

Canada Parks Agency
Rehabilitation Lachine Canal Walls
Repair and replacement of crowning
walls (Areas I.7, I.8, and I.9 – Reach No 4)
Project N° CLAC-1455-09
Addendum n° 01

THIS ADDENDUM COMPLETES, MODIFIES OR ELIMINATES CERTAIN ELEMENTS OF THE TENDER DOCUMENTS, WHICH THE ADDENDUM REFERS TO. IT IS AN INTEGRAL PART OF THE TENDER DOCUMENTS.

MODIFICATIONS ON PLANS AND SPECIFICATIONS

The current precisions are provided, following questions received from contractors during the site visit, and other written questions received.

1. PLANS

1.1 Modifications on plans, sheet 01 revision 00 is cancelled and replaced by sheet 01 revision 01:

Updated list of drawings.

1.2 Modifications on plans, sheet 02 revision 00 is cancelled and replaced by sheet 02 revision 01:

Updated notes on joints and membranes.

1.3 Modifications of plans, sheet 08 revision 00 is cancelled and replaced by sheet 08 revision 01:

Clarification on two electric conduits in area B4-S-14 D.

1.4 Modifications of plans, sheet 28 revision 00 is cancelled and replaced by sheet 28 revision 01:

See revised plans in annex of addendum.

2. SPECIFICATIONS

2.1 Replacement of section 00 01 10 Summary of work:

The section 00 01 10 Table of Contents revision 00 is cancelled and replaced by the section 00 01 10 Table of Contents revision 01. See the section appended to this addendum.

2.2 Replacement of section 01 29 00 Payment procedures:

The section 01 29 00 Payment procedures revision 00 is cancelled and replaced by the section 01 29 00 Payment procedures revision 01. See the section appended to this addendum.

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2.3 Addition of section 32 93 10 Trees, Shrubs And Ground Cover Planting

The section 32 93 10 revision 00 is added to the specifications. See the section appended to this addendum.

2.4 Addition of APPENDIX VII Plans for Planting Works:

Appendix VII Plans for Planting Works is added to the specification. See the section appended to this addendum.

3. TENDER FORM

3.1 Replacement of tender form:

Revised bilingual tender form No. 00 is superseded by bilingual tender form No. 01
See tender form Revision No. 1 attached to this Addendum.

Prepared by :

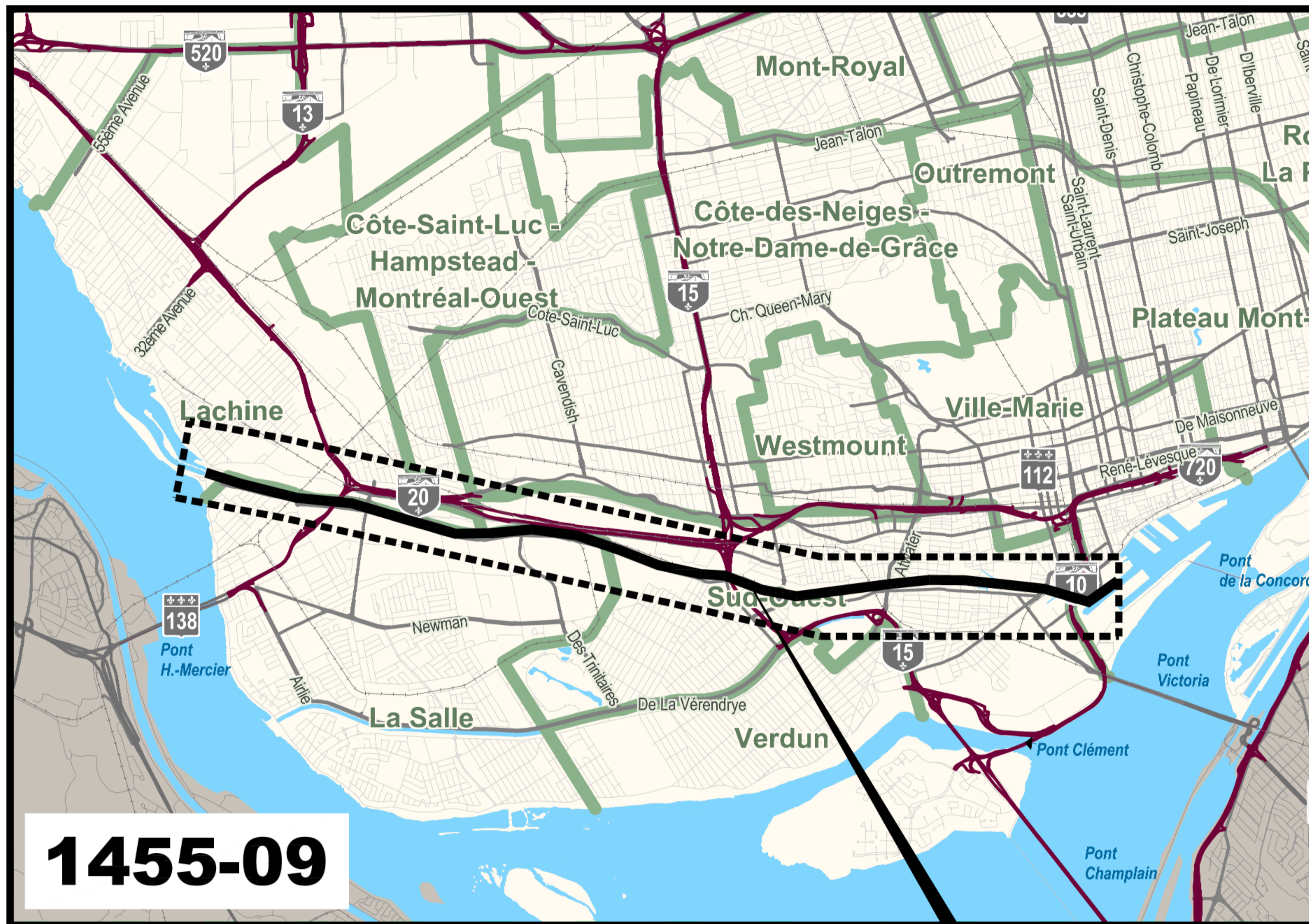
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Plans



1455-09

PLAN DE LOCALISATION / LOCATION PLAN

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DRAWING LIST:

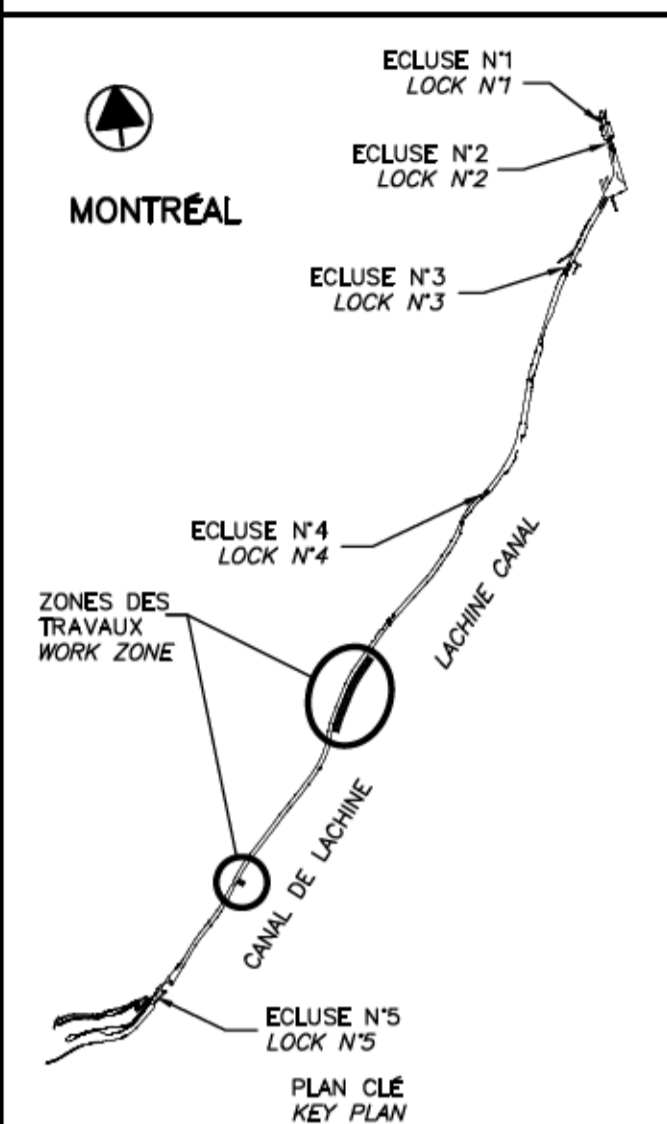
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révisions / revisions	date
01	EMIS POUR ADDENDA No 1 ISSUED FOR ADDENDUM No 1 2018-07-25
00	EMIS POUR SOUMISSION ISSUED FOR SUBMISSION 2018-07-13

Projet **PARCS CANADA / PARKS CANADA**
RÉPARATION ET REMPLACEMENT DE MURS DE COURONNEMENT ET RÉPARATION D'ASSISES (SECTEURS I.7, I.8 ET I.9 - BIEF 4)
REPAIR AND REPLACEMENT OF THE CROWNING WALLS AND SEATS REPAIR (AREAS I.7, I.8 AND I.9 - REACH 4)

Dessein **STRUCTURE / STRUCTURE**
 PAGE FRONTISPICE
 FRONT PAGE

Conçu par Carlos Villate, ing.	Designed by 2018-07-13 Date
Dessiné par Caroline Plouffe	Drawn by 2018-07-13 Date
Approuvé par Martin Champagne, ing.	Approved by 2018-07-13 Date
Soumission Dominic Pierre, ing. Administrateur de projets APC	Tender 2018 PCA Project Manager
No de projet 1455-09	Project number No de contrat Contract number
Nom du fichier CL(1455-09)	File name No de classement
No de plan ou dessin CL-32-125.01	File name No feuillet Drawing no 01/37

CE DOCUMENT NE DOIT PAS ÊTRE UTILISÉ À DES FINS DE CONSTRUCTION
 THIS DOCUMENT MUST NOT BE USED FOR CONSTRUCTION

RÉPARATION ET REMPLACEMENT DE MURS DE COURONNEMENT ET RÉPARATION D'ASSISES (SECTEURS I.7, I.8 ET I.9 - BIEF 4)

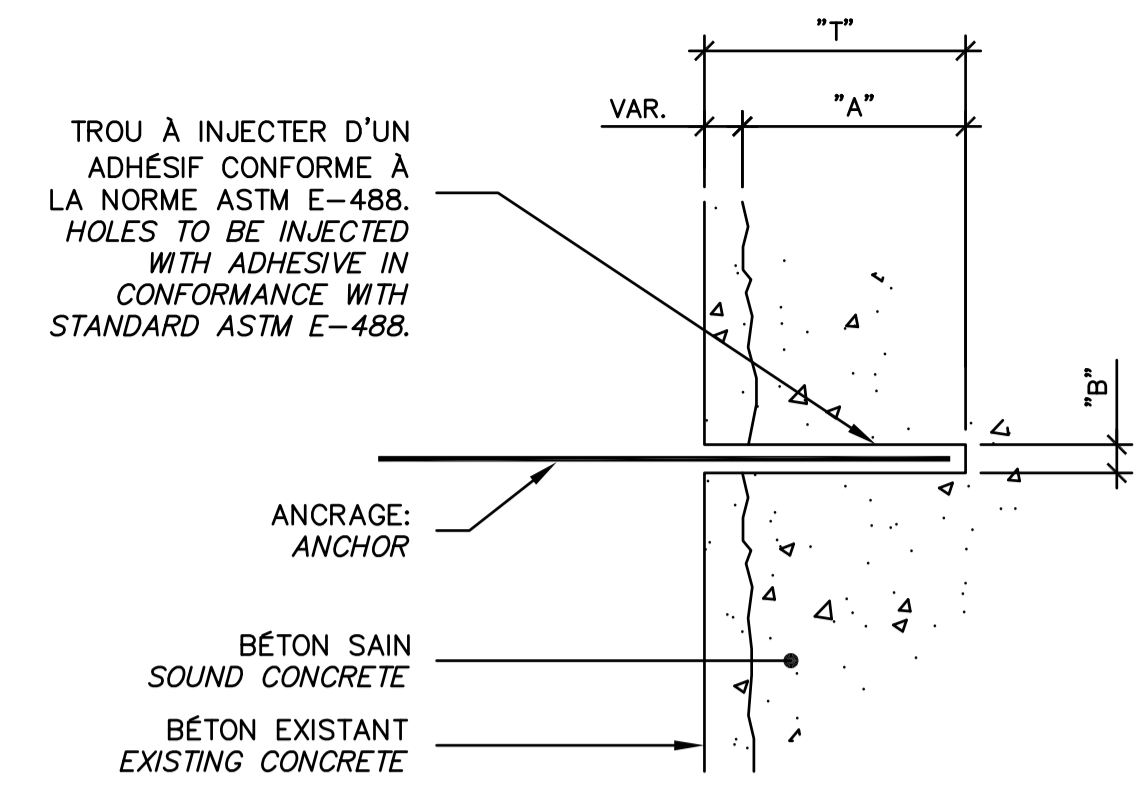
REPAIR AND REPLACEMENT OF THE CROWNING WALLS AND SEATS REPAIR (AREAS I.7, I.8 AND I.9 - REACH 4)

NOTES GÉNÉRALES

- 1- TOUS LES TRAVAUX DOIVENT ÊTRE EXÉCUTÉS CONFORMÉMENT AUX CODES DE CONSTRUCTION EN VIGUEUR (PROVINCIAL ET FÉDÉRAL).
- 2- SE RÉFÉRER UNIQUEMENT AUX DIMENSIONS INDIQUÉES AUX PLANS. NE PAS MESURER LES PLANS À L'ÉCHELLE. TOUTES LES DIMENSIONS SONT EN MILLIMÈTRES ET APPROXIMATIVES, SAUF INDICATIONS CONTRAIRES.
- 3- TOUTES LES DIMENSIONS DOIVENT ÊTRE VÉRIFIÉES AU CHANTIER PAR L'ENTREPRENEUR. L'ENTREPRENEUR GÉNÉRAL ET/OU SES SOUS-TRAITANTS NE SONT PAS AUTORISÉS À INTERPRÉTER, S'IL Y A LIEU, LES OMISSIONS OU CONTRADICTIONS ENTRE LES PLANS ET DEVIS DES PROFESSIONNELS. SEULE UNE QUESTION ÉCRITE DE LA PART DE L'ENTREPRENEUR SERA CONSIDÉRÉE ET RÉPONDUE PAR ADDENDA LORS DE LA PÉRIODE DE SOUMISSION PAR LES PROFESSIONNELS. SI DES INTERPRÉTATIONS SONT SOULEVÉES LORS DES TRAVAUX, L'AVIS DES PROFESSIONNELS SEUL PRÉVAUDRA.
- 4- L'ENTREPRENEUR DEVRA, À SES FRAIS, DÉPLACER TOUT OBSTACLE NUISANT À LA RÉALISATION DE SES TRAVAUX ET REMETTRE LES LIEUX AINSI QUE LES ÉQUIPEMENTS DANS LEURS ÉTATS ORIGINAUX ET CE, À LA SATISFACTION DU CLIENT.
- 5- L'ENTREPRENEUR DOIT VISITER LES LIEUX ET S'Y FAMILIARISER COMPLÈTEMENT AVANT DE SOUMISSIIONNER.
- 6- L'ENTREPRENEUR GÉNÉRAL DOIT VÉRIFIER TOUTES LES DIMENSIONS SUR LE CHANTIER, ÉTABLIR LA COORDINATION ENTRE LES DIVERSES DISCIPLINES ET AVISER L'INGÉNIEUR DE TOUTE NON CONCORDANCE POUR REVERIFICATION.
- 7- DURANT LES TRAVAUX, L'ENTREPRENEUR EST RESPONSABLE DE TOUT DOMMAGE CAUSÉ AUX OUVRAGES EXISTANTS PAR SES EMPLOYÉS OU D'AUTRES PERSONNES SOUS SES ORDRES ET IL DOIT LES RÉPARER À SES FRAIS DURANT L'EXÉCUTION DES TRAVAUX. L'ENTREPRENEUR DOIT GARDER LES LIEUX PROPRES ET LIBRES DE TOUS DÉBRIS.
- 8- UTILISER UNE SCIE LORSQUE LA DÉMOLITION DOIT SUIVRE UNE LIGNE OU UN PLAN.
- 9- L'ENTREPRENEUR EST TENU D'AVISER LE PROPRIÉTAIRE DE TOUTE DÉFECTUOSITÉ OU DÉTÉRIORATION DANS L'EXISTANT À CONSERVER PENDANT LES TRAVAUX DE DÉMOLITION.
- 10- À L'ENDROIT OÙ DES TRAVAUX DE DÉMOLITION SONT À EFFECTUER PRÈS DES OUVRAGES EXISTANTS, L'ENTREPRENEUR DEVRA PRENDRE LES PRÉCAUTIONS NÉCESSAIRES POUR NE PAS DÉRANGER OU ENDOMMAGER D'AUCUNE FAÇON CES OUVRAGES. L'ENTREPRENEUR EST RESPONSABLE DE TOUT BRIS ET DOIT RÉPARER À SES FRAIS.
- 11- LES MATÉRIEAUX DE DÉMOLITION DEVIENNENT LA PROPRIÉTÉ DE L'ENTREPRENEUR ET DOIVENT ÊTRE ÉVACUÉS HORS DU SITE QUOTIDIENNEMENT, EN RESPECTANT LES EXIGENCES DES AUTORITÉS COMPÉTENTES.
- 12- ENTREPRENDRE LA DÉMOLITION DES OUVRAGES DANS L'ÉTAT OÙ ILS SONT AU MOMENT DE L'INSPECTION DU CHANTIER SELON LE RELEVÉ PHOTOGRAPHIQUE AU DEVIS.
- 13- L'ENTREPRENEUR DEVRA PRÉVOIR UN SYSTÈME DE PROTECTION AFIN D'ÉVITER LA CHUTE DE DÉBRIS, OU DÉVERSEMENT D'EAU USÉE DANS LE CANAL. (AUCUN DÉBRIS, NI EAU USÉE NE SERA ACCEPTÉ DANS LE CANAL).
- 14- JOINTS : L'ENTREPRENEUR NE POURRA EN AUCUN CAS AJOUTER, RETRANCHER OU DÉPLACER UN JOINT DE CONSTRUCTION, DE DILATATION OU DE CONTRÔLE SANS AUTORISATION ÉCRITE DE L'INGÉNIEUR. LES COULÉES SONT LIMITÉES À 40 m DE LONGUEUR POUR LES MURS DE COURONNEMENT.
- 15- TOUT L'ACIER D'ARMATURE EXISTANT APPARENT DEVRA ÊTRE NETTOYÉ AU JET DE SABLE AVANT LA MISE EN PLACE DU NOUVEAU BÉTON.
- 16- IL EST DE LA RESPONSABILITÉ DE L'ENTREPRENEUR DE VÉRIFIER LA PRÉSENCE DE TOUS LES SERVICES PUBLICS SUR LE SITE DES TRAVAUX (BELL, GAZ METRO, CSEM, HQ, ETC.) ET DE LES PROTÉGER.
- 17- LA POSITION DES LIMITES DE BÉTON EST APPROXIMATIVE. UNE VALIDATION SUR PLACE DOIT ÊTRE EFFECTUÉE PAR L'ENTREPRENEUR AVANT DE DÉBUTER LES TRAVAUX. CETTE VALIDATION DEVRA ÊTRE FAITE CONJOINTEMENT AVEC LE RESPONSABLE DE CHANTIER DU MINISTÈRE.
- 18- LA POSITION, LE DIAMÈTRE, LE PLAGÉ ET LA QUANTITÉ DES BARRES D'ARMATURE EXISTANTES SONT INCONNUS ET DOIVENT ÊTRE VALIDÉS AU CHANTIER.
- 19- LA MÉTHODE DE TRAVAIL DE L'ENTREPRENEUR DOIT ÊTRE INDÉPENDANTE DU NIVEAU DE L'EAU DANS LE CANAL.
- 20- L'ENTREPRENEUR DOIT PRÉVOIR L'ENLÈVEMENT PARTIEL ET LA RÉINSTALLATION DE SECTIONS DE GLISSIÈRES MÉTALLIQUES AFIN D'ACCÉDER AUX ZONES DE TRAVAU.
- 21- AUCUN TIRANT DE COFFRAGE APPARENT NE PEUT ÊTRE MIS EN PLACE SAUF POUR LES RÉPARATIONS SANS SURÉPAISSEUR.
- 22- LES CHAMFREINS DOIVENT ÊTRE ARRONDIS TEL QUE L'EXISTANT, LE DIAMÈTRE DES CHAMFREINS N'EST PAS STANDARD. L'ENTREPRENEUR DOIT VALIDER LE DIAMÈTRE DES ARRONDIS.
- 23- ENLÈVEMENT DU BÉTON LÂCHE ET NETTOYAGE DES CAVITÉS (TYP.).
- 24- TOUT L'ACIER DOIT ÊTRE GALVANISÉ.
- 25- À NOTER QUE LA PEINTURE DES GARDE-CORPS (LISSÉS ET POTEAUX) ET BOLLARDS CONTIENT DU PLOMB. L'ENTREPRENEUR DOIT ADAPTER SON PRIX POUR TENIR COMPTE DES EXIGENCES DE LA CNESST EN MATIÈRE D'EXPOSITION AU PLOMB.
- 26- LE MUR DOIT AVOIR LE MÊME EMPLACEMENT, ALIGNEMENT ET LE MÊME FORMAT QU'À L'ORIGINE. CERTAINS COURONNEMENT SONT DÉVERSÉS, L'ENTREPRENEUR DOIT EFFECTUER UN RELEVÉ D'ARPENTAGE COMPLET DE L'OUVRAGE AFIN DE DÉTERMINER L'ALIGNEMENT D'ORIGINE, LES LARGEURS, LES HAUTEURS SPÉCIFIQUES DES SECTIONS (VOIR DEVIS).
- 27- LES PENTES ET PROFILS EXISTANTS MONTRÉS SUR LES PLANS SONT À TITRE INDICATIF SEULEMENT. LES PENTES ET PROFILS EXISTANTS SONT VARIABLES ET DOIVENT ÊTRE RELEVÉS PRÉCISÉMENT PAR L'ENTREPRENEUR POUR LA PRÉPARATION DES DESSINS D'ATELIER.
- 28- POUR LES LIMITES DE PROPRIÉTÉS DE L'AGENCE PARCS CANADA ET DES ZONES DE MOBILISATION AUTORISÉES SUR LES TERRAINS DE L'AGENCE PARCS CANADA, SE RÉFÉRER AUX ANNEXES DU DEVIS.
- 29- L'ENTREPRENEUR DOIT EFFECTUER UN RELEVÉ D'ARPENTAGE DES FONDS D'EXCAVATION ET DE LA DÉMOLITION AVANT LA RECONSTRUCTION.

