-4.2 No. 11.2-M89(April 1997), Textile Test Methods - Bursting Strength - Ball Burst Test (Extension of September 1989).
 - .2 CAN/CGSB-148.1, Methods of Testing Geotextiles and Complete Geomembranes.
 - .1 No.2-M85, Methods of Testing Geosynthetics - Mass per Unit Area.
 - .2 No.3-M85, Methods of Testing Geosynthetics - Thickness of Geotextiles.
 - .3 No.6.1-93, Methods of Testing Geotextiles and Geomembranes - Bursting Strength of Geotextiles Under No Compressive Load.
 - .4 No.7.3-92, Methods of Testing Geotextiles and Geomembranes - Grab Tensile Test for Geotextiles.
 - .5 No. 10-94, Methods of Testing Geosynthetics - Geotextiles - Filtration Opening Size.
 - .2 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-G40.20/G40.21-98, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
 - .2 CAN/CSA-G164-M92(R1998), Hot Dip Galvanizing of Irregularly Shaped Articles.
- 1.4 Submittals
- .1 Submit samples in accordance with Section 01 33 00 - Submittal

Procedures.

- .2 Submit to Departmental Representative the following samples at least two (2) weeks prior to beginning Work.
 - .1 Minimum length of 300 mm of roll width of geotextile.
 - .2 Minimum of 1 m seam with at least 300 mm of geotextile on both sides of seam.
 - .3 Submit to Departmental Representative a copy of mill test data and certificate at least two (2) weeks prior to start of Work.
- 1.5 Delivery, Storage and Handling
- .1 During delivery and storage, protect geotextiles from direct sunlight, ultraviolet rays, excessive heat, mud, dirt, dust, debris and rodents.

PART 2 - PRODUCTS

- 2.1 Material
- .1 Geotextile for civil Work: geotextile material used on construction site is supplied in rolls and respects the following:
 - .1 Product type : non-woven, short monofilament
 - .2 Fibre type :Polypropylene
 - .3 Thickness: 1.1 mm (minimum)
 - .4 Tear resistance (MD): 530 N (minimum)
 - .5 Tear resistance (CD): 530 N (minimum)
 - .6 Grab tensile strength and elongation: 45-105 %
 - .7 Tensile resistance (MD): 235 N (minimum)
 - .8 Tensile resistance (CD): 235 N (minimum)
 - .9 Bursting strength (Mullen): 1550 kPa
 - .10 Filtration opening size (FOS): 75-115 microns.
 - .11 Permeability: 0.13 cm/s

PART 3 - EXECUTION

- 3.1 Installation
- .1 Place geotextile material by unrolling onto graded surface in orientation, manner and indicated locations.
 - .2 Place geotextile material smooth and free of tension stress, folds, wrinkles and creases.
 - .3 Place geotextile material on sloping surfaces in one continuous

length from toe of slope to upper extent of geotextile.

- .4 Overlap each successive strip of geotextile 600 mm over previously laid strip.
- .5 Protect installed geotextile material from displacement, damage or deterioration before, during and after placement of material layers.
- .6 After installation, cover with overlying layer within 4 hours of placement.
- .7 Replace damaged or deteriorated geotextile to approval of Departmental Representative.
- .8 Place and compact soil layers in accordance with Section 31 23 10 - Excavating Trenching and Backfilling.

3.2 Cleaning

- .1 Remove construction debris from Project site and dispose of debris in an environmentally responsible and legal manner.

3.3 Protection

- .1 Vehicular traffic not permitted directly on geotextile.

End of section

PART 1 - GENERAL

1.1 Use of Terms

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM D698-[00ae1], Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600kN-m/m³)
- .2 Canadian Standards Association (CSA)/CSA International
 - .1 CSA-A23.1/A23.2-[04], Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete
 - .2 Government of Québec /Ministère des Transports/Cahier des charges et devis généraux (CCDG)

1.2 Related Work

- .1 Section 013543 - Environmental Procedures
- .2 Section 310517 - Aggregate Materials
- .3 Section 329121 - Topsoil Placement and Final Grading

1.3 Testing and Inspection

- .1 Testing of materials and compaction of backfill and fill will be carried out at Canada's expenses by a testing laboratory designated by the Departmental Representative.
- .2 Not later than one (1) week before backfilling or filling, provide a 23-kilogram sample of the stabilized filling materials proposed for the execution of the Work to the designated testing agency.
- .3 Do not begin backfilling or filling operations until the material has been approved for use for this purpose by the Departmental Representative.
- .4 Not later than 48 hours before backfilling or filling with approved material, notify the Departmental Representative so that the necessary compaction tests can be carried out by the designated testing laboratory.
- .5 Before beginning the Work, conduct, with the Departmental Representative, a condition survey of existing buildings, trees and other plants, lawns, fencing, service poles, wires,

pavement, survey benchmarks and monuments which may be affected by the Work.

1.4 Buried Services

- .1 Before commencing the work, verify the location of buried services on and adjacent to the site.
- .2 Arrange, with the appropriate authorities, for relocation of buried services likely to interfere with execution of the Work, and pay the costs of relocating services.
- .3 Remove obsolete buried services within 2 m of foundations and cap cut-offs with female plugs.

1.5 Protection

- .1 Protect the excavations against frost.
- .2 Keep excavations clean, free of standing water and loose soil.
- .3 Where soil is subject to significant volume change due to a change in moisture content, cover and protect to the Departmental Representative's approval.
- .4 Protect natural and man-made features required to remain undisturbed. Unless otherwise indicated or located in an area to be occupied by new construction, protect existing trees from damage.
- .5 Protect buried services that are required to remain undisturbed.

PART 2 - PRODUCTS

2.1 Materials

- .1 The granular materials are specified in Section 310517.

PART 3 - EXECUTION

3.1 Excavation

- .1 Excavate as required to carry out the Work, regardless of the materials encountered. Do not disturb soil or rock below bearing surfaces. Notify the Departmental Representative when excavations are complete. If bearings are unsatisfactory, additional excavation will be authorized in writing and paid for as additional work.
- .2 Excavate for wood structures and paving to sub-grade levels. Remove all topsoil, organic matter, debris and other loose and deleterious matter encountered at sub-grade level.

3.2 Backfilling

- .1 Clean backfill material from a known site.
- .2 Inspection: Do not commence backfilling until fill material and spaces to be filled have been inspected and approved by the Departmental Representative.
- .3 Deleterious matter: Remove snow, ice, construction debris, organic soil and standing water from spaces to be filled.
- .4 Lateral support: Maintain even levels of backfill around structures as the Work progresses, to equalize earth pressures.
- .5 Compaction of sub-grade: Compact existing sub-grade under walks, paving, and wood structure, to same compaction density as specified for fill. Fill excavated areas with selected sub-grade material, gravel and sand, compacted as specified for fill.
- .6 Placing
- .1 Place backfill, fill and basecourse material in 150 mm lifts; add water as required to achieve specified density.
- .2 Place unshrinkable fill in areas as indicated. Consolidate and level unshrinkable fill with internal vibrators.
- .7 Compaction: Compact each layer of material to following densities for material to ASTM D698.
- .8 Do not disturb the soil of the drainage line of trees that must remain. This includes the subsoil surfaces above existing or removed pavements.

- .9 Under seeded and sodded areas: Use site excavated material to bottom of topsoil except in trenches and within 600 mm of foundations.
- .10 Blown rock material, not capable of fine grading, is not acceptable; imported material must be placed on this type of material.
- .11 Against foundations (except as applicable to trenches and under slabs and paving): excavated material or imported material with no stones larger than 200 mm diameter within 600 mm of structures.

3.3 Grading

- .1 Grade so that water will drain away from buildings, walls and paved areas, to catch basins and other disposal areas approved by the Departmental Representative. Grade to be gradual between finished spot elevations shown on drawings.

3.4 Shortage or Surplus

- .1 Supply necessary fill to meet backfilling and grading requirements and with minimum and maximum rough grade variance.
- .2 Dispose of surplus material off site at an authorized location.

END OF SECTION

PART 1 - GENERAL

1.1 Related Section

- .1 Section 31 22 13 - Rough Grading; Section 31 05 17 - Aggregate Materials

1.2 Reference

- .1 American Society for Testing and Materials (ASTM)
- .2 ASTM C 136-[96a], Method for Sieve Analysis of Fine and Coarse Aggregates
- .3 ASTM C 117-[95], Test Method for Material Finer Than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing
- .4 ASTM E 11-[95], Specification for Wire - Cloth Sieves for Testing Purposes
- .5 ASTM D 4318-[98], Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils

Canadian General Standards Board (CGSB)

- .1 CAN/CGSB-8.1-[88], Sieves, Testing, Woven Wire, Inch Series
- .2 CAN/CGSB-8.2-[88], Sieves, Testing, Woven Wire, Metric

PART 2 - PRODUCTS

+2.1 Materials

- .1 Granular sub-base
 - .1 As specified in the Aggregate Materials section.
- .2 Granular topping
 - .1 Crushed stone particles: hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials.
 - .2 The material used, having a 5-0 mm gradation, will be granite-, limestone- and basalt-based. The fine particles shall be homogeneous in the materials. When the material is obtained from gravel, 50% of the material shall have one crushed face. Colour as specified in the plan.
 - .1 Grey limestone stones.

Sieve Designation	% Passing
10 mm	[100]
5 mm	[95-100]
2.5 mm	[78-80]
1.25 mm	[55-65]
0.63 mm	[40-50]
0.315 um	[25-35]
.160 um	[20-25]
.080 um	[12-17]
 - .3 Permaloc prefabricated aluminium edging 4.8mm thick X 89mm high with stakes anchors as recommended by the manufacturer.

PART 3 - EXECUTION

3.1 Subgrade

- .1 Ensure that subgrade preparation conforms to levels and compaction required to allow for installation of the granular base.

3.2 Granular sub-base

- .1 Place granular sub-base material so as to obtain a minimum thickness as indicated.
- .2 Place in layers of 150 mm compacted thickness. Compact each layer to 95% Standard Density in accordance with ASTM D 698.

3.3 Edging

- .1 Install edging true to grade, in location and layout as indicated and to separate the timber structures of the topsoil.

3.4 Granular Topping

- .1 Placing
 - .1 Install a compacted 50 mm thickness of material on the prepared sub-base. To avoid any segregation, the material must be applied in a single layer.
 - .2 The limits of the surfaces shall be defined cleanly and well aligned. The joints with the neighbouring finishes shall be regular and stable, without undulations. The surfaces shall conform to the grades and slopes indicated in the plans.
 - .3 Any paving considered to be unsuccessful (thickness, grades, alignments) by the Departmental Representative shall be reworked to his satisfaction.
- .2 Watering
 - .1 Water abundantly so that moisture penetrates the entire thickness of the area. It is preferable to water with a low-pressure hose to avoid deformation of works already graded. As an indication, the quantity of water necessary is around 45 litres per m².
- .3 Compaction
 - .1 When the water is drained and the surface remains moist, roll with a minimum one-tonne roller. Do not use vibrating plates or vibrating rollers.
- .4 Inspection
 - .1 The finished surface shall be flexible, uniform, solid and dry, with no visible cracks or signs of erosion or stratification. Loose material shall not be present on the surface before use. After the first year of use, a quantity of 5 mm or more will be loose on the surface.
 - .2 Non-conforming surfaces shall be replaced with a new 5-0 mm crushed stone according to the specifications and placed as recommended by the manufacturer.
 - .3 The final thickness of the surface course shall in no case be less than 45 mm at a given point, which implies good finishing of the sub-base course.

END OF SECTION

PART 1 - GENERAL

1.1 Related Section

- .1 Section 01 33 00 - Submittal Procedures; Section 03 30 00
Cast-in-Place Concrete

1.2 Submittals

- .1 Submit product data in accordance with Section 01 33 00 -
Submittal Procedures.
- .2 Submit shop drawings in accordance with Section 01 33 00 -
Submittal Procedures.
- .3 Shop drawings must indicate dimensions, sizes, assembly,
anchorage and installation details for each furnishing specified.
- .4 Provide maintenance data for care and cleaning of site
furnishings.
- .5 Provide maintenance data for care and cleaning of furnishings.

PARTI 2 - PRODUCTS

2.1 Bench

- .1 Quantity :16
- .2 Contractor must provide benches and deliver at the Parks Canada workshop located on Mill street in Montreal. The delivery must be done before march 31, 2014.
- .3 Architectural features 6 benches to install provided by PC
 - .1 The design benches must match that of the existing benches at the Lachine Canal in Montréal.
 - .2 Solid aluminum end pieces sand cast in one piece. The contour and hollowed out sections of the end pieces must have a raised curl, and the hollowed sections must be curved to match the contour of the bench. The Parks Canada Agency beaver logo must be cast in relief and appear in the centre of each of the two end pieces. The logo must be visible on the outside surface of each end piece.
 - .3 The wood slats must form a continuous line from the seat to the seatback, following the curve of the body (knees and lower back) to ensure user comfort. Slats must have no projecting edges that might create pressure points on the body. The slats must be evenly spaced, except for the parts with a more pronounced curve. Wood slats must all have the same dimensions for easy replacement. The wood slats must be bolted to the top of the sand-cast aluminum end pieces. The slats must project beyond the end pieces on each side and must be easy to replace without unfastening or removing the end pieces.
- .4 Components:
 - .1 End piece: Two (2) sand-cast aluminum 356.2 alloy end pieces with the Parks Canada Agency beaver logos cast in relief.
 - .2 Support bands: One (1) ±6mm aluminum flat bar shaped to match the curve of the end pieces and fastened to each wood slat
 - .3 Seat:
 - .1 Fourteen (14) Ipe wood slats, ±51 mm x ±76 mm (nominal), ±38 mm x ±64 mm (finished) with 10 mm bevelled edge.
 - .2 Exotic Ipe wood, whose natural properties (dense, rot-resistant, antifungal, fire-resistant) make it very resistant to weather

and vandalism.

- .3 The supplier must present the Forest Stewardship Council (FSC) chain of custody registration code or proof of equivalent certification for the Ipe wood.
- .5 Dimensions:
 - .1 Height: ± 813 mm
 - .2 Length: $\pm 1,803$ mm
 - .3 Depth: ± 686 mm
 - .4 Weight: ± 80 kg
- .6 Finish:
 - .1 End pieces and support bands: Electrostatic powder coated (minimum thickness of 0.102 mm) with black semi-gloss exterior UV-resistant polyester-powder resin.
 - .1 Painted sand-cast aluminum prototype for approval by the technical authority
 - .2 Seat: Ipe wood coated with a layer of Messmer's, Penofin, OR other approved protective UV-resistant oil.
 - .1 Sample of wood and finish for approval by the technical authority
- .7 Fasteners: Hardware must be corrosion resistant and theftproof. Use only stainless steel parts. All necessary hardware and equipment for preassembly and final assembly of the bench must be supplied by the supplier. For each type of fastener, submit a specification sheet for approval by the technical authority. Use Loctite OR other approved threadlocker and submit a specification sheet for approval by the technical authority.
- .8 Assembly: The bench must be delivered preassembled and wrapped.
- .9 Anchors: The bench must be anchored to the concrete slab using internally threaded sealing sleeves and stainless steel antitheft bolts. Provide at least one anchor per leg. All antitheft hardware and installation tools must be supplied by the supplier. For each type of anchoring component, submit a specification sheet for approval by the technical authority.

2.2 Trash Container

- .1 Wastebaskets are provided by Parks Canada and are installed by the contractor.
- .2 Quantity: 3
- .3 The Contractor shall recover items of furniture workshops provided by Canada Parks Canada located on Mill Street in Montreal. The Contractor shall coordinate in advance with the Departmental Representative (7 days) to set a date and time for recovery items.

PART 3 - EXECUTION

3.1 Installation

- .1 Assemble furnishings in accordance with the manufacturer's instructions.
- .2 Install furnishings true, plumb, anchored and firmly supported as indicated by the Departmental Representative.
- .3 Touch up damaged finishings to the satisfaction of the Departmental Representative.

END OF SECTION

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 32 92 23 - Sodding
- .2 Section 32 93 10 - Planting of Trees, Shrubs and Ground Covers
- .3 Section 01 33 00 - Submittal Procedures

1.2 Definition

- .1 Compost
 - .1 Mixture of soil and decomposing organic materials used as a fertilizer, mulch or soil amendment product.
 - .2 Compost is composed of 40% or more treated organic materials, the percentage determined according to the Walkley-Black tests or LOI (loss-on-ignition).
 - .3 The product shall be stable enough (materials decomposed enough) to prevent any harmful effect on plant growth (C/N ratio less than (25) (50)), and it shall not contain toxic ingredients or growth inhibitors.
 - .4 Composted solid materials of organic origin shall conform to the compost quality criteria, category (A) (B) MDDEP, set forth in a document published by the Canadian Council of Ministers of the Environment (CCME).

1.4 References

- .1 CCME and MDDEP legal documents

1.5 Submittals

- .1 Submit the documents and samples required in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Documents to be submitted for quality control purposes.
- .3 Soil analysis: Submit the test reports certifying that the products and materials satisfy the requirements for the physical characteristics and performance criteria.
- .4 Certificates: Submit the documents signed by the manufacturer, certifying that the products and materials satisfy the requirements for the physical characteristics, performance criteria and contamination analysis (CCME criterion for residential/park use or lower than B MDDEP).

PART 2 - PRODUCTS

2.1 Materials

- .1 Loam: arable soil which is neither too rich in clay nor too poor in sand, with an organic material content between 4% and 5%, for sandy loam, and between 2% and 3% for clayey loam. The soil must be free of subsoil earth, roots, grass clumps, weeds, debris, organic materials, stones bigger than 50 mm in diameter and other foreign bodies.
- .2 Black earth: supple and homogenous soil composed of decomposing products, free of colloidal residues, wood, sulphur and iron and having a maximum water content of 15%. The size of the shredded particle must be less than 6% mm.
- .3 Coarse sand: natural sand only, with a gradation within the specific limits of the following table. No more than 45% of the particles shall be retained between two (2) consecutive sieves of this table. The gradation shall be determined according to the test method CAN/CSA-A23.2-2A

Sieve designation Total mass passing

100 mm	100
5 mm	98-100
1.25 mm	90-97
630 um	80-95
315 um	50-85
160 um	35-65
80 um	15-35

- .4 Peat moss: consisting of cell sheet stems, mostly partially composed of sphagnum moss. The minimum pH value shall be 4.5 and the maximum value 6.0. Brown colour with homogeneous elastic consistency, free of wood and harmful materials likely to prevent growth, and composed of shredded particles measuring no less than 5 mm.
- .5 Lime: ground agricultural lime containing no less than 85% carbonates. Gradation, 90% by weight passing 0.125 mm.
- .6 Fertilizer: complete synthetic commercial fertilizer containing no less than 65% insoluble nitrogen. Composition to be

determined according to the analyses, generally for sodding (10-6-4) and for trees and shrubs (10-52-16). Finely ground bone powder containing no less than 2% phosphoric acid and 3% nitrogen.

- .7 Organic constituents: Organic constituents shall be obtained by an organic process assuring decomposition of products of vegetable origin and/or animal origin (excluding poultry manure) into a stable organic product, rich in humic compounds. The material will be homogeneous, will look like soil and will not emit any fetid odour.

2.2 Soil Mixture

- .1 “Sodding” type
- .1 Use a mixture consisting of one (1) part black earth, one (1) part coarse sand and two (2) parts loam.
- .2 Mixture characteristics:
Between 4% and 7% organic material,
pH between 6 and 7, CEC between 10 and 20 MEQ/100g.,
water retention capacity: maximum 20 %
Phosphorus 200kg/ha
Potassium 400kg/ha
Calcium 4,500 kg/ha
Magnesium 640 kg/ha
- .2 “Tree pit” type
- .1 Use a mixture consisting of three (3) parts black earth, one (1) part coarse sand, two (2) parts loam and one (1) part compost.
- .2 Mixture characteristics:
Between 10% and 15% organic material
pH between 6 and 7,
CEC between 10 and 20 MEQ/100g., water retention
capacity: maximum 20 %
Phosphorus 200kg/ha
Potassium 400kg/ha
Calcium 4,500 kg/ha
Magnesium 640 kg/ha

PART 3 - EXECUTION

- 3.1 Existing Bedding Soil Preparation
- .1 Verify the soil level to ensure that it is adequate.
 - .1 Otherwise, notify the Departmental Representative and do not commence the work before receiving his authorization.
 - .2 Grade the soil, eliminating hollows and bumps and giving it a slope that favours good drainage.
 - .3 Remove the debris, roots, branches, stones bigger than 50 mm in diameter and other harmful substances.
 - .1 Remove soil contaminated with calcium chloride, toxic materials and contaminated petroleum products to a depth of 300 mm from the finished grade.
 - .2 Remove debris extending 75 mm beyond the soil's surface.
 - .3 Dispose of all the removed materials off site.
 - .4 Break up the soil over the entire area to receive a layer of topsoil, down to a depth of at least 100mm. Repeat the operation perpendicularly to the first passes on the surfaces in which the transportation and spreading equipment compacted the soil.

 - 3.2 Placing and Spreading Topsoil and Soil
 - .1 Once the Departmental Representative has accepted the existing bedding soil, place the topsoil.
 - .2 Spread the topsoil in uniform layers no more than 150 mm thick.
 - .3 In the case of areas to be sodded, grade the topsoil to within 15 mm from the final grade of the soil.
 - .4 Spread the topsoil in layers of the following minimum thickness after settling:
 - .1 150 mm for the areas to be sodded;
 - .2 3m³ per planting hole;
 - .3 minimum of 300mm for the perennials.
 - .5 Spread the topsoil and the soil by hand around trees, shrubs and obstacles.

- 3.3 Final Grading
- .1 Grade the soil to eliminate hollows and bumps and favour good drainage. Produce a layer of loose earth by breaking up and raking the soil.
 - .2 Firm up the topsoil layer to obtain the prescribed apparent density, using the equipment approved by the Departmental Representative. Leave the surfaces smooth, uniform and quite firm so that deep tracks are not formed under a person's weight.
- 3.4 Acceptance
- .1 The Departmental Representative will examine the topsoil placed, and will determine whether the material, the thickness of the topsoil layer and the final grading are acceptable.
- 3.5 Cleaning
- .1 Once the work is completed, remove the surplus materials, rubbish, tools and safety barriers from the site.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Section .1 Section 01 33 00 - Submittal Procedures
- .2 Section 32 91 21 - Topsoil Placement and Final Grading
- 1.2 Reference Standard .1 The Work includes all operations related to the preparation and cleaning of surface soil, sodding and surface maintenance. All such work must comply with standard BNQ 0605-100/2001 Aménagement paysager à l'aide de végétaux [Landscaping with Plants], Partie III - Préparation des surfaces [Part III - Surface Preparation] and Partie IV - Engazonnement [Part IV - Sodding], unless otherwise specified.
- 1.3 Submittals .1 Samples
- .1 Submit required samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Samples must be approved by the Departmental Representative.
- 1.4 Quality Assurance .1 Test reports: Submit test reports certifying that products and materials meet all requirements in terms of physical characteristics and performance criteria.
- .1 Provide an eco toxicological analysis demonstrating that the equipment complies with the standards and Residential / Parks of CCME.
- .2 Backfill cannot be delivery on site before the approval of the Departmental Representative.
- .2 Certificates: Submit documents signed by the manufacturer certifying that products and materials meet all requirements in terms of physical characteristics and performance criteria.
- .3 Meeting prior to implementation: Hold a meeting to review work requirements, implementation instructions and terms of the warranty.

1.5 Work Schedule

- .1 Establish a schedule for sod placement in a manner that coincides with the preparation of surfaces.
- .2 Establish the schedule in such way that sod placement takes place after the ground is unfrozen
- .3 Place sod within 48 hours of removal, except during cold and rainy weather.
Sod must be removed and planted
when the soil is not excessively dry

1.6 Waste Management and Elimination

- .1 Send unused amendment (fertilizer) products to a certified hazardous materials collection site approved by the Departmental Representative.
It is not permitted to discharge unused amendment (fertilizer) products into sewers, a watercourse, a lake, onto soil or any other location where this could pose a risk to health or the environment.

PART 2 - PRODUCTS

2.1 Materials

- .1 Top-quality cultivated grass: turf grass specially sown and cultivated in sod farms or fields reserved for this purpose.
 - .1 Type of cultivated grass: sod or rolled, more than 750 mm in width, cultivated mostly from Kentucky bluegrass seed and registered varieties. Must be class I, produced in Quebec and compliant with BNQ 0605-300 -XIV/2001 - Gazon en plaques, classification et caractéristiques. [Sod, Classification and Characteristics.]
- .2 Topsoil in accordance with Section 32 91 21.
- .3 Water: drinkable, provided by the Contractor.
- .4 Fertilizer
 - .1 Fertilizer compliant with the Fertilizer Act and the Regulation respecting Canadian fertilizer.
 - .2 Slow-acting compound fertilizer containing 8-30-12.

2.2 Quality Control
at Source

- .1 The sodding material must be approved by the Departmental Representative at the source of supply
- .2 Once the sod's source of supply has been approved, no other source may be used without the Departmental Representative's written consent.

PART 3 - EXECUTION

3.1 Preparatory Work

- .1 Ensure that the form of the ground is adequate and that the surfaces to be sodded are prepared in accordance with Section 32 91 21 - Topsoil Placement and Final Grading. Inform the Departmental Representative of any deviation from drawings and wait for the Departmental Representative's instructions before beginning the Work.
- .2 Do not execute the Work when conditions are unfavourable, for example when the ground is frozen or wet, or when it is covered with snow, ice or stagnant water.
- .3 Execute final grading of surfaces in such way as to create a soft, uniform slope, free of hollows and asperities, in accordance with indicated contours and spot elevations, at about eight (8) mm, favouring natural surface drainage.
- .4 Remove weeds, debris, rocks of 50 mm in diameter or more and earth contaminated by oil or other harmful products from the site.

3.2 Sod Placement

- .1 Install grass within 24 hours of unrolling if the temperature exceeds 20 degrees Celsius.
- .2 Place sod in parallel strips, with staggered joints. Place these tightly together, leaving no empty spaces and making sure they do not overlap. Cut narrow or irregular-shaped sod pieces with sharp implements.
- .3 Roll grass with a light 320 to 540kg/m³ roller to ensure roots adhere to the soil, in accordance with the Departmental Representative's directives. If the soil is dry, water the grass before rolling.

3.3 Fertilization Program

- .1 Spread fertilizer during the grass's planting and warranty periods to favour the start of growth as well as appearance.