GENERAL NOTES

- 1- ALL WORK MUST BE CARRIED OUT IN ACCORDANCE WITH IN EFFECT CONSTRUCTION CODE (PROVINCIAL AND FEDERAL).
- 2- REFER SOLELY TO THE DIMENSIONS INDICATED ON PLANS. DO NOT MEASURE THE PLANS TO SCALE. ALL DIMENSIONS ARE IN MILLIMETRES AND APPROXIMATIVE, UNLESS NOTED OTHERWISE.
- 3- THE CONTRACTOR MUST VERIFY ALL DIMENSIONS ON-SITE. THE GENERAL CONTRACTOR AND/OR HIS SUBCONTRACTORS ARE NOT AUTHORIZED TO INTERPRET, IF APPLICABLE, OMISSIONS OR CONTRADICTIONS BETWEEN THE PLANS AND SPECIFICATIONS PREPARED BY THE PROFESSIONALS. ONLY QUESTIONS SUBMITTED IN WRITING BY THE CONTRACTOR WILL BE CONSIDERED AND ANSWERED BY THE PROFESSIONALS IN THE FORM OF AN ADDENDUM DURING THE TENDER PERIOD. IF INTERPRETATIONS ARE PUT FORTH DURING THE EXECUTION OF THE WORK, THE OPINION OF THE PROFESSIONAL SHALL PREVAIL.
- 4- THE CONTRACTOR MUST, AT HIS EXPENSE, DISPLACE ANY OBSTACLE IMPEDING HIS WORK AND RESTORE THE PREMISES AND EQUIPMENT TO THEIR ORIGINAL STATE AND TO THE CLIENT'S SATISFACTION.
- 5- THE CONTRACTOR MUST VISIT THE SITE AND FAMILIARIZE HIMSELF COMPLETELY WITH SITE CONDITIONS BEFORE SUBMITTING A BID.
- 6- THE GENERAL CONTRACTOR MUST VERIFY ALL OF THE DIMENSIONS ON-SITE, ENSURE COORDINATION BETWEEN THE VARIOUS DISCIPLINES AND NOTIFY THE ENGINEER OF ANY INCONSISTENCIES FOR RE-VERIFICATION.
- 7- DURING THE WORKS, THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE CAUSED TO EXISTING STRUCTURES BY HIS EMPLOYEES OR BY OTHER PERSONS UNDER HIS SUPERVISION, AND MUST REPAIR THEM AT HIS EXPENSE. THE CONTRACTOR MUST KEEP THE PREMISES CLEAN AND FREE OF ALL DEBRIS.
- 8- USE A SAW WHEN THE DEMOLITION MUST FOLLOW A LINE OR A PLANE.
- 9- THE CONTRACTOR IS REQUIRED TO NOTIFY THE OWNER OF ANY DEFECT OR DETEIORATION IN THE EXISTING STRUCTURE TO BE PRESERVED DURING THE DEMOLITION WORK.
- 10- WHERE DEMOLITION WORK IS REQUIRED NEAR EXISTING STRUCTURES, THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS SUCH AS NOT TO DISTURB OR DAMAGE THESE STRUCTURES IN ANY WAY. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE AND WILL REPAIR THESE AT HIS EXPENSE.
- 11- DEMOLITION MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR AND MUST BE TAKEN OFF-SITE ON A DAILY BASIS, IN COMPLIANCE WITH THE REQUIREMENTS OF COMPETENT AUTHORITIES.
- 12- UNDERTAKE THE DEMOLITION OF THE STRUCTURES AS THEY WERE AT THE TIME OF THE SITE INSPECTION WHICH WAS CARRIED OUT PRIOR TO SUBMITTING THE BID.
- 13- THE CONTRACTOR MUST FORESEE A PROTECTION SYSTEM TO AVOID FALLING DEBRIS OR WASTE WATER DEVERSEMENT IN THE CANAL. (DEBRIS AND WASTE WATER WILL NOT BE ACCEPTED IN THE CANAL.)
- 14- JOINTS: IN NO CASE MAY THE CONTRACTOR ADD, REMOVE OR MOVE A CONSTRUCTION, EXPANSION OR CONTROL JOINT WITHOUT THE ENGINEER'S WRITTEN AUTHORIZATION. (POURING LIMITED TO 40 m LENGTH FOR CROWNING WALLS.)
- 15- ALL EXISTING AND APPARENT STEEL REINFORCEMENTS MUST BE CLEANED WITH A SAND BLAST BEFORE POURING NEW CONCRETE.
- 16- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE PRESENCE OF ALL THE PUBLIC SERVICES ON SITE (BELL, GAZ METRO, CSEM, HQ, ETC.) AND TO PROTECT THEM.
- 17- THE POSITION OF THE CONCRETE LIMITS ARE APPROXIMATE. A VALIDATION ON SITE MUST BE PERFORMED BY THE CONTRACTOR WITH THE FIELD MINISTRY REPRESENTATIVE BEFORE BEGINNING THE WORKS.
- 18- THE POSITION, THE DIAMETER, THE BENDING AND THE QUANTITY OF EXISTING REBARS ARE UNKNOWN AND SHALL BE VALIDATED ON SITE.
- 19- THE CONTRACTOR'S WORKING METHOD MUST BE INDEPENDANT FROM THE CANAL'S WATER LEVEL.
- 20- THE CONTRACTOR MUST FORESEE THE PARTIAL REMOVAL AND REINSTALLATION OF METALLIC RAILINGS TO BE ABLE TO ACCESS TO WORKING ZONE.
- 21- NO VISIBLE FORMWORK TIE-RODS MAY BE INSTALLED EXCEPT FOR THE REPARATION WITHOUT EXTRA THICKNESS.
- 22- CHAMFER AND ROUNDING MUST BE AS PER EXISTING, THE DIAMETER OF CHAMFER IS NOT STANDARD. THE CONTRACTOR HAVE TO VALIDATE THE ROUNDING DIAMETER.
- 23- REMOVAL OF LOOSE CONCRETE AND CAVITY CLEANING (TYP.)
- 24- ALL REINFORCING STEEL MUST BE GALVANISED.
- 25- NOTE THE PAINT OF RAILINGS (GUARDRAILS AND POST) AND BOLLARDS CONTAINS LEAD. THE CONTRACTOR HAVE TO ADAPT HIS PRICE TO TAKE ACCOUNT THE CNESST REQUIREMENTS IN TERM OF LEAD EXPOSURE.
- 26- THE WALL MUST HAVE THE SAME LOCATION, ALIGNMENT AND THE SAME SIZE AS ORIGINALLY. SOME CROWNING WALL ARE OVERTURNED, THE CONTRACTOR MUST DO A COMPLETE SURVEY OF THE CROWNING WALL IN ORDER TO DETERMINE THE ORIGINAL ALIGNMENT, THEM SPECIFIC WIDTHS AND HEIGHTS OF THE SECTIONS (SEE SPECIFICATIONS).
- 27- THE EXISTING SLOPES AND PROFILES SHOWN ON PLANS ARE FOR INFORMATION ONLY. REAL PROFILES AND SLOPES ARE VARIABLES AND MUST BE SURVEYED BY THE CONTRACTOR FOR THE PREPARATION OF SHOP DRAWING.
- 28- REFER TO THE APPENDIX OF THE SPECIFICATION FOR PROPERTY LIMIT AND AUTHORIZED ACCESS ZONE OF PARCS CANADA.
- 29- THE CONTRACTOR MUST PERFORM A SURVEY OF THE THE BOTTOM OF EXCAVATION AND DEMOLITION BEFORE RECONSTRUCTION.
- 30- ADD 2 PLY SELF-ADHESIVE MEMBRANES, 300 mm AND 500 mm WIDTH, ON ALL JOINTS OF POURING AND OVER THE ENTIRE LENGTH OF THESE, INCLUDING THE JOINT BETWEEN THE FOOTING AND THE CROWNING WALL.



NOTE A:
LES PROFONDEURS D'ENFONCEMENT FOURNIES DANS LE TABLEAU 2.2 ONT ÉTÉ DÉTERMINÉES EN FONCTION DE LA QUALITÉ ANTICIPÉE DU SUBSTRAT EXISTANT. LA LONGUEUR DES ANCRAGES EFFECTIVE DEVRA ÊTRE SUFFISANTE POUR PERMETTRE L'ATTEINTE DE LA LIMITE ELASTIQUE DES BARRES INDIQUÉE AU TABLEAU. LA PROFONDEUR EFFECTIVE DE L'ANCRAGE DEVRA ÊTRE AJUSTÉE EN FONCTION DU SUBSTRAT ET DE SA QUALITÉ.

EMBEDMENT DEPTHS PROVIDED IN THE TABLE 2.2 WERE DETERMINED ACCORDING TO THE QUALITY OF THE EXISTING SUBSTRATUM. THE EFFECTIVE LENGTH OF THE ANCHORS MUST BE SUFFICIENT TO REACH THE ELASTIC LIMIT OF THE BARS INDICATED IN THE TABLE. THE EMBEDMENT DEPTH MUST BE ADJUSTED ACCORDING TO THE EXISTING CONDITION AND SUBSTRATUM.

NOTE B:
LE DIAMÈTRE DES TROUS DOIT ÊTRE CONFORME AUX RECOMMANDATIONS DU MANUFACTURIER. THE DIAMETER OF HOLES MUST RESPECT THE RECOMMANDATIONS OF THE MANUFACTURER.

NOTE C:
LES PROFONDEURS D'ENFONCEMENT DU TABLEAU 2.2 NE COUVRENT PAS LES ANCRAGES 15M DE RÉPARATION DE COURONNEMENT. VOIR PLAN DE RÉPARATION DE COURONNEMENT POUR DÉTAIL.

EMBEDMENT DEPTHS IN TABLE 2.2 DO NOT INCLUDE THE 15M ANCHORS OF CROWNING REHABILITATION. SEE DRAWING OF CROWNING REHABILITATION FOR DETAIL.

2.1 ANCRAGE - DÉTAIL TYPIQUE / ANCHOR - TYPICAL DETAIL
NON À L'ÉCHELLE / NOT TO SCALE

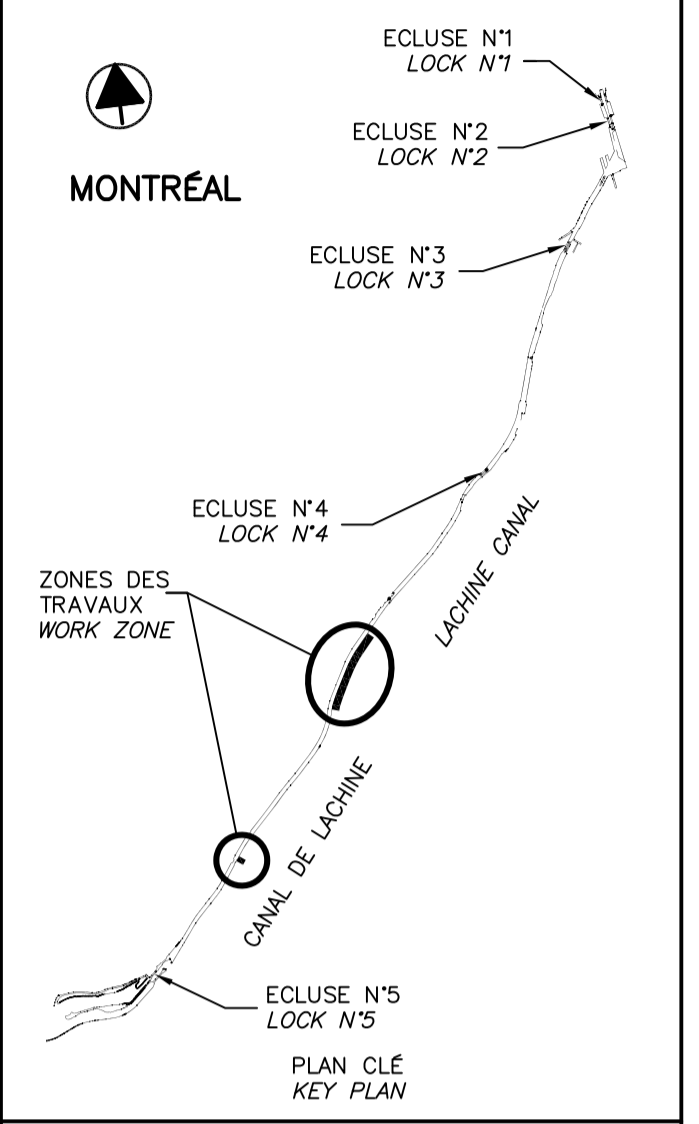
DIAMÈTRE DES BARRES BAR DIAMETERS	BÉTON CONCRÈTE EXIST.	"A" (mm)	LIMITE ÉLASTIQUE ELASTIC LIMIT (kN)	"B" (mm)
10M	400	"A"	40	14
15M	730	"A"	80	20
20M	1000	"A"	120	25
25M	1720	"A"	200	28
30M	1960	"A"	280	37
35M	2290	"A"	400	40

2.2 TABLEAU - PROFONDEUR D'ENFONCEMENT / EMBEDMENT DEPTH - TABLE
NON À L'ÉCHELLE / NOT TO SCALE

PARTIES DE L'OUVRAGE WORK PARTS	TYPE DE BÉTON DE CIMENT CEMENT CONCRETE TYPE	RÉSISTANCE @ 28 JOURS-MPa STRENGTH @ 28 DAYS-MPa
MUR DE COURONNEMENT CROWNING WALL	V-S	35
RÉFECTION DU MUR DE COURONNEMENT REHABILITATION OF THE CROWNING WALL	V-S	35
RÉPARATION DES ASSISES REPAIR OF CONCRETE SEATS	BÉTON PROJETÉ PAR PROCÉDÉ HUMIDE SHOTCRETE SPRAYED BY WET MIX METHOD	35
RÉPARATION SOUS NIVEAU D'EAU REPAIR UNDER WATER LEVEL	BÉTON ANTI-LESSIVAGE XV ANTI-WASHING CONCRETE XV	35

NOTE: COUSSIN DE SUPPORT: BÉTON 20MPa AVEC AIR ENTRAÎNÉ OU ÉQUIVALENT APPROUVÉ SUPPORT PAD: CONCRETE 20MPa WITH ENTRAINED AIR OR APPROVED EQUIVALENT

2.3 TABLEAU DES CARACTÉRISTIQUES DU NOUVEAU BÉTON / NEW CONCRETE SPECIFICATIONS TABLE
NON À L'ÉCHELLE / NOT TO SCALE



révisions / revisions	date
01	EMIS POUR ADDENDA No 1 ISSUED FOR ADDENDUM No 1 2018-07-25
00	EMIS POUR SOUMISSION ISSUED FOR SUBMISSION 2018-07-13

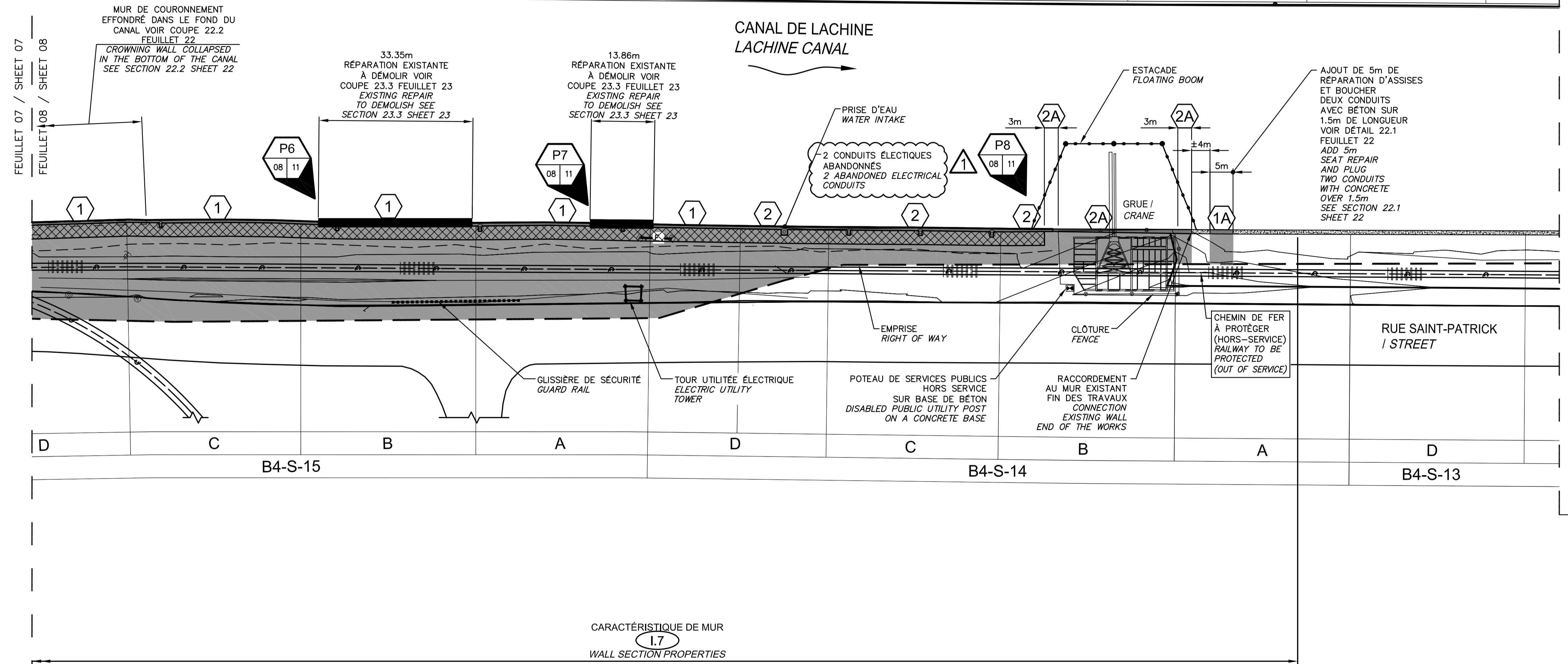
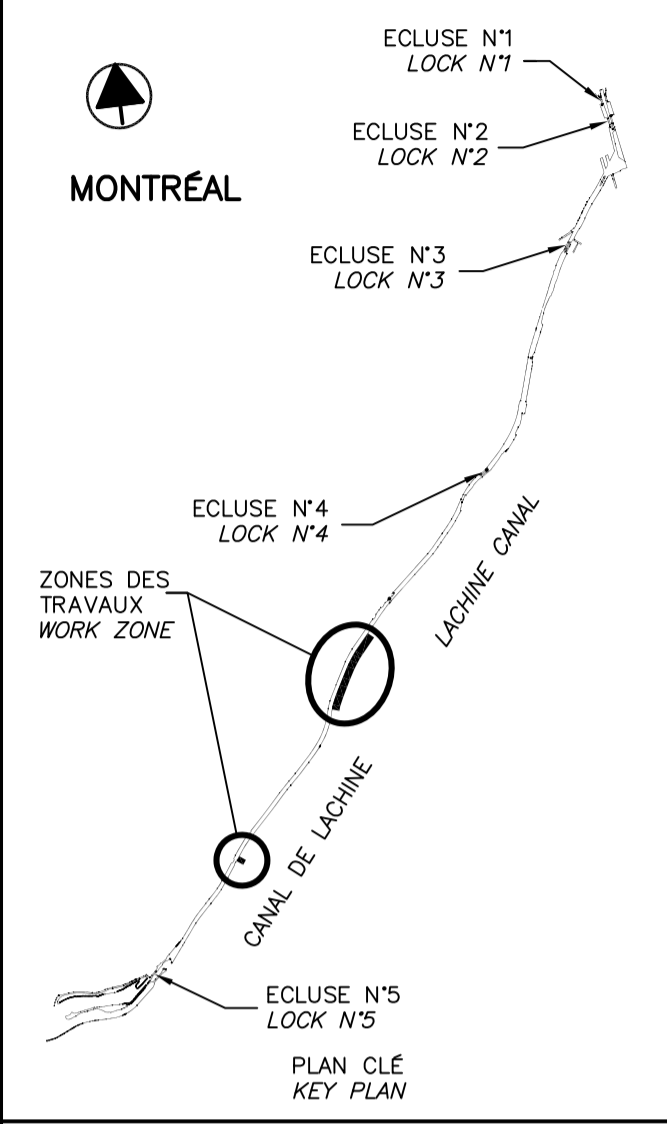
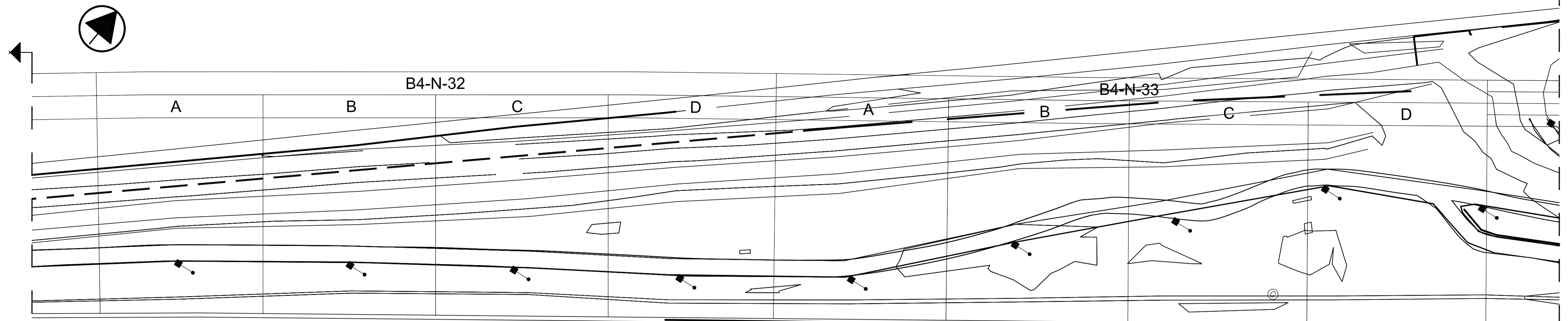
PARCS CANADA / PARKS CANADA
RÉPARATION ET REMPLACEMENT DE MURS DE COURONNEMENT ET RÉPARATION D'ASSISES (SECTEURS 1.7, 1.8 ET 1.9 - BIEF 4)
REPAIR AND REPLACEMENT OF THE CROWNING WALLS AND SEATS REPAIR (AREAS 1.7, 1.8 AND 1.9 - REACH 4)

STRUCTURE / STRUCTURE
NOTES GÉNÉRALES / GENERAL NOTES

Conçu par / Designed by Carlos Villate, ing. 2018-07-13 Date	Dessiné par / Drawn by Caroline Plouffe 2018-07-13 Date	Approuvé par / Approved by Martin Champagne, ing. 2018-07-13 Date	Soumission / Tender Dominic Pierre, ing. 2018 Administrateur de projets APC / PCA Project Manager
No de projet / Project number 1455-09	No de contrat / Contract number	Norm du fichier / File name CL(1455-09)	No de classement
No de plan ou dessin / File name CL-32-125.02	No feuillet / Drawing no 02/37		

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THIS DOCUMENT MUST NOT BE USED FOR CONSTRUCTION



révisions / revisions	date
01	EMIS POUR ADDENDA No 1 ISSUED FOR ADDENDUM No 1 2018-07-25
00	EMIS POUR SOUMISSION ISSUED FOR SUBMISSION 2018-07-13

Projet **PARCS CANADA
PARKS CANADA**

RÉPARATION ET REMPLACEMENT DE MURS DE COURONNEMENT ET RÉPARATION D'ASSISES (SECTEURS 1.7, 1.8 ET 1.9 - BIEF 4)
 REPAIR AND REPLACEMENT OF THE CROWNING WALLS AND SEATS REPAIR (AREAS 1.7, 1.8 AND 1.9 - REACH 4)

Dessin **STRUCTURE
STRUCTURE**
 BIEF 4 - VUE EN PLAN AGRANDIE 4/4 (EXISTANT)
 REACH 4 - ENLARGED PLAN VIEW 4/4 (EXISTING)

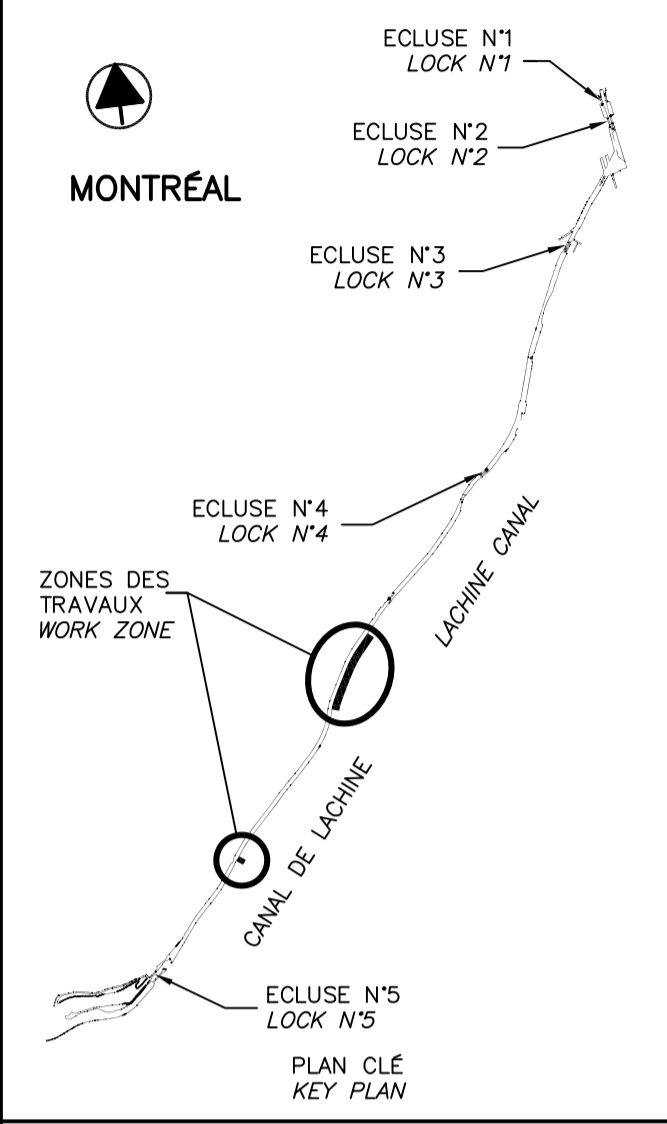
Conçu par Carlos Villate, ing. 2018-07-13
 Dessiné par Caroline Plouffe 2018-07-13
 Approuvé par Martin Champagne, ing. 2018-07-13
 Soumission Dominic Pierre, ing. 2018
 Administrateur de projets APC PCA Project Manager