3.4 Maintenance During
Planting Period

- .1 Perform maintenance work described below as of the date of installation of the grass until the date of receipt of the Work.
- .2 Water sodded surfaces in sufficient quantity and frequency to maintain an optimal rate of humidity in the grass, up to a depth of 75 to 100 mm.
- .3 Mow the grass down to 60 mm when it has reached 80 mm in height or before, and remove any mowing residue that could choke sodded surfaces in accordance with the Departmental Representative's directives.
- .4 Ensure that sodded surfaces are 95% weed-free.
- .5 In autumn and following spring, spread fertilizer on sodded surfaces in accordance with the fertilization program. Apply half of the required quantity of fertilizer in one direction and the rest perpendicularly; water properly so that the fertilizer penetrates the soil.

3.5 Receipt of Work

- .1 Surfaces covered with cultivated grass will be accepted by the Departmental Representative if the following conditions are met:
 - .1 Sodded surfaces are planted in an adequate manner;
 - .2 Sodded surfaces are free of dead grass zones and bare areas;
 - .3 Sodded surfaces are mowed at least twice before receipt of the Work.
- .2 Surfaces sodded in autumn will be accepted the following spring, one month after the start of the growth period, provided the aforementioned conditions are met.

END OF SECTION

PART 1 - GENERAL

- | | | |
|------------|-------------------------|--|
| <u>1.1</u> | <u>Related Sections</u> | <ul style="list-style-type: none"> .1 Section 01 33 00 - Submittal Procedures .2 Section 32 31 21 - Topsoil Placement and Grading |
| <u>1.2</u> | <u>Reference</u> | <ul style="list-style-type: none"> .1 Agriculture and Agri-Food Canada (AAFC) <ul style="list-style-type: none"> .1 Plant Hardiness Zones-[2000] .2 Canadian Nursery Landscape Association (CNLA) <ul style="list-style-type: none"> .1 Canadian Standards for Nursery Stock-[2001] .3 Justice Canada (Jus) <ul style="list-style-type: none"> .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33 .2 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34 .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS) <ul style="list-style-type: none"> .1 Technical Data Sheets (TDS) .5 All this Work shall conform to standard BNQ 0605-100/2001- Aménagement paysager à l'aide de végétaux (Landscaping with Plants), Partie III-Terreau (Part III - Soil) and Partie VIII - Plantation des arbres et des arbustes (Part VIII - Planting of Trees and Shrubs), unless otherwise specified. |
| <u>1.3</u> | <u>Definition</u> | <ul style="list-style-type: none"> .1 Mycorrhiza: symbiotic association of a fungus with the roots of a plant. This symbiotic association favours the establishment of plants in recently imported and developed soils. |
| <u>1.4</u> | <u>Submittals</u> | <ul style="list-style-type: none"> .1 Submit the documents and samples required in accordance with Section 01 33 00 - Submittal Procedures. .2 Submit the Technical Data Sheets for the following products: <ul style="list-style-type: none"> .1 fertilizer; .2 mycorrhizae; .3 anti-dessicant; .4 guying system, including the cable clamps, collars, guy wires, anchors and tensioners; |

- .5 mulch.
- .3 Submit samples for the following products:
 - .1 mulch;
 - .2 mycorrhizae.
- .4 Proof of order of plants: Two weeks after the contract is signed, the Contractor shall provide proof of firm orders of plants from its suppliers. It shall send the Departmental Representative a copy of the purchase order with each supplier. The purchase order shall contain at least the following information:
 - .1 order confirmation date;
 - .2 list of plants ordered and reserved;
 - .3 supplier's contact information (telephone, representative, company)
- .5 Material Safety Data Sheets.

1.5 Quality Assurance

- .1 Health and Safety
 - .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 – Health and Safety Requirements.
- .2 Quality control at the source:
 - .1 The plans shall be approved before planting;
 - .2 Imported plants shall be accompanied by all the necessary permits in accordance with the regulations.
 - .3 The Departmental Representative reserves the right to approve the plants at the source of supply.
 - .4 The Contractor shall inform the Departmental Representative of the source fifteen (15) days before delivery of the plants and obtain his approval before commencing the planting work.
 - .5 The plants approved provisionally at the source of supply may be rejected at the site before planting on the basis of their condition after delivery or damage caused during delivery or handling.
 - .6 Plants not approved provisionally at the source of supply will be inspected directly on the site.
 - .7 The plants shall be inspected formally by the Departmental Representative before they are put in the ground and must have been given final approval for use for planting purposes.
 - .8 Final approval for use for planting purposes does not prevent eventual rejection of the plants due to failure to regrow during the warranty period.
 - .9 The plants shall be produced in a nursery.

1.6 Storage and Protection

- .1 Upon delivery, protect the plants against frost, excessive heat, wind and sun.
- .2 Immediately protect and store the plants that will not be planted within one (1) hour after their arrival on the site, by placing them in the location approved for this purpose by the Departmental Representative.
- .3 Protect the plants against any damage during transportation.

- .1 When the distance to be travelled is less than 30 km and the truck drives at less than 80 km/h, place tarps around the plants or on top of the truck bed.
- .2 When it is not possible to use a closed truck, due to the size and weight of the plants, protect the foliage and root balls by means of anti-dessicants and tarps.
- .3 Protect the stored plants against forest, wind and sun, by adopting the following measures:
 - .1 In the case of bareroot plants, maintain the moisture around the roots by heeling in the plants or burying their roots in sand or topsoil and watering the entire depth of the rhizosphere.
 - .2 In the case of container-grown plants, maintain an adequate moisture level in the containers. Heel in the delivered plants in fibre containers.
 - .3 In the case of plants balled and burlapped and surrounded by a metal wire basket, place them to protect the branches against any damage, and maintain an adequate moisture level in the rhizosphere.

1.7 Work Schedule

- .1 Submit the work schedule to the Departmental Representative for review ten (10) days before delivery of the plants.
- .2 The work schedule shall indicate the following information:
 - .1 the type and number of plants;
 - .2 the delivery dates;
 - .3 the arrival dates on site;
 - .4 the planting dates.

1.8 Warranty

- .1 For plants with a diameter greater than 75 mm, the 12-month warranty period specified in subsection CG32.1 of the General Clauses * C + is increased to 24 months.
- .2 The Departmental Representative will inspect the plants at the end of the warranty period.
- .3 The Departmental Representative reserves the right to extend the Contractor's liability for another year if, at the end of the initial warranty period, the foliage and development do not seem sufficient to ensure the future survival of the plants.

PART 2 - PRODUCTS

2.1 Plants

- .1 Type of preparation of the roots, dimensions, category and quality: conforming to the Canadian Standards for Nursery Stock.
 - .1 Source of supply of plants: plants cultivated in zones 3A to 5A, according to the plant hardiness zones in Canada.
 - .2 The plants shall belong to species suitable to the hardiness zone of the land where they must be planted.
 - .3 The plants shall belong to species suitable for the location for which they are intended.
- .2 Plants: free of diseases, insects, defects or bruises, exhibiting a healthy structure and a robust fasciculated root system.
- .3 Trees: except as otherwise indicated, trees with a straight trunk and luxuriant branches characteristic of the species.
- .4 Bareroot plants: cultivated in a nursery, in a dormant period, not balled and burlapped or cultivated in containers.

2.2 Water

- .1 Water free of impurities that could hinder plant growth.

2.3 Stake

- .1 Steel T sections, 40 mm x 40 mm x 5 mm x 2,750 mm with a total weight of 2kg/metre and sharpened at the factory.
- .2 Rigid collar for trees 70 mm and bigger, modified with a nylon strap 5 mm wide for a variable length according to the diameter of the tree. Collar fastened with a round-head screw.
- .3 Guy wire: 12 gauge galvanized wire with rubber ring.

- .4 Cable clamp; U bolts: 13 mm in diameter, galvanized, with curved restraining bar and hexagonal nuts.

2.4 Trunk Protection

- .1 Metal mesh composed of galvanized wire 1.4 mm in diameter, electrically welded, with mesh 25 mm x 25 mm and fasteners.

2.5 Mulch

- .1 Mulch composed of cedar fragments: wood chips ranging in size from 25 to 75 mm and 25 mm thick, free of bark, small branches and leaves.

2.6 Fertilizer

- .1 4-3-9 natural fertilizer, according to the manufacturer's recommendations.
- .2 Mycorrhiza : ectomycorrhizae and endomycorrhizae in a peat/perlite mixture.

2.7 Anti-dessicant

- .1 Wax emulsion.

PART 3 - EXECUTION

3.1 Preparation

- .1 Ensure that the plants are acceptable for the Departmental Representative.
- .2 Cut the damaged roots and branches.
- .3 Apply an anti-dessicant on the conifers and on the foliage of broadleaf trees in accordance with the manufacturer's instructions.

3.2 Excavation and Preparation
of Planting Holes

- .1 Establish the bedding layer of the planting areas in accordance with Section 32 91 21 - Rough Grading.
- .2 Prepare the planting areas in accordance with Section 32 91 21 - Topsoil Placement and Grading.
- .3 Planting holes
 - .1 Before starting to dig, stake the land and submit the

layout to the Departmental Representative.

- .2 Dig to the depth and over the width indicated.
- .3 Remove the subsoil earth, rocks, roots, debris and toxic materials from the excavated materials that will serve as soil for the trees and shrubs planted individually. Remove the excess materials.
- .4 Scarify the walls of the planting holes.
- .5 Before planting the trees and shrubs, remove the water which has infiltrated into the holes. Notify the Departmental Representative.

3.3 Planting

- .1 For bareroot plants, place a 50 mm layer of fill at the bottom of the hole, then plant the trees and shrubs so that their roots are well deployed in the hole.
- .2 For balled and burlapped plants, remove the top third of the burlap, taking care not to damage the root ball. Do not remove the burlap or rope located under the root ball.
- .3 For container-grown plants or plants with a root ball wrapped in a non-degradable material, remove the container or the rapping completely without damaging the root ball.
- .4 Plant the plants vertically at the indicated locations, orienting them so that they produce the best possible effect, given the neighbouring structures, such as buildings, roads and sidewalks.
- .4 Trees and shrubs
 - .1 Backfill in 150 mm layers and tamp each layer to eliminate the air pockets. When the hole is two thirds full, fill the remaining space with water. Once the water has penetrated into the soil, backfill to the final grade.
 - .2 Incorporate mycorrhizae at the rate of 500 ml per planting hole and fertilize fosse at the rate of 300 ml per planting hole.
 - .3 Form a watering trough as indicated.
- .5 For vegetative cover, also backfill to the final grade and tamp the soil to eliminate the air pockets.
- .6 Water the plants well.
- .7 After tamping the soil, backfill to the final grade.
- .9 Remove the burlap, metal wires and containers from the site.

3.4 Trunk Protection

- .1 Install trunk protection material on broadleaf trees as indicated.
- .2 Install the trunk protection material before staking, as the case may be.

3.5 Staking

- .1 Install the stakes as indicated.
- .2 Install a single stake for broadleaf trees less than (3) m tall and evergreens less than two (2) m tall.
 - .1 Place the stake on the prevailing wind side, at a distance of 150 mm from the trunk.
 - .2 Sink the stake to a depth of at least 150 mm into the undisturbed soil, below the roots. Ensure that the stake is solid, vertical and not cracked.
 - .3 Install a tube 150 mm long as a guying collar at a height of 1,500 mm above ground level.
 - .4 Insert a type 1 guy wire into the tube, bend the tube back around the tree to form a collar, twist the wire to fasten it, attach the wire firmly to the stake, and then cut the remaining wire end.
- .3 Install three (3) guy wires attached to anchor stakes around broadleaf trees more than (3) m tall and around evergreens more than two (2) m tall.
 - .1 Use type 2 guy wire with a guy clamp for trees less than 75 mm in diameter, and type 2 guy wires with a guy clamp for trees more than 75 mm in diameter.
 - .2 Use type 1 anchor stakes for trees less than 75 mm in diameter and type 2 anchor stakes for trees more than 75 mm in diameter.
 - .3 Install guying collars above the branches to prevent them from slipping, at about 2/3 of the total height in the case of evergreens and at half the height in the case of broadleaf trees. The collars shall not be installed more than 2.5 m above the ground.
 - .4 The guying collars shall have a big enough circumference to encircle the trunk and to allow 50 mm of play between the collar and the trunk. Insert a guy wire in the collar encircling the trunk and fasten it to the main wire with a guy clamp or by twisting it; cut the wire near the twist. Also arrange the buys around the trunk at intervals of about 120 degrees.
 - .5 Plant the stakes at equal intervals around the tree, so that the guy wire forms a 45-degree angle in relation to the

- ground. Install the stakes at an angle that will provide the wire with maximum strength.
- .6 Attach the guy wires to the anchor stakes and fasten them by twisting them with a guy clamp.
 - .7 Install the tensioners and tension the guys, leaving the play required to allow a slight movement of the tree.
 - .8 Saw the top of the wood anchor stakes 100 mm above ground level, or at the height determined by the Departmental Representative.
 - .9 Install fluorescent tape pennants on the guys.
- .4 After installing the stakes, remove the broken branches with clean and well sharpened tools.
- 3.6 Mulching
- .1 Before spreading mulch, add earth as needed to compensate for subsidence of the soil.
 - .2 Spread the mulch as indicated.
- 3.7 Maintenance During Planting
- .1 Perform the following maintenance work from planting to acceptance of the work by the Departmental Representative.
 - .1 Water the soil to maintain a suitable moisture level to guarantee the planting, growth and health of the plants, without causing erosion.
 - .1 Water the evergreen trees late in autumn, before the frost, to saturate the soil around the roots.
 - .2 Remove the weeds once a month.
 - .3 Put the disturbed mulch back in place and add more as needed.
 - .4 At the places not covered with mulch, till the soil as needed to keep the top layer loose.
 - .5 If it is necessary to fight insects, fungi and diseases, resort to the appropriate methods in accordance with the federal, provincial and municipal regulations and by-laws in this regard. Before applying products, submit them to the Departmental Representative for review.
 - .6 Prune the dead or broken branches.
 - .7 Maintain the trunk protection devices and the guy wires in good condition; adjust them as needed.
 - .8 Remove and replace the dead or sick plants by

proceeding in the manner prescribed for the first plantings.