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VUE EN PLAN - AGRANDIE 8.1 EXISTANT
 ENLARGED - PLAN VIEW 04 08 EXISTING
 ÉCH./SCALE 1:500

No de projet / Project number 1455-09	No de contrat / Contract number
Norm du fichier / File name CL(1455-09)	No de classement / Classification
No de plan ou dessin / File name CL-32-125.08	No feuillet / Drawing no 08/37



SCEAUX SEALS

01	EMIS POUR ADDENDA No 1 ISSUED FOR ADDENDUM No 1	2018-07-25
00	EMIS POUR SOUMISSION ISSUED FOR SUBMISSION	2018-07-13
révisions revisions		date

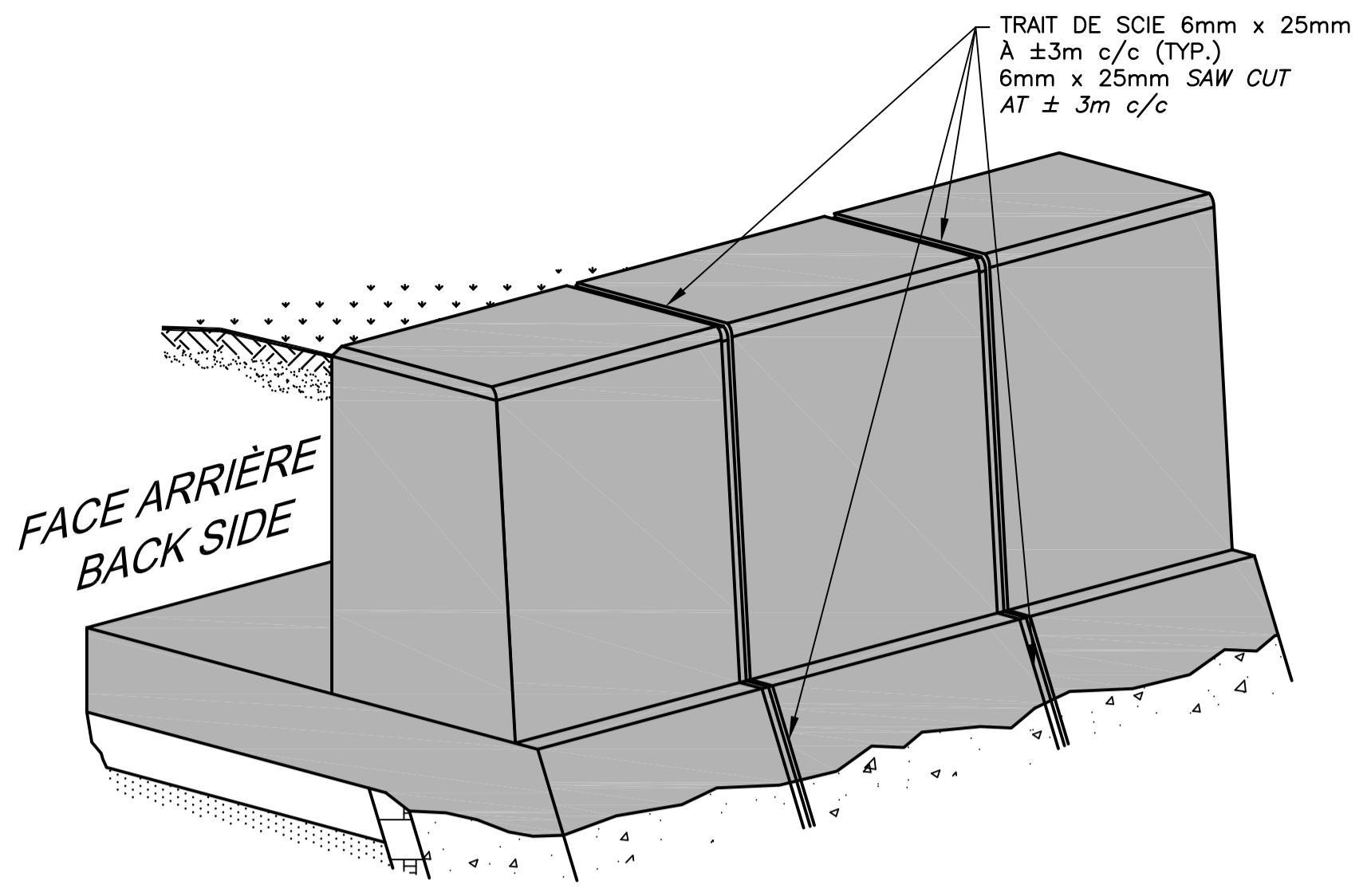
Projet PARCS CANADA
 PARKS CANADA

RÉPARATION ET REMPLACEMENT DE MURS DE COURONNEMENT ET RÉPARATION D'ASSISES (SECTEURS 1.7, 1.8 ET 1.9 - BIEF 4)
 REPAIR AND REPLACEMENT OF THE CROWNING WALLS AND SEATS REPAIR (AREAS 1.7, 1.8 AND 1.9 - REACH 4)

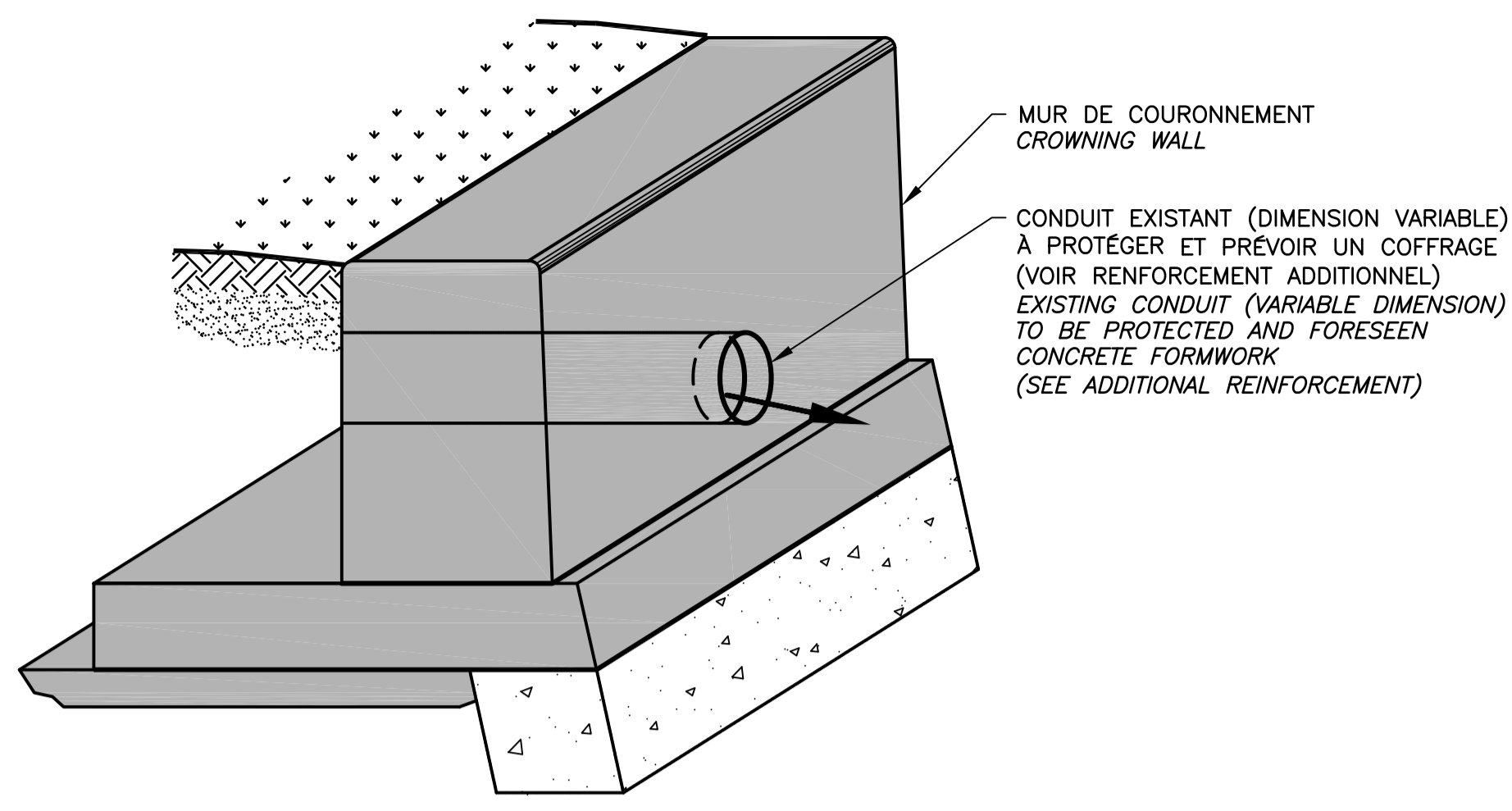
Dessin STRUCTURE
 STRUCTURE

DÉTAILS TYPQUES
 DÉTAILS DIVERS
 TYPICAL DETAILS
 VARIOUS DETAILS

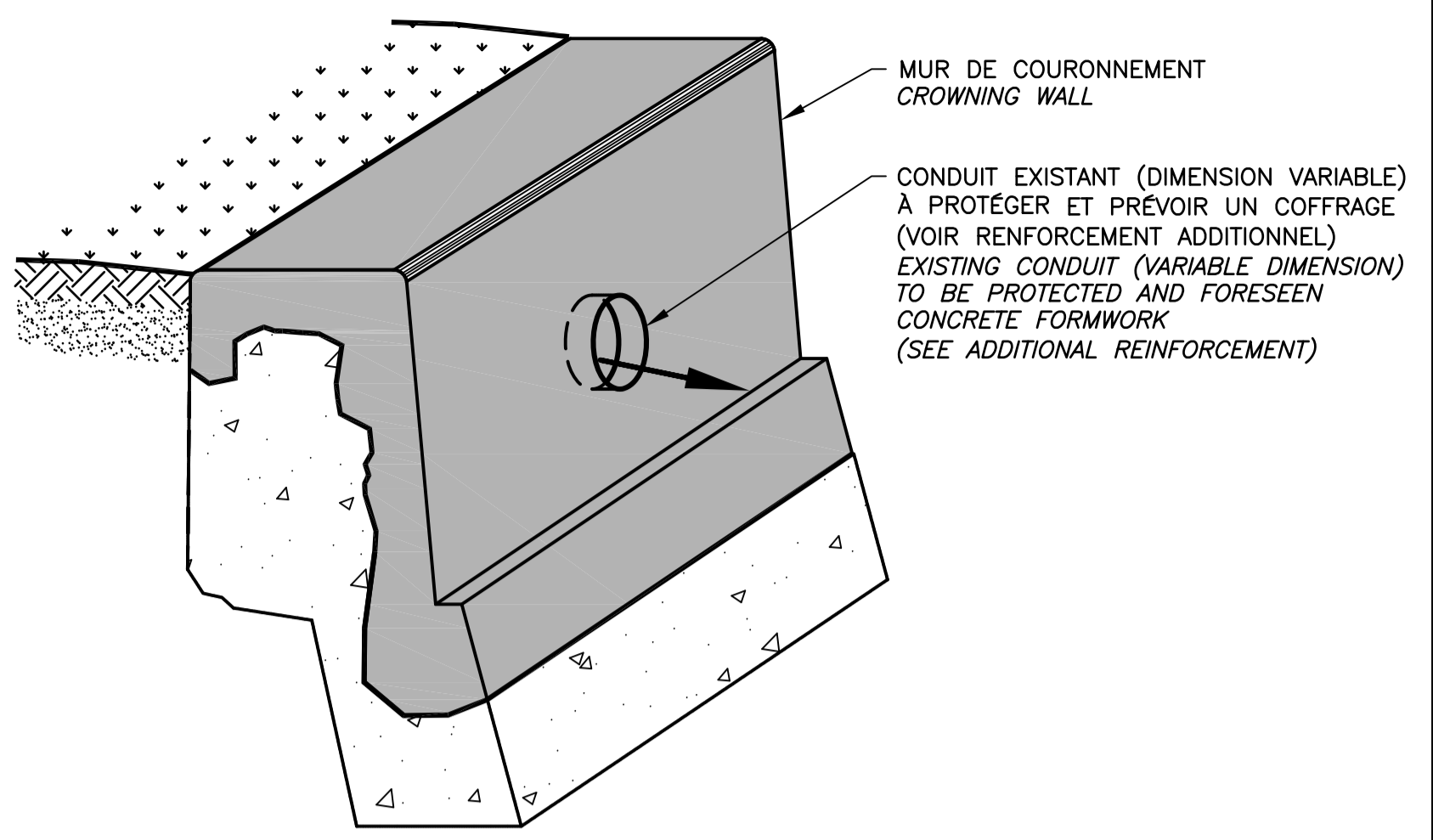
Conçu par Carlos Villate, ing.	2018-07-13	Designed by Date
Dessiné par Caroline Plouffe	2018-07-13	Drawn by Date
Approuvé par Martin Champagne, ing.	2018-07-13	Approved by Date
Soumission Dominic Pierre, ing.	2018	Tender Year
Administrateur de projets APC PCA Project Manager		
No de projet 1455-09	No de contrat Contract number	
Nom du fichier CL(1455-09)		
No de plan ou dessin CL-32-125.28	No de feuillet 28	File name Drawing no



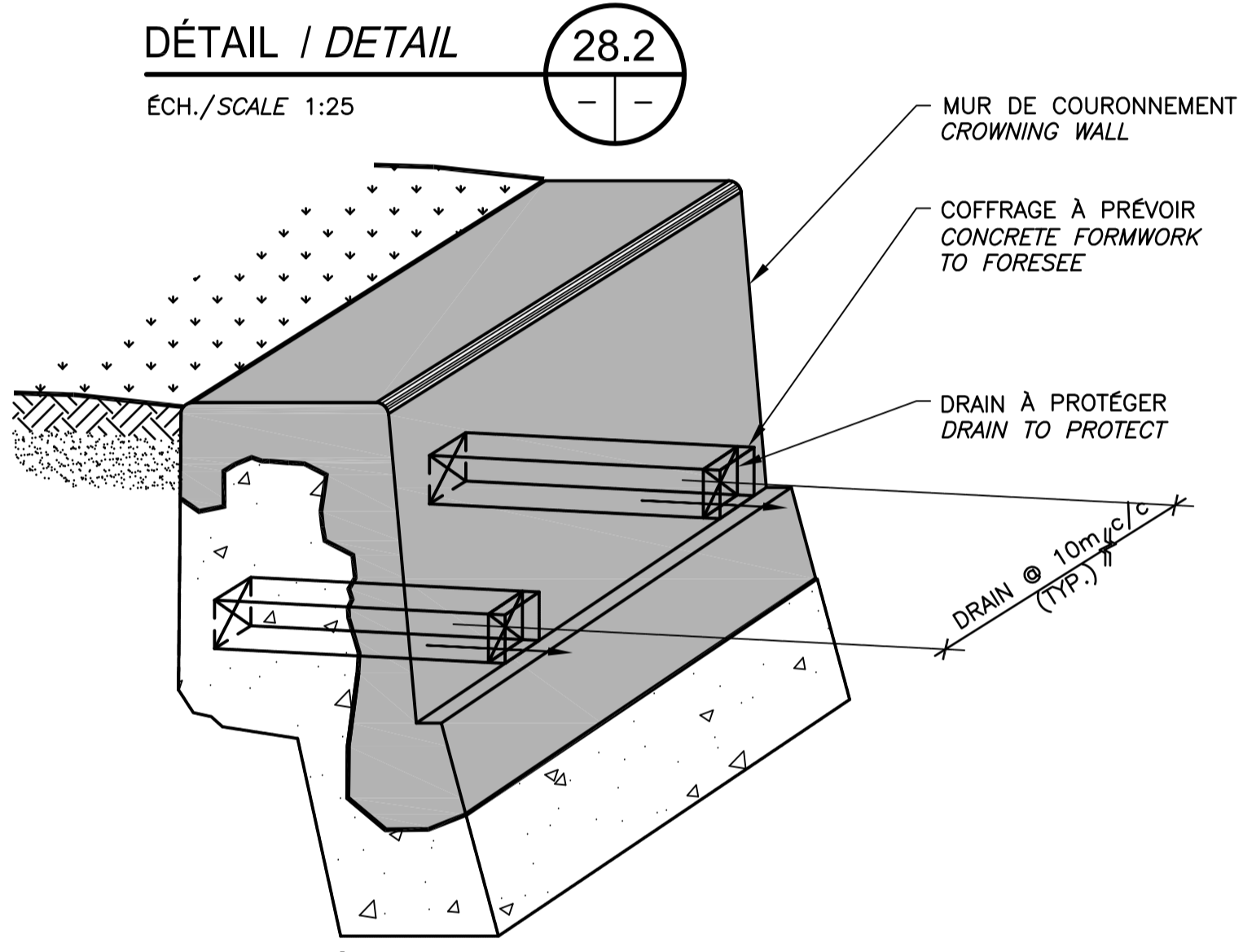
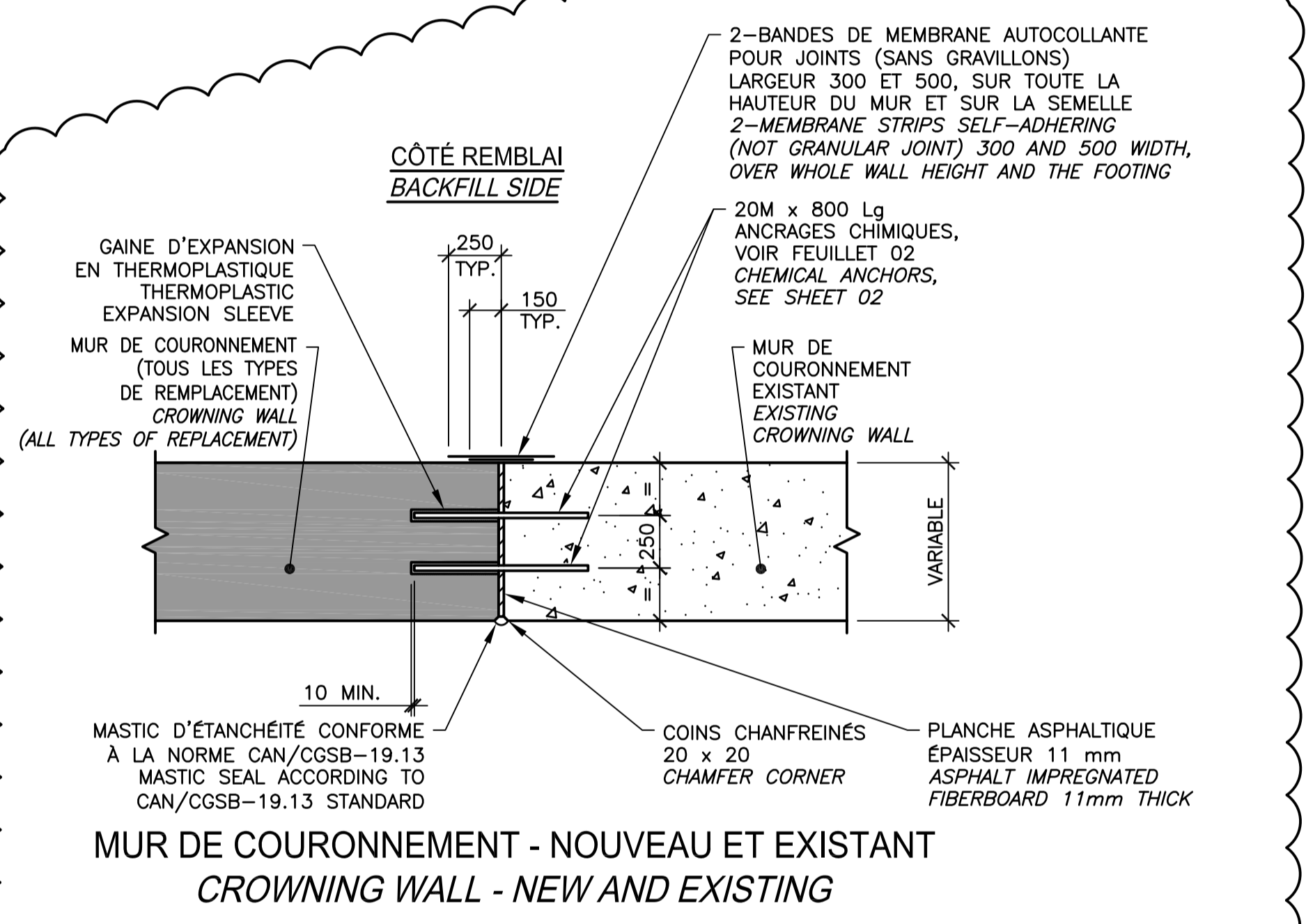
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 CRACK CONTROL JOINT DETAIL
 NON À L'ÉCHELLE / NOT TO SCALE



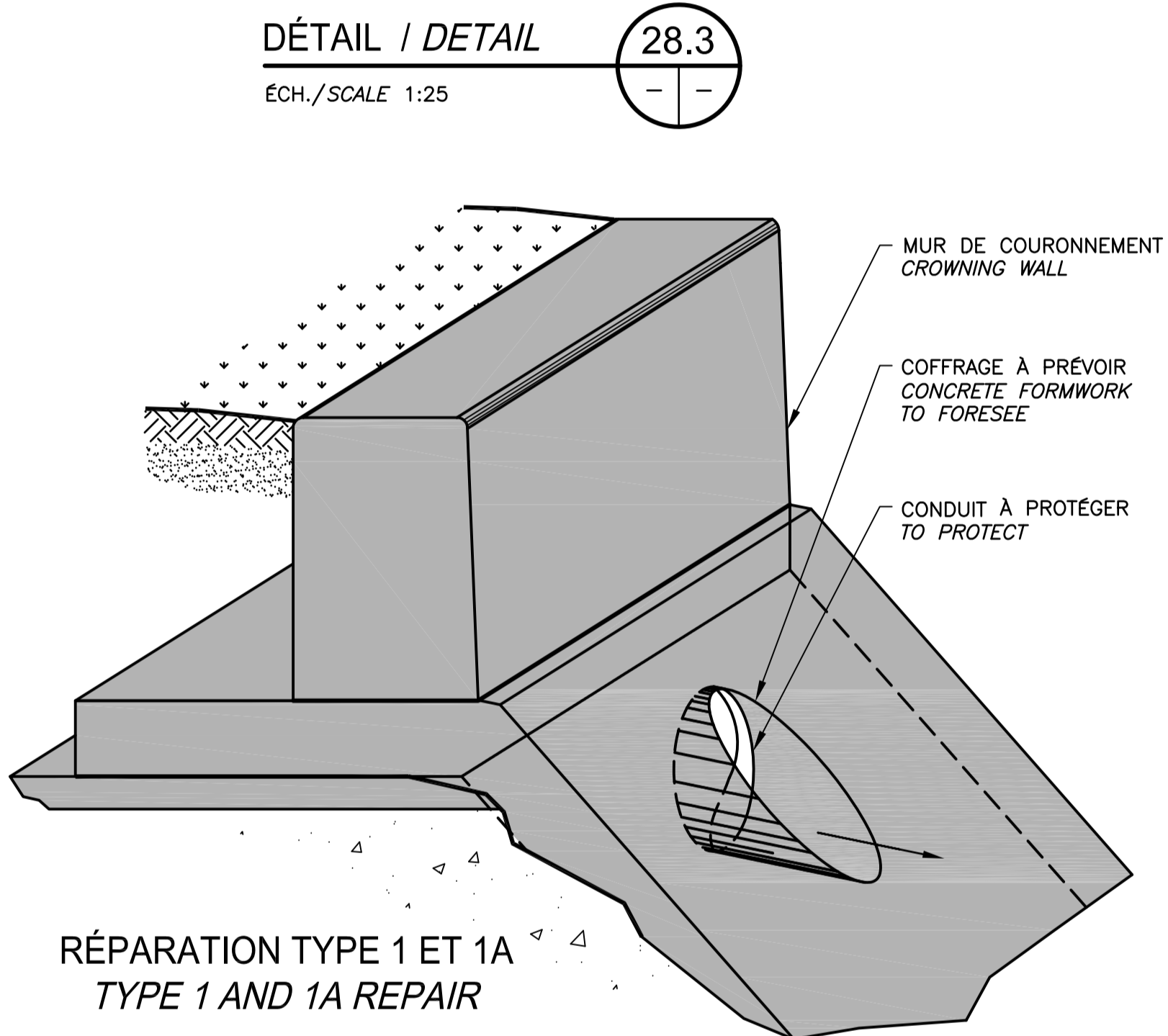
REPLACEMENT / REPLACEMENT
 DÉTAIL DES OUVERTURES DE CONDUIT
 OPENNING CONDUIT DETAIL



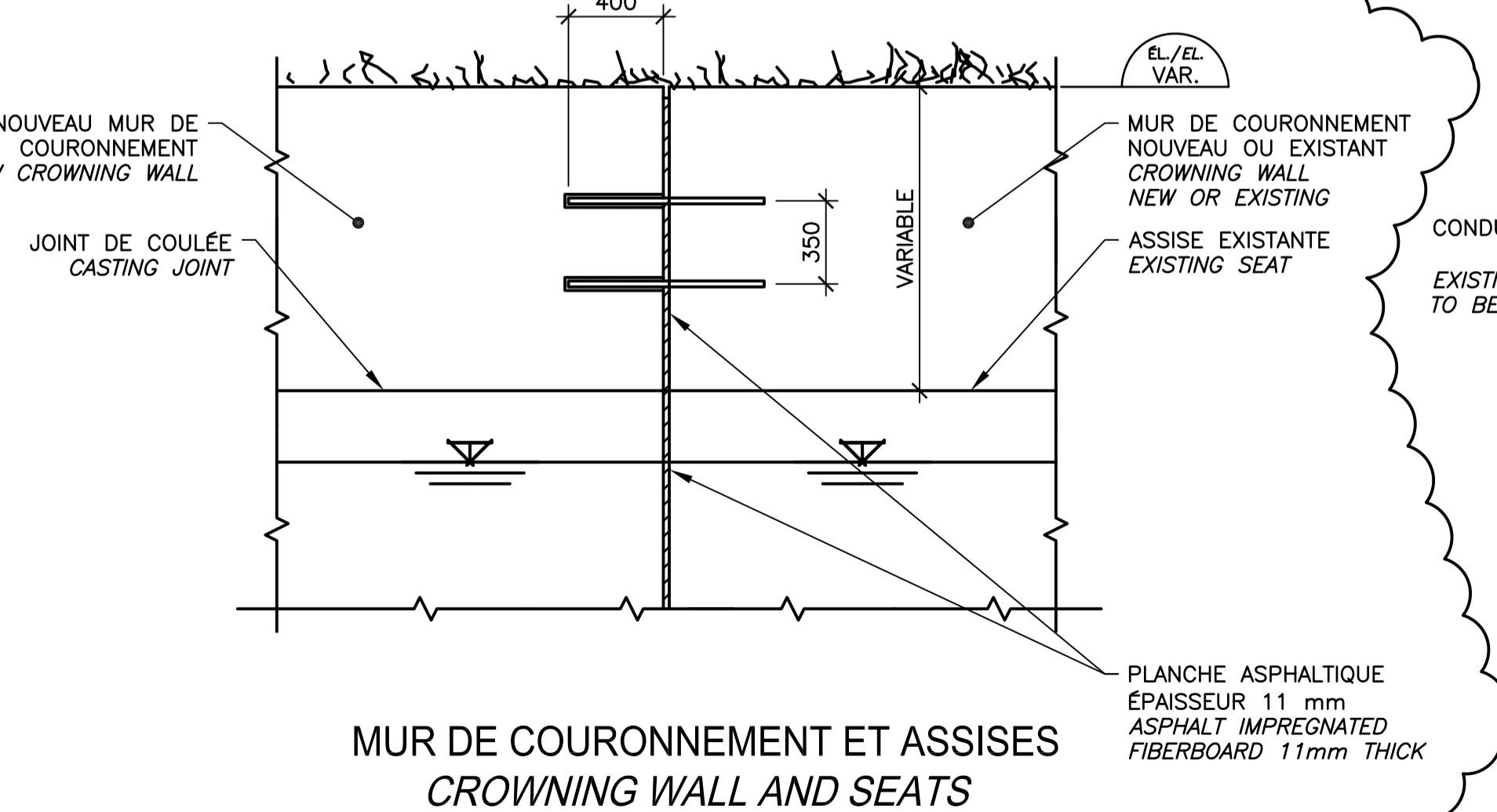
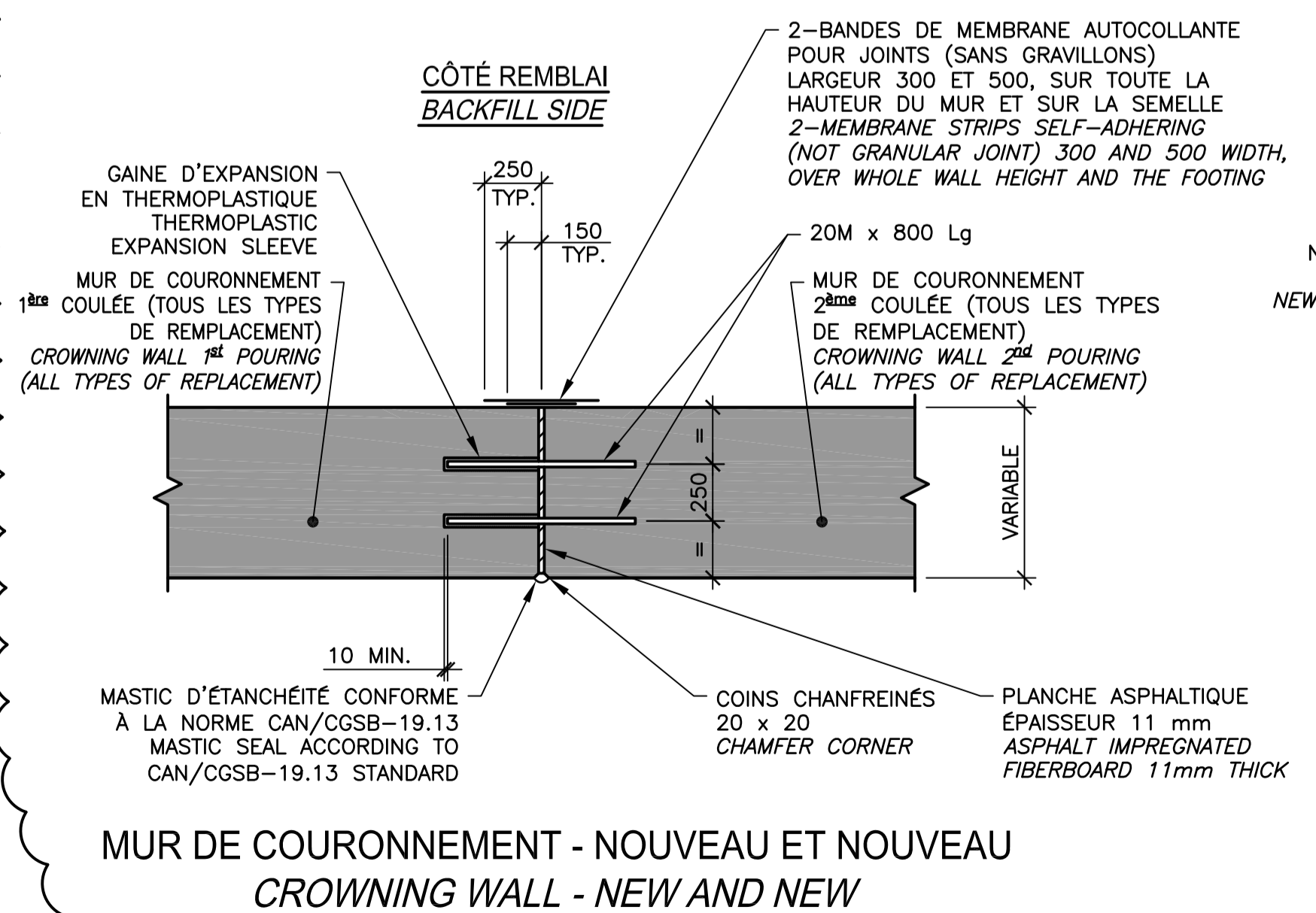
RÉPARATION / REPAIR
 DÉTAIL DES OUVERTURES DE CONDUIT
 OPENNING CONDUIT DETAIL



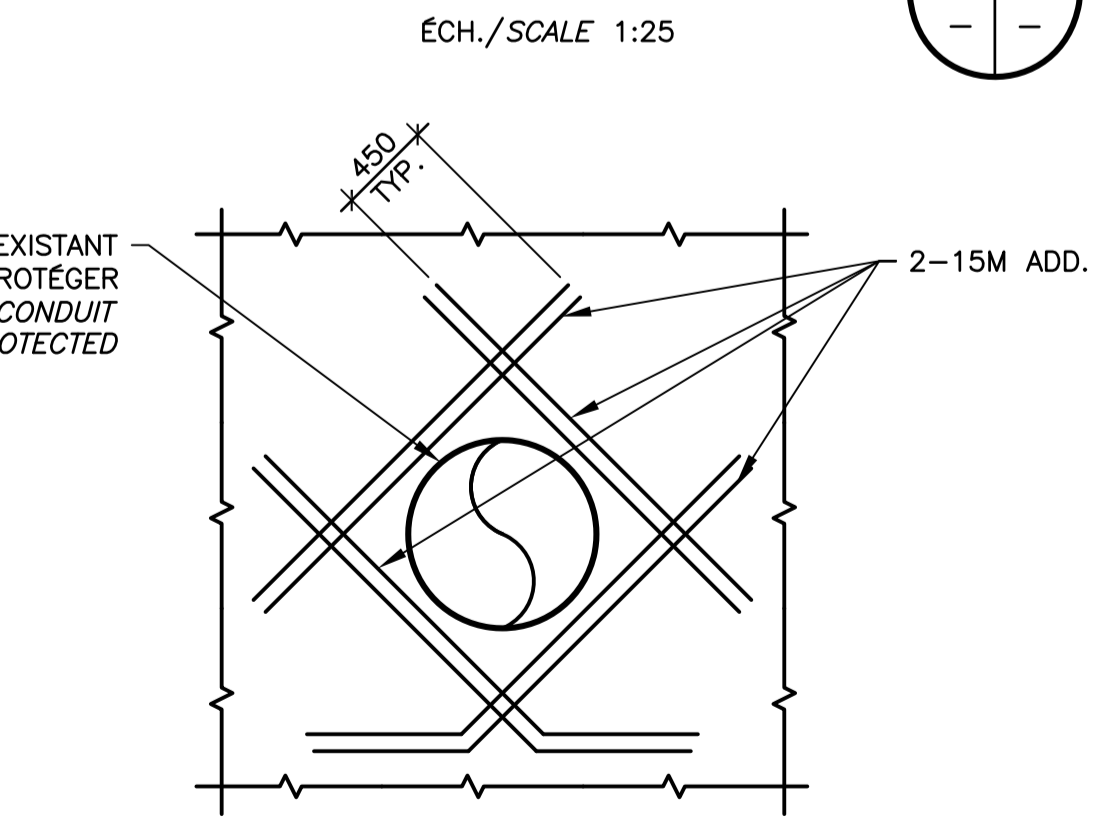
RÉPARATION / REPAIR
 DÉTAIL DES OUVERTURES DE DRAIN
 DRAIN OPENNING DETAIL



RÉPARATION TYPE 1 ET 1A
 TYPE 1 AND 1A REPAIR
 DÉTAIL DES OUVERTURES DE CONDUIT
 OPENNING CONDUIT DETAIL



MUR DE COURONNEMENT ET ASSISES
 CROWNING WALL AND SEATS
 CONSTRUCTION
 ÉLÉVATION / ELEVATION



RENFORCEMENT ADDITIONNEL
 ADDITIONAL REINFORCEMENT
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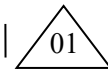
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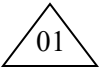
Canada Parks Agency
Rehabilitation Lachine Canal Walls
Repair and replacement of crowning
walls (Areas I.7, I.8, and I.9 – Reach No 4)
Project N° CLAC-1455-09
Addendum n° 01

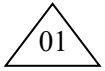
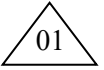
Specifications

DEVIS

DIVISION	SECTION	NUMBER OF PAGES
DIVISION 0	SPECIAL REQUIREMENTS	
01010	Archaeological monitoring	2
DIVISION 01	GENERAL REQUIREMENTS	
01 11 00	Summary of Work	10
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01 32 16.07	Construction Progress Schedule - Bar (Gantt) Chart	3
01 33 00	Submittal Procedures	6
01 35 13.43	Special project procedures for contaminated sites	10
01 35 29.06	Health and Safety Requirements	4
01 35 43	Environmental Procedure	7
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	APPENDIX B – Example of an Environmental Protection Plan (EPP)	12
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01 52 00	Construction Facilities	7
01 56 00	Temporary Barriers and Enclosures	4
01 61 00	Common Product Requirements	5
01 71 00	Examination and Preparation	3
01 73 00	Execution	3
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01 74 21	Construction/Demolition Waste Management and Disposal	12
	APPENDIX A – Waste audit (WA)	1
	APPENDIX B – Waste reduction workplan (WRW)	1
	APPENDIX C – Demolition waste audit (DWA)	1
	APPENDIX D – Cost/revenue analysis workplan (CRAW)	1
	APPENDIX E – Canadian Governmental departments chief Responsibility for the environment	1
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01 78 00	Closeout Submittals	5
DIVISION 02	EXISTING CONDITIONS	
02 41 99	Demolition for Minor Works	4
DIVISION 03	CONCRETE	
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03 20 00	Concrete Reinforcing	6
03 30 00	Cast-In-Place Concrete	12
03 30 03	Concrete Repair	7





033713	Shotcrete	13	
DIVISION 05	METALS		
05 50 00	Metal Fabrications	4	
DIVISION 09	PAINTING		
09 97 19	Painting Exterior Metal Surfaces	7	
DIVISION 31	EARTHWORK		
31 04 31	Historic Subgrade, Shoring and Bracing	4	
31 05 16	Aggregate Materials	4	
31 11 00	Clearing and Grubbing	4	
31 23 33.01	Excavating trenching and backfilling	9	
DIVISION 32	EXTERIOR IMPROVEMENTS		
32 91 19.13	Topsoil Placement and Grading	5	
32 92 19.16	Hydraulic Seeding	7	
32 93 10	Trees, Shrubs and Ground Cover Planting	12	
DIVISION 35	WATERWAYS AND MARINE CONSTRUCTION		
35 59 29	Mooring devices	1	
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APPENDIX I	Photos of Crowning wall	30	
APPENDIX II	PAC Property Plans	4	
APPENDIX III	Plans of valued environmental components	11	
APPENDIX IV	Tree list	9	
APPENDIX V	Contaminated Soils	7	
APPENDIX VI	3D Cuts	10	
APPENDIX VII	Plans of the plantation works	3	

END OF SECTION

Part 1 General

.1 Not used.

Part 2 Explanation of the Bid Form prices

2.1 Item 1. – Government Representative Site Office, Environment, and General Items

.1 Item 1.1 – Construction Facilities

.1 Payment item 1.1 of the *Schedule of Prices* is a fixed lump sum amount to compensate all necessary expenses incurred in the execution of the works as well as any other expenses not included in the other *Schedule of Prices* items, in accordance with the requirements of the specifications.

.2 The amount includes all that is described in Section 01 52 00, *Construction Facilities*, such as, but is not limited to, the following:

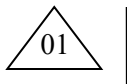
:

.1 Electricity, water, and lighting on site.

.2 Construction site offices; Furnishings, telephone and related services (internet, fax, photocopying machine with a color scanner, etc.), microwave and small refrigerator (9 cubic feet minimum), cold and hot water dispenser, including drinking water, heating and air conditioning of the site offices.

.3 Access roads including the necessary deforestation, clearing-up, removal of scrub, vines, dead wood, trees and shrub whose trunk diameter is less than 50 mm (measured from the diameter at chest height), the removal of all brush roots and bushes at the junction of the crowning walls and seat on 500 mm below the wall (for estimation purpose approximatively a cleaning of 70% of the length of the wall should be consider) , the removal of fences and vines on the edge of the crowning wall, twenty (20) exploration wells for additional sampling of contaminated soils at the start of the project (including a characterisation plan, the location of the wells, sampling by a laboratory professional, characterisation, transmission of results accompanied by a plan and analysis certificates) the moving, the storage and replacing of urban furniture (tables, benches, garbage cans, etc.), sanitary facilities, rigid site fencing (minimum height of 2440mm) safety buoy must be installed around all the mobilization premise, site signs and maintenance, in accordance with the requirements of the specifications and drawings, and as directed by the Government Representative. In addition, all requirement link to the protection of the CN railroad during the contract and the temporary rail crossing are covered by this article.

.4 The maintenance of traffic and temporary signage, including but not limited to:



- .1 Maintenance and mobilization of access road;
 - .2 Provide and maintain construction sign for access;
 - .3 Maintenance of access to properties;
 - .4 The provision of signalers as required;
 - .5 Maintenance of signs and traffic lanes including inspections requested;
 - .6 Modification and rehabilitation of existing signage;
 - .7 Bilingualism of the temporary signs;
 - .8 As well as other costs relating to the special requirements for traffic control;
- .5 The maintenance of the worksite and of its access routes.
- .6 The required coordination with the City of Montreal and other stakeholders, including obtaining all necessary permits to carry out the work.
- .7 All that is required in the following sections and is not directly attributed or related to one of the other items of the Bid Form:
- | | |
|---------------------|---|
| Section 01 11 00 | Summary of Work |
| Section 01 31 19 | Project Meetings |
| Section 01 32 16.07 | Construction Progress Schedule |
| Section 01 33 00 | Submittal Procedures |
| Section 01 35 29.06 | Health and Safety Requirements |
| Section 01 52 00 | Construction Facilities |
| Section 01 52 00 | Construction Facilities |
| Section 01 56 00 | Temporary Barriers and Enclosures |
| Section 01 73 00 | Execution |
| Section 01 74 11 | Cleaning |
| Section 01 74 21 | Construction/Demolition Waste Management and Disposal |
| Section 01 77 00 | Closeout Procedures |
| Section 07 78 00 | Closeout Submittals |
- .8 All costs associated with surveying and staking the works and all other site take-offs and measurements that are not allocated to any of the other items of the *Schedule of Prices*.
- .9 The costs of providing a security guard or other means of supervision for the site for all the duration of the contract (if required).
- .10 Rental costs of land and/or space for the storage of materials.
- .11 The protection of existing public utilities within the work site during construction. If the Contractor damages these installations during his work, he must replace them at his expense.

- .12 All fees pertaining to the supply of water and electricity for the duration of the work.
 - .13 Expenses for all means taken to avoid damage to earthworks, trees, shrubs, paving, bed of the river and its banks, etc.
 - .14 The rehabilitation of the premises:
 - .1 All work to restore the temporary sites used (access road, storage area, etc.) to their natural state;
 - .2 All work to restore street furniture (benches, tables, garbage cans, etc.) to their original condition;
 - .3 All work to restore vegetation by grassing of sites damaged by work;
 - .4 All work permitting the repair of all other damages and damages that the Contractor caused to the site of the works, to the public or private property affected by its works.
 - .15 The Contractor shall repair all damage caused in the performance of its work to the satisfaction of the Owners concerned and that of the Government Representative. The work site must be returned in a similar or better condition to that existing before the work begins.
 - .16 Supply and installation of noise protection screens for noise generating equipment (example: generator)
- .3 The submitted price is paid as shown below:
- .1 A portion equal to 20 % of the total amount bid for this item will be paid with the first progress claim, provided that the work has begun.
 - .2 Other progress payments under this item will be paid to a percentage consistent with the general progress of work for each progress claim period except for the last payment which shall be paid to an amount up to 85% of the general progress of the work.
 - .3 The last progress claim equivalent to 15% shall be paid with the payment emitted during the "*Substantial Performance of the Work*".
- .2 Item 1.2 – Environmental Protection Measures
- .1 Payment item 1.2 of *Schedule of Prices* is a fixed lump sum amount to compensate all necessary expenses incurred for measures to protect the environment in accordance with the requirements of the specifications.
 - .2 The amount includes, but is not limited to, the following:
 - .1 All that is described in Section 01 35 43, *Environmental Procedures* such as the preparation, presentation, and implementation of the environmental protection plan;
 - .2 The preparation, presentation, and implementation of :
 - .1 The environmental protection plan (PPE)
 - .2 The emergency spill plan;

- .3 The construction facilities location plan location;
 - .4 The work zone plans;
 - .5 The air pollution prevention plan;
 - .6 The contamination prevention plan;
 - .7 The wastewater management plan;
 - .8 The plan for the designation and protection of wetlands and historical, archaeological, cultural, and biological resources;
 - .9 The preparation, presentation, and implementation of a plan to protect the historical and heritage character of the site.
- .3 Vegetation protection measures (trees, plants, etc.);
 - .4 Temporary facilities for pollution prevention;
- .3 The submitted price is paid as shown below:
 - .1 A portion equal to 20 % of the total amount bid for this item will be paid with the first progress claim, provided that the work has begun.
 - .2 Other progress payments under this item will be paid to a percentage consistent with the general progress of work for each progress claim period.
- .3 Item 1.3 - Sediment Barrier
 - .1 Payment item 1.3. of the *Schedule of Prices* is per linear meter (m. Lin.) for all costs incurred for the supply and the installation of sediment barrier in accordance with the requirements of the plans and specifications
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction of the Work Plan;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Supply including geotextile, transportation, handling, warehousing and placing;
 - .4 Servicing and maintenance of barriers for the duration of the work;
 - .5 Dismantling of the sediment barrier;
 - .6 Cleaning of the premises at the end of work;
 - .7 Any incidental expense and coordination
 - .3 The submitted price is paid as shown below:
 - .1 50% of the price after the installation of the Sediment Barrier to the satisfaction of the ministry representative;
 - .2 50% of the price after the removal of all materials composing the Sediment Barrier, out of the work site.

- .4 Item 1.4 - Turbidity curtain (confinement)
 - .1 Payment item 1.4 of the Schedule of Prices is per linear meter (m. Lin.) for all costs incurred for the supply and the installation of a turbidity curtain for the duration of the work in accordance with the requirements of the plans and specifications. The payment is equivalent of the length of the reparation even if the curtain exceeds the reparation.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction, of the Work Plan and shop drawings;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, transportation, handling, storage, and operation;
 - .4 Maintenance and retention of the curtain for the duration of the work;
 - .5 Dismantling of the curtain;
 - .6 Cleaning of premises at the end of work;
 - .7 Any incidental expense and coordination.
 - .3 The submitted price is paid as shown below:
 - .1 50% of the price after the installation of the Turbidity curtain (confinement) with the satisfaction of the ministry representative;
 - .2 50% of the price after the evacuation of all materials composing the Turbidity curtain (confinement), out of the work site.