3.8 Maintenance During
the Warranty Period

- .1 Perform the following maintenance work from acceptance of the Work by the Departmental Representative to the end of the warranty period.
 - .1 Water the soil to maintain a suitable moisture level to guarantee the optimum growth and health of the plants, without causing erosion.
 - .2 Reshape the damaged watering troughs.
 - .3 Remove the weeds once a month.
 - .4 Put the disturbed mulch back in place and add more as needed.
 - .5 At the places not covered with mulch, till the soil as needed to keep the top layer loose.
 - .6 If it is necessary to fight insects, fungi and diseases, resort to the appropriate methods in accordance with the federal, provincial and municipal regulations and by-laws in this regard. Before applying products, submit them to the Departmental Representative for review.
 - .7 Spread fertilizer in early spring based on the soil analysis results.
 - .8 Prune dead, broken or dangerous branches.
 - .9 Maintain the trunk protection devices and the tree stakes in good condition; adjust them as needed.
 - .10 At the end of the warranty period, remove the trunk protection devices and the tree stakes, then grade the watering troughs.
 - .11 Remove and replace the dead or sick plants by proceeding in the manner prescribed for the first plantings.
 - .12 Submit a written report to the Departmental Representative each month containing the following information:
 - .1 the maintenance work performed;
 - .2 the development and condition of the plants;
 - .3 the necessary preventive or corrective measures which area not the Contractor's responsibility.

3.9 Condition of Acceptance

- .1 The planting work will be accepted by the Departmental Representative, provided that the plants have well developed foliage and vigorous growth and conform to the requirements of the plans, details and specifications.

- .2 Autumn plantings will be approved in the spring after a one-month period following the beginning of the growing season, provided that the conditions of acceptance have been fulfilled.

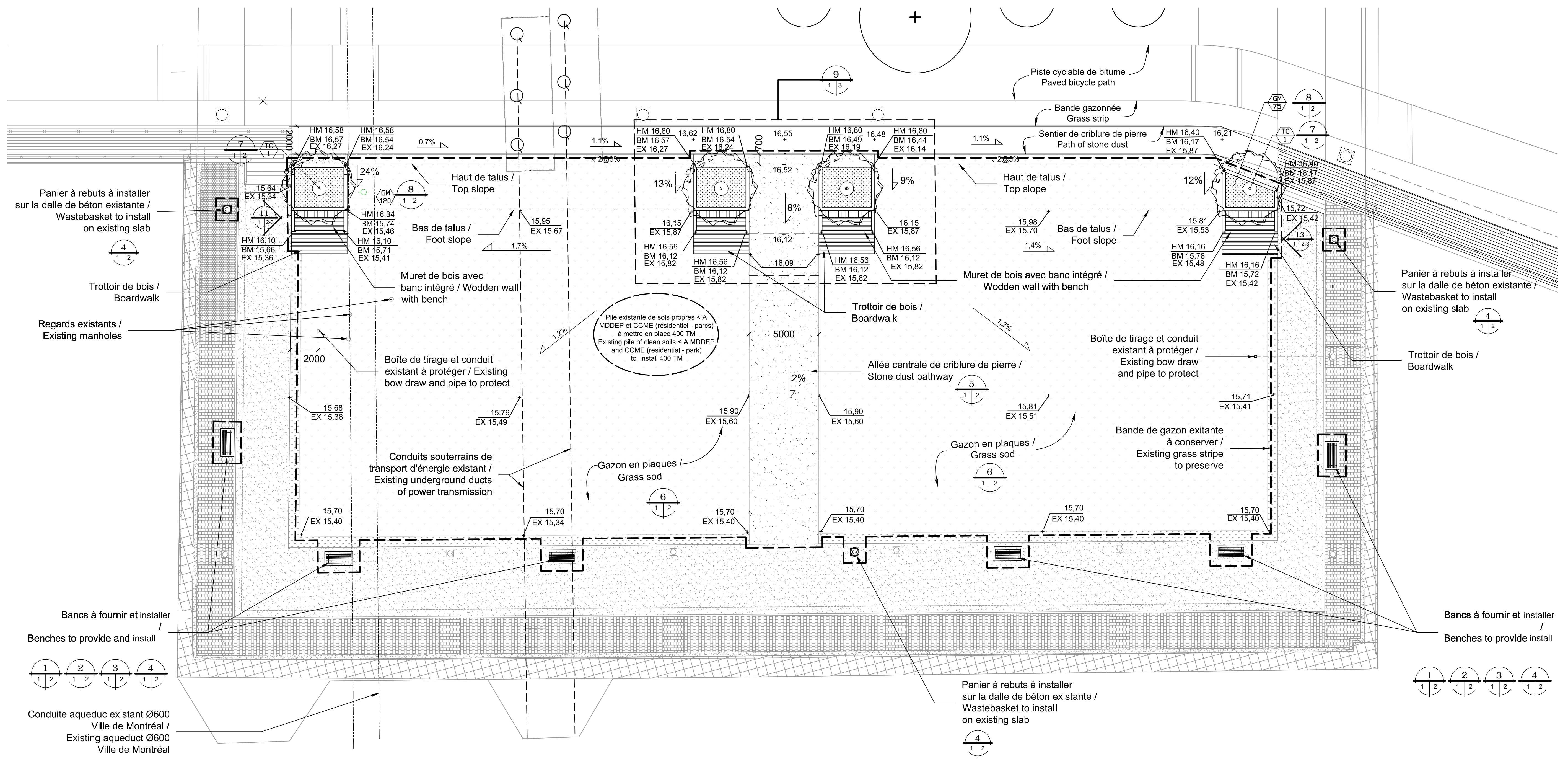
3.10 Final Acceptance

- .1 Final acceptance will be given at the end of the warranty period if all the plants are on the right track to growth.

END OF SECTION

Légende / Legend

- 15,82 Élévation proposée / Proposed elevation
- HM 16,59 Élévation proposée Haut de Mur / Proposed elevation Top of Wall
- BM 16,12 Élévation proposée Bas de Mur / Proposed elevation Bottom of Wall
- HM 16,59 Top wall proposed elevation
- BM 16,12 Foot wall proposed elevation
- EX 15,82 Élévation existante / Existing elevation



1 EMIS POUR APPEL D'OFFRES 2013-08-30

Modification	Date
A. No du détail	A. Detail No
B. Localisation	B. Localisation
C. Sur feuille No	C. On sheet No

CONCEPTION:	DESIGN:
Conçu par:	Designed by:
C. Simard, C. Gaudreault	
Dessiné par:	Drawn by:
C. Gaudreault	
Vérifié par:	Checked by:
C. Simard	
Chargé de projet:	Project manager by:

VALIDÉ PAR: VALIDATED BY:

Gestionnaire de projet:	Project manager:
C. Simard	
Gestionnaire principal de projet:	Project director:
S. Huot	
Projet:	Project:

QUAI DE TRANSBORDEMENT
LHNC DU CANAL DE LACHINE

Titre du dessin: Drawing title:

Lot 2
Plan d'aménagement et d'implantation
Part 2
Layout and landscaping plan

Date: 2013-08-30 Feuille: 01/03

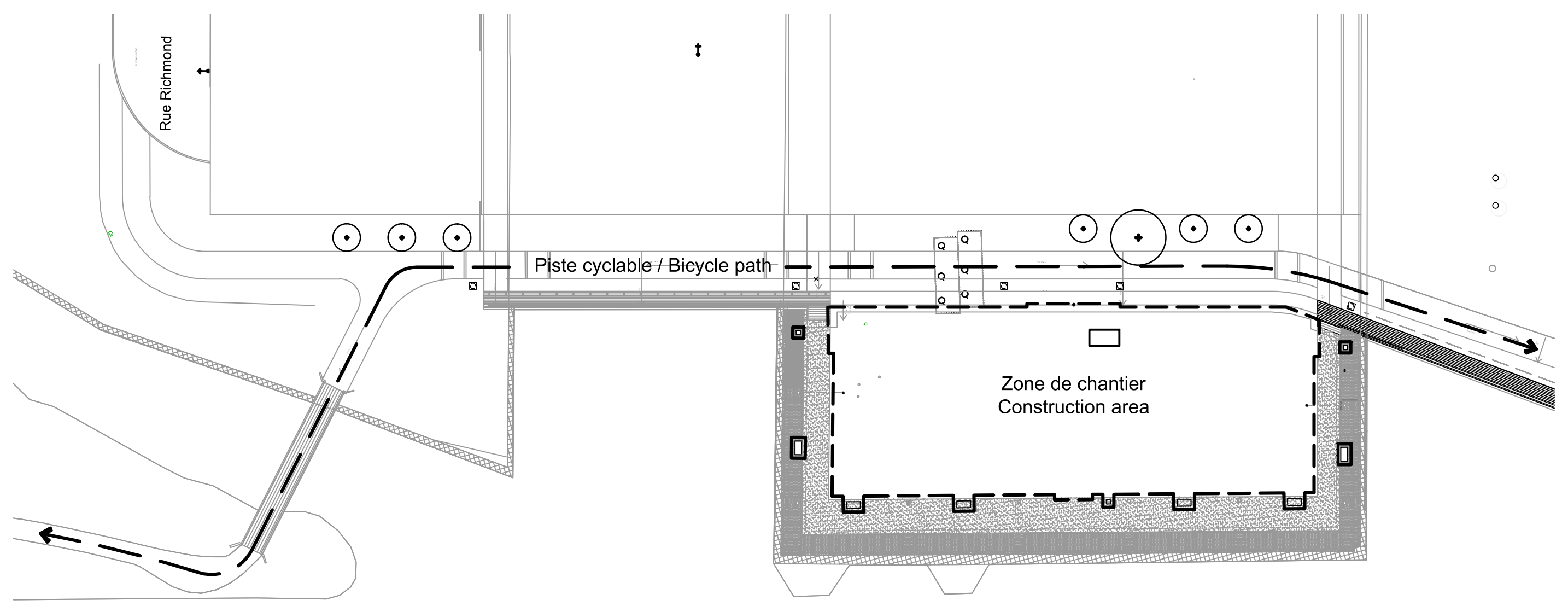
Échelle: Scale: 01/03

Réf. Consultant: Ref. Consultant: R.057393.100 Sheet: No de référence: Reference no: Ministère: 168/00/PR1-246 Ministry: CL-18-182.1

PLAN D'AMÉNAGEMENT
LANDSCAPING PLAN

ÉCHELLE/SCALE: 1:150

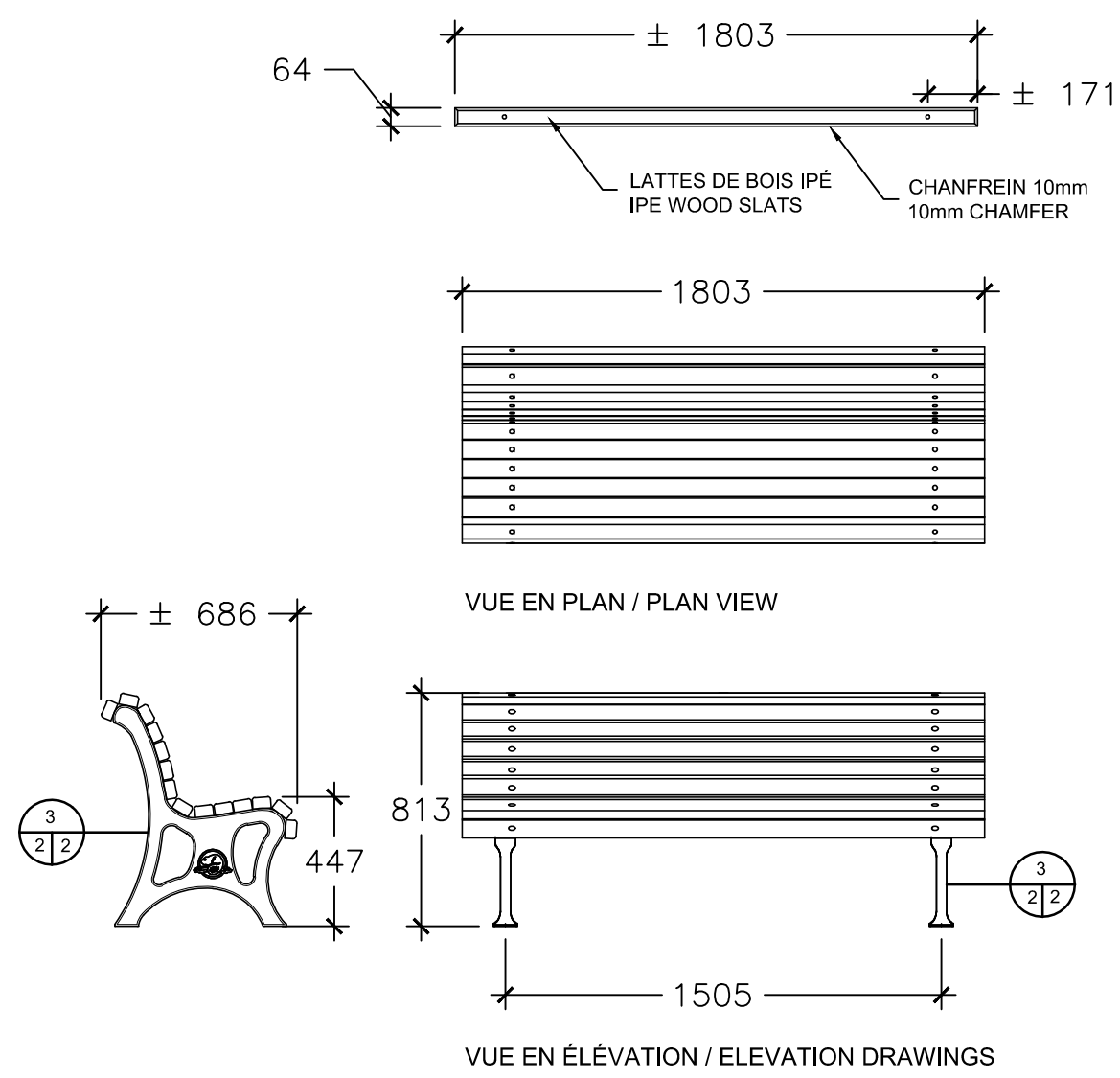
TABLEAU DE PLANTATION / PLANTING TABLE				
CODE	QUANTITÉ / QUANTITY	NOM LATIN / NOM FRANÇAIS / NOM ANGLAIS / LATIN NAME / FRENCH NAME / ENGLISH NAME	DISTANCE PLANTATION	MODE
ARBRES / TREES				
TC	4	TILIA CORDATA / TILLEUL À PETITES FEUILLES / LITTLE-LEAF LINDEN		80 MM
VIVACES / PERENNIALS				
GM	435	GLYCERIA MAXIMA 'VARIEGATA' / GLYCÉRIE / MANNA GRASS	300mm C/C	SP4