- .5 Item 1.5 – Supply, Painting and Installation of Guardrails
 - .1 Payment item 1.5 of the *Schedule of Prices* is priced per linear meter (m. Lin.) for the removal, the surface preparation, painting and repositioning of guardrails in accordance with the requirements of the plans and specifications.
 - .2 The posts of the new guardrails are provided by Parks Canada, the Contractor must provide for the supply, painting and installation of the new rails as well as the painting, installation and transportation required to use the new posts provided by Parks Canada.
 - .3 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of the shop drawings, the painting procedure, the samples and the required technical data sheets;
 - .2 Mobilization of labor, tools and equipment and hardware required for the execution of the work;
 - .3 Supply, painting and transportation of the new guardrails;
 - .4 The transport, painting and installation of the new posts supplied by Parks Canada as well as the hardware (screws, nuts, sleeves, etc.) and adjustments to ensure that the linearity of the rails at their junctions;
 - .5 The supply, handling, transport and use of materials (anchors, grout, paint, screws, spacer, etc.);
 - .6 All costs incurred in the surface preparations;

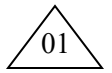
- .7 Leveling the railings, if necessary, with cement grout;
 - .8 In the event of damage, immediately repair the affected items and at the Contractor's expense;
 - .9 Any incidental expenses and coordination.
- .6 Item 1.6 – Clearing
- .1 Payment item 1.6 – Deforestation of trees with diameters superior to 50 mm (measured from the diameter at chest height)
 - .1 Payment items 1.6.1 to 1.6.4 of the *Schedule of Prices* are priced per unit for all the costs incurred for the deforestation of trees according to their dimensions, in accordance with the requirements of the plans and specifications.
 - .2 The Payment Item 1.6.4 is a unit price for all costs incurred for the removal of stumps located outside the excavation area, as the complete removal of the stumps inside the excavation area is included at item "Excavation and stockpiling".
 - .3 For trees outside of the excavation area, the Contractor have to cut the trees and grub the stumps 600 mm under the natural ground line.
 - .4 For trees located in the excavation area, the complete stump removing is included at item "Excavations and stockpiling".
 - .5 Some trees are already cut in the zone outside of the excavation area. The Contractor have to grub the stumps 600 mm under the natural ground line.
 - .6 The price includes, but is not limited to, the following:
 - .1 Preparation, presentation, and correction of the Work Plan;
 - .2 The mobilization of labour, tools, and equipment required to carry out the work;
 - .3 Supply, transport, handling, maintenance, and removal of access required for clearing works;
 - .4 The clearing of areas identified in the specification annex ;
 - .5 Loading, transporting and disposing of debris to a site in accordance with current policies;
 - .6 Cleaning at the end of the works;
 - .7 Any incidental expenses.
- .7 Item 1.7 - Platforms and Access System
- .1 Payment items 1.7.1 – Platforms and access system for crowning walls
 - .1 Payment items 1.7.1 and 107.2 of the *Schedule of Prices* are priced per linear meter (m. Lin.) of wall intervention for the supply, installation for the duration of the work and removal of the access platforms and system in accordance with the requirements of plans and specifications. The unit price for the platforms and access system (in linear meter) includes the

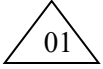
equivalent of the intervention length, regardless of the number of vertical displacements required. Only the equivalent of the intervention length will be paid. If the Contractor puts two platforms at two different heights on the same repair section of 1 m, only one platform of 1 m will be paid and not 2 m. Access platforms and systems must be watertight at the level of their contact with the existing substrate. Foresee an existing irregular substrate as indicated on the plans, on the photos and 3D sections.

- .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction of shop drawings and design calculations;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, transport, handling, installation, maintenance and removal of platforms and access systems (including geotextile et anti-dust screen);
 - .4 Implementation and removal under water level if necessary;
 - .5 Any incidental expenses and coordination.
- .3 The submitted price is paid as shown below for each item:
 - .1 50% of the price after the installation of the platform with the satisfaction of the ministry representative;
 - .2 50% of the price after the evacuation of all materials composing the platform, out of the work site.

2.2 Item 2. – Replacement of the Crowning Walls

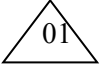
- .1 Item 2.1 – Excavations and stockpiling
 - .1 Payment item 2.1 of the *Schedule of Prices* is priced per cubic meter (m³) for excavated and stockpiled backfilled material. The volume shall be calculated in accordance with the section and profile of excavation accepted by the ministry representative and the contractor excavation survey in accordance with the requirements of the plans and specifications.
 - .2 Price includes, but is not limited to, the following:
 - .1 Mobilization of labor, tools and equipment required for the execution of the work;
 - .2 The preparation, presentation, and correction of the sections and typical soil excavation profile for acceptance, the excavation, stockpiling and disposition procedure, and the shop drawing required for the job execution;
 - .3 The georeferenced excavation survey of the existing in accordance with the approved section and profile and transmission to the inspector;
 - .4 Complete removal and disposition of stumps and roots in excavation areas (includes removal and off-site disposal of all stumps in this area);



- 
- .5 The identified excavation required for not damaging the existing dressed stones;
 - .6 Drying and drainage of the excavation bottom;
 - .7 Excavation, loading, transport and stockpiling of the backfilled material (be sure to implement environmental requirements for soil storage and required protection system.);
 - .8 Compaction of bottom material before installation of any new material (concrete, backfill, etc.);
 - .9 Excavations and pile-ups required for planting new trees are included in this slips item;
 - .10 Any incidental expenses and coordination.

.2 Item 2.2 – Disposal of Contaminated Soil

.1 Item 2.2.1 to 2.2.4 – Range <A, A-B, B-C, C+, >D

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- .1 Payment items 2.2.1 to 2.2.5 of the *Schedule of Prices* are priced per tonnes (t) of evacuated soil for the disposal of different types of contaminated soils range <A, A-B, B-C, C+ and >D(RBCS) in accordance with the requirements of the specifications and drawings, and as directed by the Government Representative.
 - .2 The amount includes, but is not limited to, the following:
 - .1 Disposal of contaminated soil contaminated soils <A, A-B, B-C, C+ and >D(RBCS) as directed by the Government Representative.
 - .2 Loading, transport off site and treatment as prescribed by Section 01 74 21 *Construction / Demolition Waste Management and Disposal* and by section 01 35 13.43, *Special project procedures for contaminated sites*;
 - .3 Stockpiling and off-site disposal
 - .4 Clean-up;
 - .5 Any incidental expenses and coordination.
 - .3 The post of disposal of contaminated soils <A includes the loading and off-site disposal of pebbles with a diameter equal to or greater than 300 mm present in the embankments and those with a diameter equal to or greater than 150 mm in the last layer of 300 mm. For estimation purposes, provide for 100 tonnes of material to be sorted and disposed of. This does not include the concrete of the walls to be demolished, but the existing materials present in the backfill.
 - .4 Stacking of soil for planting new trees is included in these form posts.

.3 Items 2.3 –Demolition and/or removal of collapsed walls

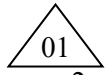
- .1 The line item 2.3 of the Schedule of Prices are priced per cubic meter (m³) of concrete demolished, in accordance with the requirements of the specifications and drawings, and as directed by the Government Representative.

- .2 The amount includes, but is not limited to, the following:
 - .1 Preparation, presentation, and correction of the demolition procedure and the Work Plan regarding the demolition of the wall;
 - .2 The mobilization of labour, tools, and equipment required to carry out the work;
 - .3 All required saw cuts;
 - .4 The preparation, presentation, and correction of the section and typical profile of the existing concrete demolition for acceptance;
 - .5 The demolition of defective and sound concrete as directed by the Government Representative;
 - .6 Cleaning, surface preparation and disposition of debris;
 - .7 Cleaning the reinforcing steel to be retained;
 - .8 Cleaning of the concrete substrate;
 - .9 The collection and treatment of demolition materials as prescribed by Section 01 74 21 *Construction / Demolition Waste Management and Disposal*;
 - .10 Any incidental expenses and coordination.

- .4 Item 2.4 - Reinforcing galvanised steel
 - .1 The price to the payment item 2.4, of the *Schedule of Prices* is priced per kilogram (kg) of steel according to the quantities placed in the formwork, in accordance with the requirements of the drawings and specifications.
 - .2 This item includes also the reinforcement needed for the stairs reconstruction has shown on the drawings.
 - .3 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of the Work Plan, Shop Drawings, and *Schedule of Prices* for the installation of the Steel Bars;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply of reinforcing bars and the shaping thereof,
 - .4 Galvanization where stipulated in the plans and specifications;
 - .5 Work site coordination and required adjustment for cast-in-place elements installation and drilling (Bollards, rungs, guardrail anchors, etc.);
 - .6 The cuts and adjustment on site;
 - .7 Installation of reinforcing steel required;
 - .8 The rebar installation confirmation table and revision of the installation schedule.
 - .9 Any incidental expenses and coordination.

- .5 Positions 2.5 – Cast-in-Place Concrete

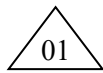
- .1 The price in item 2.5 of the Schedule of Prices is priced per cubic meter (m³) of wall concrete, the quantities shall be calculated according to the theoretical dimensions in accordance with the requirements of the plans and specifications. For estimation purposes, consider an irregular formwork of footings over the entire length of the crowning wall replacement - (Type 2 Wall). For estimation purposes, consider 47 m² of irregular formwork for the crevices and holes present in the seats as shown on the detail on plans. The crowning walls pours are limited to 40 m. maximum.



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These prices include, but are not limited to, the following:

- .1 The preparation, presentation, and correction, if required, of shop drawings, the concreting procedure, the descriptions of the mixtures and the technical data sheets required;
- .2 Mobilization of labor, tools and equipment required for the execution of the work;
- .3 Supply, installation and dismantling of formwork;
- .4 Supply and installation of chamfers;
- .5 The supply and application of mold release agent;
- .6 Supply and installation of formwork ties;
- .7 The supply and application of repair mortar to the location of the formwork ties;
- .8 The anchors, used to replace the formwork tie-rods, used to hold the formwork in place and required for the placement of concrete on existing concrete.
- .9 Supply and installation of steel wire;
- .10 The supply, transport, handling and placing of the drain 150 mm x 150 mm;
- .11 The supply, transport, handling and installation of the transition details, control joints including 20M anchors 2 and the 2 adhesive strips on the entire height of the wall;
- .12 The supply, transport, handling and placing of the steel components incorporated in the concrete, as shown in the drawings;
- .13 Treatment of substrate before concreting;
- .14 Supply, installation, vibration, finishing, wet curing of concrete;
- .15 The execution of the saw-strokes shown in the drawings;
- .16 Cleaning of concrete surfaces adjacent to the concreting area;
- .17 At the end of the work, off-site evacuation of the formwork materials and correction of defective repairs;
- .18 Concrete Finishing, analysis and register;
- .19 Treatment of surplus materials in accordance with Section 01 74 21, *Construction / Demolition Waste Management and Disposal*;
- .20 Any incidental expenses and coordination;



- .21 The preparation, supply and repair of cracks exceeding the specific requirements of the specifications;
- .22 Provide for the preparation, supply and treatment of specific cracks (other than that of the previous article) for the purpose of injecting 30 meters in length. This processing length is conditional upon approval by the Departmental Representative;
- .23 Any incidental expenses and coordination.

.6 Position 2.6 - Bollards

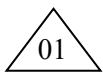
- .1 The price at item 2.6 of the Schedule of Prices is unit priced for the removal, surface preparation, painting and replacing of the bollards in accordance with the requirements of the drawings and specifications.
- .2 **Note that the existing bollard paint contain lead.** The Contractor must adapt his price to take into account the requirement of CNESST in terms of lead exposition during stripping.
- .3 The surface preparation and the paint stripping containing lead can't be done in the field work zone. The works must be done inside a factory.
- .4 Price includes, but is not limited to, the following:
 - .1 The survey of the bollard localisation, the preparation, presentation, and correction, if required, of shop drawings, the paint stripping procedure containing lead, the painting procedure, samples and technical data sheets required. Provide a DWG, PDF and EXCEL spreadsheet with identification, location and other relevant information;
 - .2 Photographic survey of existing bollards;
 - .3 Specific bollard identification;
 - .4 Mobilization of labor, tools and equipment required for the execution of the work;
 - .5 Removal, transportation, handling, storage of bollards;
 - .6 The supply, handling, transport and use of materials;
 - .7 All costs incurred in the preparation of surfaces;
 - .8 The lead paint removal wastes disposition;
 - .9 Painting of the bollards
 - .10 Repositioning bollards, including new anchors of the same size as the existing one (same localisation them existing);
 - .11 In the event of damage, immediately repair the affected items and at the Contractor's expense;
 - .12 All costs related to the work in section 35 59 29 - Mooring equipment;
 - .13 Any incidental expenses and coordination.
- .5 The submitted price is paid as shown below:

- .1 100% of the price after the removal of the Bollards, to the satisfaction of the ministry representative.
- .7 Posts 2.7 - Rungs
 - .1 The price at item 2.7 of the Schedule of Prices is unit priced for the establishment of a series of steps in accordance with the requirements of the plans and specifications.
 - .2 The unit rungs include steps similar to the existing conditions. The sets of steps are composed with holes for the feet and smooth galvanized reinforced steel in front and on top of the walls as described on the plans. The price also includes the chemical anchors to whole the bars.
 - .3 The existing conditions is composed of four ranks on the front face and one on the top. In case of variation, the rungs will be paid proportionally.
 - .4 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction of shop drawings, samples, and technical data sheets. Provide a DWG, PDF and EXCEL spreadsheet with identification, location and any other relevant information on the height of the rows, numbers, spaces between them, type, shape and identification section;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, transport, handling and setting of the echelons, such as the existing ones;
 - .4 Any incidental expenses and coordination.
- .8 Item 2.8- Type 1 borrowing materials, MG-20
 - .1 The price at item 2.8 of the Schedule of Prices is priced per tonne (t) for the borrowed materials in accordance with the requirements of the plans and specifications.
 - .2 This item concerned the materials whose replacing all excavated materials. No reuse of materials is expected on this contract
 - .3 Price includes, but is not limited to, the following:
 - .1 Transportation of loan materials to the site.
 - .2 The supply and installation of borrowed materials in accordance with the plans, specifications, and instructions of the Government Representative.
 - .3 Compaction analysis and register;
 - .4 Cleaning of premises;
 - .5 Any incidental expenses and coordination.
- .9 Positions 2.9 – Concrete support pad

- .1 The price at item 2.9 of the Schedule of Prices is a per cubic meter (m³) price for backfill, in accordance with the plans and specifications as directed by the Departmental Representative.
- .2 The concrete for the support pad is a pumpable concrete with a minimum capacity of 20MPa with an air-entraining admixture;
- .3 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction, if required, of shop drawings, the concreting procedure, the descriptions of the mixtures and the technical data sheets required;
 - .2 Supply, installation and dismantling of formwork of a variable height required for the works;
 - .3 Transportation of support pad concrete to the site;
 - .4 Purchase and placement of concrete support pad according to plans and specifications;
 - .5 Concrete needed to clog up out of service ducts;
 - .6 Treatment of surplus materials in accordance with the requirements of Section 01 74 21, *Construction / Demolition Waste Management and Disposal*;
 - .7 Cleaning of the premises;
 - .8 Any incidental expenses.

- .10 Item 2.10 - Perforated drain 150 mm and geotextile, PVC (type 1) or PVC COEX (type 1) or PE (type 2), 180 kPa min.
 - .1 The price at item 2.10 of the Schedule of Prices is priced per linear meter (m. Lin.) for the perforated drain in accordance with the requirements of the plans and specifications.
 - .2 The drainage system to install behind the crowning wall must have a diameter of 150 mm.
 - .3 Price includes, but is not limited to, the following:
 - .1 The supply of materials, the installation of drains including the installation of the geotextile, the preparation of the foundation, the clear stone support cushion, the self-adhesive membrane along the entire length of the wall, the connection of the elements and all accessories required for the installation Such as joints between the various sections;
 - .2 The execution of the slope needed for drainage;
 - .3 Cleaning of premises;
 - .4 Any incidental expenses and coordination.

- .11 Item 2.11- Top Soil
 - .1 The price at item 2.11 of the Schedule of Prices is priced per square meter (m²), based on the area covered in accordance with the requirements of the plans and specifications.



- .2 Price includes, but is not limited to, the following:
 - .1 Stripping, loading, transport and storage of topsoil;
 - .2 The preparation of the ground for the placement of the topsoil;
 - .3 The supply of the material, loading, transport, spreading, leveling, stripping, removal of woody debris and waste, and any amendments necessary to make the material conform to plans and specifications;
 - .4 Any incidental expenses and coordination.

- .12 Item 2.12 - Hydraulic Seeding
 - .1 The price at item 2.12 of the Schedule of Prices is priced per square meter (m²) for hydraulic seeding and shall be used to measure the maintenance of the seeded area during the guarantee period in square meters in accordance with the requirements of the plans and specifications.
 - .2 Measure hydraulic seeding in square meters of seeded area for each mix.
 - .3 Price includes, but is not limited to, the following:
 - .1 The supply, implementation of materials in accordance with the plans and directives of the Government Representative;
 - .2 Recovery of sodding of portions of covered surfaces by less than 75% shoot height 150 mm;
 - .3 Areas where the mixture will be incorporated into the existing lawn will not be considered for payment purposes;
 - .4 Protection and maintenance of turf;
 - .5 Cleaning of premises;
 - .6 First lawn mowing;
 - .7 Any incidental expense
 - .4 Only the area above the excavated trench is included in this payment item. Costs related to all other areas damaged by the work are considered miscellaneous and are included in the reclamation price.
 - .5 The submitted price is paid as shown below:
 - .1 50% of the price after initial seeding to the satisfaction of the Government Representative;
 - .2 50% of the price after the first lawn to the satisfaction of the Government Representative.

2.3 Item 3. - Repair of the crowning wall without overlay

- .1 Item 3.1 - Concrete demolition – Crowning Wall
 - .1 The line item 2.3 of the Schedule of Prices are priced per cubic meter (m³) of concrete demolished, in accordance with the requirements of the specifications and drawings, and as directed by the Government Representative.

- .2 The amount includes, but is not limited to, the following:
 - .1 Preparation, presentation, and correction of the Work Plan regarding the demolition of the wall;
 - .2 The mobilization of labour, tools, and equipment required to carry out the work;
 - .3 All required saw cuts including the saw cuts in the lower part of the Canal side wall to avoid breakage of the foundations during the demolition;
 - .4 The preparation, presentation and correction of the cut and profile type of demolition of existing concrete for approval;
 - .5 The demolition of defective and sound concrete as directed by the Government Representative;
 - .6 Cleaning, surface preparation and disposition of debris;
 - .7 Cleaning the reinforcing steel to be retained;
 - .8 Cleaning of the concrete substrate;
 - .9 The collection and treatment of demolition materials as prescribed by Section 01 74 21 *Construction / Demolition Waste Management and Disposal*;
 - .10 Any incidental expenses and coordination.

- .2 Item 3.2 - Cast -in-Place Concrete;
 - .1 The prices at items 3.2.1 and 3.2.2 of the Schedule of Prices are prices per cubic meter (m³) of wall concrete, the quantities are calculated according to the actual quantities put in place, in accordance with the requirements of the plans and specifications. For estimation purposes, consider an irregular formwork at the lower part of the wall formwork over the entire length of the wall repair without overlay - (Type 2A Wall). For estimation purposes, consider 2 m² of irregular formwork for the crevices and holes present in the seats as shown on the detail on plans.
 - .2 The repairs are to be done continuously on all length of selected sections.
 - .3 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of the Work Plan for the shop drawings, concreting procedure, specifications of mixtures and technical data sheets required. The preparation, presentation and correction of the cut and profile type of concreting for approval;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The excavation of 300 mm at the back of the wall and the displacement is included in the excavation post (second class excavation) and stockpiling;
 - .4 Saw lines required;
 - .5 Cleaning of reinforcing steel to be retained;

- .6 Cleaning and surface preparation,
- .7 Supply, installation and dismantling of formwork;
- .8 Supply and installation of chamfers;
- .9 The supply and application of mold release agent;
- .10 Supply and installation of formwork ties;
- .11 The supply, transport, handling and placing of the steel components incorporated in the concrete, as shown in the drawings;
- .12 Supply, installation, vibration, finishing, wet curing of concrete (including additional concrete at bollard localisation);
- .13 The collection of demolition materials, their disposal outside the building site and their treatment in accordance with the requirements of Section 01 74 21, *Construction/Demolition Waste Management and Disposal*;
- .14 Costs incurred for the removal, cleaning and refitting of fence sections on the crown wall.
- .15 Preparation, presentation and correction of the cut and profile type of concrete poured in place for approval;
- .16 The preparation, supply and repair of cracks exceeding the specific requirements of the specifications;
- .17 A forecast for the preparation, supply and treatment of specific cracks (other than that of the previous article) for the purpose of making an injection over 10 meters in length. This processing length is conditional on approval by the Departmental Representative
- .18 Any incidental expenses and coordination.
- .4 The submitted price is paid as shown below:
 - .1 100% of the price after the concrete curing has been completed and after the formwork removal to the satisfaction of the ministry representative;
- .3 Item 3.3 - Reinforcing galvanised steel
 - .1 The price to the payment item 3.3 of the *Schedule of Prices* is priced per kilogram (kg) of steel according to the quantities placed in the formwork, in accordance with the requirements of the drawings and specifications.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of the Work Plan for the Installation of Steel Bars;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The preparation, presentation, and correction, if required, of the shop drawings and the slip of the frames;
 - .4 The supply of reinforcing bars and the shaping thereof,
 - .5 Galvanization where stipulated in the plans and specifications;

- .6 Work site coordination and required adjustment for cast-in-place elements installation and drilling (Bollards, rungs, guardrail anchors, etc.);
 - .7 The cuts and adjustment on site;
 - .8 Installation of reinforcing steel required;
 - .9 Any incidental expenses and coordination.
- .4 Items 3.4 - Chemical anchorage
- .1 The price to the payment item 3.3 of the Schedule of Prices is priced per unit of chemical anchor, in accordance with the requirements of the plans and specifications.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction of shop drawings and anchor chemical technical sheet;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Drilling and cleaning of holes for the installation of chemical anchors;
 - .4 The supply, handling, transport and installation of steel anchor rods and anchor chemicals;
 - .5 The execution of tests on control anchorages, in accordance with Section 03 30 03;
 - .6 Any incidental expenses and coordination.
 - .3 This item excludes the following items:
 - .1 Anchors, used to replace formwork tie-rods, which are used to hold the formwork in place and are required for the placement of concrete on existing concrete, are not covered by any item in the slip and All costs incurred by the Contractor for the construction of these works are included in the price of the formwork;
- .5 Position 3.5 - Bollards
- .1 The price at item 3.5 of the Schedule of Prices is unit priced for the removal, surface preparation, painting and replacing of the bollards in accordance with the requirements of the drawings and specifications.
 - .2 **Note that the existing bollard paint contain lead.** The Contractor must adapt his price to take into account the requirement of CNESST in terms of lead exposition during stripping.
 - .3 The surface preparation and the paint stripping containing lead can't be done in the field work zone. The works must be done inside a factory.
 - .4 Price includes, but is not limited to, the following:
 - .1 The survey of the bollard localisation, the preparation, presentation, and correction, if required, of shop drawings, the paint stripping procedure containing lead, the painting procedure, samples and technical data

- sheets required. Provide a DWG, PDF and EXCEL spreadsheet with identification, location and other relevant information;
 - .2 Photographic survey of existing bollards;
 - .3 Specific bollard identification;
 - .4 Mobilization of labor, tools and equipment required for the execution of the work;
 - .5 Removal, transportation, handling, storage of bollards;
 - .6 The supply, handling, transport and use of materials;
 - .7 All costs incurred in the preparation of surfaces;
 - .8 The lead paint removal wastes disposition;
 - .9 Painting of the bollards
 - .10 Repositioning bollards, including new anchors of the same size as the existing one (same localisation them existing);
 - .11 In the event of damage, immediately repair the affected items and at the Contractor's expense;
 - .12 All costs related to the work in section 35 59 29 - Mooring equipment;
 - .13 Any incidental expenses and coordination.
- .5 The submitted price is paid as shown below:
- .1 100% of the price after the removal of the Bollards, to the satisfaction of the ministry representative.
- .6 Posts 3.6 - Rungs
- .1 The price at item 3.6 of the Schedule of Prices is unit priced for the establishment of a series of steps in accordance with the requirements of the plans and specifications.
 - .2 The unit rungs include steps similar to the existing conditions. The sets of steps are composed with holes for the feet and smooth galvanized reinforced steel in front and on top of the walls as described on the plans. The price also includes the chemical anchors to whole the bars.
 - .3 The existing conditions is composed of four ranks on the front face and one on the top. In case of variation, the rungs will be paid proportionally.
 - .4 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction of shop drawings, samples, and technical data sheets. Provide a DWG, PDF and EXCEL spreadsheet with identification, location and any other relevant information on the height of the rows, numbers, spaces between them, type, shape and identification section;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, transport, handling and setting of the echelons, such as the existing ones;

.4 Any incidental expenses and coordination.

.7 Item 3.7 - Hydraulic Seeding

- .1 The price at item 3.7 of the Schedule of Prices is priced per square meter (m²) for hydraulic seeding and shall be used to measure the maintenance of the seeded area during the guarantee period in square meters in accordance with the requirements of the plans and specifications.
- .2 Measure hydraulic seeding in square meters of seeded area for each mix.
- .3 Price includes, but is not limited to, the following:
 - .1 The supply, implementation of materials in accordance with the plans and directives of the Government Representative;
 - .2 Recovery of sodding of portions of covered surfaces by less than 75% shoot height 150 mm;
 - .3 Areas where the mixture will be incorporated into the existing lawn will not be considered for payment purposes;
 - .4 Protection and maintenance of turf;
 - .5 Cleaning of premises;
 - .6 First lawn mowing;
 - .7 Any incidental expense
- .4 Only the area above the excavated trench is included in this payment item. Costs related to all other areas damaged by the work are considered miscellaneous and are included in the reclamation price.
- .5 The submitted price is paid as shown below:
 - .1 50% of the price after initial seeding to the satisfaction of the Government Representative;
 - .2 50% of the price after the first lawn to the satisfaction of the Government Representative.

2.4 Item 4. – Repair of concrete seat and/or crevices

.1 Items 4.1 – Concrete Demolition

- .1 The price at item 4.1 of the Schedule of Prices is priced per square meter (m²) of demolish seat concrete surface area, in accordance with the requirements of the specifications and drawings, and as directed by the Government Representative.
- .2 The amount includes, but is not limited to, the following:
 - .1 Preparation, presentation, and correction of the Work Plan regarding the demolition of the seat surface;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The mobilization of labor, tools and equipment required for the execution of the work;
 - .4 All required saw cuts;

- .5 The demolition of defective and sound concrete as directed by the Government Representative;
 - .6 The cleaning of steel reinforcement to be conserved;
 - .7 The cleaning of concrete substrate to be conserved and disposition of debris;
 - .8 The collection and treatment of demolition materials as prescribed by Section 01 74 21 *Construction / Demolition Waste Management and Disposal*;
 - .9 Any incidental expenses.
- .2 Items 4.2 – Galvanized wire mesh 51x51 MW9,1xMW9,1
- .1 The price at item 4.2 of the Schedule of Prices is priced per square meter of wire mesh, in accordance with the requirements of the specifications and drawings and as directed by the Government Representative.
 - .2 The amount includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction of the Work Plan for the installation of wire mesh;
 - .2 The mobilization of labour, tools, and equipment required to carry out the work;
 - .3 The supply of wire mesh flat sheets;
 - .4 Installation of required wire mesh including overlap;
 - .5 Steel wire used to connect the wire mesh sheets;
 - .6 Rebar installation confirmation table and a revision of the installation schedule.
 - .7 Any incidental expenses.
- .3 Item 4.3 - Galvanized reinforcement
- .1 The price to the payment item 4.3 of the *Schedule of Prices* is priced per kilogram (kg) of steel according to the quantities placed in the formwork, in accordance with the requirements of the drawings and specifications.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of the Work Plan, Shop Drawings, and *Schedule of Prices* for the installation of the Steel Bars;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply of reinforcing bars and the shaping thereof,
 - .4 Galvanization where stipulated in the plans and specifications;
 - .5 The cuts and adjustment on site;
 - .6 Installation of reinforcing steel required;
 - .7 Any incidental expenses.

- .4 Items 4.4 - Chemical anchorage
- .1 The price to the payment item 4.4 of the Schedule of Prices is priced per unit of chemical anchor, in accordance with the requirements of the plans and specifications.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction of shop drawings and anchor chemical technical sheet;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Drilling and cleaning of holes for the installation of chemical anchors;
 - .4 The supply, handling, transport and installation of steel anchor rods and anchor chemicals;
 - .5 The execution of tests on control anchorages, in accordance with Section 03 30 03;
 - .6 Any incidental expenses.
- .5 Items 4.5 – Shotcrete
- .1 The price to the payment item 4.5 of the Schedule of Prices is priced per Cubic meter (m³) of wall concrete, in accordance with the requirements of the specifications and drawings, and as directed by the Government Representative. For estimation purposes, consider an irregular formwork for the total length of the seats - (Type 1 and 1A Walls). For estimation purposes, consider an approximate length of 100 m of key under the seats to be repaired.
 - .2 For the quantity calculation, an average thickness of 300mm has been used.
 - .3 Price includes, but is not limited to, the following:
 - .1 Costs related to the cooling of concrete or other approved method of implementation of concrete in hot weather must be included in the unit price of concrete;
 - .2 The preparation, presentation and correction of shop drawings, concreting procedure, specification sheets of mixtures and technical data sheets;
 - .3 The certification of the spray gun operator;
 - .4 The mobilization of labour, tools, and equipment required to carry out the work;
 - .5 The supply, installation, and dismantling of required formwork;
 - .6 The identification, marking and adjustment of the projected slope;
 - .7 Supply, installation, vibration, finishing, and wet curing of concrete;
 - .8 The moulds for the manufacture of the samples;
 - .9 Implementation, finishing and treatment of surfaces and cleaning surfaces abutting;
 - .10 Saw cut as shown on the drawing;

- .11 Cleaning of adjacent concrete surface;
- .12 At the end of the work, repair of the defective zone;
- .13 Concrete finishing as directed by the Departmental Representative;
- .14 Treatment of surplus materials in accordance with the requirements of Section 01 74 21 Construction / Demolition Waste Management and Disposal;
- .15 Any incidental expenditure.

2.5 Item 5. – Traffic maintenance end temporary signage

The temporary signage and the dimensions of signs on the pedestrian path have to be compliant with Annexe F – Liste des panneaux de signalisation pour les voies cyclables, with chapter 7 – Voies cyclables and with tome V – Signalisation routière – Volume 1, 2 and 3 of road works published by “Les publications du Québec”.

The signs used for this project have to be obligatory bilinguals.

- .1 Item 5.1- Traffic Maintenance and Temporary Signage
 - .1 The price at item 5.1 is a daily price for traffic and temporary signaling for the pedestrian access linking Charlevoix and des Éclusiers streets during the works as showed on the drawings and all other pedestrian or biking access possibly needed during the works. in accordance with the requirements of the plans and specifications. This item is used only for temporary on St-Patrick Street while deforesting trees.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of all signaling plans. The plans must be signed by an engineer member of the “ordre des ingénieurs du Québec”;
 - .2 Acquiring all the municipal permits related to road restriction on St-Patrick street;
 - .3 The provision, mobilization, maintenance, replacement in the event of breakage or vandalism, the commissioning or disengagement, the displacement and demobilization of the temporary signaling required to carry out work on the entire site in accordance with the requirements of this document;
 - .4 Maintenance of circulation and temporary signs during the works;
 - .5 The provision of signalers as required;
 - .6 Temporary signaling, tools, equipment, vehicle and manpower required for the complete execution of all works;
 - .7 Bilingualism of the temporary signs;
 - .8 Modification and rehabilitation of existing signage;
 - .9 Maintenance of access to properties;

- .10 Any incidental expenses and coordination.
- .3 Are excluded the following:
 - .1 Mobilisation to working area, their maintenance and their removal, including the panels and the panel maintenance;
 - .2 Maintenance and all temporary signage other than the one related to the pedestrian access explain above are included in construction facilities item.
- .2 Item 5.2 - Special Panels
 - .1 The price at item 5.2 of the Schedule of Prices is priced per square meter (m²) for the conformity and installation of special panels and signs in accordance with the requirements of the drawings and specifications.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of shop drawings signed and sealed by a member engineer in good standing of the Ordre des ingénieurs du Québec;
 - .2 Obtaining all required certificates;
 - .3 The supply, shaping, transportation and handling of the materials required for the application of the special panels and signs;
 - .4 Mobilization of labor, tools and equipment required for the execution of the work;
 - .5 The provision of accessories required for the installation of panels and signs such as poles, braces, hardware;
 - .6 Implementation, maintenance, replacement in case of accident, breakage or vandalism of special panel;
 - .7 Maintenance of the panel;
 - .8 Demobilization of special panels and signs at the end of the work;
 - .9 Turning the traffic sign on or off, as often as required;
 - .10 Temporary signage required during operations;
 - .11 Any incidental expenses and coordination.
- 2.6 Item 6. - Provision for winter conditions - Concreting in cold weather**
 - .1 Item 6.1 - Temporary Shelter for Concrete Pouring and heating included
 - .1 The price at items 6.1.1 and 6.1.2 of the Schedule of Prices is priced per linear meter (m. Lin.) to offset all costs incurred for the temporary shelter for crowning walls and seats concrete work in accordance with the requirements of the plans and specifications.
 - .2 Temporary shelter is payable only if it is required in writing by the Government Representative.
 - .3 Price includes, but is not limited to, the following:

- .1 The preparation, presentation, and correction of the shop drawings and the description of the shelter.
- .2 Mobilization of labor, tools and equipment required for the execution of the work;
- .3 The supply, handling and transportation of the materials required to construct the shelter;
- .4 Installation, maintenance during construction and dismantling at the end of the temporary shelter;
- .5 Heating the temporary shelter during the work;
- .6 Off-site transportation of materials;
- .7 Any incidental expenses.
- 4 The bid price is paid as follows:
 - .1 50% of the amount after assembly of the shelter to the satisfaction of the Government Representative;
 - .2 50% of the amount after the evacuation of the materials that made up the shelter, outside the construction site.
- .5 The price includes the equivalent of the intervention length regardless of the number of installations and relocations required. Only the equivalent of the intervention length will be paid. If the contractor places two shelters at two different heights on the same 1m repair section, a single 1m shelter will be paid and not 2m.
- .2 Item 6.2 - Insulation (RSI 0.40 per coat)
 - .1 The price at item 6.2 of the Schedule of Prices is priced per square meter (m²) of new uncut concrete surface covered with insulation in accordance with the requirements of the plans and specifications.
 - .2 Insulation layers shall be payable only if required in writing by the Government Representative.
 - .3 Item 6.2
 - .4 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction, if required of the description of the composition of the insulating layer;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, handling, transportation, installation, maintenance during construction, removal, and disposal of insulation layers at the end of the work;
 - .4 The cost of insulation protection of concrete required because of the correction of defective works shall be borne by the Contractor.
 - .5 Any incidental expenses.
- .3 Item 6.3 - Heating of Concrete Components

- .1 The price at item 6.3 of the Schedule of Prices is priced per cubic meter (m³) of concrete or cement slurry installed, the components of which are heated in accordance with the requirements of the drawings and specifications.
- .2 This item is used for all concrete activities if required
- .3 Price includes but is not limited to:
 - .1 Heating of the mixing water (between 40 ° C and 80 ° C) used for the manufacture of the concrete;
 - .2 Heat aggregates to remove frozen pieces, snow, and ice;
 - .3 The cost of heating the concrete or grout components without the need for shrinkage because of the correction of defective work shall be borne by the Contractor;
 - .4 Any incidental expenses.

2.7 Item 7 – Specialized equipment

- .1 Item 7.1 - Survey marker
 - .1 The price at item 7.1 of the Schedule of Prices is a price per unit for the supply and installation of survey markers, in accordance with the requirements of the plans, specifications and the Government Representative instructions.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation, and correction, if required, of the technical specification of the marker;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply manutention transport and installation of the survey marker;
 - .4 Any incidental expenses.

- .2 Item 7.2 – Tree plantation
 - .1 The price at payment item 7.2 of the Schedule of Prices is a unit price per planted tree.
 - .2 Price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of data sheets;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Supply, handling, transportation and installation of trees;
 - .4 Maintenance throughout the period of establishment and warranty. The maintenance work described in Section 32 93 10 - Planting Plant Trees, Shrubs and Ground Cover is a minimum requirement. This does not relieve the contractor of all the actions that he deems necessary in order to ensure the survival of the plants and to respect his guarantee.
 - .5 Maintaining accessories in good condition and inspections to detect insects and diseases.
 - .6 Any incidental expenses.

.3 The bided price is paid as follows:

- .1 60% of the amount when trees are planted to the satisfaction of the Departmental Representative;
- .2 40% of the amount at the end of the first year of warranty;

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 329119-13 Topsoil placement and grading.

1.2 REFERENCES

- .1 Definitions:
 - .1 Mycorrhiza: association between fungus and roots of plants. This symbiosis, enhances plant establishment in newly landscaped and imported soils.
- .2 Reference Standards:
 - .1 Agriculture and Agri-Food Canada (AAFC).
 - .1 Plant Hardiness Zones in Canada-[2000]. The project is located in the 5b zone.
 - .2 Bureau de normalisation du Québec 300 (BNQ).
 - .1 Produits de pépinières et de gazon NQ 0605-300.
 - .2 Aménagement paysager à l'aide de végétaux NQ 0605-100.
 - .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
 - .4 U.S. Environmental Protection Agency (EPA) / Office of Water
 - .1 EPA 832/R-92-005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

1.3 ADMINISTRATIVE REQUIREMENTS

- .1 Scheduling: obtain approval from Parks Canada Agency Representative of schedule [7] days in advance of shipment of plant material.
- .2 Schedule to include:
 - .1 Quantity and type of plant material.
 - .2 Shipping dates.
 - .3 Arrival dates on site.
 - .4 Planting Dates.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for trees, fertilizer, mycorrhiza, anti-desiccant, anchoring equipment, and mulch and include product characteristics, performance criteria, physical size, finish and

limitations. The contractor must submit written proof of confirmation of his plant order certified by his suppliers no later than 15 days after the signature of the contract. The confirmation of the plant order must include the following information:

- The name and address on the supplier;
 - For each species of plant : quantity, height / size; scientific name and rooting type, as defined in NQ 0605-300.
- .2 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements 01 35 43 - Environmental Procedures.
- .3 Samples:
- .1 Submit samples of mulch, topsoil, mycorrhiza, stake and guying collar and the trunk protection.

1.5 QUALITY ASSURANCE

- .1 Qualifications:
- .1 Landscape Contractor: to be a Member in Good Standing of *Association des Paysagistes Professionnels du Québec - APPQ*.
 - .2 Landscape Planting Supervisor: Landscape Industry Certified Technician with Softscape Installation designation.
 - .3 Landscape Maintenance Supervisor: Landscape Industry Certified Technician with Ornamental Maintenance designation and holds a pesticide application authorization certificate issued by *Ministère du Développement durable, Environnement et lutte contre les changements climatiques (MDDELCC)* issued under the Quebec Pesticides Act. A copy of the certificate must be given to the supervisor before the start of the pesticide application.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .1 Protect plant material from frost, excessive heat, wind and sun during delivery.
 - .2 Protect plant material from damage during transportation:
 - .1 Delivery distance is less than 30 km and vehicle travels at speeds under 80 km/h, tie tarpaulins around plants or over vehicle box.
 - .2 Delivery distance exceeds 30 km or vehicle travels at speeds over 80 km/h, use enclosed vehicle where practical.
 - .3 Protect foliage and root balls using anti-desiccants and tarpaulins, where use of enclosed vehicle is impractical due to size and weight of plant material.
- .3 Storage and Handling Requirements:

- .1 Immediately store and protect plant material which will not be installed within [1] hour[s] in accordance with supplier's written recommendations and after arrival at site in storage location approved by Parks Canada Agency Representative.
- .2 Protect stored plant material from frost, wind and sun and as follows:
 - .1 For bare root plant material, preserve moisture around roots by heeling-in or burying roots in [sand or topsoil] and watering to full depth of root zone.
 - .2 For pots and containers, maintain moisture level in containers.
 - .3 For balled and burlapped and wire basket root balls, place to protect branches from damage. Maintain moisture level in root zones.
- .3 Store and manage hazardous materials in accordance with manufacturer's written instructions.

1.7 WARRANTY

- .1 For all plant material as itemized on plant list the 12 months warranty period is extended to 24 months.

Part 2 Products

2.1 PLANT MATERIAL

- .1 Type of root preparation, sizing, grading and quality: comply to Canadian Standards for Nursery Stock and standard *Produits de pépinières et de gazon* NQ 0605-300 of *Bureau de normalisation du Québec*.
 - .1 Source of plant material: grown in Zone 5b to 4a, in accordance with Plant Hardiness Zones in Canada.
 - .2 Plant material must be planted in zone specified as appropriate for its species.
 - .3 Plant material in location appropriate for its species.
- .2 Plant material: free of disease, insects, defects or injuries and structurally sound with strong fibrous root system.
- .3 Trees: with straight trunks, well and characteristically branched for species.
- .4 Trees larger than 40 mm in caliper: half root pruned during each of two successive growing seasons, the latter at least one growing season before arrival on site.
- .5 Bare root stock: nursery grown, in dormant stage, not balled and burlapped or container grown.

2.2 WATER

- .1 Free of impurities that would inhibit plant growth.

2.3 STAKES

- .1 T-bar, steel, 40 x 40 x 5 x 2440 mm green color

2.4 GUYING WIRE

- .1 Type 1: steel, 3 mm wire.

2.5 CLAMPS

- .1 U-bolt: galvanized, 13 mm diameter, c/w curved retaining bar and hex nuts.
- .2 Crimp type.

2.6 GUYING COLLAR

- .1 Tube: plastic, 13 mm diameter, nylon reinforced.

2.7 TRUNK PROTECTION

- .1 Plastic: perforated spiralled strip.

2.8 MULCH

- .1 Wood chip: varying in size from 50 mm to 75 mm and 5 to 20 mm thick, free of bark, small branches and leaves.

2.9 FERTILIZER

- .1 At the time of planting, a natural fertilizer of pure chicken manure shall be applied for each plant.

The manure must be dehydrated and granulated, and contain a minimum of 90% dry matter.

The fertilizer must not contain any sewage sludge, no synthetic products, no fillers, no compost and no binder to bind the particles together.

The product analysis must meet the following specifications :

4 % Total nitrogen (N)

4 % Phosphoric acid assimilable (P₂O₅)

2 % Soluble potash (K₂O)

7 % Calcium

70 % Organique matter

10 % Maximum moisture content

- .2 The quantities to be added per container format are as follows :

- Common pit : 250 ml/square meter (190 grams)
- Individual pit of tree and conifer : 125 ml per tree
- Individual pit for shrub : 40 ml per shrub

- .3 The fertilizer is applied before placing the mulch, directly on the top of the planting pit, homogeneously over the entire surface of the pit (excliding the bead).

The fertilizer must be applied using a graduated container.

- .1 Ensure new root growth is in contact with mycorrhiza.
- .2 Use mycorrhiza as recommended by manufacturer's written recommendations.

2.10 ANTI-DESICCANT

- .1 Wax-like emulsion.

2.11 FLAGGING TAPE

- .1 Fluorescent, red or orange colour.

2.12 SOURCE QUALITY CONTROL

- .1 Obtain approval from Parks Canada Agency Representative of plant material prior to planting.
- .2 Imported plant material must be accompanied with necessary permits and import licenses. Conform to Federal, Provincial or Territorial regulations.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrate previously installed under other Sections or Contracts are acceptable for planting installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Parks Canada Agency Representative.
 - .2 Inform Parks Canada Agency Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Parks Canada Agency Representative.

3.2 PRE-PLANTING PREPARATION

- .1 Proceed only after receipt of written acceptability of plant material from Parks Canada Agency Representative.
- .2 Remove damaged roots and branches from plant material.
- .3 Apply anti-desiccant to conifers and deciduous trees in leaf in accordance with manufacturer's instructions.
- .4 Locate and protect utility lines.
- .5 Notify and acquire written acknowledgment from utility authorities before beginning excavation of planting pits for trees and shrubs.
- .6 Temporary Erosion and Sedimentation Control:

- .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 EXCAVATION AND PREPARATION OF PLANTING BEDS

- .1 Establishment of sub-grade for planting beds in accordance with Section 31 22 13 - Rough Grading.
- .2 Preparation of planting beds in accordance with Section 32 91 19.13 - Topsoil Placement and Grading.
- .3 For individual planting holes:
 - .1 Stake out location and obtain approval from Parks Canada Agency Representative prior to excavating.
 - .2 Excavate to depth and width as indicated.
 - .3 Remove rocks, roots, debris and toxic material from excavated material that will be used as planting soil for trees and individual shrubs. Dispose of excess material.
 - .4 Scarify sides of planting hole.
 - .5 Remove water which enters excavations prior to planting. Notify Parks Canada Agency Representative if water source is ground water.

3.4 PLANTING

- .1 For jute burlapped root balls, cut away top one third of wrapping and wire basket without damaging root ball.
 - .1 Do not pull burlap or rope from under root ball.
- .2 For container stock or root balls in non-degradable wrapping, remove entire container or wrapping without damaging root ball.
- .3 Plant vertically in locations as indicated.
 - .1 Orient plant material to give best appearance in relation to structure, roads and walks.
- .4 For trees and shrubs:
 - .1 Backfill soil in 150 mm lifts.
 - .1 Tamp each lift to eliminate air pockets.
 - .2 When two thirds of depth of planting pit has been backfilled, fill remaining space with water.
 - .3 After water has penetrated into soil, backfill to finish grade.

- .2 Form watering saucer as indicated.
- .5 Water plant material thoroughly.
- .6 After soil settlement has occurred, fill with soil to finish grade.

3.5 TRUNK PROTECTION

- .1 Install trunk protection on deciduous trees as indicated.
- .2 Install trunk protection before installation of tree supports.

3.6 TREE SUPPORTS

- .1 Install tree supports as indicated.
- .2 Use two stake tree support for deciduous trees less than 3 m in height.
 - .1 Place stakes on prevailing wind side and 500 mm minimum from trunk.
 - .2 Drive stake 300 mm minimum into undisturbed soil beneath roots.
 - .1 Ensure stake is secure, vertical and unsplit.
 - .3 Install 150 mm long guying collar 1500 mm above grade.
 - .4 Thread Type 1 guying wire through guying collar tube.
 - .1 Twist wire to form collar and secure firmly to stake. Cut off excess wire.
- .3 After tree supports have been installed, remove broken branches with clean, sharp tools.

3.7 MULCHING

- .1 Ensure soil settlement has been corrected prior to mulching.
- .2 Spread mulch as indicated.

3.8 MAINTENANCE DURING ESTABLISHMENT PERIOD

- .1 Perform following maintenance operations from time of planting to acceptance by Parks Canada Agency Representative.
 - .1 Water to maintain soil moisture conditions for optimum establishment, growth and health of plant material without causing erosion.
 - .1 For evergreen plant material, water thoroughly in late fall prior to freeze-up to saturate soil around root system.
 - .2 Remove weeds [monthly].
 - .3 Replace or respread damaged, missing or disturbed mulch.
 - .4 If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Parks Canada Agency Representative prior to application.
 - .5 Remove dead or broken branches from plant material.
 - .6 Keep trunk protection and guy wires in proper repair and adjustment.

- .7 Remove and replace dead plants and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings.

3.9 MAINTENANCE DURING WARRANTY PERIOD

- .1 From time of acceptance by Parks Canada Agency Representative to end of warranty period, perform following maintenance operations.
 - .1 Water to maintain soil moisture conditions for optimum growth and health of plant material without causing erosion.
 - .2 Reform damaged watering saucers.
 - .3 Remove weeds monthly.
 - .4 Replace or respread damaged, missing or disturbed mulch.
 - .5 If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Parks Canada Agency Representative prior to application.
 - .6 Apply organic fertilizer in early spring.
 - .7 Remove dead, broken or hazardous branches from plant material.
 - .8 Keep trunk protection and tree supports in proper repair and adjustment.
 - .9 Remove trunk protection, tree supports and level watering saucers at end of warranty period.
 - .10 Remove and replace dead plants and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings.
 - .11 Submit monthly written reports to Parks Canada Agency Representative identifying:
 - .1 Maintenance work carried out.
 - .2 Development and condition of plant material.
 - .3 Preventative or corrective measures required which are outside Contractor's responsibility.

3.10 VERIFICATION

- .1 Verification requirements in accordance with Section 01 47 17 - Sustainable Requirements: Contractor's Verification, include:
 - .1 Materials and resources.
 - .2 Storage and collection of recyclables.
 - .3 Construction waste management.
 - .4 Local/regional materials.

3.11 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 – Cleaning.
 - .1 Leave Work area clean at end of each day.

- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for [reuse] [recycling] in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal 01 35 21 - LEED Requirements.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.
 - .2 Divert discarded burlap, wire and plastic plant containers materials from landfill to plastic recycling facility approved by the Government of Quebec.
 - .3 Dispose of unused fertilizer at official hazardous material collection site approved by the Government of Quebec.
 - .4 Dispose of unused anti-desiccant at official hazardous material collections site approved by the Government of Quebec.
 - .5 Divert unused wood and mulch materials from landfill to recycling or composting facility approved by the Government of Quebec.

3.12 CLOSEOUT ACTIVITIES

- .1 Submit maintenance reports for trees, shrubs, and other plantings.
- .2 **Performing maintenance work**

The Contractor must notify the Parks Canada Agency representative in writing at least 48 hours prior to the completion of each maintenance operation.

All maintenance performed without prior written notice will not be paid.

- .3 **Weeding**

Unless otherwise directed by the Parks Canada Agency Representative, a minimum of three (3) weedings per maintenance period is required.

First year of maintenance: between June 7 and 15, between July 23 and 30 and between August 23 and 30. Second year of interview: between June 7th and 15th, between July 23rd and 30th and between August 23rd and 30th

Weed control consists of the complete removal of all weeds (the aerial part and all the roots) over the entire surface of the individual and common planting pits. This operation must be carried out gently, without causing damage to the plantations.

- .4 **Pruning**

In addition to the requirements of section 3.9 in section 32 93 10, the Contractor must dispose of the cuttings off-site.