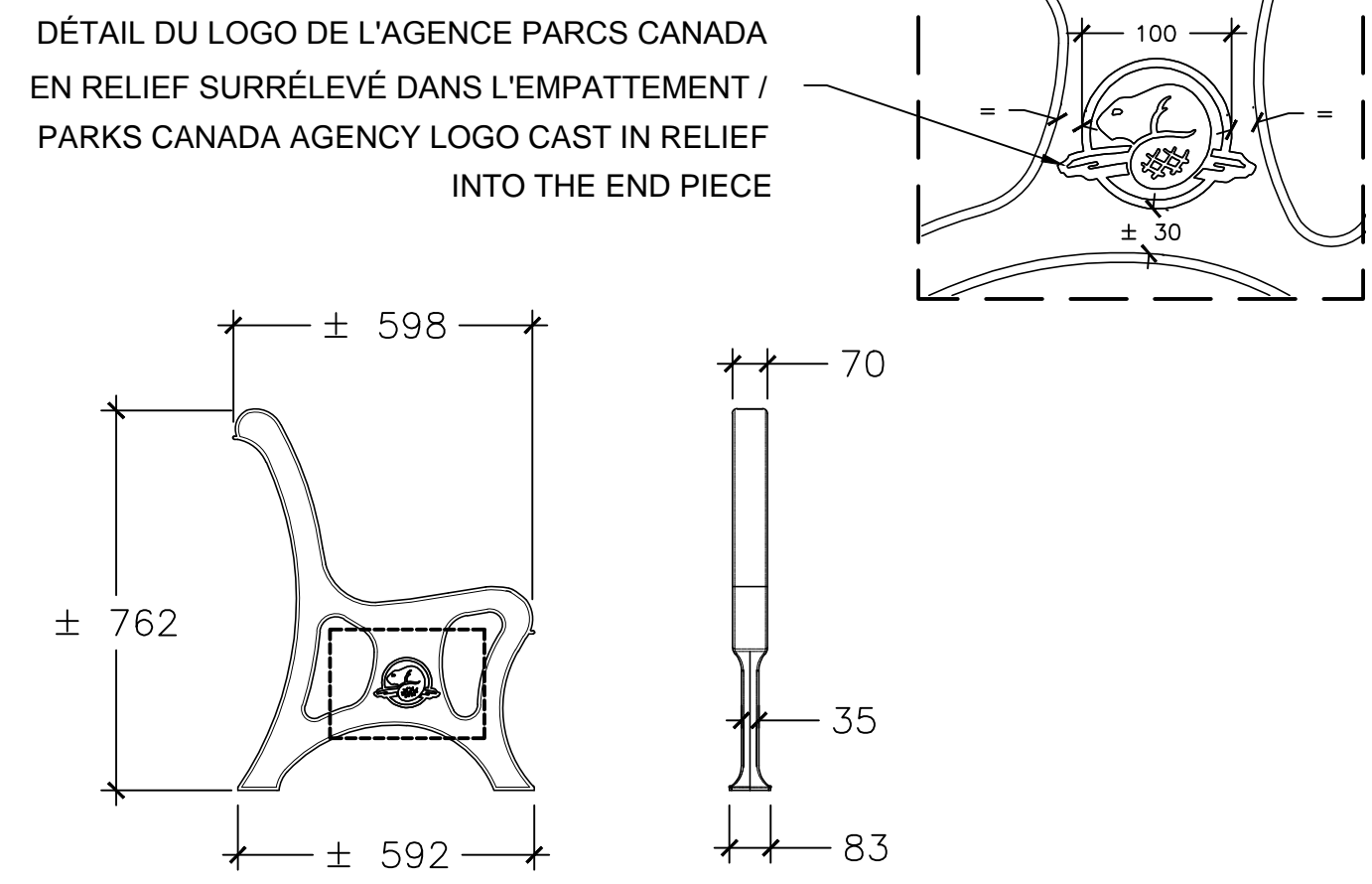
PLAN DE LOCALISATION
LOCATION MAP

ÉCHELLE/SCALE: 1:600

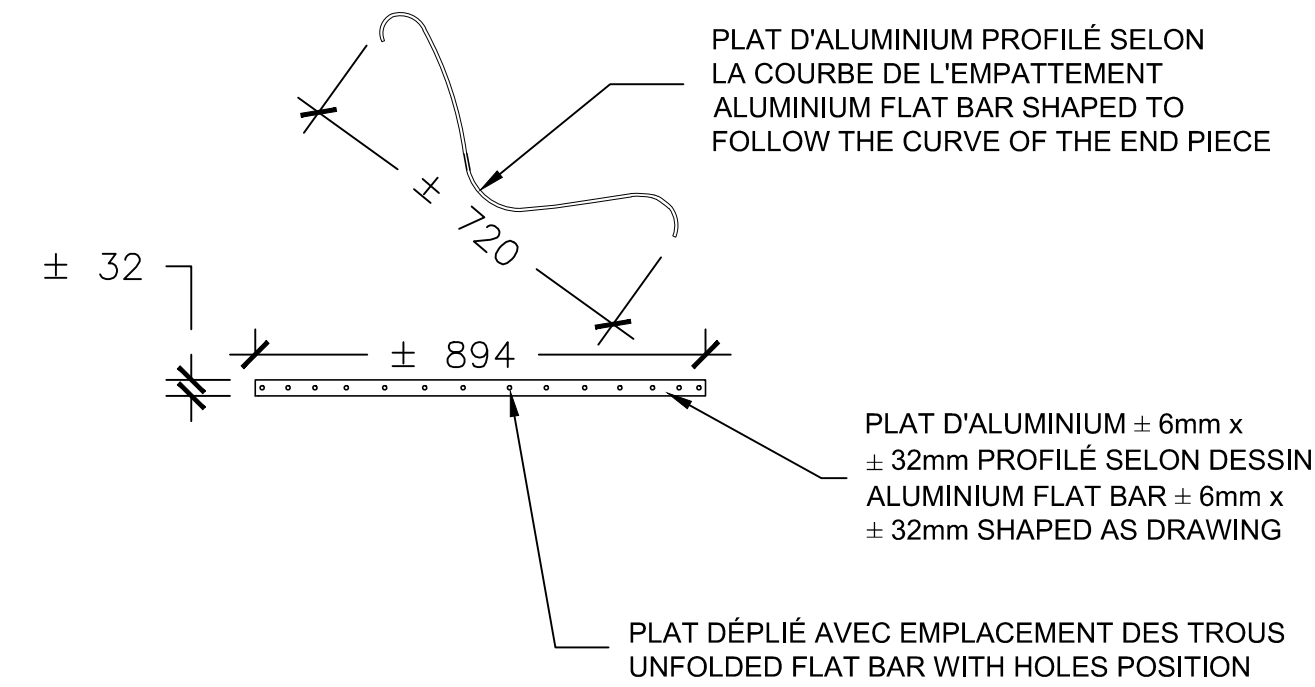
AutocAD / format A1 / S:\SIP\Parcs\CLIENTS\PARCS CANADA\UG Ouest du Québec\188-LRN CANAL LACHINE\00-Général\BNI\Lot102-Plans\01-Dossier Travail\Plan caseR_057393_100_Lot 2_Aménagement.dwg



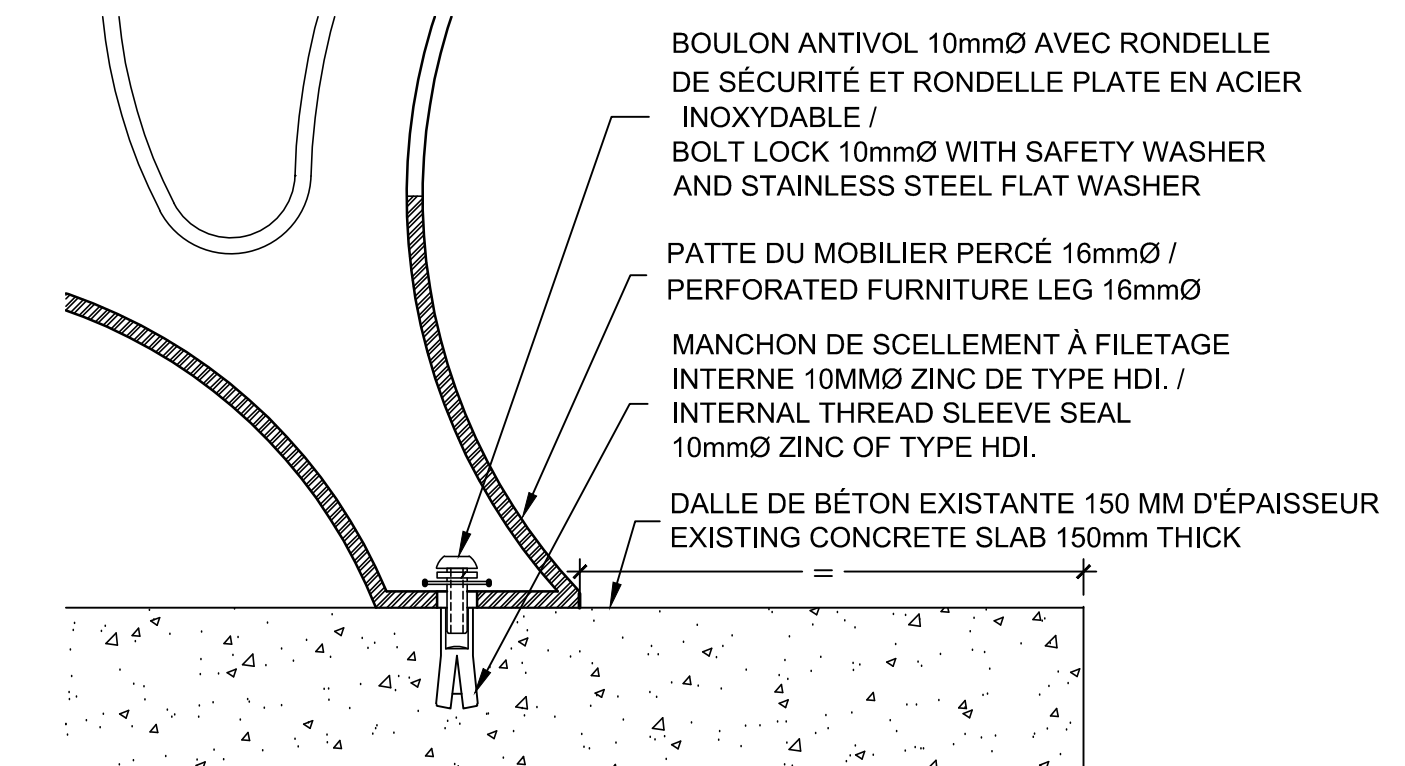
BANC DE BOIS AVEC DOSSIER
WOOD BENCH WITH BACKREST
ÉCHELLE/SCALE: 1:25



EMPATTEMENT DE FONTE D'ALUMINIUM ALLIAGE 356.2
SAND-CAST ALUMINIUM ALLOY 356.2 END PIECE
ÉCHELLE/SCALE: 1:15



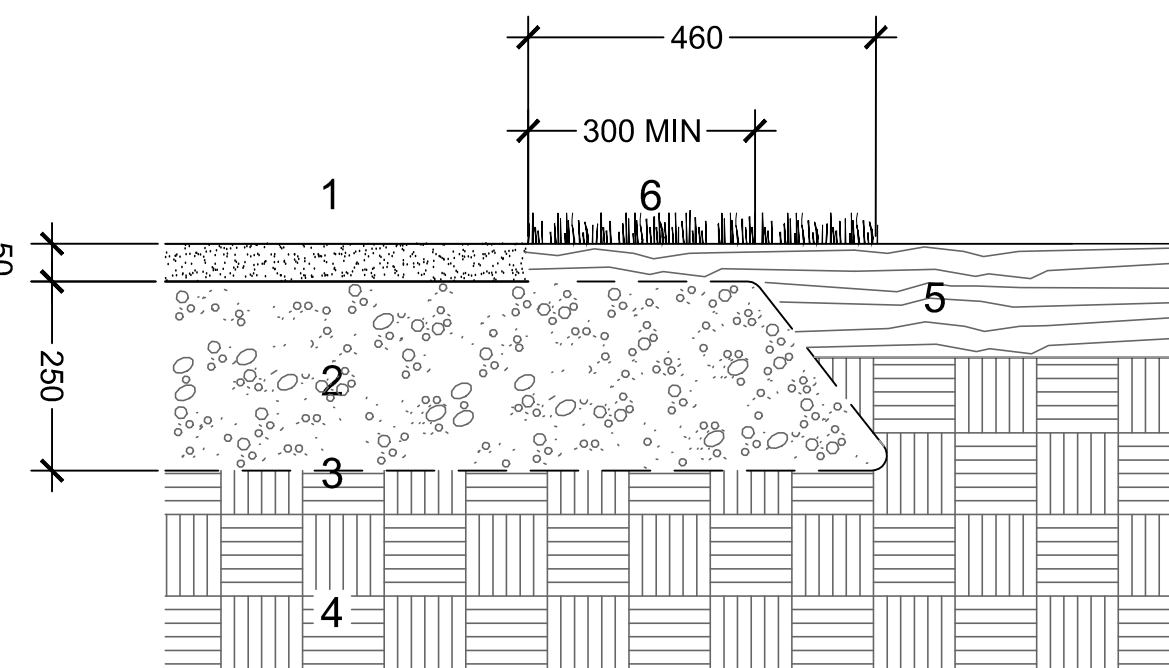
BANDE DE SUPPORT CENTRAL VUES EN PLAN ET PROFIL
CENTRAL SUPPORT BAND PLAN AND SIDE VIEWS
ÉCHELLE/SCALE: 1:15



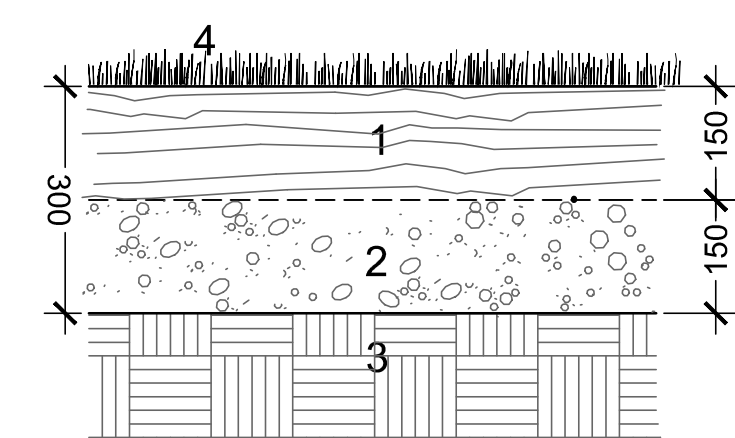
DÉTAIL TYPE ANCRAGE ANTIVOL
ANTI-VANDALISM ANCHOR
ÉCHELLE/SCALE: 1:3

- 1 POUSSIÈRE DE PIERRE COMPACTÉ À 98 % P.M. / M.P. 98% COMPACTED CRUSHED STONE
- 2 FONDATION GRANULAIRE MG-20 COMPACTÉ À 98% P.M. / M.P. 98% COMPACTED MG-20 GRANULAR SUB-BASE.
- 3 GÉOTEXTILE NON-TISSÉ / NON-WOVEN GEOTEXTILE
- 4 SOL NON-REMANIÉ OU REMBLAI COMPACTÉ À 98% P.M. / UNDISTURBED GROUND OR M.P. 98% COMPACTED BACKFILL.
- 5 TERRE VÉGÉTALE / TOPSOIL
- 6 GAZONNEMENT / SODDING

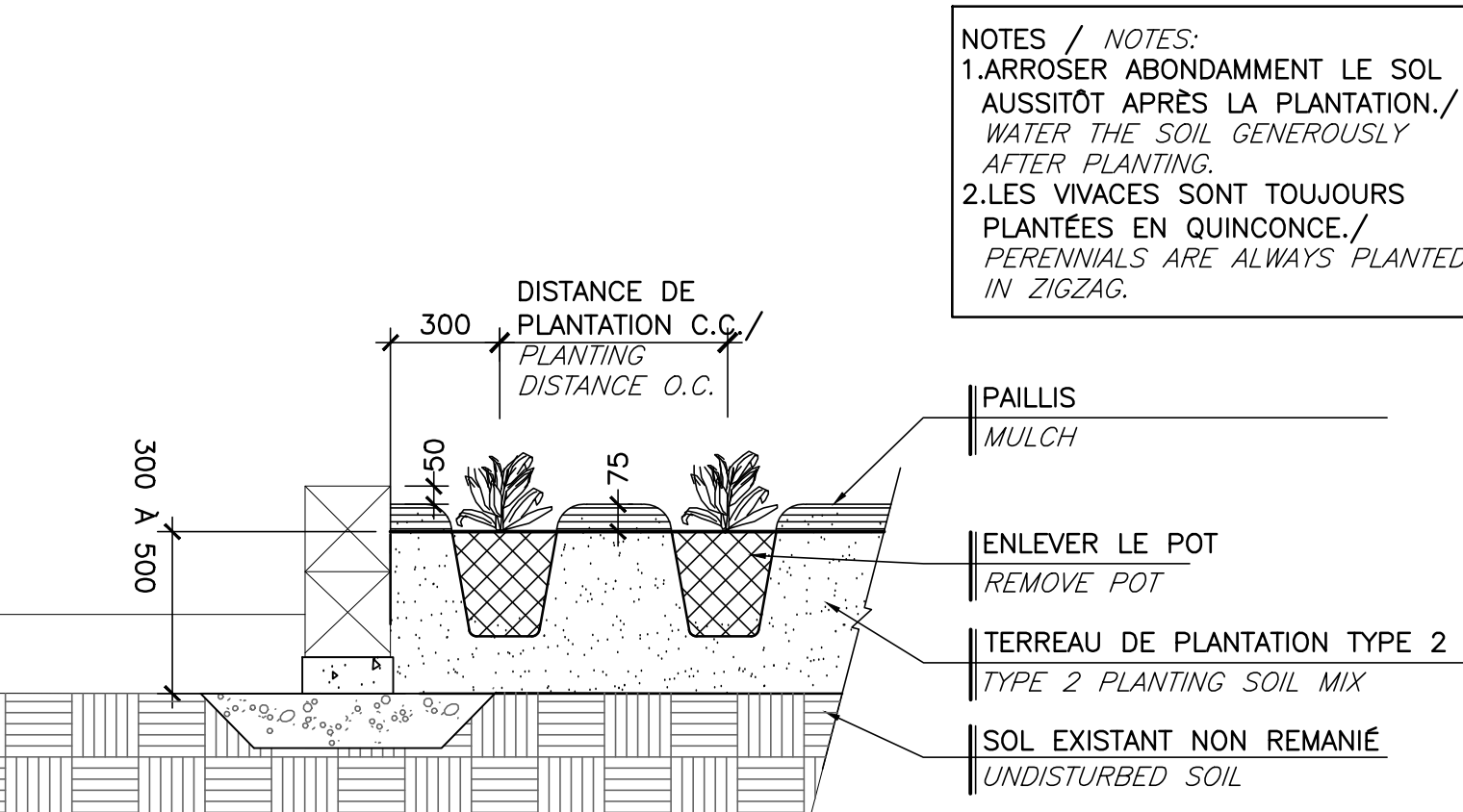
- 1 TERRE VÉGÉTALE / TOPSOIL
- 2 REMBLAI DE MATÉRIEL PROPRE / BACKFILL OF CLEAN SOIL
- 3 SOL NON-REMANIÉ OU REMBLAI EXISTANT / UNDISTURBED GROUND OR EXISTING BACKFILL
- 4 GAZONNEMENT / SODDING



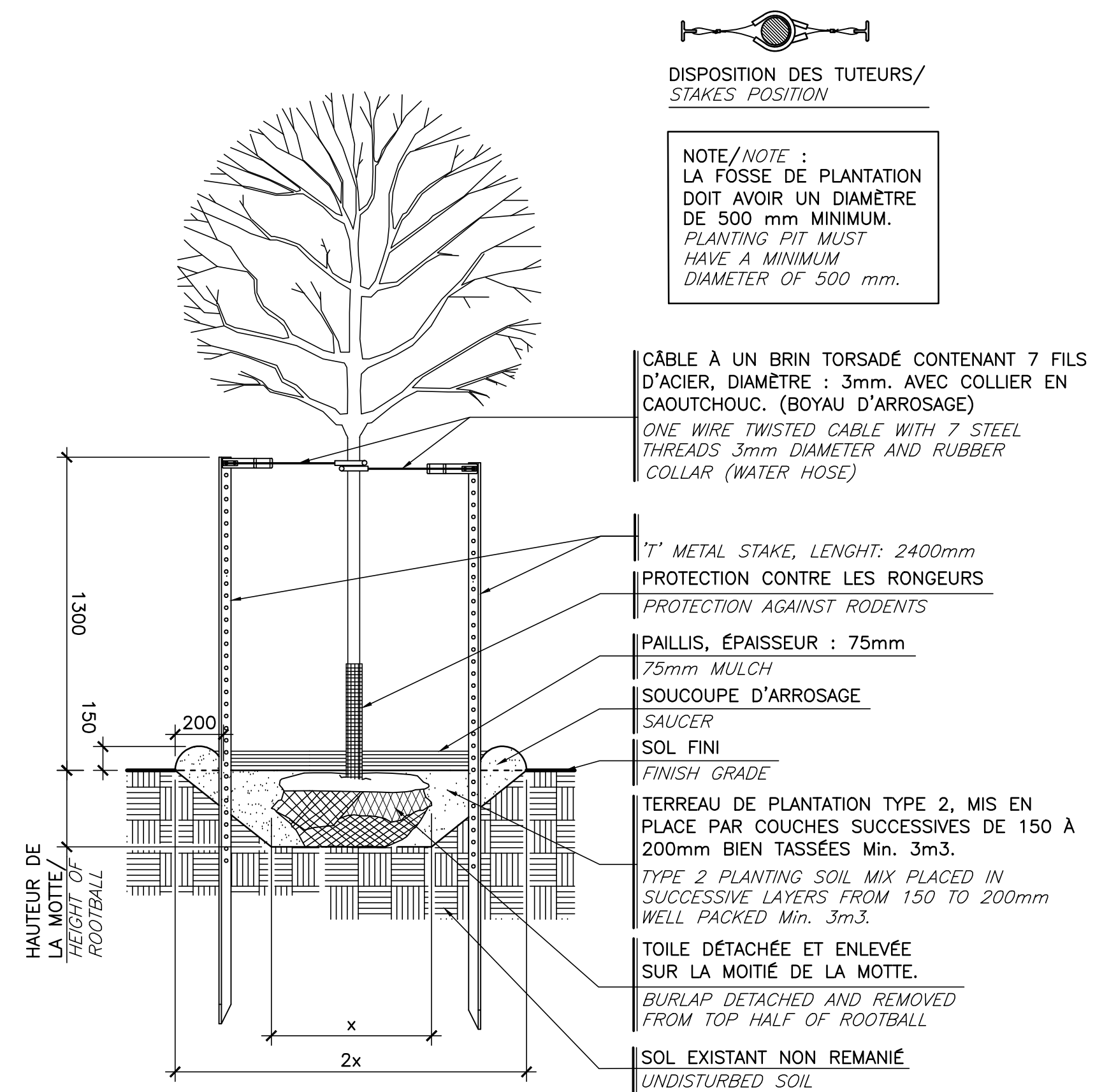
REVÊTEMENT DE SOL EN PIERRE CONCASSÉE
CRUSHED STONE SURFACING
ÉCHELLE/SCALE: 1:10



REMBLAI ET ENGAZONNEMENT
BACKFILL AND SODDING
ÉCHELLE/SCALE: 1:10



VIVACES PERENNIALS
ÉCHELLE/SCALE: 1:20



PLANTATION ARBRE
THREE PLANTING
ÉCHELLE/SCALE: 1:10

1	ÉMIS POUR APPEL D'OFFRES	2013-08-30
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A. No du détail	A. Detail No
B. Localisation	B. Localisation
C. Sur feuille No	C. On sheet No

CONCEPTION:	DESIGN:
Conçu par:	Designed by:
C. Simard, C. Gaudreault	
Dessiné par:	Drawn by:
C. Gaudreault	
Vérifié par:	Checked by:
C. Simard	
Chargé de projet:	Project manager by:

VALIDÉ PAR:	VALIDATED BY:
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Gestionnaire de projet:	Project manager:
C. Simard	

Gestionnaire principal de projet:	Project director:
S. Huot	

Projet:	Project:
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QUAI DE TRANSBORDEMENT
LHNC DU CANAL DE LACHINE

Titre du dessin:	Drawing title:
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Lot 2 - Détails

Part 2 - Details

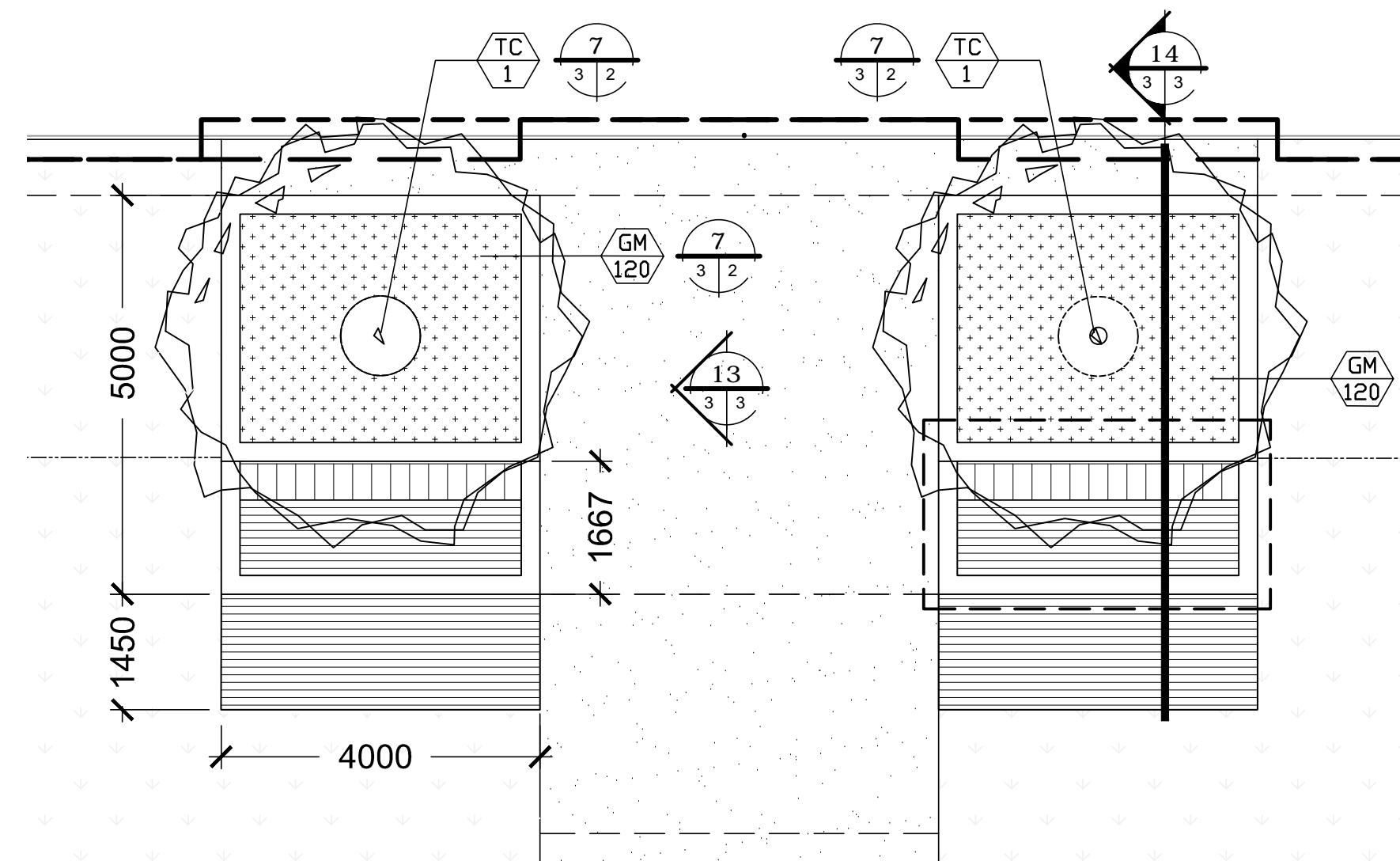
Date:	2013-08-30	Feuille:	
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Échelle:	Indiquée	Scale:	02 / 03
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Ref. Consultant:	R.057393.100	Ref. Consultant:	
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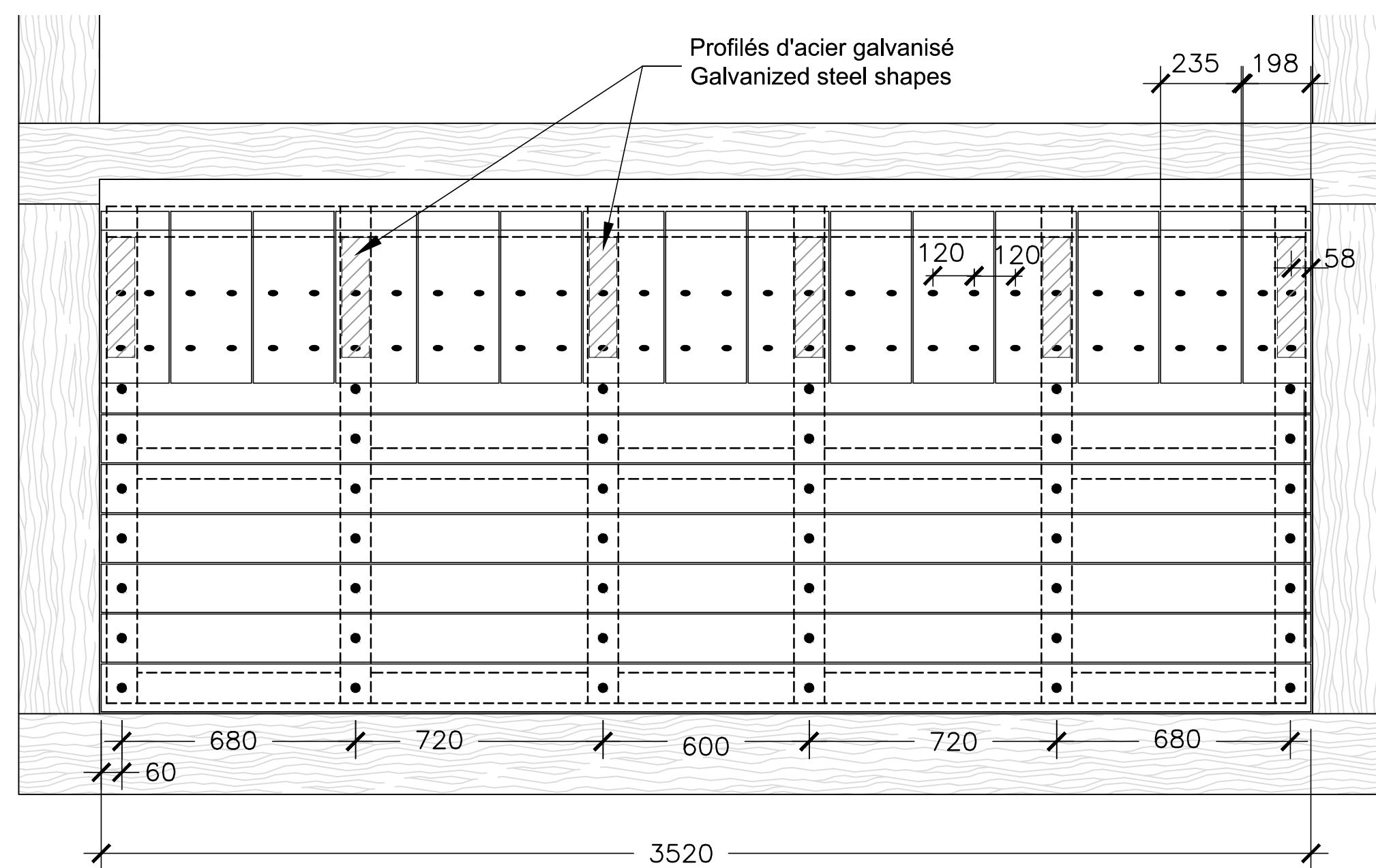
No de référence:	168/00/PR1-246	Reference no:	
Ministère:		Ministry:	

CL-18-182.1



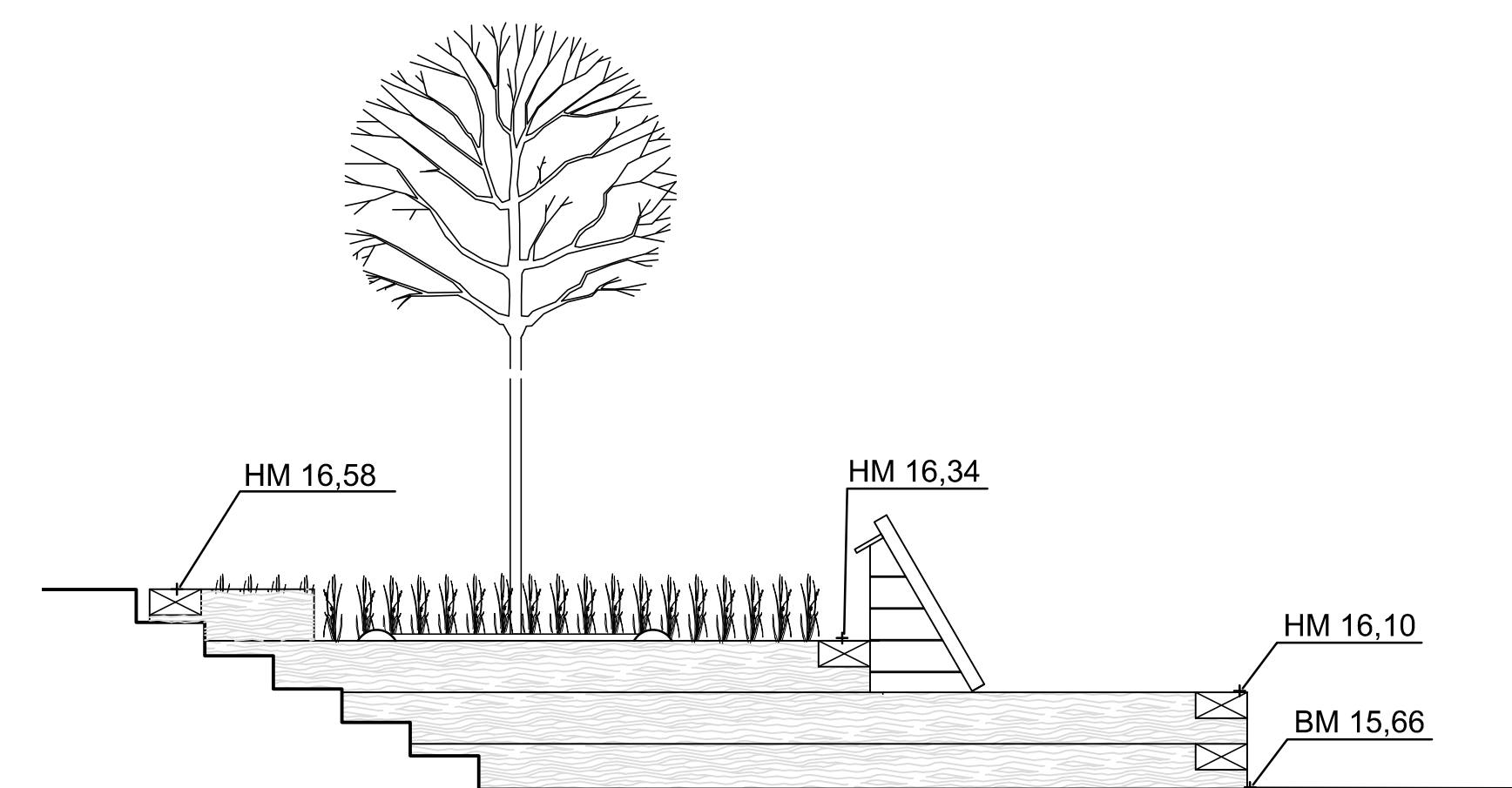
PLAN AGRANDI MURET DE BOIS
WALLS BENCH ENLARGED PLAN

ÉCHELLE/SCALE: 1:75



PLAN AGRANDI DÉTAIL DE BOULONNAGE SIÈGE ET DOSSIER
BACKREST AND SEAT BOLT DETAIL ENLARGED PLAN

ÉCHELLE/SCALE: 1:15

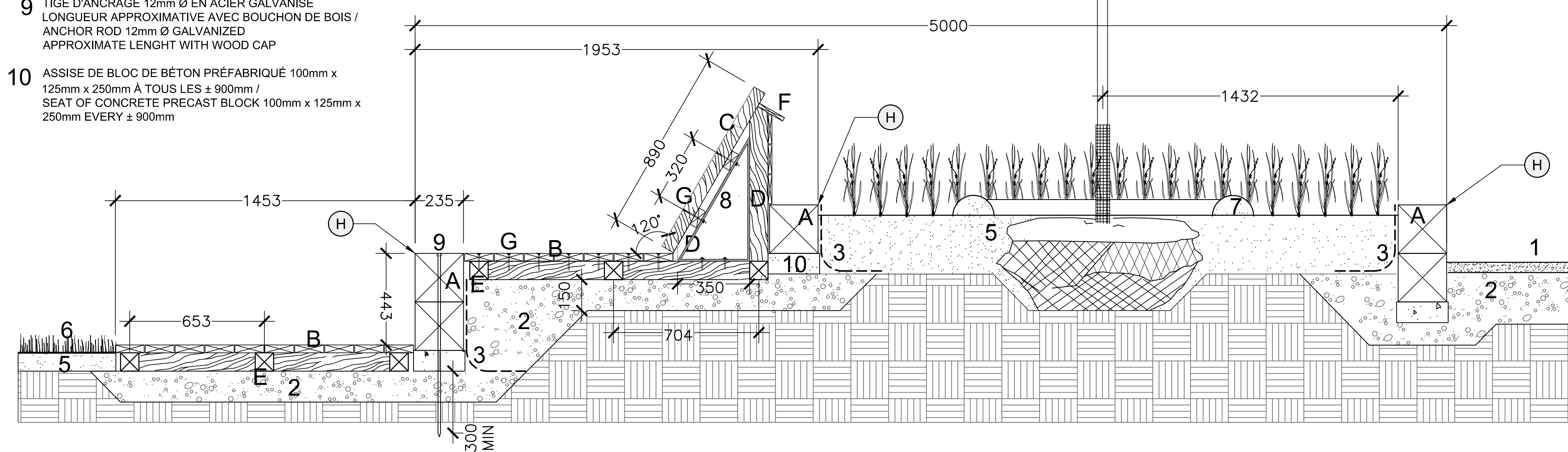


ÉLÉVATION DU MURET DE BOIS OUEST

WEST WALL ELEVATION

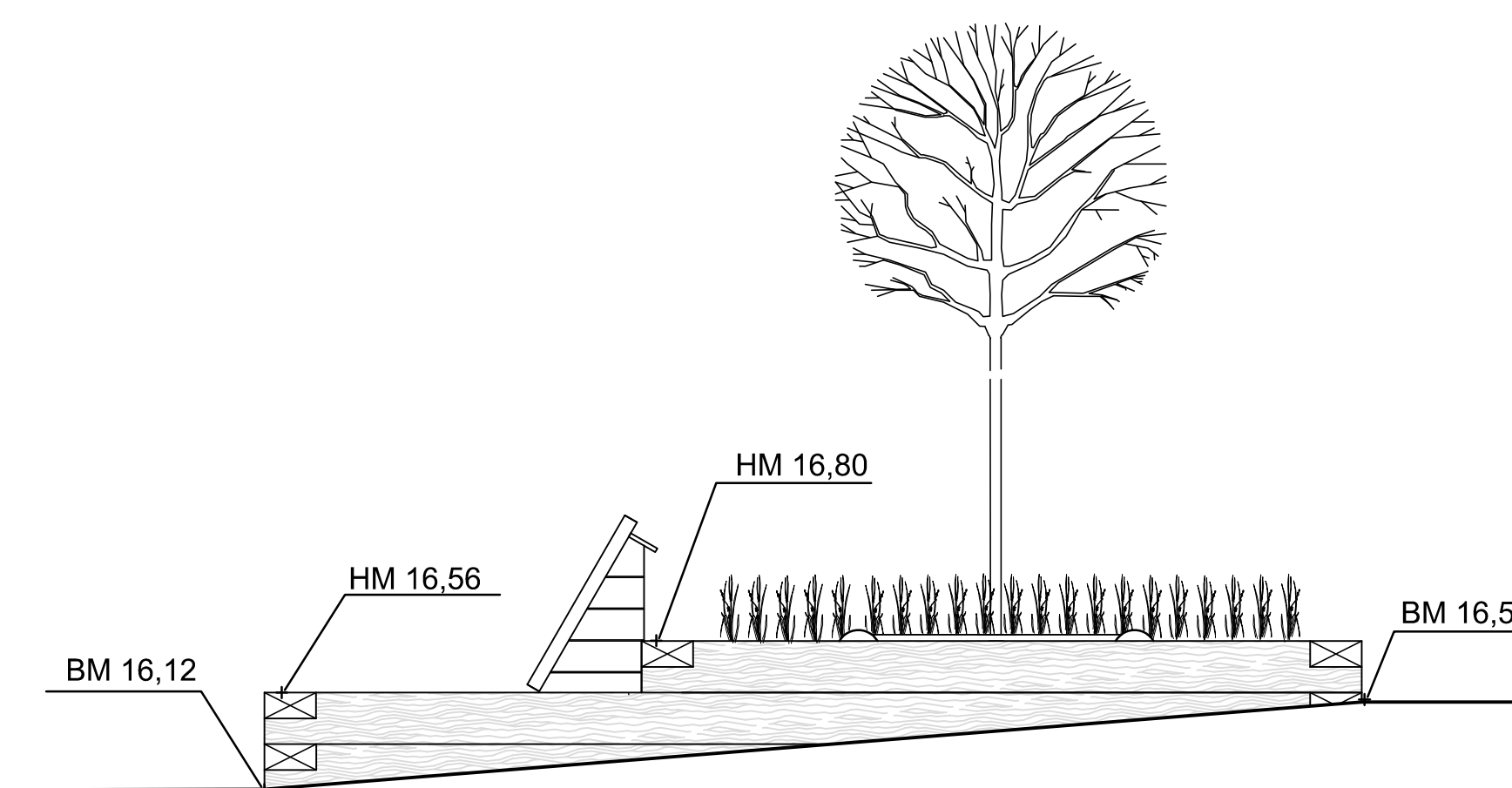
SCALE: 1:30

- | | |
|---|--|
| <p>1 POUSSIÈRE DE PIERRE COMPACTÉ À 98 % P.M.
M.P. 98% COMPACTED CRUSHED STONE</p> <p>2 FONDATION GRANULAIRE MG-20 COMPACTÉ À 98% P.M.
M.P. 98 % COMPACTED MG-20 GRANULAR SUB-BASE.</p> <p>3 GÉOTEXTILE NON-TISSÉ
NON-WOVEN GEOTEXTILE</p> <p>4 SOL NON-REMANIÉ OU REMBLAI COMPACTÉ À 98% P.M.
UNDISTURBED GROUND OR M.P. 98% COMPACTED
BACKFILL.</p> <p>5 TERRE VÉGÉTALE
TOPSOIL</p> <p>6 GAZONNEMENT
SODDING</p> <p>7 PAILLIS
MULCH</p> <p>8 PROFILÉ D'ACIER GALVANISÉ 80mm LARGE x VARIABLE x
3/8" D'ÉPAIS, PRÉ-PERÇÉ AVANT GALVANISATION /
GALVANIZED STEEL SHAPE 80mm WIDE x VARIABLE x 3/8"
THICK, PRE-DRILLED BEFORE GALVANISATION</p> <p>9 TIGE D'ANCRAGE 12mm Ø EN ACIER GALVANISÉ
LONGUEUR APPROXIMATIVE AVEC BOUCHON DE BOIS /
ANCHOR ROD 12mm Ø GALVANIZED
APPROXIMATE LENGTH WITH WOOD CAP</p> <p>10 ASSISE DE BLOC DE BÉTON PRÉFABRIQUÉ 100mm x
125mm x 250mm À TOUS LES ± 900mm /
SEAT OF CONCRETE PRECAST BLOCK 100mm x 125mm x
250mm EVERY ± 900mm</p> | <p>A 235mm x 235mm SAPIN DOUBLAS ASSEMBLÉ AVEC CHEVAUCHEMENT ET À MI-BOIS
AUX EXTRÉMITÉS /
235mm x 235mm BC FIR ASSEMBLY WITH OVERLAP AND MID-WOOD TO END</p> <p>B SAPIN DOUGLAS 38mm x 140mm
38mm x 140mm BC FIR</p> <p>C SAPIN DOUGLAS 64mm x 235mm
64mm x 235mm BC FIR</p> <p>D BOIS TRAITÉ SPF 38mm x 89mm
38mm x 89mm SPF TREATED WOOD</p> <p>E BOIS TRAITÉ SPF 89mm x 89mm
89mm x 89mm SPF TREATED WOOD</p> <p>F PLANCHE DE FINITION ARRIÈRE ET CÔTÉS DU DOSSIER EN SAPIN DOUGLAS 19mm x 140mm
BACK AND SIDES OF BACKREST FINISH WOOD PIECE 19mm x 140mm SPF BC FIR</p> <p>G BOULON ANTIVOL D'ACIER INOXYDABLE TÊTE PLATE 5/16"
Ø (4 UNITÉS PAR MORCEAUX) /
SECURITY POLISHED STAINLESS STEEL FLAT HEAD BOLT
5/16" Ø (4 UNITS PER PIECE)</p> <p>H ARÊTES EXTÉRIEURES 5mm CHANFREINÉES AU CHANTIER
5mm EXTERNAL EDGES CHAMFERED ON SITE</p> |
|---|--|



COUPE TYPE MURET ET BANC DE BOIS
WOOD WALL AND BENCH TYPICAL SECTION

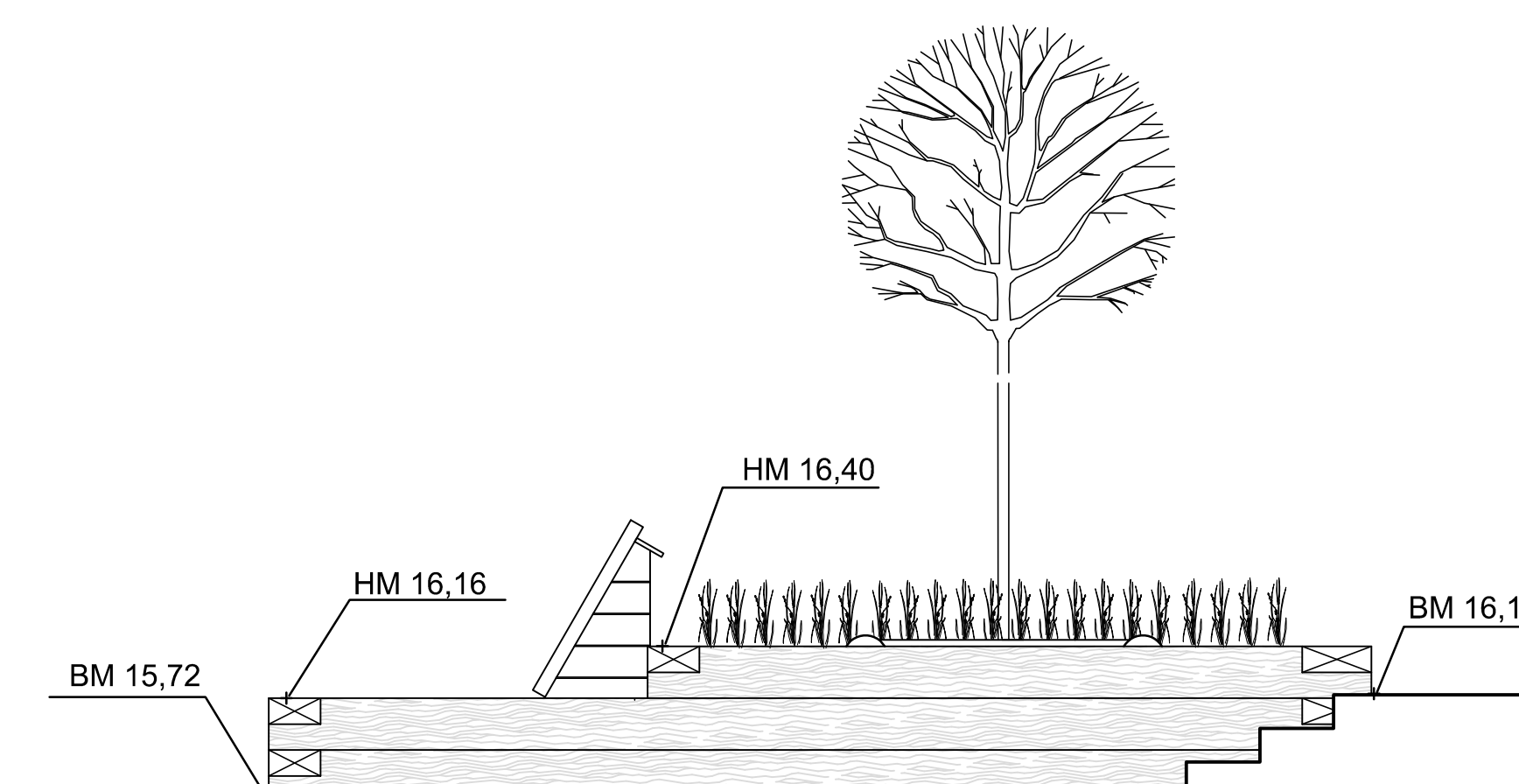
ÉCHELLE/SCALE: 1:15



ÉLÉVATION DU MURET CENTRAL

CENTRAL WALL ELEVATION

SCALE: 1:30



ÉLÉVATION DU MURET EST

EAST WALL ELEVATION

SCALE: 1:30

Modification	EMIS POUR APPEL D'OFFRES	Date
1		2013-08-30

A. No du détail	A	A. Detail No
B. Localisation	B C	B. Localisation
C. Sur feuille No		C. On sheet No

CONCEPTION:	DESIGN:
Conçu par:	Designed by:
C. Simard, C. Gaudreault	

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C. Gaudreault	

Vérifié par:	Checked by:
C. Simard	

Chargé de projet:	Project manager by:

VALIDÉ PAR:	VALIDATED BY:

Gestionnaire de projet:	Project manager:
C. Simard	

Gestionnaire principal de projet:	Project director:
S. Huot	

Projet:	Project:

QUAI DE
TRANSBORDEMENT
LHNC DU CANAL DE
LACHINE

Titre du dessin:	Drawing title:
Lot 2 - Détails	
Part 2 - Détails	

Date:	2013-08-30	Feuille:	03
Échelle:	Indiquée	Scale:	03

Ref. Consultant:	Indiquée	Ref. Consultant:	
R.057393.100			

No de référence:	168/00/PR1-246	Reference no	
Ministère:		Ministry:	
	CL-18-182.1		