Size works also include:

The formation size of the trees.

Pruning work must conform to the following specifications:

Never cut the main axis of a tree;

Eliminate broken, weak or diseased branches;

Shorten badly oriented branches and branches in competition with the main axis of a tree;

Clear the trunk from all the small branches (pruning greedy and stump rejects);

Do not leave a chicot;

Always prune over a vigorous and well-directed call-sap.

.5 Fertilization

On the second spring, a natural fertilizer of pure chicken manure shall be applied for each plant.

The manure must be dehydrated and granulated, and contain a minimum of 90% dry matter.

The fertilizer must not contain any sewage sludge, no synthetic products, no fillers, no compost and no binder to bind the particles together.

The product analysis must meet the following specifications :

4 % Total nitrogen (N)

4 % Phosphoric acid assimilable (P₂O₅)

2 % Soluble potash (K₂O)

7 % Calcium

70 % Organique matter

10 % Maximum moisture content

The quantities to be added per container format are as follows :

For plants planted in individual pits, the fertilizer must be applied to the outside of the bead of the pit, to a maximum width of 10 cm.

The fertilizer must be applied using a graduated contain.

.6 Watering

During the first year of maintenance, a minimum of five (5) waterings is required in addition to watering performed during planting work. This number does not relieve the contractor of his obligation to water frequently during periods of heat wave.

The five (5) waterings are carried out due to a weekly watering from the fifth day after the completion of the planting work. No watering is required when rainfall of 30 mm or more is observed over a twenty-four (24) hour period. In this case, the required watering is postponed one week after this period of precipitation.

.7 Special winter protection for deciduous trees

This measure applies to all trees planted under this project.

The work consists of installing winter protection in the first fall and removing it in the first spring of the maintenance period.

In the fall, between November 1 and November 15, the contractor must wrap 100% of the tree branches with a membrane specially designed for this purpose. The latter must be

attached using nylon rope or plastic tie of the TIE-WRAP type. Subsequently, the crown should be attached to the stake with a piece of wood two (2) inches by three (3) inches by eight (8) feet in length. The attachment of the membrane must be strong enough so that the membrane is held in place until spring.

In the spring, between April 1st and April 15th, the contractor must remove the membrane and store it so that it can be drained and reused.

The membrane is ARBOTEX GLACÉ from Texel or the equivalent approved by the supervisor.

.8 Maintenance of accessories in good condition

The Contractor must ensure that all accessories are maintained in good condition to maintain their effectiveness.

The Contractor must remove any items that could damage or interfere with plant growth.

.9 Replacement of plants

In the fall of each year of the warranty period, the Contractor visits the plantations and provides the Parks Canada Representative with a list of plants to replace the following spring. This list remains partial. It is completed during the spring visit of the plantations. However, a confirmation of the purchase order must be sent to the Parks Canada Representative no later than ten (10) consecutive days after receipt of this list.

Following plant bud break in the spring of each year of the warranty period, a visit from the Parks Canada Representative will evaluate the plants to be replaced. A revised purchase order against the purchase order submitted the previous fall must be submitted to the Parks Canada Representative no later than five (5) business days after the spring visit to confirm the plants to be replaced and allow for an inspection at the latest source of supply.

Replacement plantings are subject to the same requirements as the original plants and the present specifications.

.10 Protection against insects and diseases

The contractor must inspect the plantations for pests or diseases. When insects or diseases are detected, the Contractor shall notify the Representative of Parks Canada as soon as possible of the extent of the hazard and the suitability of the treatment to ensure the survival of the plants. If required, a treatment plan is proposed to the Parks Canada Representative to protect the plants.

Treatments against insects and diseases are carried out by a person holding a pesticide application certificate issued by the *Ministère du Développement durable, de l'Environnement et des Parcs* (MDDEP) issued under the Act Quebec on pesticides. A copy of the certificate must be given to the supervisor before the start of the pesticide application.

.11 Removal of stakes and protections against rodents

At the end of the maintenance period, the contractor must remove all stakes and rodent protections. It must dispose of it outside the site, on a site authorized by the regulations in force.

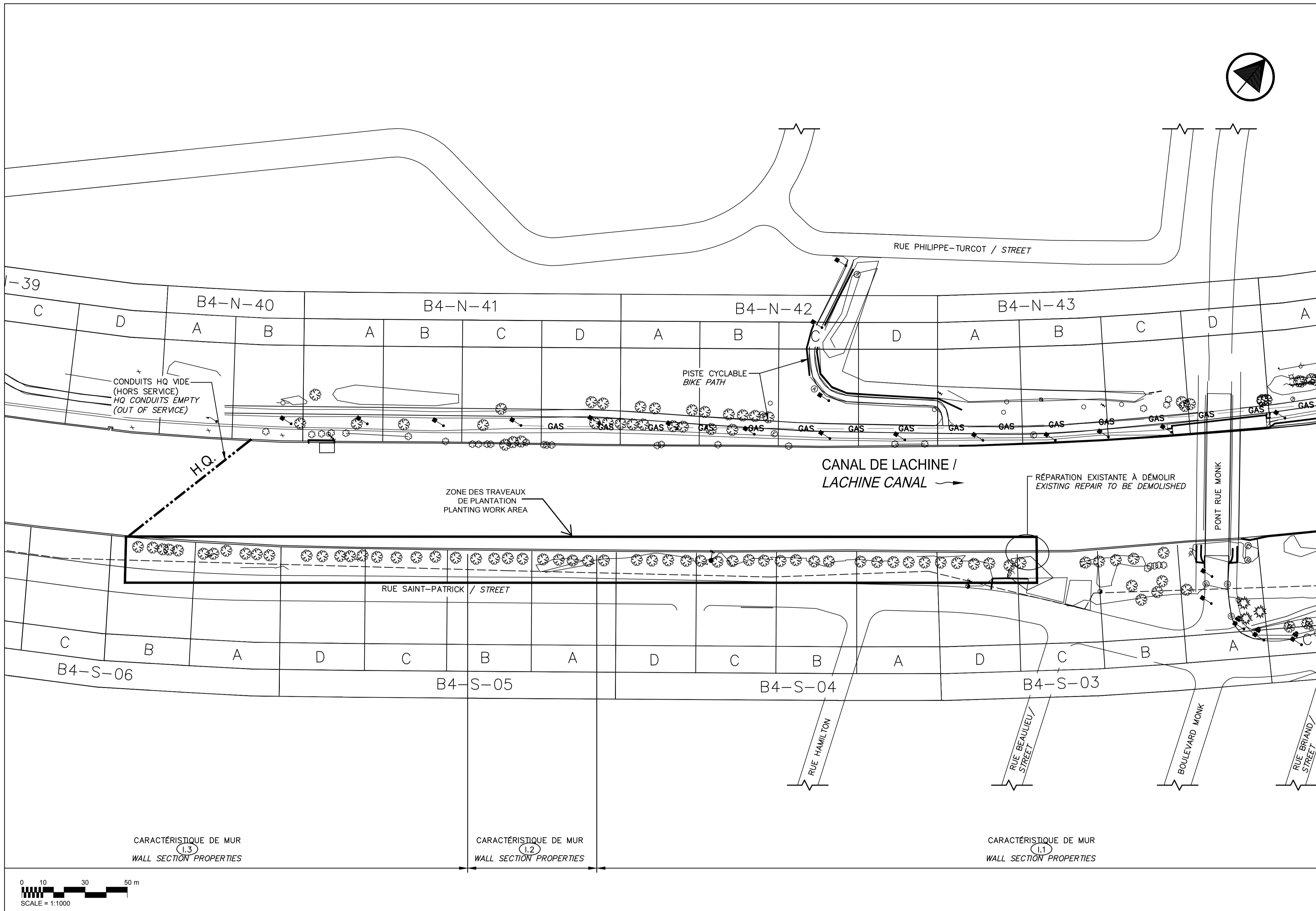
.12 **Payment for protection and maintenance work**

See item 2.1 – Excavation and stockpiling, item 2.2 – Disposal of contaminated soil and item 7.2 – Specialty supplies of section 01 29 00 – Payment procedures.

END OF SECTION

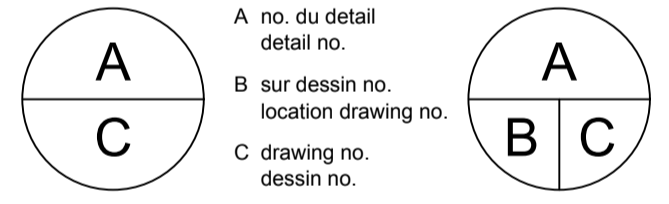
Canada Parks Agency
Rehabilitation Lachine Canal Walls
Repair and replacement of crowning
walls (Areas I.7, I.8, and I.9 – Reach No 4)
Project N° CLAC-1455-09
Addendum n° 01

APPENDIX VII
Plans for planting works



**ZONE DES TRAVEAUX DE PLANTATION
 TREE PLANTATION WORK AREA**

01	POUR SOUMISSION / FOR TENDER	2018-06-XX
00	CONCEPT PRÉLIMINAIRE/CONCEPT DESIGN	2018-06-15
révisions / revisions	description	date



Projet: PARCS CANADA - UNITÉ DES VOIES NAVIGABLES AU QUÉBEC
 PLANTATION EN BORDURE DU CANAL LACHINE
 PARKS CANADA - QUEBEC WATERWAYS FIELD UNIT
 PLANTATION ALONG THE LACHINE CANAL

Dessin: ZONE DES TRAVEAUX DE PLANTATION
 DESCRIPTION GÉNÉRALE
 TREE PLANTATION WORKS AREA
 GENERAL DESCRIPTION

Conçu par / Designed By: David Thomassin, arch. pays. (2018/06/15)
Dessiné par / Drawn By: David Thomassin, arch. pays. (2018/06/15)
Examiné par / Reviewed By: Caroline Lussier, urb. (2018/06/15)
Approuvé par / Approved By: Dominic Pierre, ing. (2016/06/15)

PLAN SOUMISSION / TENDER DRAWING
 PAS POUR CONSTRUCTION/NOT FOR CONSTRUCTION

No. du projet / Project no.: 1455-09
No. du dessin / Drawing no.: AP-RMUR-1455-07-07

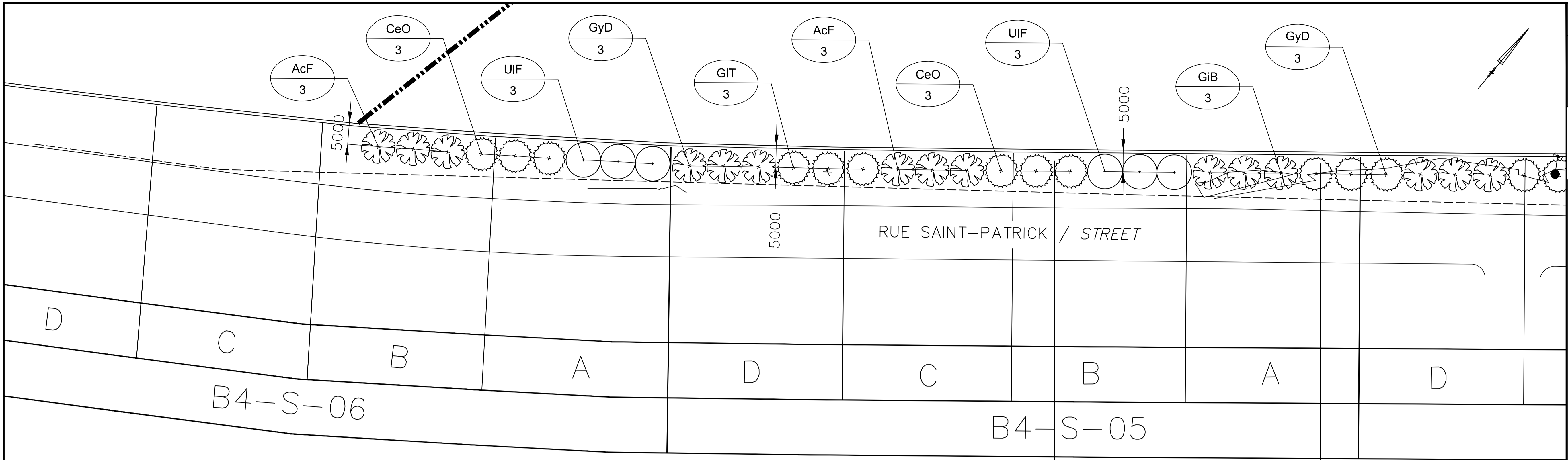
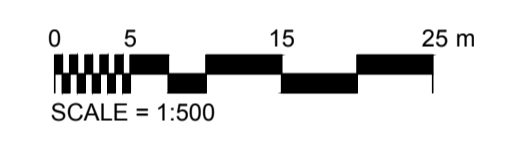


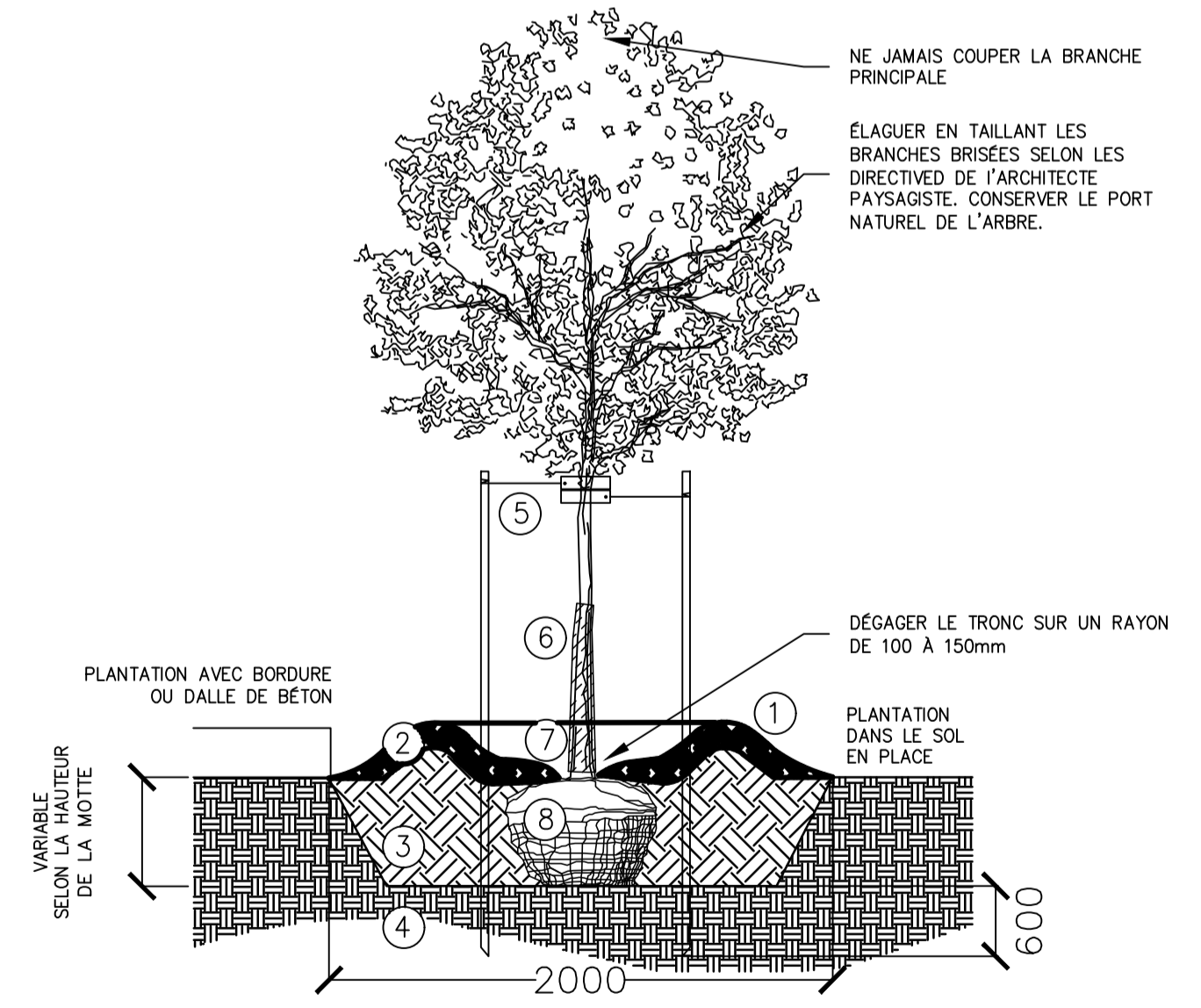
TABLEAU DE PLANTATION/ PLANTING TABLE

CLÉ/ KEY	NOM LATIN / LATIN NAME	AP2	AP3	TOTAL	DIAM	CONTENANT / CONTAINER	DISTANCE C/C	DÉTAIL DE PLANTATION / PLANTING DETAIL
ARBRE À FEUILLES CADUQUES/ DECIDUOUS TREE								
AcF	<i>Acer x freemanii</i> 'Autumn Blaze'	6	6	12	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
CeO	<i>Celtis occidentalis</i>	6	6	12	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
GiB	<i>Ginkgo biloba</i>	3	0	3	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
Git	<i>Gleditsia triacanthos</i> 'Street Keeper'	3	3	6	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
GyD	<i>Gymnocladus dioicus</i> 'Espresso'	6	3	9	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
UIF	<i>Ulmus</i> 'Frontier'	6	6	12	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake



01	POUR SOUMISSION / FOR TENDER	2018-06-XX
00	CONCEPT PRÉLIMINAIRE/CONCEPT DESIGN	2018-06-15
révisions / revisions	description	date

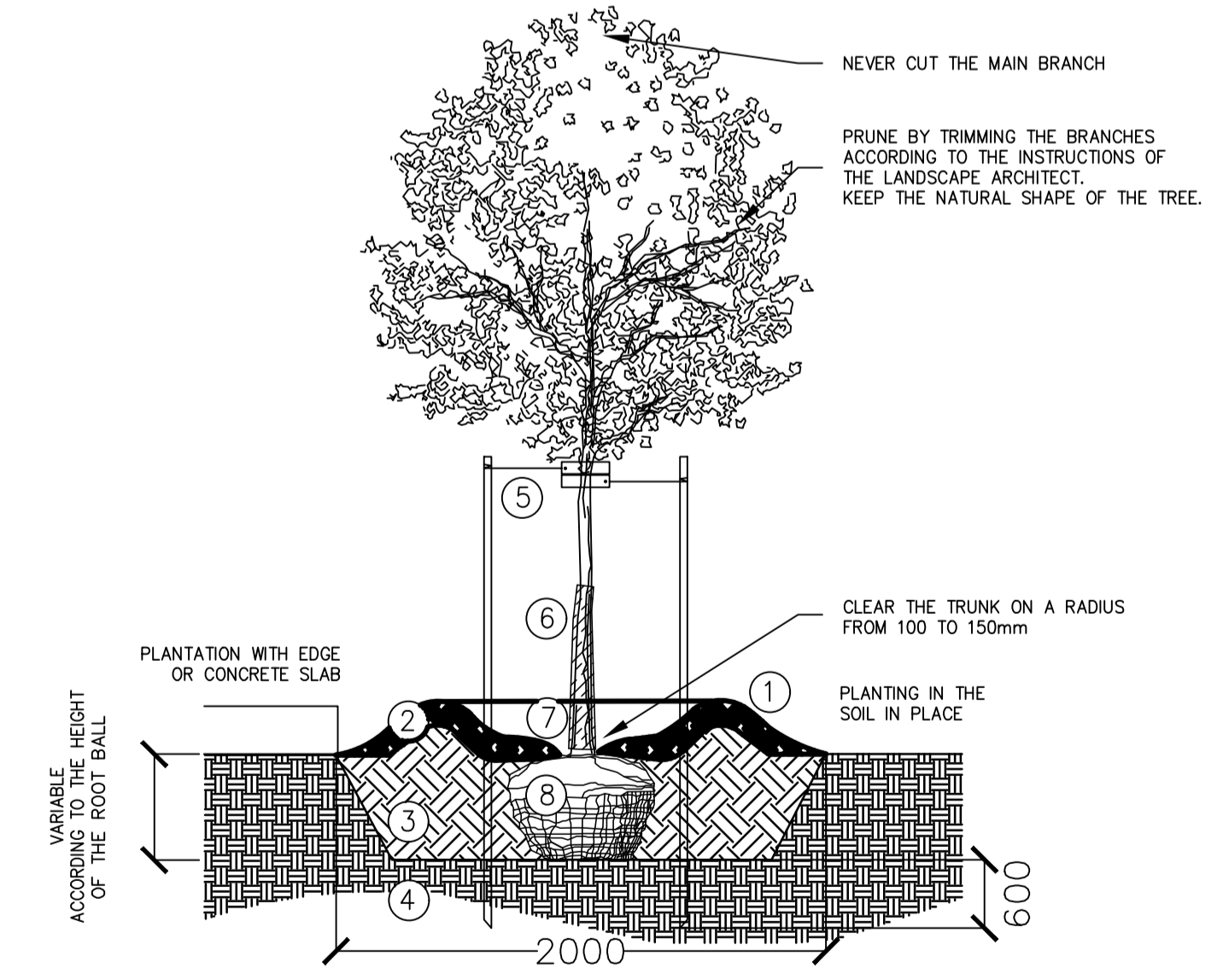
DÉTAIL DE CONSTRUCTION



- DESCRIPTION**
- ① PAILLUS BRF BOIS RAMEAUX FRAGMENTÉS 100mm, VOIR SECTION DE DEVIS 32 93 10
 - ② CUVETTE D'ARROSAGE 1500mm Ø (BORDURE DE 150mm DE HAUT PAR 300mm DE LARGE À LA BASE) VOIR SECTION DE DEVIS 32 93 10
 - ③ TERRE VÉGÉTALE TAMISÉE POUR PLANTATION, VOIR SECTION DE DEVIS 32 93 10
 - ④ SOL NON-REMANIÉ OU REMBLAI COMPACTÉ, VOIR SECTION DE DEVIS 32 93 10
 - ⑤ TUTEUR D'ACIER AVEC COLLIER DE HAUBANAGE ET FIL D'ACIER GALVANISÉ AU 2/3 DE LA HAUTEUR DE L'ARBRE, VOIR SECTION DE DEVIS 32 93 10
 - ⑥ MATÉRIEL DE PROTECTION, VOIR SECTION DE DEVIS 32 93 10
 - ⑦ COLLET AU MÊME NIVEAU QUE LE TERRAIN FINI, VOIR SECTION DE DEVIS 32 93 10
 - ⑧ JUTE, CORDAGE ET PANIER DE BROCHE COUPÉS SUR AU MOINS 1/2 DE LA MOTTE. POT/CONTENANT À ENLEVER AU COMPLET, VOIR SECTION DE DEVIS 32 93 10

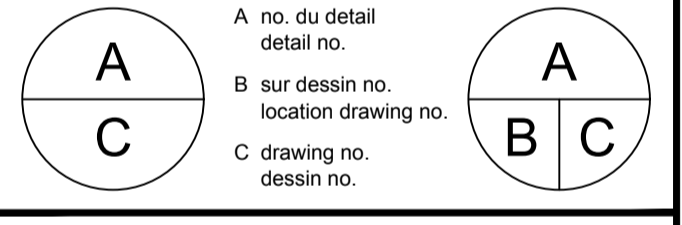
Plantation d'arbre feuillu avec tuteur
 32 93 10 PLANTATION D'ARBRES, D'ARBUSTES ET DE COUVRE-SOL VÉGÉTAUX
 ÉCHELLE: AUCUNE

CONSTRUCTION DETAIL



- DESCRIPTION**
- ① FRAGMENTED WOOD MULCH 100mm, SEE SECTION 32 93 10 OF THE SPECIFICATION
 - ② WATERING BOWL 1500mm Ø (EDGE HEIGHT OF 150mm BY 300mm WIDTH AT THE BASE), SEE SECTION 32 93 10 OF THE SPECIFICATION
 - ③ SCREENED TOPSOIL FOR PLANTING, SEE SECTION 32 93 10 OF THE SPECIFICATION
 - ④ UNDISTURBED SOIL OR COMPACTED FILLING, SEE SECTION 32 93 10 OF THE SPECIFICATION
 - ⑤ STEEL STAKE WITH GUYING COLLAR AND GALVANIZED STEEL WIRE AT 2/3 OF THE HEIGHT OF THE TREE, SEE SECTION 32 93 10 OF THE SPECIFICATION
 - ⑥ PROTECTIVE MATERIAL, SEE SECTION 32 93 10 OF THE SPECIFICATION
 - ⑦ COLLAR AT THE SAME LEVEL AS THE FINISHED GROUND, SEE SECTION 32 93 10 OF THE SPECIFICATION
 - ⑧ JUTE, CORDAGE AND SPINDLE BASKET CUT ON AT LEAST 1/2 OF THE BASKET. COMPLETELY REMOVED POT/CONTAINER, SEE SECTION 32 93 10 OF THE SPECIFICATION

Deciduous tree planting with stake
 32 93 10 TREES, SHRUBS AND GROUND COVER PLANTING
 SCALE: NONE



Projet / Project
PARCS CANADA - UNITÉ DES VOIES NAVIGABLES AU QUÉBEC
 PLANTATION EN BORDURE DU CANAL LACHINE
 PARKS CANADA - QUEBEC WATERWAYS FIELD UNIT
 PLANTATION ALONG THE LACHINE CANAL

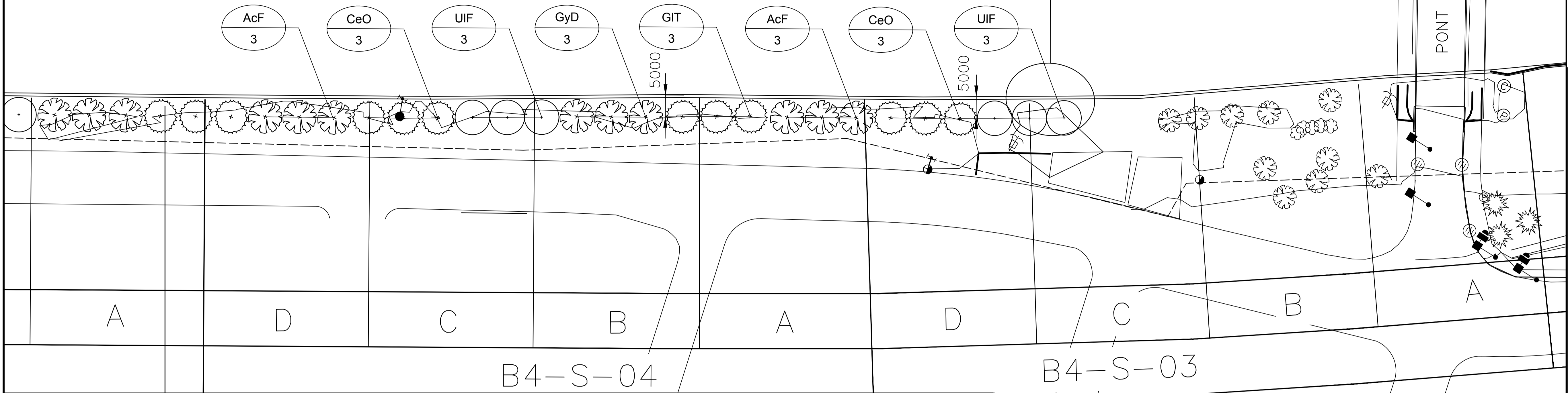
Dessin / Drawing
PLAN DE PLANTATION ET DÉTAIL TYPE
 TREE PLANTATION PLAN AND TYPICAL DETAIL

Conçu par / Designed By
 David Thomassin, arch. pays. (2018/06/15)
 Dessiné par / Drawn By
 David Thomassin, arch. pays. (2018/06/15)
 Examiné par / Reviewed By
 Caroline Lussier, urb. (2018/06/15)
 Approuvé par / Approved By
 Dominic Pierre, ing. (2016/06/15)

PLAN SOUMISSION / TENDER DRAWING PAS POUR CONSTRUCTION/NOT FOR CONSTRUCTION
 No. du projet / Project no. 1455-09
 APC / PCA
 No. du dessin / Drawing no. AP-RMUR-1455-07-07 AP2

CANAL DE LACHINE / LACHINE CANAL

RÉPARATION EXISTANTE À DÉMOLIR
EXISTING REPAIR TO BE DEMOLISHED



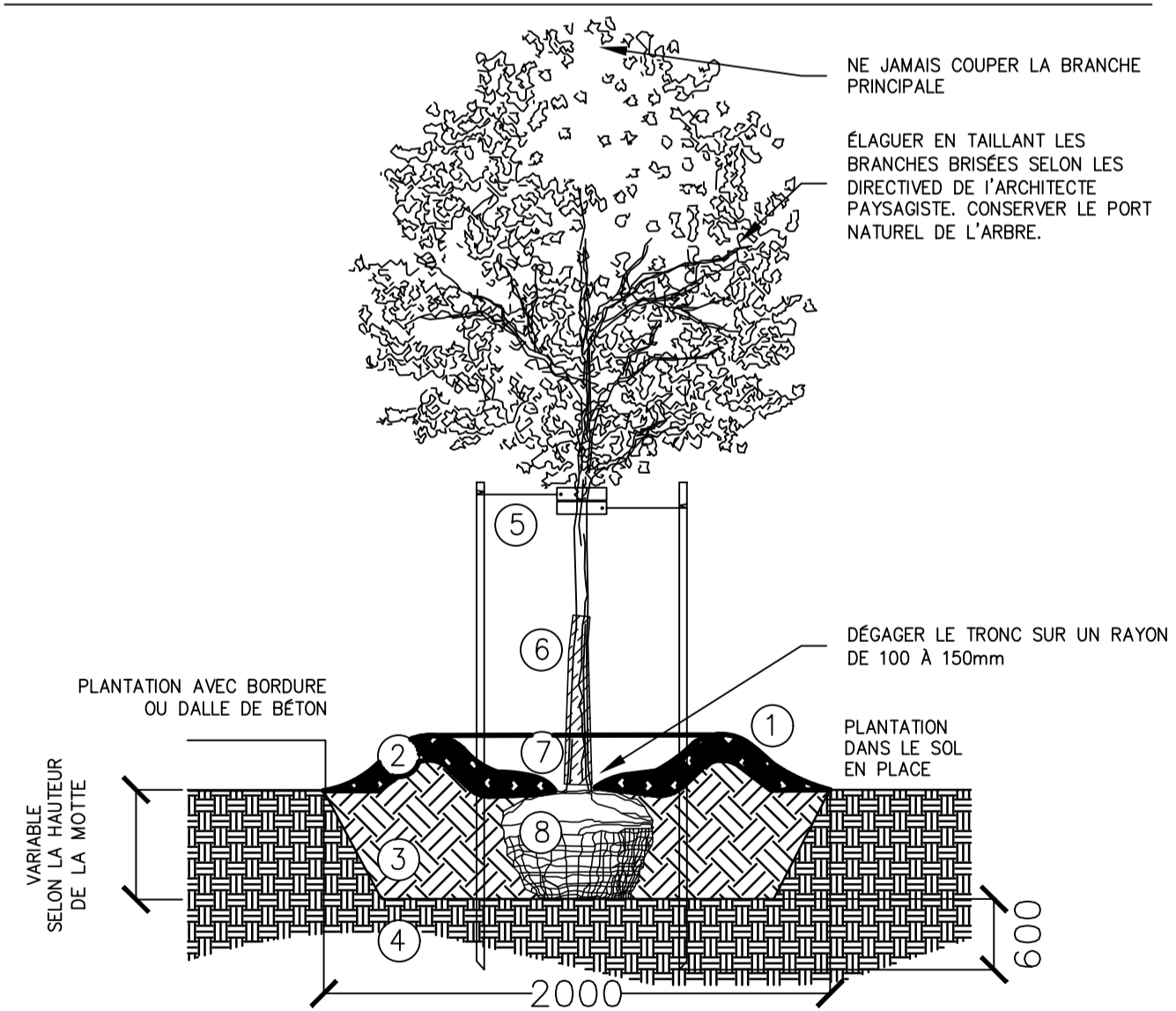
B4-S-04

B4-S-03

TABLEAU DE PLANTATION/ PLANTING TABLE

CLÉ/ KEY	NOM LATIN / LATIN NAME	AP2	AP3	TOTAL	DIAM	CONTENANT / CONTAINER	DISTANCE C/C	DÉTAIL DE PLANTATION / PLANTING DETAIL
ARBRE À FEUILLES CADUQUES/ DECIDUOUS TREE								
AcF	<i>Acer x freemanii</i> 'Auntumn Blaze'	6	6	12	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
CeO	<i>Celtis occidentalis</i>	6	6	12	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
GiB	<i>Ginkgo biloba</i>	3	0	3	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
GIT	<i>Gleditsia triacanthos</i> 'Street Keeper'	3	3	6	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
GyD	<i>Gymnocladus dioicus</i> 'Espresso'	6	3	9	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake
UIF	<i>Ulmus</i> 'Frontier'	6	6	12	40-45mm	cont. #15 ou en motte / or root ball 60cm dia.	8000mm	Plantation d'arbres feuillu avec tuteur Deciduous tree planting with stake

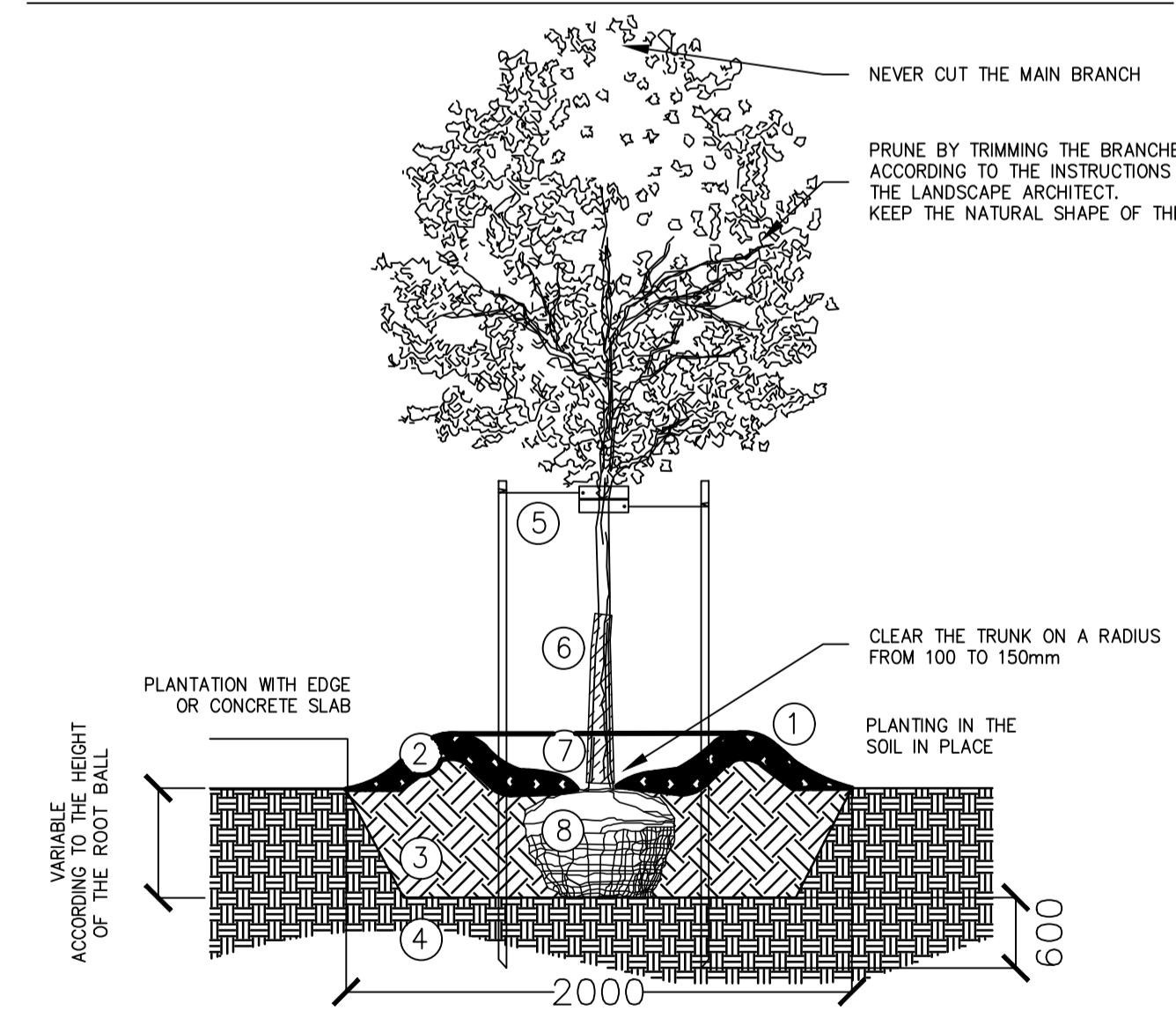
DÉTAIL DE CONSTRUCTION



- DESCRIPTION**
- ① PAILLIS BRF BOIS RAMÉAUX FRAGMENTÉS 100mm, VOIR SECTION DE DEVIS 32 93 10
 - ② CUVETTE D'ARROSAGE 1500mm Ø (BORDURE DE 150mm DE HAUT PAR 300mm DE LARGE À LA BASE) VOIR SECTION DE DEVIS 32 93 10
 - ③ TERRE VÉGÉTALE TAMISÉE POUR PLANTATION, VOIR SECTION DE DEVIS 32 93 10
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Plantation d'arbre feuillu avec tuteur
32 93 10 PLANTATION D'ARBRES, D'ARBUSTES ET DE COUVRE-SOL VÉGÉTAUX

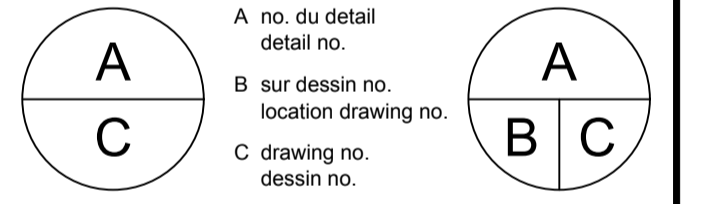
CONSTRUCTION DETAIL



- DESCRIPTION**
- ① FRAGMENTED WOOD MULCH 100mm, SEE SECTION 32 93 10 OF THE SPECIFICATION
 - ② WATERING BOWL 1500mm Ø (EDGE HEIGHT OF 150mm BY 300mm WIDTH AT THE BASE), SEE SECTION 32 93 10 OF THE SPECIFICATION
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Deciduous tree planting with stake
32 93 10 TREES, SHRUBS AND GROUND COVER PLANTING

révisions / revisions	description	date
01	POUR SOUMISSION / FOR TENDER	2018-06-XX
00	CONCEPT PRÉLIMINAIRE/CONCEPT DESIGN	2018-06-15



Projet / Project
PARCS CANADA - UNITÉ DES VOIES NAVIGABLES AU QUÉBEC
PLANTATION EN BORDURE DU CANAL LACHINE
PARKS CANADA - QUEBEC WATERWAYS FIELD UNIT
PLANTATION ALONG THE LACHINE CANAL
Dessin / Drawing
PLAN DE PLANTATION ET DÉTAIL TYPE
TREE PLANTATION PLAN AND TYPICAL DETAIL

Conçu par / Designed By David Thomassin, arch. pays.	Date / Date (2018/06/15)
Dessiné par / Drawn By David Thomassin, arch. pays.	Date / Date (2018/06/15)
Examiné par / Reviewed By Caroline Lussier, urb.	Date / Date (2018/06/15)
Approuvé par / Approved By Dominic Pierre, ing.	Date / Date (2016/06/15)
PLAN SOUMISSION / TENDER DRAWING PAS POUR CONSTRUCTION/NOT FOR CONSTRUCTION	
No. du projet / Project no. 1455-09	APC / PCA
No. du dessin / Drawing no. AP-RMUR-1455-07-07	AP3

Canada Parks Agency
Rehabilitation Lachine Canal Walls
Repair and replacement of crowning
walls (Areas I.7, I.8, and I.9 – Reach No 4)
Project N° CLAC-1455-09
Addendum n° 01

Tender Form



AGENCE PARCS CANADA / CANADA PARKS AGENCY

RÉHABILITATION DE MURS DU CANAL-DE-LACHINE - RÉPARATION ET REMPLACEMENT DES MURS DE COURONNEMENT / REHABILITATION OF LACHINE CANAL WALLS-REPAIR AND REPLACEMENT OF THE CROWNING WALLS

No DE PROJET / PROJECT No : CLAC-1455-09

BORDEREAU DE SOUMISSION / BID FORM- 1455-09 - REVI

TABLEAU DES PRIX UNITAIRES : il est convenu que le tableau suivant est le tableau des prix unitaires à utiliser aux fins de contrat

TABLE OF UNIT COSTS: it is agreed that the following table is the Table of Unit Costs to be used for the purposes of this Contract

POSTES DE PAIEMENT / PAYMENT ITEMS

1	Description du travail / Description of work	Unité / Unit	Prix unitaire / Unit cost	Quantité / Quantity	MONTANT TOTAL / TOTAL AMOUNT
1.	ORGANISATION DE CHANTIER, BUREAU DU SURVEILLANT, ET ARTICLES GÉNÉRAUX / SITE OFFICE, ENVIRONNEMENT AND GENERAL ITEMS				
1.1	Installations de chantier / Construction Facilities	Global / Lump sum		1	
1.2	Mesures de protection de l'Environnement / Environmental Protection Measures	Global / Lump sum		1	
1.3	Barrière à sédiments / Sediment barrier	M. Lin. / Lin. M.		880	
1.4	Rideau de turbidité (confinement) / Turbidity curtain (containment)	M. Lin. / Lin. M.		880	
1.5	Fourniture, peinture et mise en place de garde-corps / Supply, painting and installation of guardrails	M. Lin. / Lin. M.		25	
1.6	Déboisement / Clearing				
1.6.1	-Déboisement d'arbres et arbustes entre 50 mm et 100 mm de diamètre inclusivement / Clearing of trees and shrubs between 50 mm and 100 mm inclusive at DHP	Unité / Unit		7	
1.6.2	-Déboisement d'arbres entre plus de 100 mm et 450 mm au DHP / Clearing of trees between more than 100 mm and 450 mm inclusive at DHP	Unité / Unit		24	
1.6.3	-Déboisement d'arbres de plus de 450 mm au DHP / Clearing of trees of more than 450 mm at DHP	Unité / Unit		1	
1.6.4	-Essouchage des arbres coupés en dehors de la zone d'excavation / Grouping of cut trees located outside the excavation	Unité / Unit		25	
1.7	Plateformes et système d'accès / Platforms and Access System				
1.7.1	Plateformes et système d'accès pour couronnements / Platforms and Access System for crowning walls	M. Lin. / Lin. M.		880	
1.7.2	Plateformes et système d'accès pour assises / Platforms and Access System for seats	M. Lin. / Lin. M.		340	
2.	REMPLACEMENT DU MUR DE COURONNEMENT / REPLACEMENT OF THE CROWNING WALLS				
2.1	Excavation (déblai 2e classe) et mise en réserve / Excavations and stockpiling	M. Cu. / Cu M.		3424	
2.2	Disposition des sols contaminés / Disposal of Contaminated Soil				
2.2.1	- Plage < A / Range < A	Tonne / Ton		510	
2.2.2	- Plage A-B / Range A-B	Tonne / Ton		2750	
2.2.3	- Plage B-C / Range B-C	Tonne / Ton		3550	
2.2.4	- Plage C+ / Range C+	Tonne / Ton		740	
2.3	Démolition et/ou récupération couronnement effondré / Concrete Demolition and/or Removal of collapsed walls	M. Cu. / Cu M.		1524	
2.4	Armature galvanisé / Reinforcing Galvanized Steel	Kg / Kg		99550	
2.5	Béton coulé en place / Cast in place Concrete				
2.5.1	Béton coulé hors de l'eau / Concrete poured out of the water	M. Cu. / Cu M.		1587	
2.5.2	Béton antilessivage / anti-washing concrete	M. Cu. / Cu M.		15	
2.6	Bollards / Bollards	Unité / Unit		22	
2.7	Échelons / Rungs	Unité / Unit		59	
2.8	Matériaux emprunt type 1, MG-20 / Type 1 borrowing materials, MG-20	Tonne / Ton		7875	
2.9	Coussin de support en béton / Concrete support pad	M. Cu. / Cu M.		220	
2.10	Drain perforé 150 mm et géotextile, PCV (type 1) ou PCV COEX (type 1) ou PE (type 2), 180 kPa min. / Perforated Drain (200 mm) and Geotextile, PCV (type 1) or PCV COEX (type 1) or PE (type 2), 180 kPa min.	M. Lin. / Lin. M.		855	
2.11	Terre végétale / Top soil	M. carré / Sqrt. M		2326	
2.12	Ensemencement hydraulique / Hydroseeding	M. carré / Sqrt. M		2326	
3	RÉPARATION SANS SURÉPAISSEUR DU MUR DE COURONNEMENT / REPAIR OF THE CROWING WALL				
3.1	Démolition du béton - mur de couronnement / Concrete demolition - Crowning Wall	M. Cu. / Cu M.		13	
3.2	Béton coulé en place / Cast -in-Place Concrete				
3.2.1	Béton coulé hors de l'eau / Concrete poured out of the water	M. Cu. / Cu M.		13	
3.2.2	Béton antilessivage / anti-washing concrete	M. Cu. / Cu M.		6	
3.3	Armature galvanisé / Reinforcing Galvanized Steel	Kg / Kg		1073	
3.4	Ancrage chimique (acier galvanisé) / Chemical Anchorage (galvanized steel)	Unité / Unit		825	
3.5	Bollards / Bollards	Unité / Unit		1	
3.6	Échelons / Rungs	Unité / Unit		3	
3.7	Ensemencement hydraulique / Hydroseeding	M. carré / Sqrt. M		32	
4	RÉPARATION DES ASSISES ET/OU DES CREVASSES DE BÉTON / REPAIR OF CONCRETE SEAT AND/OR CREVICES				
4.1	Démolition du béton / Concrete Demolition	M. carré / Sqrt. M		1400	
4.2	Treillis soudé galvanisé 51x51 MW9,1xMW9,1 / Galvanized wire mesh 51x51 MW9,1xMW9,1	M. carré / Sqrt. M		1400	
4.3	Armature galvanisé / Reinforcing Galvanized Steel	Kg / Kg		20400	
4.4	Ancrage chimique (acier galvanisé) / Chemical Anchorage (galvanized steel)	Unité / Unit		6120	



AGENCE PARCS CANADA / CANADA PARKS AGENCY

RÉHABILITATION DE MURS DU CANAL-DE-LACHINE - RÉPARATION ET REMPLACEMENT DES MURS DE COURONNEMENT / REHABILITATION OF LACHINE CANAL WALLS-REPAIR AND REPLACEMENT OF THE CROWNING WALLS

No DE PROJET / PROJECT No : CLAC-1455-09

BORDEREAU DE SOUMISSION / BID FORM- 1455-09 - REVI

TABLEAU DES PRIX UNITAIRES : il est convenu que le tableau suivant est le tableau des prix unitaires à utiliser aux fins de contrat

TABLE OF UNIT COSTS: it is agreed that the following table is the Table of Unit Costs to be used for the purposes of this Contract

POSTES DE PAIEMENT / PAYMENT ITEMS					
4.5	Béton projeté / Shotcrete	M. Cu. / Cu M.		580	
5	MAINTIEN DE LA CIRCULATION ET SIGNALISATION TEMPORAIRE / TRAFFIC MAINTENANCE AND TEMPORARY SIGNAGE				
5.1	Maintien de la circulation et signalisation temporaire / Traffic Maintenance and temporary signage	Jour / Day		210	
5.2	Panneaux spéciaux / Special signs	M. carré / Sqrt. M		20	
6	PROVISIONS POUR CONDITIONS D'HIVER / PROVISION FOR WINTER CONDITIONS - COLD WEATHER CONCRETING				
6.1	Abri temporaire et Chauffage inclus / Temporary Shelter for Concrete Pouring and heating included				
6.1.1	Abri temporaire et Chauffage inclus pour couronnements / Temporary Shelter for Concrete Pouring and heating included for crowning walls	M. Lin. / Lin. M.		885	
6.1.2	Abri temporaire et Chauffage inclus pour assises / Temporary Shelter for Concrete Pouring and heating included for seats	M. Lin. / Lin. M.		337	
6.2	Isolant RSI 0,40 par couche / Insulation (RSI 0,40 per layer)	M. carré / Sqrt. M		3727	
6.3	Chauffage des constituants de béton / Heating of Concrete Components	M. Cu. / Cu M.		2200	
7	FOURNITURE SPÉCIALISÉ / SPECIALIZED EQUIPMENT				
7.1	Borne d'arpentage / Survey marker	Unité / Unit		3	
7.2	Plantation d'arbres / Trees Planting	Unité / Unit		54	
Total des postes de paiement / Total Items :					

Préparé par / Prepared by :

Date :

Nom de la compagnie / Company: