

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Public Works and Government Services Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave. Jasper
5th floor/5e étage
Edmonton
Alberta
T5J 1S6
Bid Fax: (780) 497-3510

Request For a Standing Offer
Demande d'offre à commandes

Regional Individual Standing Offer (RISO)
 Offre à commandes individuelle régionale (OCIR)

Canada, as represented by the Minister of Public Works and Government Services Canada, hereby requests a Standing Offer on behalf of the Identified Users herein.

Le Canada, représenté par le ministre des Travaux Publics et Services Gouvernementaux Canada, autorise par la présente, une offre à commandes au nom des utilisateurs identifiés énumérés ci-après.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
 Public Works and Government Services Canada
 ATB Place North Tower
 10025 Jasper Ave./10025 ave Jasper
 5th floor/5e étage
 Edmonton
 Alberta
 T5J 1S6

Title - Sujet General Landscaping	
Solicitation No. - N° de l'invitation W690D-18AAAI/A	Date 2018-06-20
Client Reference No. - N° de référence du client W690D-18AAAI	GETS Ref. No. - N° de réf. de SEAG PW-\$PWU-005-11394
File No. - N° de dossier PWU-8-41036 (005)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-07-13	
Time Zone Fuseau horaire Mountain Daylight Saving Time MDT	
Delivery Required - Livraison exigée See Herein	
Address Enquiries to: - Adresser toutes questions à: Virakorn, Matthew	Buyer Id - Id de l'acheteur pwu005
Telephone No. - N° de téléphone (780)497-3588 ()	FAX No. - N° de FAX (780)497-3510
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE 17 WING DET DUNDURN BLDG 155 GENERAL DELIVERY STN MAIN DUNDURN Saskatchewan S0K1K0 Canada	
Security - Sécurité This request for a Standing Offer includes provisions for security. Cette Demande d'offre à commandes comprend des dispositions en matière de sécurité.	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT

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IMPORTANT NOTICE TO OFFERORS

SUPPORT THE USE OF APPRENTICES

Through Canada's Economic Action Plan 2013, the Government of Canada proposes to support the employment of apprentices in federal construction and maintenance projects. Refer to Part 2, item 5.

INTEGRITY PROVISIONS: Changes have been made to the Integrity Provisions - Bid as of 2016-04-04.

See 01, Integrity Provision – Offer, of 2006 Standard Instructions - Request for Standing Offers for more information.

PART 1 - GENERAL INFORMATION

1. Introduction

The Request for Standing Offers (RFSO) template is divided into seven parts plus attachments and annexes, as follows:

Part 1, General Information: provides a general description of the requirement;

Part 2, Offeror Instructions: provides the instructions applicable to the clauses and conditions of the RFSO;

Part 3, Offer Preparation Instructions: provides Offerors with instructions on how to prepare their offer to address the evaluation criteria specified;

Part 4, Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria which must be addressed in the offer, if applicable, and the basis of selection;

Part 5, Certifications: includes the certifications to be provided;

Part 6, Security, Financial and Insurance Requirements: includes specific requirements that must be addressed by Offerors; and

Part 7: 7A, Standing Offer, and 7B, Resulting Contract Clauses:

7A, includes the Standing Offer containing the offer from the Offeror and the applicable clauses and conditions;

7B, includes the clauses and conditions which will apply to any contract resulting from a call-up made pursuant to the Standing Offer.

The Annexes include the Statement of Work, the Basis of Payment, Health & Safety, Usage Reports, Offer, SRCL, and any other annexes.

2. Summary

General Landscaping Standing Offer, 17 Wing Detachment Dundurn, Dundurn, SK.

Work under this standing offer includes the provision of skilled licensed labour, tools, equipment, supervision and material as requested by Department of National Defence in the form of call ups for General Landscaping work at the 17 Wing Detachment Dundurn, Dundurn, SK.

Services are to be provided on an "as required" basis.

It is anticipated that only 1 firm will be issued a standing offer.

The standing offer will be issued for a term of three (3), years.

This procurement contains MANDATORY requirements. See Part 4 and 5 of the RFSO for details.

"There is a security requirement associated with this requirement. For additional information, see Part 6 - Security, Financial and Insurance Requirements, and Part 7A - Standing Offer. Offerors should consult the "Security Requirements for PWGSC Bid Solicitations - Instructions for Bidders" document "

(<http://www.tpsgc-pwgsc.gc.ca/app-acq/lc-pl/lc-pl-eng.html#a31>) on the Departmental Standard Procurement Documents Web site."

"The requirement is subject to the provisions of the Canadian Free Trade Agreement (CFTA)."

3. Health & Safety Requirements

There are Health & Safety requirements associated with this requirement. See Annex C .

4. Debriefing

After issuance of a standing offer, offerors may request a debriefing on the results of the request for standing offers. Offerors should make the request to the Standing Offer Authority within 15 working days of receipt of notification that their offer was unsuccessful. The debriefing may be provided in writing, by telephone or in person. The debriefing will include an outline of the reasons the submission was not successful, making reference to the evaluation criteria. The confidentiality of information relating to other submissions will be protected.

5. Security Requirement

There is a security requirement associated with the requirement of the Standing Offer. For additional information, see Part 6 - Security, Financial and Insurance Requirements, and Part 7 - Standing Offer and Resulting Contract Clauses.

PART 2 - STANDING OFFER - INSTRUCTIONS TO OFFERORS

1. Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the Request for Standing Offers RFSO by title, number and date are set out in the Standard Acquisition Clauses and Conditions Manual issued by Public Works and Government Services Canada (PWGSC). The Manual is available on the PWGSC Web site: <http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp>

Offerors who submit an offer agree to be bound by the instructions, clauses and conditions of the RFSO and accept the terms and conditions of the Standing Offer and Resulting Contract(s).

The 2006 (2017-04-27) Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the RFSO.

Subsection 5.4 of 2006, Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements, is amended as follows:

DELETE sixty (60) days and **INSERT** ninety (90) days

2. Submission of Offers

Offers must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the Request for Standing Offers.

2.1 Revision of Offer:

An offer submitted in accordance with these instructions may be revised by letter or facsimile, provided that the revision is received at the office designated for the receipt of offers on or before the date and time set for the closing of the RFSO. The facsimile shall be on the offeror's letterhead or bear a signature that identifies the offeror.

A revision to the unit price schedule must clearly identify the change(s) in the unit price(s) and the specific item(s) to which each change applies.

A letter or facsimile submitted to confirm an earlier revision shall be clearly identified as a confirmation.

Failure to comply with any of the above provisions shall result in the rejection of the non-compliant revision(s) only. The offer shall be evaluated based on the original offer submitted and all other compliant revision(s).

Facsimile number for receipt of revisions: **(780) 497-3510**

2.2 Firm Price and/or Rates:

The Offeror is required to submit firm prices, rates or both that will apply for the entire period of the Standing Offer.

2.3 Form: Offers not submitted on the prescribed Offer Form will not be considered.

2.4 Alterations: Any alteration to the pre-printed or pre-typed sections of the Offer Form, or any condition or qualification placed upon the offer may be cause for disqualification of the offer. Alterations, corrections, changes or erasures made to statements or figures entered on the Offer Form by the offeror shall be initialed by the person or persons signing the offer. Initials shall be original(s). Alterations, corrections, changes or erasures that are not initialed shall be deemed void and without effect.

2.5 Incomplete Offers: Incomplete offers may be rejected.

2.6 Taxes

The offeror is responsible for all applicable taxes.

Offerors are not to include any amounts for the Goods and Services Tax (GST) or Harmonized Sales Tax (HST), whichever is applicable. Any amount levied in respect of the GST/HST shall be billed as a separate item on invoices submitted by the contractor, and shall be paid in addition to the amount approved by Canada for work performed under any resulting Contract. The Contractor shall be required to remit the appropriate amount to the Canada Revenue Agency in accordance with the applicable legislation.

The Federal Government is exempt from the Quebec Sales Tax (QST). Offerors shall not include in their prices any amount that is intended to cover the QST on goods and services performed in the execution of the Work except for such amounts for which an Input Tax Refund is not available. The successful Offeror should make arrangements directly with the Province of Quebec to recover any QST paid by it in performing the Work under the resulting Contract.

2.7 Performance Evaluation

Offerors shall take note that the performance of the Contractor during and upon completion of the work shall be evaluated by Canada. The evaluation shall be based on the quality of workmanship; timeliness of completion of the work; project management, contract management and management of health and safety. Should the Contractor's performance be considered unsatisfactory, the Contractor's bidding privileges on future work may be suspended indefinitely.

An electronic version of the form PWGSC-TPSGC 2913, SELECT - Contractor Performance Evaluation Report Form, used to record the performance is available on the Public Works and Government Services Canada (PWGSC) Web site.

3. Enquiries - Request for Standing Offers

All enquiries MUST be submitted in writing to the Standing Offer Authority no later than five (5) calendar days before the Request for Standing Offers (RFSO) closing date. Enquiries received after that time may not be answered.

Offerors should reference as accurately as possible the numbered item of the RFSO to which the enquiry relates. Care should be taken by offerors to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that offerors do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all offerors. Enquiries not submitted in a form that can be distributed to all offerors may not be answered by Canada.

4. Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of work.

5. PUBLIC WORKS AND GOVERNMENT SERVICES CANADA APPRENTICE PROCUREMENT INITIATIVE

1. To encourage employers to participate in apprenticeship training, Contractors bidding on construction and maintenance contracts by Public Works and Government Services Canada (PWGSC) are being asked to sign a voluntary certification, signaling their commitment to hire and train apprentices.
2. Canada is facing skills shortages across various sectors and regions, especially in the skilled trades. Equipping Canadians with skills and training is a shared responsibility. In Economic Action Plan (EAP) 2013, the Government of Canada made a commitment to support the use of apprentices in federal construction and maintenance contracts. Contractors have an important role in supporting apprentices through hiring and training and are encouraged to certify that they are providing opportunities to apprentices as part of doing business with the Government of Canada.

3. Through the Economic Action Plan 2013 and support for training programs, the Government of Canada is encouraging apprenticeships and careers in the skilled trades. In addition, the government offers a tax credit to employers to encourage them to hire apprentices. Information on this tax measure administered by the Canada Revenue Agency can be found at: www.cra-arc.gc.ca. Employers are also encouraged to find out what additional information and supports are available from their respective provincial or territorial jurisdiction.
4. Signed certifications (Appendix 2) will be used to better understand contractor use of apprentices on Government of Canada maintenance and construction contracts and may inform future policy and program development.

5. The Contractor hereby certifies the following:

In order to help meet demand for skilled trades people, the Contractor agrees to use, and require its subcontractors to use, reasonable commercial efforts to hire and train registered apprentices, to strive to fully utilize allowable apprenticeship ratios * and to respect any hiring requirements prescribed by provincial or territorial statutes

The Contractor hereby consents to this information being collected and held by PWGSC, and Employment and Social Development Canada to support work to gather data on the hiring and training of apprentices in federal construction and maintenance contracts.

To support this initiative, a voluntary certification signaling the Contractor's commitment to hire and train apprentices is available at Appendix 2.

If you accept fill out and sign Appendix 2

** The journeyperson-apprentice ratio is defined as the number of qualified/certified journeypersons that an employer must employ in a designated trade or occupation in order to be eligible to register an apprentice as determined by provincial/territorial (P/T) legislation, regulation, policy directive or by law issued by the responsible authority or agency.*

PART 3 - OFFER PREPARATION INSTRUCTIONS

1. General

- 1.1 Insert the hourly rate or unit price against each class of labour, plant, or item of specified material listed on the Unit Price Schedule of the Offer form. Insert the percentage mark-up for Unspecified Material, if any; mathematical extensions against all items including the Contractor's Mark-up on Unspecified Material if applicable, and Total Estimated Amount, GST/HST extra.
- 1.2 Submit the Offer, duly completed, to the office designated on page 1 of the RFSO in accordance with the Standard Instructions.
- 1.3 Sign and date the Offer in accordance with the RFSO.

2. Offer Preparation Instructions

Canada requests that offerors provide their offer in separately bound sections as follows:

Section I: Annex E - Financial Offer (1 hard copy)

Section II: Certifications (1 hard copy)

Prices must appear in the financial offer only. No prices must be indicated in any other section of the offer.

Canada requests that offerors follow the format instructions described below in the preparation of their offer.

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to that of the Request for Standing Offers.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>).

To assist Canada in reaching its objectives, offerors are encouraged to:

- 1) use paper containing fibre certified as originating from a sustainably-managed forest and/or containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Financial Offer

Offerors must submit their financial offer in accordance with the Annex B, Basis of Payment. The total amount of Goods and Services Tax or Harmonized Sales Tax must be shown separately, if applicable.

.1 Electronic Payment of Invoices – Offer (see SC03 Part 7B)

In accordance with SC03, of Part 7B, if you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex E item 3.5 Electronic Payment Instruments, to identify which ones will be accepted.

If Annex "E" Offer - Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

Section II: Certifications

Offerors must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

- (a) Offers will be assessed in accordance with the entire requirement of the Request for Standing Offers including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the offers.
- (c) Offers shall be evaluated on the basis of the lowest compliant offer being recommended for issuance of a Standing Offer.

1.1 Evaluation

a) MANDATORY REQUIREMENTS - Precedent to issuance of a Standing Offer

- i) Health & Safety Requirements
- ii) Code of Conduct Certifications (*see Part 5 - Certifications*)
- iii) Proof of Insurance - *upon request*
- iv) Security Requirements

1.2. Financial Evaluation

- 1.2.1 Price Schedule - A rate must be entered for each item.
- 1.2.2 Offers retained pursuant to Part 4, will be evaluated on the basis of the total estimated amount quoted, GST/HST extra. It is anticipated that one standing offer will be issued to the lowest compliant offeror.

2. Basis of Selection

2.1 Basis of Selection - Lowest Evaluated Price

An offer must comply with the requirements of the Request for Standing Offers to be declared responsive. The responsive offer with the lowest evaluated price will be recommended for issuance of a standing offer.

3. Ranking

- 3.1 Only 1 firm will be issued a standing offer.
- 3.2 The firm submitting the lowest price compliant submission will be issued a Standing Offer.

PART 5 - CERTIFICATIONS

Offerors must provide the required certifications and associated information to be issued a standing offer.

The certifications provided by offerors to Canada are subject to verification by Canada at all times. Canada will declare an offer non-responsive, will have the right to set-aside a standing offer, or will declare a contractor in default in carrying out any of its obligations under any resulting contracts, if any certification made by the Offeror is found to be untrue whether made knowingly or unknowingly or unknowingly during the offer evaluation period, during the Standing Offer period, or during the contract period.

The Standing Offer Authority will have the right to ask for additional information to verify the Offeror's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Standing Offer Authority may render the Offer non-responsive, may result in the setting aside of the Standing Offer or constitute a default under the Contract.

1. Mandatory Certifications Required Precedent to Issuance of a Standing Offer

1.1 Code of Conduct and Certifications - Related documentation

By submitting an offer, the Offeror certifies, for itself and its affiliates, to be in compliance with the Code of Conduct and Certifications clause of the 2006 (2017-04-27) Standard Instructions. The related documentation therein required will help Canada in confirming that the certifications are true.

2 Additional Certifications Precedent to Issuance of a Standing Offer

The certifications listed below should be completed and submitted with the offer, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Standing Offer Authority will so inform the Offeror and provide the Offeror with a time frame within which to meet the requirement. Failure to comply with the request of the Standing Offer Authority and meet the requirement within that time period will render the offer non-responsive.

2.1 Health & Safety Requirements - per attached Annex C .

2.2 Insurance, (Annex F - Insurance Certificate)

2.3 Former Public Servant – Competitive Requirements M3025T (2014-11-27)

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPS, offerors must provide the information required below before the issuance of a standing offer. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of offers is completed, Canada will inform the Offeror of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the offer non-responsive.

Definitions

For the purposes of this clause,

"former public servant" is any former member of a department as defined in the Financial Administration Act R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the Public Service Superannuation Act (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the Supplementary Retirement Benefits Act, R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the Canadian Forces Superannuation Act, R.S., 1985, c. C-17, the Defence Services Pension Continuation Act, 1970, c. D-3, the Royal Canadian Mounted Police Pension Continuation Act, 1970, c. R-10, and the Royal Canadian Mounted Police Superannuation Act, R.S., 1985, c. R-11, the Members of Parliament Retiring Allowances Act, R.S. 1985, c. M-5, and that portion of pension payable to the Canada Pension Plan Act, R.S., 1985, c. C-8.

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Offeror a FPS in receipt of a pension?

YES () NO ()

If so, the Offeror must provide the following information, for all FPS in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Offerors agree that the successful Offeror's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

Work Force Reduction Program

Is the Offeror a FPS who received a lump sum payment pursuant to the terms of a work force reduction program?

YES () NO ()

If so, the Offeror must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force reduction program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including the Goods and Services Tax or Harmonized Sales Tax.

2.4 Proof of Financial Capability - upon request, per article 2 of Part 6.

2.5 Security Requirement - per article 1 of Part 6.

PART 6 - SECURITY, FINANCIAL AND INSURANCE REQUIREMENTS

1. Security Requirement

1. Before issuance of a standing offer, the following conditions must be met:
 - (a) the Offeror must hold a valid organization security clearance as indicated in Part 7A - Standing Offer;
 - (b) the Offeror's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirement as indicated in Part 7A - Standing Offer;
 - (c) the Offeror must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites.
2. Offerors are reminded to obtain the required security clearance promptly. Any delay in the issuance of a standing offer to allow the successful offeror to obtain the required clearance will be at the entire discretion of the Standing Offer Authority.
3. For additional information on security requirements, bidders should consult the "Security Requirements for PWGSC Bid Solicitations - Instructions for Bidders"
<http://www.tpsgc-pwgsc.gc.ca/app-acq/lc-pl/lc-pl-eng.html#a31> document on the Departmental Standard Procurement Documents Web site.

2. Financial Capability

Financial Statements: In order to confirm an offeror's financial capability to perform the Contract, the Standing Offer Authority may during the RFSO evaluation phase, request from that offeror current financial information. The requested financial information may include, but is not limited to, an offeror's most recent audited financial statements or financial statements certified by an offeror's chief financial officer. The information provided will be considered in the offer evaluation and selection process. If an offer is found to be non-responsive on the basis that an offeror is considered financially incapable of performing the Work, that offeror will receive a written notification from the Standing Offer Authority.

Should an offeror provide the requested information to Canada in confidence while indicating that the disclosed information is confidential, Canada will treat the information in a confidential manner in accordance with the Access to Information Act, R.S. 1985, c.A-1.

3. Insurance Terms

The Offeror must provide a certificate from an insurance broker or an insurance company licensed to operate in Canada stating that the Offeror, if issued a standing offer as a result of the request for standing offer, can be insured in accordance with the Insurance Requirements specified in SACC Manual clause R2900D GC10 – Insurance.

If the information is not provided in the offer, the Standing Offer Authority will so inform the Offeror and provide the Offeror with a time frame within which to meet the requirement. Failure to comply with the request of the Standing Offer Authority and meet the requirement within that time period will render the offer non-responsive.

Certificate of Insurance attached at Annex F.

1) Insurance Contracts

- (a) The Contractor must, at the Contractor's expense, obtain and maintain insurance contracts in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.

- (b) Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

2) Period of Insurance

- (a) The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.

3) Proof of Insurance

- (a) Before commencement of the Work the Contractor must deposit with Canada a Certificate of Insurance on the form attached herein.
- (b) Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.

4) Insurance Proceeds

In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

5) Deductible

The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

PART 7 - CLAUSES & CONDITIONS

PART 7(A) - STANDING OFFER

1. Offer - attached at Annex E

- .1 General Provisions
- .2 Financial Terms
- .3 Prices

2. Security Requirement

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid Designated Organization Screening (DOS), issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).
2. The Contractor/Offeror personnel requiring access to sensitive work site(s) must EACH hold a valid **RELIABILITY STATUS**, granted or approved by CISD/PWGSC.
3. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of CISD/PWGSC.
4. The Contractor/Offeror must comply with the provisions of the:
 - a. Security Requirements Check List and security guide (if applicable), attached at Annex H;
 - b. Industrial Security Manual (Latest Edition).

3. Standard Clauses and Conditions

- 1) .1 General Conditions - Standing Offer, 2005 (2017-06-04)
- 2) The documents identified by title, number and date in paragraph 1) are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site:
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

4. Term of Standing Offer

4.1 Period of the Standing Offer

The period for making call-ups against the Standing Offer is TBD.

4.2 Estimates

Where an estimate of the cost of performing specific work is required, the Identified User will provide the Offeror with a statement of the work required and the Offeror must provide the Identified User with an estimate of the cost of performing the specified work in accordance with the pricing provision of the Standing Offer. The Offeror must not undertake any of the specified work unless and until a call-up is issued by the Identified User. The estimated cost stated in the call-up must not be exceeded without the specific written authorization of the Identified User.

5. Authorities

5.1 Standing Offer Authority

The Standing Offer Authority is:

Name: *see front page of Standing Offer for details*
Public Works and Government Services Canada
Acquisitions Branch

Directorate: Real Property Contracting

The Standing Offer Authority is responsible for the establishment of the Standing Offer, its administration and its revision, if applicable. Upon the making of a call-up, as Contracting Authority, they are responsible for any contractual issues relating to individual call-ups made against the Standing Offer by any Identified User.

5.2 Project Authority

The Project Authority for the Standing Offer is identified in the call-up against the Standing Offer.

The Project Authority is the representative of the department or agency (Departmental Representative) for whom the Work will be carried out pursuant to a call-up against the Standing Offer and is responsible for all the technical content of the Work under the resulting Contract.

6. Identified users

The Identified User authorized to make call-ups against the Standing Offer is: Department of National Defense (DND), Dundurn, SK.

7. Call-up Procedures

1. Best Standing Offer: the offer that provides lowest prices will be retained.

The Project Authority will establish the scope of work to be performed by the successful firm and negotiate the level of effort required to perform the work based on the hourly rates contained in the Standing Offer.

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8. CALL-UP INSTRUMENT

Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

CALL-UP AGAINST A STANDING OFFER COMMANDE SUBSÉQUENTE À UNE OFFRE PERMANENTE

In accordance with STANDING OFFER NO.: _____	Conformément à L'OFFRE PERMANENTE No. _____	Call-up no. - No de commande _____
Dated _____ and the terms and conditions therein, you are Requested to carry out the worked described below.	En date du _____ Et les modalités qui y sont énumérées, vous êtes prié d'exécuter les travaux décrits ci-après.	

Contractor's name and address - Nom et adresse de l'entrepreneur		Send invoice to - Expédier la facture à
Fax No. ()		attention:
Project no. - No du projet	Note: Quote standing offer number, project number and call-up number on your invoice. Inscrire le numéro de l'offre permanente, le numéro du projet et le numéro de commande sur la facture.	
Location of work - Endroit des travaux	Call-up cost, GST/HST extra - Coût de la commande, TPS en plus	

Work description - Description des travaux	
Certified pursuant to subsection 32 (1) of the Financial Administration Act Certifié en vertu du paragraphe 32 (1) de la Loi sur la gestion des finances publiques	
_____ Signature	_____ Date
Departmental Representative - Représentant du ministère	
_____ Signature	_____ Date

PWGSC-TPSGC 2829 (03/2006)

9. Limitation of Call-ups

Individual call-ups against the Standing Offer must not exceed \$60,000.00 (Goods and Services Tax or Harmonized Sales Tax included).

10. Priority Documents

If there is a discrepancy between the wording of any documents which appear on the list, the wording of the document which first appears on the list has priority over the wording of any document which subsequently appears on the list.

- a) the call up against the Standing Offer, including any annexes and any amendments;
- b) the articles of the Standing Offer;
- c) the general conditions 2005 (2016-04-04), General Conditions - Standing Offers - Goods or Services
- d) any amendment or variation in the Standing Offer that is made in accordance with the terms and conditions of the Standing Offer;
- e) the general conditions dated and listed in Part 7B, Resulting Contract Clauses;
- f) the Supplemental general conditions;
- g) Annexes:
 - Annex A, Statement of Work and any amendment to the solicitation document incorporated in the Standing Offer before the date of the Standing Offer;
 - Annex B, Basis of Payment;
 - Annex C, Health & Safety Requirements - Saskatchewan
 - Annex D, Periodic Usage Report Form; and
 - Annex F, Insurance
 - Annex G; Voluntary Report for Apprentices Employed During the Contract
 - Annex H; Security Requirement Check List (SRCL).
- h) the Offeror's offer Annex E, dated _____ (insert date of offer);

11. Certifications

11.1 Compliance

Compliance with the certifications provided by the Offeror is a condition of authorization of the Standing Offer and subject to verification by Canada during the term of the Standing Offer and of any resulting contract that would continue beyond the period of the Standing Offer. In the event that the Offeror does not comply with any certification or it is determined that any certification made by the Offeror in its offer is untrue, whether made knowingly or unknowingly, Canada has the right to terminate any resulting contract for default and set aside the Standing Offer.

12. Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in the province of work.

13. Proactive Disclosure of Contracts with Former Public Servants A3025C (2013-03-21)

By providing information on its status, with respect to being a former public servant in receipt of a Public Service Superannuation Act (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with Contracting Policy Notice: 2012-2 of the Treasury Board Secretariat of Canada.

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14. Offeror's Contact Information

Name: _____

Title: _____

Address: _____

Telephone: _____

Fax: _____

Email: _____

PART 7 (B) - RESULTING CONTRACT CLAUSES

- 1) The following clauses and conditions apply to and form part of any contract resulting from a call-up against the Standing Offer:
 - (a) Statement of Work - The Contractor must perform the Work described in the call-up against the Standing Offer;
 - (b) General Conditions:

(i)	GC1	General Provisions	R2810D	(2016-04-04);
(ii)	GC2	Administration of the Contract	R2820D	(2016-01-28);
(iii)	GC3	Execution and Control of the Work	R2830D	(2015-02-25);
(iv)	GC4	Protective Measures	R2840D	(2008-05-12);
(v)	GC5	Terms of Payment	R2550D	(2016-01-28);
(vi)	GC6	Delays and Changes in the Work	R2865D	(2016-01-28);
(vii)	GC7	Default, Suspension or Termination of Contract	R2870D	(2008-05-12);
(viii)	GC8	Dispute Resolution	R2884D	(2016-01-28);
(ix)	GC10	Insurance	R2900D	(2008-05-12);
 - (c) Supplementary Conditions, if any;
 - (d) Allowable Costs for Contract Changes Under GC6.4.1 R2950D (2015-02-25);
 - (e) Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
 - (f) Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - (g) Any amendment or variation of the contract documents that is made in accordance with the General Conditions.
- 2) The documents identified by title, number and date in paragraph 1) are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Website:
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>
- 3) The language of the contract documents shall be the language of the Bid and Acceptance Form submitted.
- 4) A contract is formed between Canada and the Offeror only when a Call-up duly signed is issued by the Departmental Representative and accepted by the Offeror*. The Offeror shall then be referred to as "the Contractor" and the Contract includes the Offer, the Specifications referred to in the Unit Price Schedule, the General Conditions, and the Call-up .

5) Interpretation

"Accepted by the Offeror" * means that the Offeror has agreed to, and commenced performance of the work.

"Minister" includes a person acting for the Minister, the Minister's successor in office, their lawful deputy and their representatives appointed for the purpose of the Standing Offer.

"Departmental Representative" means the Project Authority who is the representative of the department or agency for whom the Work will be carried out pursuant to a call-up against the Standing Offer and is responsible for all the technical content of the Work under the resulting Contract.

"Superintendent" or *"Supervisor"* means the employee or representative of the Contractor designated by the Contractor to act as Superintendent;

"Unit Price Table" means the table of prices per unit set out in the Offer; and

"Work" means, subject only to any express stipulation in the Contract to the contrary, everything that is necessary to be done, furnished or delivered by the Contractor to perform the Contract in accordance with the work as described in each Call-up, and in the technical specifications or statement of work.

SUPPLEMENTAL CONDITIONS

SC01 **INSERT** the following supplementary conditions in the resulting General Conditions:

1.1. T1204 - Direct Request by Customer Department

- 1.1.1 Pursuant to paragraph 221 (1)(d) of the Income Tax Act, R.S. 1985, c.1 (5th Supp.), payments made by departments and agencies to contractors under applicable services contracts (including contracts involving a mix of goods and services) must be reported on a T1204 Government Service Contract Payments slip.
- 1.1.2 To enable departments and agencies to comply with this requirement, the Contractor must provide Canada, upon request, its business number or Social Insurance Number, as applicable. (These requests may take the form of a general call-letter to contractors, in writing or by telephone).

1.2. Periodic Reports

- 1.2.1 The Offeror shall provide to the Standing Offer Authority biannual reports on usage of the Standing Offer, showing the number and total value of call-ups by each consignee. Reports shall be submitted in the format shown on the attached Annex D "Periodic Usage Report Form" and forwarded to the Standing Offer Authority no later than fifteen (15) days after the designated reporting period.
- 1.2.2 The Offeror understands that failure to comply may result in the setting aside of the Standing Offer.

SC02 TERM OF CONTRACT

2.1 Period of the Contract

The Work must be completed in accordance with the call-up against the Standing Offer.

SC03 PAYMENT

3.1 CHANGES TO GC5 R2550D - TERMS OF PAYMENT

DELETE GC5.4, GC5.5, and GC5.6 and **INSERT** the following:

GC5.4 Payment

.1 Terms of Payment

- 1. Where the duration of the work identified in a call-up is greater than 30 days, the Contractor may submit monthly progress claims, and shall be entitled to receive progress payments at monthly or other agreed intervals. Subject to verification by the Departmental Representative, payment of the Contractor's invoice for work satisfactorily completed shall be made not later than 30 days after receipt thereof. The due date shall be the 30th day following receipt of a properly submitted invoice.
- 2. The Contractor shall submit a separate invoice for each Call-up to the Departmental Representative in accordance with any invoicing instructions set out herein. The properly submitted invoice shall be delivered to the Departmental Representative in the agreed format with sufficient detail, information, and backup to permit verification.

The Contractor's invoice shall show the following, as separate items:

- (a) the amount of the progress payment being claimed for Work satisfactorily performed excluding GST/HST;

- (b) the amount for any tax calculated (GST/HST) in accordance with the applicable federal tax legislation; and
 - (c) the total amount which shall be the sum of the amounts referred to in (a) and (b) above.
3. The amount of the tax shown on the invoice shall be paid by Canada to the Contractor in addition to the amount of the progress payment for Work satisfactorily performed.
4. If, within 15 days of receipt of the invoice, additional information is requested by the Departmental Representative for the purpose of verification, the 30 day payment period shall commence upon receipt of the requested information. Payment shall be made prior to or on the thirtieth (30) day after receipt of the corrected invoice or the required information.
- .1 Any monthly progress payment made to the Contractor may be subject to a 10% holdback which shall be released to the Contractor with the final payment unless the amount held back is required by Canada to remedy any defect in the Contractor's work.
 - .2 Where the duration of the Work identified in a call-up is equal to or less than thirty (30) days, the Contractor may receive a single payment as full consideration for the Work performed.
5. Upon completion of the Work in the progress claim, the Contractor may be requested to provide a completed and signed statutory declaration containing a declaration that, up to the date of the progress claim, the Contractor has complied with all lawful obligations with respect to the Labour Conditions and that, in respect of the Work, all lawful obligations of the Contractor to its Subcontractors and Suppliers, referred to collectively in the declaration as "subcontractors and suppliers", have been fully discharged before any further payment is made.
6. Upon written notice by a Sub-Contractor, with whom the Contractor has a direct contract, of an alleged non payment to the Sub-Contractor, the Departmental Representative may provide the Sub-Contractor with a copy of the latest approved progress payment made to the Contractor for the Work.
7. Upon the satisfactory completion of all Work, the amount due, less any payments already made, shall be paid to the Contractor not later than thirty (30) days after receipt of a properly submitted invoice, and upon request, with a Statutory Declaration in accordance with paragraph 5 above.

3.2 Basis of Payment - see Annex B

3.3 Limitation of Price

Canada will not pay the Contractor for any changes, modifications or interpretations of the Work unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

3.4 Supplemental Invoicing Instructions

EXAMPLE 1 - DND

- .1 Invoices
 - .1 All invoices submitted for payment shall show:
 - .1 Construction Engineering Work Order Number,
 - .2 Construction Engineering File Number,
 - .3 Requisition Number, DSS 942 (Requisition on Contract),
 - .4 Public Works and Government Services Canada (PWGSC) Standing Offer Number, and
 - .5 same address as on PWGSC contract.
 - .2 Invoices are to include a breakdown as follows:
 - .1 Hourly rate per the Offer and hours of work for each tradesperson.

- .2 An itemized list of materials used, by cost, shall be shown on all invoices submitted for payment.
 - .3 Extended total.
 - .4 Good and Services Tax (GST/HST) shall be shown as a separate item.
 - .5 Where subcontracting is involved a copy of subcontractor's invoice shall accompany the invoice against the requisition.
 - .6 Where discount or markup is applicable, indicate separately.
- .3 Invoices submitted for payment against this contract that are not properly identified will be returned to the Contractor for proper annotation before certification for payment is made.

3.5 Electronic Payment of Invoices - Call-up (see PART 3.1)

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card.

ANNEX E item 7.1 must be completed to indicate which electronic payment instrument, if any, is acceptable.

Section GC5.11 Delay in Making Payment, Interest on Overdue Accounts, of GC5 - Terms of Payment R2550D will not apply to payments made using Electronic Instruments.

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ANNEXES

Annex A	Statement of Work
Annex B	Basis of Payment
Annex C	Health & Safety Requirements
Annex D	Periodic Usage Report Form
Annex E	Offer
	Appendix 1 – Integrity Provisions
	Appendix 2 - Voluntary Certification to Support the Use of Apprentices
Annex F	Insurance Certificate
Annex G	Voluntary Reports for Apprentices Employed During the Contract
Annex H	Security Requirements Checklist

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ANNEX A

STATEMENT OF WORK

REFER TO ATTACHED DOCUMENT

ANNEX B

BASIS OF PAYMENT

.1 Basis of Payment

Payments in respect of the agreed price shall be made upon satisfactory performance of the Work, and upon approval of the Departmental Representative, but such payments shall not exceed the amount(s) as specified in the Call Up, for the Work without written authorization.

In consideration of the Contractor satisfactorily completing all of its obligations under the resulting Contract, the Contractor will be paid a firm price, Goods and Services Tax or Harmonized Sales Tax extra.

.1 Hourly Rates:

The Contractor will be paid firm hourly rates as follows, for work performed in accordance with the Contract.

See attached for details

ANNEX C

MANDATORY HEALTH AND SAFETY - for Work in the Province of Saskatchewan

1.) SPECIAL INSTRUCTIONS TO BIDDERS (SI):

WCB AND SAFETY PROGRAM

1. The recommended Bidder shall provide to the Contracting Authority, prior to Contract award: [Standing Offer issue:]
 - 1.1 a Workers Compensation Board Statement of Injury Cost Supplement - *Saskatchewan*, or equivalent documentation from another jurisdiction;
 - 1.2 a Workers Compensation Board letter of good standing, also listing covered Directors, Principals, Proprietor(s) or Partners who will be or who are anticipated to be present on the work site(s), or equivalent documentation from another jurisdiction; and
 - 1.3 a Certificate of Recognition (COR) or Registered Safety Plan (RSP). A health and safety policy and program, as required by other provincial/territorial Occupational Health and Safety Acts, will be acceptable in lieu of a COR or RSP.
2. The recommended Bidder shall deliver all of the above documents to the Contracting Authority on or before the date stated (usually 3-5 days after notification) by the Contracting Authority. Failure to comply with the request may result in the bid being declared non-compliant.

2.) SUPPLEMENTARY CONDITIONS (SC):

Workplace Safety and Health

1. EMPLOYER/CONTRACTOR

- 1.1 The Contractor shall, for the purposes of the Workplace Safety and Health Act and Regulations, Saskatchewan, and for the duration of the Work:
 - 1.1.1 act as the Employer, where there is only one employer on the work site, in accordance with the Authority Having Jurisdiction;
 - 1.1.2 assume the role of Contractor, where there are two or more employers involved in work at the same time and space at the work site, in accordance with the Authority Having Jurisdiction; and
 - 1.1.3 agree, in the event of two or more Contractors working at the same time and space at the work site, without limiting the General Conditions, to Canada's order * to:
 - 1.1.3.1 assume, as the Contractor, the responsibility for Canada's other Contractor(s); or
 - 1.1.3.2 accept that Canada's other Contractor is Contractor and conform to that Contractor's Site Specific Health and Safety Plan.

* "order" definition: *after contract award, Contractor is ordered by a Change Order*

2. SUBMITTALS

2.1 The Contractor shall provide to Canada:

- 2.1.1 prior to the pre-construction meeting, a transmittal and copy of a completed Notice of Project form PWGSC - TPSGC 458 (form will be provided to the proposed contractor prior to award), as sent to the Authority Having Jurisdiction (AHJ); and
- 2.1.2 prior to commencement of work and without limiting the terms of the General Conditions:

- 2.1.2.1 copies of all other necessary permits, notifications and related documents as called for in the scope of work/specifications and/or by the AHJ; and
- 2.1.2.2 a site specific Health and Safety Plan as requested.

NOTE: Please do not include any forms that include personal 3rd party information such as the names of the contractor's employees and their related claims information.

3. LABOUR AUTHORITY CONTACT:

The contact below represents the Labour Authority in the jurisdiction (AHJ). They are not representatives of the Workers Compensation.

Do not contact the people referenced below for issues pertaining to WCB or WCB Clearances. Those queries must be directed specifically to the WCB, and where the WCB has both a Labour and Compensation component, WCB issues must be directed to the Compensation/Employer Services sections.

SASKATCHEWAN North

Saskatchewan Labour
Occupational Health and Safety Division
122 - 3rd Avenue North
Saskatoon, SK, S7K 2H6
Attention: Chief Safety Northern Region
Telephone: (306) 933-5050
Facsimile: (306) 933-7337

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ANNEX D
Periodic Usage Report Form

As a requirement of this Request for Standing Offer, a report shall be submitted as follows:

Return to:

Matthew Virakorn	(780) 497-3510	Matthew.virakorn@pwgsc-tpsgc.gc.ca
<i>Name</i>	<i>Fax</i>	<i>Email Address</i>

at:

Public Works and Government Services Canada
Real Property Contracting, Acquisitions Branch
10025 Jasper Avenue, ATB Place, North Tower, 5th Floor
Edmonton, Alberta
T5J 1S6

REPORT ON THE VOLUME OF BUSINESS

SUPPLIER: _____

REPORT FOR THE PERIOD ENDING: _____

Description of Work	Call-up #	TOTAL BILLING

NIL REPORT: We have not done any business with the federal government for this period

PREPARED BY:

NAME: _____

SIGNATURE: _____

TELEPHONE NO.: _____

ANNEX E OFFER

Description of Work: General Landscaping Standing Offer, DND 17 Wing Detachment Dundurn, Dundurn, SK

1. OFFER

- .1 This Standing Offer is made by the Offeror to Canada;
- .2 This Offer is to furnish all necessary tools, plant, equipment, services, materials and labour to execute and complete the Work described above in careful and workmanlike manner;
- .3 The Work shall be more particularly described in individual Call-ups to be issued by the Project Authority, hereinafter called the "Departmental Representative";
- .4 Individual Call-ups may be issued, from time to time, during the period identified in Part 7A, clause 4.1, hereinafter called the "Term".

2. GENERAL PROVISIONS

- .1 This Offer when signed by or on behalf of the Offeror, the Specifications referred to in the Unit Price Schedule below and the General Conditions shall constitute the complete Offer subject to the provisions contained therein;
- .2 The Hourly Rate and the Unit Price, as offered, govern in calculating each Estimated Total Price; any errors in the extension of the Unit Price and in the addition of the Estimated Total Prices will be corrected in order to obtain the actual Total Estimated Amount;
- .3 This Offer supersedes and cancels all communications, negotiations and agreements relating to the Work other than those contained in the Offer;

The Offeror agrees:

- .1 to carry out individual work projects as requisitioned from time to time by the Departmental Representative in **Call- ups Against a Standing Offer**, form PWGSC/TPSGC 2829 or 942, of which the Offeror acknowledges to have in its possession, in accordance with the requirements set out therein and in consideration of payment of amounts to be determined pursuant to section 3. Below;
- .2 to provide, on demand from the Departmental Representative, a detailed price estimate, calculated in accordance with section 4 below, and a proposed work schedule for each work project; and
- .3 to commence Work promptly upon receipt of each Call-up issued pursuant to this Offer, duly signed by the Departmental Representative.
- .4 This Offer does not constitute a binding contract between Canada and the Offeror. The Departmental Representative shall have the right to issue a Call-up with those other offerors which have also submitted offers to Canada.

- .5 A contract is formed between Canada and the Offeror only when a Call-up duly signed is issued by the Departmental Representative and accepted by the Offeror. The Offeror shall then be referred to as "the Contractor" and the Contract includes the Offer, the Specifications referred to in the Unit Price Schedule below, the General Conditions and the Call-up .
- .6 The estimated number of hours, the quantities of material and plant, and the amount of the Allowance for Unspecified material set out in the Unit Price Schedule are for the purpose of comparative evaluation of the offers and do not express an obligation on the part of Canada to order any or all of the work, material or plant listed therein.
- .7 The Offeror declares that no bribe, gift or benefit has been or will be paid, given, promised or offered directly or indirectly to any official or employee of Canada or to a member of the family of such person, with a view to influence the entry into or the administration of any contract which may result from this Offer.

3. FINANCIAL TERMS

- .1 Each item specified in the Unit Price Schedule in subsection 4.1 includes wages, traveling time and costs, allowances, supervision, liabilities as employer, insurance, and the use of all tools, tackle, etc., overhead, profit and all other liabilities whatsoever.
- .2 Unspecified Material shall be reimbursed at net cost, as supported by invoices, plus Markup as established in section 4 of this Offer. "Net Cost" means all amounts reasonably and properly paid by the Offeror in respect of materials required for and used in the Work, and includes packing, handling and delivery charges, less any trade discounts received by the Offeror. The Offeror's Markup on Unspecified Material covers overheads, profit, and all other expenses whatsoever.
- .3 The prices inserted in section 4 of this Offer include all applicable federal, provincial, and municipal taxes.
 - .1 However, they do not include any amount for the Goods and Services Tax (GST) or Harmonized Sales Tax (HST). The appropriate GST/HST amounts will be paid by Canada to the Offeror in addition to the amounts paid against the amount of the contract. The Offeror shall make appropriate remittances to Revenue Canada in accordance with the legislation.
 - .2 The prices do not include the Québec Sales Tax. The Offeror shall arrange directly with the Province of Québec for the reimbursement of Provincial Sales Tax paid to this Province for the purpose of any contract resulting from this Offer.
- .4 Payment by Canada for the Offeror's own special equipment not covered by the Unit Price Schedule and required at the job site will be no greater than the local going rental rate for such equipment or the rate published by the local construction association for such equipment, whichever is the lower.
- .5 The cost of subcontract work, including special equipment rentals approved by the Project Authority, shall be reimbursed at actual cost with the addition of ten (10) percent to cover overheads, profit, and all other expenses whatsoever. "Actual cost" means all amounts reasonably and properly paid by the Contractor for those parts of the Work carried out by subcontractors.
- .6 Pricing
 - .1 The prices requested in the Offer are:
 - .1 hourly rates for regular hours;
 - .2 hourly rate for each hour outside of regular hours; and
 - .3 mark up on allowance for unspecified material, replacement parts, required permits and certificates. for purposes of evaluation.

.2 The hourly rates requested in the offer and acceptance for specific types of service shall be the total cost to perform the work including but not limited to:

- .1 labour including supervision, allowances and liability insurance;
- .2 travel time;
- .3 transportation/vehicle expenses;
- .4 tools and tackle;
- .5 overhead and profit;
- .6 any other incidental expenses other than supply of materials and replacement parts relating to the delivery of labour.

.3 It is considered that regular hours of work fall between 0700 and 1800 hours, Monday to Friday.

.7 Electronic Payment Instruments

.1 The Offeror accepts to be paid by any of the following Electronic Payment Instrument(s):

- () VISA Acquisition Card;
- () MasterCard Acquisition Card.

4. PRICES

The Offeror agrees that the following are the prices referred to in sections 2 and 3 above:

4.1 Unit Price Schedules – Rates**SCHEDULE A) Year 1**

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
Item	Class of Labour, material or plant	Unit	Estimated Hours/ Quantity	Unit Price \$ ¢	Estimated total price \$ ¢
1	Common Excavation – Soil Removal/ Disposal	M ³	3,000/m ³	\$_____/m ³	\$
2	Top Soil – Supply, Haul, Spread	M ³	3,000/m ³	\$_____/m ³	\$
3	Common Fill – Supply, Haul, Spread	M ³	5,000/m ³	\$_____/m ³	\$
4	Seeding – Seed, Rake, Water	M ²	1,000/m ²	\$_____/m ²	\$
5	Sodding – Supply, Install, Rolling Rod	M ²	2,000/m ²	\$_____/m ²	\$
6	Erosion Control – Apply/ Anchor Blankets on Embankments	Hour	350/m ²	\$_____/m ²	\$
7	Testing: Soil Compaction	M ²	150/ m ²	\$_____/m ²	\$
8	Labour for work that is not included in the above described work, during regular working hours between (08:00-16:00) Monday through Friday	Hour	500/hrs	\$_____/hr	\$
9	Labour for work that is not included in the above described work, outside regular working hours between (16:00-08:00) Monday through Friday	Hour	100/hrs	\$_____/hr	\$
10	Material not stated above will be charged at the Contractor's laid down cost plus a mark-up of: Verification of Contractor's cost to be provided upon request of Project Authority	%	\$10,000.00	_____%	\$
Sub Total A): Estimated Total Amount 1st Year GST/HST Extra					\$

continued

4.1 Unit Price Schedules - Rates (continued)**SCHEDULE B) Year 2**

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
Item	Class of Labour, material or plant	Unit	Estimated Hours/ Quantity	Unit Price \$ ¢	Estimated total price \$ ¢
1	Common Excavation – Soil Removal/ Disposal	M ³	3,000/m ³	\$_____/m ³	\$
2	Top Soil – Supply, Haul, Spread	M ³	3,000/m ³	\$_____/m ³	\$
3	Common Fill – Supply, Haul, Spread	M ³	5,000/m ³	\$_____/m ³	\$
4	Seeding – Seed, Rake, Water	M ²	1,000/m ²	\$_____/m ²	\$
5	Sodding – Supply, Install, Rolling Rod	M ²	2,000/m ²	\$_____/m ²	\$
6	Erosion Control – Apply/ Anchor Blankets on Embankments	Hour	350/m ²	\$_____/m ²	\$
7	Testing: Soil Compaction	M ²	150/ m ²	\$_____/m ²	\$
8	Labour for work that is not included in the above described work, during regular working hours between (08:00-16:00) Monday through Friday	Hour	500/hrs	\$_____/hr	\$
9	Labour for work that is not included in the above described work, outside regular working hours between (16:00-08:00) Monday through Friday	Hour	100/hrs	\$_____/hr	\$
10	Material not stated above will be charged at the Contractor's laid down cost plus a mark-up of: Verification of Contractor's cost to be provided upon request of Project Authority	%	\$10,000.00	_____ %	\$
Sub Total B): Estimated Total Amount 2nd Year GST/HST Extra					\$

continued

4.1 Unit Price Schedules - Rates (continued)**SCHEDULE C) Year 3**

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
Item	Class of Labour, material or plant	Unit	Estimated Hours/ Quantity	Unit Price \$ ¢	Estimated total price \$ ¢
1	Common Excavation – Soil Removal/ Disposal	M ³	3,000/m ³	\$_____/m ³	\$
2	Top Soil – Supply, Haul, Spread	M ³	3,000/m ³	\$_____/m ³	\$
3	Common Fill – Supply, Haul, Spread	M ³	5,000/m ³	\$_____/m ³	\$
4	Seeding – Seed, Rake, Water	M ²	1,000/m ²	\$_____/m ²	\$
5	Sodding – Supply, Install, Rolling Rod	M ²	2,000/m ²	\$_____/m ²	\$
6	Erosion Control – Apply/ Anchor Blankets on Embankments	Hour	350/m ²	\$_____/m ²	\$
7	Testing: Soil Compaction	M ²	150/ m ²	\$_____/m ²	\$
8	Labour for work that is not included in the above described work, during regular working hours between (08:00-16:00) Monday through Friday	Hour	500/hrs	\$_____/hr	\$
9	Labour for work that is not included in the above described work, outside regular working hours between (16:00-08:00) Monday through Friday	Hour	100/hrs	\$_____/hr	\$
10	Material not stated above will be charged at the Contractor's laid down cost plus a mark-up of: Verification of Contractor's cost to be provided upon request of Project Authority	%	\$10,000.00	_____ %	\$
Sub Total C): Estimated Total Amount 3rd Year GST/HST Extra					\$

4.1 Unit Price Schedules - Rates (continued)

4.2 TOTAL EVALUATED PRICE (Initial 1 Year Term + 2nd Year+3rd Year)

Col. 1	Col. 2	Col. 3	Col. 4
Sub Total SCHEDULE A) Initial Year Term	Sub Total SCHEDULE B) 2nd Year	Sub Total SCHEDULE C) 3rd Year	Total Evaluated Price (col.1 + col.2 + col.3 = col.4)
\$ _____	\$ _____	\$ _____	\$ _____

These items will be used for cost evaluation purposes only and do not constitute a guarantee or commitment on behalf of Canada of the quantity or amount to be used under the Standing Offer.

A rate must be entered for each item.

The Offeror agrees that the Price(s) per Unit as tendered govern in calculating the Total Evaluated Price. The Offeror understands that any errors in the extension of the Price per Unit, in the addition of the Estimated Total Price, and Estimated Total Amount will be corrected in order to obtain the Total Evaluated Price.

Cost will be evaluated on the Total Evaluated Price in Column 4. It is anticipated that only one standing offer will be issued to the lowest compliant offeror.

Solicitation No. - N° de l'invitation
W690D-18AAAI/A

Buyer ID - Id de l'acheteur
pwu005

GETS Ref. No. - N° de réf de SEAG

Client Ref. No. - N° de réf. du client
W690D-18AAAI

File No. - N° du dossier
PWU-8-41036

CCC No./N° CCC - FMS No./N° VME

APPENDIX 2 - VOLUNTARY CERTIFICATION TO SUPPORT THE USE OF APPRENTICES

Note; The contractor will be asked to fill out a report every six months as included a Annex G

Name: _____

Signature: _____

Company Name: _____

Company Legal Name: _____

Solicitation Number: _____

Optional information to provide: _____

Number of apprentices planned to be working on this contract: _____

Trades of those apprentices:

A sample of the "Voluntary Reports for Apprentices Employed during the Contract" is provided at Annex G

Solicitation No. - N° de l'invitation
W690D-18AAAI/A

Buyer ID - Id de l'acheteur
pwu005

GETS Ref. No. - N° de réf de SEAG

Client Ref. No. - N° de réf. du client
W690D-18AAAI

File No. - N° du dossier
PWU-8-41036

CCC No./N° CCC - FMS No./N° VME

ANNEX F

The Insurance Terms have been amended. Refer to Part 6 clause 3.

CERTIFICATE OF INSURANCE

Page 1 of 2



Travaux publics et
Services gouvernementaux
Canada

Public Works and
Government Services
Canada

Description and Location of Work	Contract No. W690D-18AAAC
General Landscaping, 17 Wing Detachment Dundurn, Dundurn, SK.	Project No.

Name of Insurer, Broker or Agent	Address (No., Street)	City	Province	Postal Code
Name of Insured (Contractor)	Address (No., Street)	City	Province	Postal Code
Additional Insured <i>Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services</i>				

Type of Insurance	Insurer Name and Policy Number	Inception Date D / M / Y	Expiry Date D / M / Y	Limits of Liability		
Commercial General Liability				Per Occurrence \$	Annual General Aggregate \$	Completed Operations Aggregate \$
Umbrella/Excess Liability				\$	\$	\$

I certify that the above policies were issued by insurers in the course of their Insurance business in Canada, are currently in force and include the applicable insurance coverage's stated on page 2 of this Certificate of Insurance, including advance notice of cancellation / reduction in coverage.

Name of person authorized to sign on behalf of Insurer(s) (Officer, Agent, Broker)
number

Telephone

Signature

Date D / M / Y

CERTIFICATE OF INSURANCE Page 2 of 2

General

The insurance policies required on page 1 of the Certificate of Insurance must be in force and must include the insurance coverage listed under the corresponding type of insurance on this page.

The policies must insure the Contractor and must include Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services as an additional Insured.

The insurance policies must be endorsed to provide Canada with not less than thirty (30) days' notice in writing in advance of a cancellation of insurance or any reduction in coverage.

Without increasing the limit of liability, the policies must protect all insured parties to the full extent of coverage provided. Further, the policies must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.

Commercial General Liability

The insurance coverage provided must not be substantially less than that provided by the latest edition of IBC Form 2100.

The policy must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:

- (a) Blasting.
- (b) Pile driving and caisson work.
- (c) Underpinning.
- (d) Removal or weakening of support of any structure or land whether such support be natural or otherwise if the work is performed by the insured contractor.

The policy must have the following minimum limits:

- (a) **\$2,000,000** Each Occurrence Limit;
- (b) **\$2,000,000** General Aggregate Limit per policy year if the policy contains a General Aggregate; and
- (c) **\$2,000,000** Products/Completed Operations Aggregate Limit.

Umbrella or excess liability insurance may be used to achieve the required limits.

ANNEX G

VOLUNTARY REPORT FOR APPRENTICES EMPLOYED DURING THE CONTRACT

(This report is not required at bid deposit)

The Contractor should compile and maintain records on the number of apprentices and their trade that were hired to work on the contract.

The Contractor should provide this data in accordance with the format below. If no apprentices were hired during the contract period, the Contractor should still provide a "nil" report.

The data should be submitted six months after the Contract award or at the end of the Contract, whichever comes first to the Contracting Authority.

Number of apprentices hired	Trade

(Add rows as needed)

Solicitation No. - N° de l'invitation
W690D-18AAAI/A

Buyer ID - Id de l'acheteur
pwu005

GETS Ref. No. - N° de réf de SEAG

Client Ref. No. - N° de réf. du client
W690D-18AAAI

File No. - N° du dossier
PWU-8-41036

CCC No./N° CCC - FMS No./N° VME

ANNEX H

SECURITY REQUIREMENTS CHECK LIST (SRCL)

REFER TO ATTACHED DOCUMENT

APR 25 2018



Government of Canada
Gouvernement du Canada

Contract Number / Numéro du contrat

W690D-18-AAAI

Security Classification / Classification de sécurité
UNCLASSIFIED

SECURITY REQUIREMENTS CHECK LIST (SRCL)

LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine		National Defence		2. Branch or Directorate / Direction générale ou Direction		17 Wing Det Dundurn	
3. a) Subcontract Number / Numéro du contrat de sous-traitance				3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant			
4. Brief Description of Work / Brève description du travail General Landscaping							
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?						<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?						<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
6. Indicate the type of access required / Indiquer le type d'accès requis							
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)						<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.						<input type="checkbox"/> No Non	<input checked="" type="checkbox"/> Yes Oui
6. c) Is this a commercial courier or delivery requirement with no overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?						<input checked="" type="checkbox"/> No Non	<input type="checkbox"/> Yes Oui
7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès							
Canada <input type="checkbox"/>		NATO / OTAN <input type="checkbox"/>		Foreign / Étranger <input type="checkbox"/>			
7. b) Release restrictions / Restrictions relatives à la diffusion							
No release restrictions Aucune restriction relative à la diffusion <input type="checkbox"/>		All NATO countries Tous les pays de l'OTAN <input type="checkbox"/>		No release restrictions Aucune restriction relative à la diffusion <input type="checkbox"/>			
Not releasable À ne pas diffuser <input type="checkbox"/>							
Restricted to: / Limité à: <input type="checkbox"/>		Restricted to: / Limité à: <input type="checkbox"/>		Restricted to: / Limité à: <input type="checkbox"/>			
Specify country(ies): / Préciser le(s) pays:		Specify country(ies): / Préciser le(s) pays:		Specify country(ies): / Préciser le(s) pays:			
7. c) Level of information / Niveau d'information							
PROTECTED A PROTÉGÉ A <input type="checkbox"/>		NATO UNCLASSIFIED NATO NON CLASSIFIÉ <input type="checkbox"/>		PROTECTED A PROTÉGÉ A <input type="checkbox"/>			
PROTECTED B PROTÉGÉ B <input type="checkbox"/>		NATO RESTRICTED NATO DIFFUSION RESTREINTE <input type="checkbox"/>		PROTECTED B PROTÉGÉ B <input type="checkbox"/>			
PROTECTED C PROTÉGÉ C <input type="checkbox"/>		NATO CONFIDENTIAL NATO CONFIDENTIEL <input type="checkbox"/>		PROTECTED C PROTÉGÉ C <input type="checkbox"/>			
CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>		NATO SECRET NATO SECRET <input type="checkbox"/>		CONFIDENTIAL CONFIDENTIEL <input type="checkbox"/>			
SECRET SECRET <input type="checkbox"/>		COSMIC TOP SECRET COSMIC TRÈS SECRET <input type="checkbox"/>		SECRET SECRET <input type="checkbox"/>			
TOP SECRET TRÈS SECRET <input type="checkbox"/>				TOP SECRET TRÈS SECRET <input type="checkbox"/>			
TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>				TOP SECRET (SIGINT) TRÈS SECRET (SIGINT) <input type="checkbox"/>			

TBS/SCT 350-103(2004/12)

Security Classification / Classification de sécurité
UNCLASSIFIED



Government of Canada
Gouvernement du Canada

Contract Number / Numéro du contrat

W690D-18-AAA1

Security Classification / Classification de sécurité
UNCLASSIFIED

PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

If Yes, indicate the level of sensitivity:

Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? ☒ No ☐ Yes
Non Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :

Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> RELIABILITY STATUS
COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL
CONFIDENTIEL | <input type="checkbox"/> SECRET
SECRET | <input type="checkbox"/> TOP SECRET
TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET- SIGINT
TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL
NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET
NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET
COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS
ACCÈS AUX EMPLACEMENTS | | | |

Special comments:

Commentaires spéciaux :

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.

REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? ☐ No ☒ Yes
Non Oui

If Yes, will unscreened personnel be escorted? *UNSCREENED PERS ONLY PERMITTED IN PUBLIC*
Dans l'affirmative, le personnel en question sera-t-il escorté? *ZONES / RÉCEPTION ZONES. MW*

☒ No ☐ Yes
Non Oui

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

11. b) Will the supplier be required to safeguard COMSEC information or assets?
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? ☒ No ☐ Yes
Non Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? ☒ No ☐ Yes
Non Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? ☒ No ☐ Yes
Non Oui

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? ☒ No ☐ Yes
Non Oui

TBS/SCT 350-103(2004/12)

Security Classification / Classification de sécurité

UNCLASSIFIED

Canada



PART C - (continued) / PARTIE C - (suite)

For users completing the form manually use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire manuellement doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form online (via the Internet), the summary chart is automatically populated by your responses to previous questions.

Dans le cas des utilisateurs qui remplissent le formulaire en ligne (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category Catégorie	PROTECTED PROTÉGÉ			CLASSIFIED CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL CONFIDENTIEL	SECRET	TOP SECRET TRÈS SECRET	NATO RESTRICTED NATO DIFFUSION RESTREINTE	NATO CONFIDENTIAL NATO CONFIDENTIEL	NATO SECRET	COSMIC TOP SECRET COSMIC TRÈS SECRET	PROTECTED PROTÉGÉ			CONFIDENTIAL CONFIDENTIEL	SECRET	TOP SECRET TRÈS SECRET
											A	B	C			
Information / Assets Renseignements / Biens																
Production																
IT Media / Support TI																
IT Link / Lien électronique																

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?

La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non ☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?

La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non ☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquez qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).

17 Wing Det Dundurn
Construction Engineers

Statement of Work for
General Landscaping



Requisition Number:	W690D-18-AAAI
Contract Card:	LANDAI
Date:	17 Apr 2018
Project Authority:	Sgt. Vance

<u>Section</u>	<u>Title</u>	<u>Pages</u>
<u>Division 01 - General Requirements</u>		
01 00 00	Annexes	7
01 00 01	General Instructions	7
01 33 00	Submittal Procedures	5
01 35 30	Health and Safety Requirements	6
01 35 35	Fire Safety Requirements	4
01 35 43	Environmental Procedures	3
01 42 00	References	4
01 51 00	Temporary Utilities	2
01 52 00	Construction Facilities	3
01 74 11	Cleaning	3
01 77 00	Closeout Procedures	2
01 78 00	Closeout Submittals	10
<u>Division 02 – Fire Suppression</u>		
02 01 00	Excavating and Trenching Requirements	2
02 02 00	Environmental Procedures	12
02 03 00	Requirement	4
02 04 00	Hydraulic Seeds	6
02 05 00	Sodding	5
02 06 00	Material and Installation	10

PART 1 – GENERAL

- | | | |
|-------------------------------------|----|--|
| <u>1.1 Description of Work</u> | .1 | <p>.1 Work under this Contract comprises the material, labour, equipment and supervision required for the Landscaping of various areas around buildings on 17 Wing Det Dundurn, Dundurn, SK.</p> <p>.2 Exact extent and location of work as per Engineer's instruction with each request for abatement services.</p> |
| <u>1.2 Security Authorization</u> | .1 | <p>This project will be issued with an SRCL.</p> |
| <u>1.3 Contract Administration</u> | .1 | <p>This contract will be administered in English.</p> |
| <u>1.4 Documents Required</u> | .1 | <p>Maintain at job site, one copy each of the following:</p> <ul style="list-style-type: none"> .1 Contract drawings. .2 Specifications. .3 Addenda. .4 Reviewed shop drawings. .5 Change orders. .6 Other modifications to Contract. .7 Copy of approved work schedule. .8 Manufacturers' installation and application instructions. |
| <u>1.5 Work Schedule</u> | .1 | <p>Provide within 10 working days after Contract award, construction schedule showing anticipated progress stages and final completion of work within time period required by Contract documents.</p> |
| | .2 | <p>Interim reviews of work progress based on work schedule will be conducted as deemed by DND Rep and schedule updated by Contractor in conjunction with and to approval of DND Rep.</p> |
| <u>1.6 Contractor's Use Of Site</u> | .1 | <p>Exclusive and complete for execution of work except as follows:</p> <ul style="list-style-type: none"> .1 Movement around site shall be subject to restrictions imposed by Det CO and/or DND Rep. .2 Do not unreasonably encumber site with materials or equipment. |
| | .2 | <p>Det Dundurn Training Area special precautions:</p> <ul style="list-style-type: none"> .1 Day to day restrictions in the training area may occur from time to time while military live range missions are underway. These restrictions are usually of short duration in terms of hours however may result in a full day. .2 No work will be permitted during live fire training exercises. |

.3 Normal working hours are from 0730 to 1600 but are subject to change.

.4 Weekend work is permitted with special arrangements.

.5 Obtain permission from Det Range Control 48hrs before proceeding to site.

1.7 Property Damage .1

Contractor is responsible to make good any damage to DND property resulting from his work conducted on site. Repairs shall be carried out at the contractor's expense.

.2 The contractor shall immediately notify the DND Rep or Contracting Authority of any damage incident. Damage to any surface feature or underground utility are included in this definition such as gas lines, power lines, water lines, buildings, survey markers, etc.

.3 Any tree removed or damaged during the work must be replaced with a trees equalling the total diameter of trees removed. The replacement trees should be no less than half the calliper of the trees that are damaged/removed. CE Roads and Grounds (Loc: 4269) should be contacted for a list of preferred species; each area will have specific requirements based on location, soils proximity to paved areas, moisture etc.

1.8 Codes and Standards .1

Perform work in accordance with the latest edition of National Building Code of Canada (NBC), and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.

1.9 Workmanship .1

Workmanship:

.1 Workmanship shall be executed by workers qualified in respective duties for which they are employed.

.2 Decisions as to quality or fitness of workmanship, in case of dispute, rest solely with DND Rep, whose decision is final.

.2 Qualification:

.1 All work shall be carried out by qualified journeyman or apprentice in accordance with the conditions of the Saskatchewan Provincial Act respecting manpower, vocational training and qualification.

.2 Apprenticed employees registered in the provincial apprenticeship program shall be permitted to work only under the direct supervision of a qualified journeyman.

1.10 Project Meetings .1

DND Rep will arrange project meetings, assume responsibility for setting times and recording and distributing minutes.

1.11 Project Layout .1

Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.

- | | | |
|---|----|--|
| | .2 | Provide devices as required to lay out and construct project. |
| | .3 | Supply such devices as straight edges and templates required to facilitate DND Rep's inspection of work. |
| | .4 | Supply stakes and other survey markers required for project layout. |
| 1.12 Location of Equipment and Fixtures | .1 | Location of equipment, fixtures and outlets and indicated or specified are to be considered as approximate. |
| | .2 | Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance. |
| | .3 | Inform DND Rep of impending installations and obtain approval for actual location. |
| | .4 | Submit field drawings to indicate relative position of various services and equipment as required by DND Rep. |
| | .5 | Before the start of construction, the Contractor will be responsible to identify and preserve DND Survey Monuments. |
| | .6 | If during construction, Contractor discovers a DND Survey Monument, (complete with marker post, 50 mm round pipe with 75 x 100 mm aluminium plate), do not disturb the area, carefully preserve survey monuments and inform DND Rep before proceeding. |
| | .7 | Should a DND Survey Monument be disturbed during construction, the Contractor will be responsible to re-survey and replace if the Monument if necessary, by a certified land surveyor approved by DND Rep. |
| 1.13 Cutting and Patching | .1 | Execute cutting, including excavation, fitting and patching required to allow proper fitting of construction elements. |
| | .2 | Where new elements connect with existing and where existing are altered, cut, patch and make good to match existing. |
| | .3 | Obtain DND Rep's approval before cutting, boring or sleeving load-bearing members. |
| | .4 | Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly. |

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| | .5 | Fit construction elements to pipes, sleeves, ducts and conduits. |
| 1.14 Existing
<u>Services</u> | .1 | It is the Contractor's ultimate responsibility to obtain a properly completed "17 Wing Winnipeg Detachment Dundurn Excavation Permit" (Annex A) to establish the location and extent of service lines in the area of work, before any clearing/digging is started. |
| | .2 | Ten working days prior to the scheduled start date, the Contractor shall ask for the "17 Wing Winnipeg Detachment Dundurn Excavation Permit" to be started. |
| | .3 | The DND Rep will arrange for the form to be completed and signed by the authorized representative for: <ul style="list-style-type: none"> .1 Electrical Distribution. .2 POL Distribution. .3 Sewer/Water/Drainage System. .4 Heating Plant. .5 Fire Department. .6 UGSO (Unit General Safety Officer). .7 Det TIS .8 Environmental. .9 Commercial Utility Companies (Sask First). |
| | .4 | Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to pedestrian and vehicular traffic. |
| | .5 | Submit schedule to and obtain approval from DND Rep for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties. |
| | .6 | Where unknown services are encountered, immediately advise DND Rep and confirm findings in writing. |
| | .7 | Remove abandoned service lines within 2 m of structures. Cap or otherwise seal lines at cut-off points as directed by DND Rep. |
| | .8 | Record locations of maintained, re-routed and abandoned service lines. |
| 1.15 Additional
<u>Drawings</u> | .1 | DND Rep may furnish, if requested, additional copies of drawings and specifications. |
| 1.16 Alterations, | .1 | Execute work with least possible interference or disturbance to |

Additions or Repairs to Existing <u>Building</u>	.2	occupants, public and normal use of premises. Arrange with DND Rep to facilitate execution of work.
	.3	Where security has been affected by work of Contract, provide temporary means to maintain security.
	.4	Where elevators or conveyors exist in building, only those assigned for Contractor's use may be used for moving men and material within building. Protect walls of passenger elevators to approval of DND Rep before use. Accept liability for damage, safety of equipment and overloading of existing equipment.
1.17 Restoration of <u>Disturbed Surfaces</u>	.1	Provide temporary dust screens, barriers, and warning signs in locations where renovation and alteration work is adjacent to areas used by public or government staff.
1.18 Measurement for <u>Payment</u>	.1	The Contractor shall be responsible for the restoration of all disturbed areas including adjacent areas to excavations, disturbed grassed areas, hard surfaces and any other area damaged due to work carried out, as indicated and to the satisfaction of the DND Rep.
1.19 Building Smoking <u>Environment</u>	.1	It is the intent to let this contract on the basis of lump sum.
1.20 Security	.1	17 Wing Detachment Dundurn has a smoking policy in effect. Contractor is to obtain a copy from DND Rep and adhere to it.
	.1	Access .1 Work carried out under the terms of this contract will be conducted within the Detachment where special and unique security regulations are enforced. Individuals without authorization will not be permitted to enter the Detachment.
	.2	Clearances .1 Work clearance will be granted in two possible ways, please see clause 1.2 for authorization: .1 Security Mitigation Measures .2 Security Requirements Check List.
	.3	Security Mitigation Measures .1 In the case of Security Mitigation Measures, contractor will have access to the Detachment only under full time escort.

- .2 At no time shall the contractor's employees or sub-contractors be found within the Detachment without authorization and escort.
 - .3 Every effort will be made to provide escorts according to the provided construction schedule.
 - .4 The Contractor shall give minimum 48 hours' notice (two working days) for the processing of the information. The Contractor shall ensure that all employees are advised not to enter the Detachment without prior authorization and government issued photo identification.
- .4 Security Requirements Check List
- .1 All personnel employed by the Contractor and performing work within the Detachment will be subject to a Reliability screening performed by Public Works and Government Services Canada Security Division. Prior to commencement of the Work, the Contractor and each of his personnel involved in the performance of the Contract must be security screened by the Canadian and International Industrial Security Division of the Department of Public Works and Government Services at the level of RELIABILITY STATUS.
 - .2 Information that the contractor must provide for this screening include: Date of Birth; Address; Country of Origin; Education/Professional qualifications; Employment history; and References/Personal character. The security Division will perform Criminal Record check and Credit check on each applicant. If significant adverse information arises during the conduct of a security assessment, the individual will be notified, in person, and given an opportunity to explain the circumstances. If the Deputy Minister, PWGSC, after reviewing a security assessment, denies the granting of RELIABILITY STATUS, the individual(s) concerned shall be so notified in writing along with information relating to their right of appeal and subsequent admission to the Detachment will be prohibited, pending the outcome of any appeal.
 - .3 The Contractor shall ensure that all employees are advised not to enter the Detachment without prior authorization and government issued photo identification.
 - .4 The Contractor shall be responsible for his sub-contractors, ensuring all security related requirements are met.
 - .5 The Contractor shall provide a list of employees and sub-contractors, complete with telephone numbers, who may be contacted during non-working hours in the event of any emergency.
- .5 Detachment Training Area and CFAD (Canadian Forces Ammo Depot) Special conditions.

- .1 The contractor shall provide DND a list of personnel who need access to the area to perform work under the terms of the contract.
- .2 All personnel are required to attend a 1 hour "Range Safety Briefing" or CFAD "Safety Briefing" prior to conducting any work or accessing the Training Area/FAD site.
- .3 Contractor shall provide schedule minimum 14 days in advance of scheduled work on site. Any changes to this schedule shall be provided to the inspector at a minimum of 48 hours advance notice (two working days) for processing of information and subsequent clearances to the training area. The Contractor shall ensure that all employees are advised not to enter the training without prior authorization.
- .4 Information that the contractor must provide for access: name of individual(s), dates and times for access, location of work, phone number, drivers licence.
- .5 Work clearance will be granted by DND through Range Control or CFAD.
- .6 The Contractor shall be responsible for his sub-contractors, ensuring all security related requirements are met.
- .7 Garbage or refuse shall be removed from the training area and CFAD.
- .8 Feeding wildlife is prohibited.
- .9 All meals must be prepared and consumed in a suitable enclosed space or building.
- .10 Report to Range Control as required by DND.
- .11 The Contractor shall provide a list of employees and sub-contractors, complete with telephone numbers, who may be contacted during non-working hours in the event of any emergency.

PART 2 - PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 – EXECUTION

3.1 Not Used .1 Not Used.

PART 1 – GENERAL

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| 1.1 Section | .1 | Shop drawings and product data. |
| <u>Includes</u> | .2 | Samples. |
| 1.2 Precedence | .1 | For Federal Government projects, Division 1
Sections take precedence over technical specification sections in
other Divisions of this Project Manual. |
| 1.3 Administrative | .1 | Submit to DND Rep submittals listed for review. Submit with
reasonable promptness and in orderly sequence so as to not cause
delay in Work. Failure to submit in ample time is not considered
sufficient reason for an extension of Contract Time and no claim
for extension by reason of such default will be allowed. |
| | .2 | Work affected by submittal shall not proceed until review is
complete. |
| | .3 | Present shop drawings, product data, samples and mock-ups in SI
Metric units. |
| | .4 | Where items or information is not produced in SI Metric units
converted values are acceptable. |
| | .5 | Review submittals prior to submission to DND Rep. This review
represents that necessary requirements have been determined and
verified, or will be, and that each submittal has been checked and
co-ordinated with requirements of Work and Contract Documents.
Submittals not stamped, signed, dated and identified as to specific
project will be returned without being examined and shall be
considered rejected. |
| | .6 | Notify DND Rep, in writing at time of submission, identifying
deviations from requirements of Contract Documents stating
reasons for deviations. |
| | .7 | Verify field measurements and affected adjacent Work are
coordinated. |
| | .8 | Contractor's responsibility for errors and omissions in submission
is not relieved by DND Rep's Consultant's review of submittals. |
| | .9 | Contractor's responsibility for deviations in submission from
requirements of Contract Documents is not relieved by DND Rep |

Consultant review.

- .10 Keep one reviewed copy of each submission on site.

1.4 Shop Drawings .1

The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.

- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .3 Allow 14 days for DND Rep's review of each submission.
- .4 Adjustments made on shop drawings by DND Rep are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to DND Rep prior to proceeding with Work.
- .5 Make changes in shop drawings as DND Rep may require, consistent with Contract Documents. When resubmitting, notify DND Rep in writing of any revisions other than those requested.
- .6 Accompany submissions with transmittal letter containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .7 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.

- .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
- .8 After DND Rep's review, distribute copies.
- .9 Submit prints, number as required by contractor plus two (2) copies to be retained by DND Rep, of shop drawings for each requirement requested in specification Sections and as consultant may reasonably request.
- .10 Submit prints, number as required by contractor plus two(2) copies to be retained by DND Rep, of product data sheets or brochures for requirements requested in specification Sections and as requested by DND Rep where shop drawings will not be prepared due to standardized manufacture of product.
- .11 Delete information not applicable to project.
- .12 Supplement standard information to provide details applicable to project.
- .13 If upon review by DND Rep, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .14 The review of shop drawings by Department of National Defence (DND) is for sole purpose of ascertaining conformance with general concept. This review shall not mean that DND approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of construction and Contract Documents. Without

restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of all sub-trades.

- 1.5 Product Data .1 Manufacturers' catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.
- .2 Submit 2 copies of product data.
- .3 Sheet size: 215 x 280 mm.
- .4 Delete information not applicable to project.
- .5 Supplement standard information to provide details applicable to project.
- .6 Cross-reference product data information to applicable portions of Contract documents.
- 1.6 Samples .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to DND Rep.
- .3 Notify DND Rep in writing, at time of submission of deviations in samples from requirements of SOA Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by DND Rep are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to DND Rep prior to proceeding with Work.
- .6 Make changes in samples which DND Rep may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

PART 2 – PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 – EXECUTION

3.1 Not Used .1 Not Used.

PART 1 – GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 References .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Saskatchewan Employment Act.
- .3 Province of Saskatchewan Occupational Health and Safety Regulations 1996.
- 1.3 Submittals .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
- .1 Results of site specific safety hazard assessment.
- .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
- .3 Submit copies of Contractor's authorized representative's work site health and safety inspection reports to DND Rep weekly.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit Material Safety Data Sheets (MSDS) to DND Rep.
- .7 DND Rep will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 10days after receipt of plan. Revise plan as appropriate and resubmit plan to DND Rep within 10 days after receipt of comments from DND Rep.
- .8 DND Rep 's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.

	.9	Medical Surveillance: Where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to DND Rep.
	.10	On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations.
<u>1.4 Filing of Notice</u>	.1	File Notice of Project with Provincial authorities prior to commencement of Work.
<u>1.5 Safety Assessment</u>	.1	Perform site specific safety hazard assessment related to project.
<u>1.6 Meetings</u>	.1	Schedule and administer Health and Safety meeting with DND Rep prior to commencement of Work.
<u>1.7 Project/Site Conditions</u>	.1	Work at site may involve contact with: <ul style="list-style-type: none"> .1 Asbestos. .2 Lead Paint
<u>1.8 General Requirements</u>	.1	Develop written site-specific Health and Safety Plan based on hazard assessment prior to commencing any site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
	.2	DND Rep may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
<u>1.9 Responsibility</u>	.1	Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
	.2	Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
<u>1.10 Compliance Requirements</u>	.1	Comply with Province of Saskatchewan Occupational Health and Safety Act and 17 Wing Safety Measures listed below;

- .1 A Certificate of Recognition (COR) or Registered Safety Plan (RSP). A health and safety policy and program, as required by other provincial/territorial Occupational Health and Safety Acts, will be acceptable in lieu of a COR or RSP.
- .2 Contractors and their personnel shall be familiar with this section and its requirements.
- .3 Observe and enforce construction safety measures required by National Building Code 2015, Part 8; Provincial Government, Worker's Compensation Board and municipal statutes and authorities.
- .4 Hard hats and safety boots shall be worn at all times at construction site.
- .5 Hard hats and safety boots shall be worn at all times while operating mobile equipment.
- .6 Eye or face protection shall be worn when handling any material liable to injure or irritate the eyes or when engaging in any work producing hazard from flying objects or when operating power lawn equipment and tools.
- .7 Hearing protection shall be worn when entering or working in a noise hazardous area. This is to include, but not limited, shop operations where sound levels exceed 85 decibels and operators of vehicles or equipment which produce excessive noise.
- .8 Respirators shall be worn when a worker is or may be exposed to an oxygen deficient area or to harmful concentration of gas, vapours, smoke, fumes, mist or dust.
- .9 All employees who handle or are exposed to hazardous materials as defined under the Hazardous Product Act (WHMIS Legislation) shall be WHMIS trained in accordance with the act.
- .10 Material safety data sheets (MSDS) for all materials falling under the WHMIS program shall be supplied to the work site by the Contractor/Sub-contractor or user(s), and readily accessible to all on-site personnel.
- .11 No employee shall enter or be permitted to enter a hazardous confined space unless such entry is made in compliance with Occupational Safety and Health and Labour Canada Standards.

- .12 Confined spaces entry permit must be obtained from the Det Fire Department and completed prior to the entry into a confined space.
- .13 Safety belts and lifelines shall be worn when working at heights greater than 3.26 metres above floor level where it is impractical to provide adequate work platforms or staging.
- .14 All elevated work sites shall have the area underneath cordoned off to prevent injuries from falling debris.
- .15 All construction sites which present a potential hazard to the public shall be properly cordoned off and signs prominently placed, warning of possible dangers.
- .16 No burning, cutting, welding or use of any heat producing device is allowed without a hot work permit from the Fire Department (Annex B). A pre-work inspection and post-work inspection is mandatory.
 - .1 Fire Department phone number for Safety/Fire Inspector is:
 - .1 (306) 492-2135 ext. 4229.
- .17 All accidents are to be reported through the Requirements DND Rep immediately.
- .18 In addition to these 17 Wing Det Dundurn General Safety Contractor Regulations, all Saskatchewan Occupational Health and Safety Regulations shall be adhered to at all times.
- .19 In event of conflict between any provisions of above authorities the most stringent provisions govern.
 - .1 The following are the known hazardous substances and/or hazardous conditions at the work site which will be considered as health or environmental hazards and shall be properly managed should they be encountered as part of the work.
 - .2 Specific hazards that may impact significantly on the contract or present significant risk:
 - a. Excavation
 - b. Hot work
 - c. Fall Hazards
 - d. Heavy Equipment
 - e. Overhead / Underground Utilities
 - f. Traffic
 - .3 Contractors are required to be aware of the known hazardous substances and/or hazardous conditions and are to

include in their tender price all work associated in working with, in and around the hazards.

.4 The above lists shall not be construed as being complete and inclusive of all safety and health hazards encountered as a result of the Contractor's operations during the course of work. Include the above items into the hazard assessment program specified herein.

1.11 Cell Phones .1

Use of cellular phones are prohibited within the CFAD Compound.

1.12 Overloading .1

Ensure no part of work is subjected to loading that will endanger its safety or will cause permanent deformation.

1.13 Hazardous Material .1

All hazardous material must be identified and labelled in accordance with the Workplace Hazardous Material Information System (WHMIS) and copies of the Material Safety Data Sheet (MSDS) shall be supplied to both the Det Fire Chief and DND Rep.

1.14 Unforeseen Hazards .1

Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, and follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction. Advise DND Rep verbally and in writing.

1.15 Health and Safety Co-ordinator .1

Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:

- .1 Have minimum 2 years' site-related working experience specific to construction activities taking place.
- .2 Have working knowledge of occupational safety and health regulations.
- .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.
- .4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
- .5 Be on site during execution of any hazardous Work and report directly to and be under direction of site supervisor.

1.16 Posting of Documents .1

Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and

Regulations of Province having jurisdiction, and in consultation with DND Rep.

- 1.17 Correction of Non-Compliance .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by DND Rep.
- .2 Provide DND Rep with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 DND Rep may stop Work if non-compliance of health and safety regulations is not corrected.
- 1.18 Work Stoppage .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

PART 2 – PRODUCTS

- 2.1 Not Used .1 Not used.

PART 3 – EXECUTION

- 3.1 Not Used .1 Not used.

PART 1 – GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 Fire Department Briefing .1 DND Rep will coordinate arrangements for contractor to be briefed on Fire Safety at their pre-work conference by Fire Chief before any work is commenced.
- 1.3 Reporting Fires .1 Know location of nearest fire alarm box and telephone, including emergency phone number.
- .2 Report immediately all fire incidents to the Fire Department as follows:
- .1 Activate nearest fire alarm box, or
- .2 Telephone 911, ensure you report the fire for DET DUNDURN in case of EMERGENCY ONLY.
- .3 Person activating fire alarm box will remain at the front entrance to direct Fire Department to scene of fire.
- .4 When reporting fire by telephone, give location of fire, name or number of building and be prepared to verify the location.
- 1.4 Fire Safety Plan .1 Submit a fire safety plan for the construction site prior to commencement of construction work. The fire safety plan shall conform to the National Fire Code of Canada.
- .2 Post the fire safety plan at the entrance to the construction site or near the construction site's health and safety board.
- .3 The fire safety plan shall conform to the National Fire Code of Canada, and shall contain, at minimum:
- .1 Emergency procedures to be used in case of fire, including
- .1 Sounding the fire alarm;
- .2 Notifying the fire department;
- .3 Instructing occupants on procedures to be followed when the fire alarm sounds;
- .4 Evacuating occupants, including special provisions for persons requiring assistance; and
- .5 Confining, controlling and extinguishing fires.
- .2 The appointment and organization of designated supervisory staff to carry out fire safety duties.
- .3 The training of supervisory staff and other occupants in their responsibilities for fire safety.

		.4	Documents including diagrams, showing the type, location and operation of building fire emergency systems.
		.5	The holding of fire drills (where applicable).
		.6	The control of fire hazards in the building.
		.7	The inspection and maintenance of building facilities provided for the safety of occupants.
1.5 Interior and Exterior Fire Protection and Alarm Systems	.1		Fire protection and alarm system will not be:
		.1	obstructed;
		.2	shut-off; and
		.3	left inactive at end of working day or shift without authorization from Fire Chief.
	.2		Fire hydrants, standpipes and hose systems will not be used for other than fire-fighting purposes unless authorized by Fire Chief.
1.6 Fire Protection System Impairment	.1		Notify the DND Representative and Fire Chief 48 hours prior to shutting down any active fire protection system, including water supply, fire suppression, fire detection and life safety systems.
	.2		Implement all fire protection system impairments in accordance with the National Fire Code of Canada and departmental policy.
1.7 Fire Extinguishers	.1		Supply fire extinguishers, as scaled by Fire Chief, necessary to protect work in progress and contractor's physical plant on site.
1.8 Blockage of Roadways	.1		Advise Fire Chief of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by Fire Chief, erecting of barricades and digging of trenches.
	.2		Det Transport shall be advised of any work that would impede "Emergency" vehicles located at:
		.1	Building 41A - Fire Hall
		.2	Building 155 - Det Transport
		.3	Building 60 - MP Station
		.4	Building 41 - Ambulance location
	.3		Minimum horizontal clearance: clear width of not less than 5m.
	.4		Minimum vertical clearance: overhead height of not less than 6m.
1.9 Smoking Precautions	.1		Smoking is prohibited in all DND buildings. Observe posted smoking restrictions near existing buildings.

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| <p>1.10 Rubbish and
<u>Waste Materials</u></p> | <p>.1</p> <p>.2</p> <p>.3</p> <p>.4</p> | <p>Rubbish and waste materials are to be kept to a minimum.</p> <p>Burning of rubbish is prohibited.</p> <p>Removal:
.1 Remove all rubbish from work site at end of work day or shift or as directed.</p> <p>Storage:
.1 Store oily waste in approved receptacles to ensure maximum cleanliness and safety.
.2 Deposit greasy or oily rags and materials subject to spontaneous combustion in approved receptacles and removed as specified above.</p> |
| <p>1.11 Flammable and
<u>Combustible Liquids</u></p> | <p>.1</p> <p>.2</p> <p>.3</p> <p>.4</p> <p>.5</p> <p>.6</p> | <p>Handling, storage and use of flammable and combustible liquids are to be governed by the current National Fire Code of Canada.</p> <p>Flammable and combustible liquids such as gasoline, kerosene and naphtha will be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing Underwriters' Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes requires permission of Fire Chief.</p> <p>Transfer of flammable and combustible liquids is prohibited within buildings or jetties.</p> <p>Transfer of flammable and combustible liquids will not be carried out in vicinity of open flames or any type of heat-producing devices.</p> <p>Flammable liquids having a flash point below 38° C such as naphtha or gasoline will not be used as solvents or cleaning agents.</p> <p>Flammable and combustible waste liquids, for disposal, will be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and Fire Department is to be notified when disposal is required.</p> |
| <p>1.12 Hazardous
<u>Substances</u></p> | <p>.1</p> | <p>Work entailing use of toxic or hazardous materials, chemicals and/or explosives, or otherwise creating hazard to life, safety or health, will be in accordance with National Fire Code of Canada.</p> |

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| | .2 | Obtain from Fire Chief a "Hot Work" permit (Annex B) for work involving welding, burning or use of blow torches and salamanders, in buildings or facilities. |
| | .3 | When Work is carried out in dangerous or hazardous areas involving use of heat, provide fire watchers equipped with sufficient fire extinguishers. Determination of dangerous or hazardous areas along with level of protection necessary for Fire Watch is at discretion of the Fire Chief. Contractors are responsible for providing fire watch service for work on a scale established and in conjunction with Fire Chief at pre-work conference. |
| | .4 | Where flammable liquids, such as lacquers or urethanes are to be used, proper ventilation shall be provided and all sources of ignition are to be eliminated. Fire Chief is to be informed prior to and at cessation of such work. |
| 1.13 Questions and/or Clarifications | .1 | Direct any questions or clarification on Fire Safety in addition to above requirements to the DND representative. DND is responsible to obtain clarifications from the Fire Chief. |
| 1.14 Fire Inspection | .1 | Site inspections by Fire Chief will be coordinated through DND Rep. |
| | .2 | Allow Fire Chief unrestricted access to work site. |
| | .3 | Co-operate with Fire Chief during routine fire safety inspection of work site. |
| | .4 | Immediately remedy all unsafe fire situations observed by Fire Chief. |

PART 2 – PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 – EXECUTION

3.1 Not Used .1 Not Used.

PART 1 – GENERAL

- 1.1 General .1 Comply with all federal, provincial, and municipal regulatory requirements and guidelines for environmental protection and natural resource conservation.
- 1.2 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.3 Fires .1 Fires and burning of rubbish on site not permitted.
- 1.4 Disposal of Wastes .1 Do not bury rubbish and waste materials on site unless approved by DND Rep.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
- .3 The contractor shall dispose of all rubbish and residue in accordance with existing provincial and/or municipal regulations and/or bylaws. A disposal manifest will be delivered to the Project Authority to ensure the waste has been accepted by a proper facility.
- .4 Costs associated with appropriate removal, transportation and disposal of ALL WASTE is the responsibility of the Contractor.
- 1.5 Drainage .1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.
- 1.6 Site Clearing and Plant Protection .1 Protect trees and plants on site and adjacent properties where indicated.
- .2 Wrap in burlap, trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m.

	.3	Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
	.4	Minimize stripping of topsoil and vegetation.
	.5	Restrict tree removal to areas indicated or designated by DND Rep. See Section 01 00 01 1.6.3 for tree replacement requirements.
<u>1.7 Work Adjacent to Waterways</u>	.1	Do not operate construction equipment in waterways.
	.2	Do not use waterway beds for borrow material.
	.3	Do not dump excavated fill, waste material or debris in waterways.
	.4	Design and construct temporary crossings to minimize erosion to waterways.
	.5	Do not skid logs or construction materials across waterways.
	.6	Avoid indicated spawning beds when constructing temporary crossings of waterways.
	.7	Do not blast under water or within 100 m of indicated spawning beds.
<u>1.8 Pollution Control</u>	.1	Maintain temporary erosion and pollution control features installed under this contract.
	.2	Control emissions from equipment and plant to local authorities' emission requirements.
	.3	Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
	.4	Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.
<u>1.9 Protection of Monitoring Wells</u>	.1	Protect any and all existing groundwater monitoring wells. Report any disturbances or damage to the Project Authority immediately. Det Environment will need to be informed.
<u>1.10 Halocarbons</u>	.1	Refrigeration units will comply with the Federal Halocarbon Regulations (FHR), 2003.

- .2 Halocarbon refrigerants shall be R410A or a suitable CFC free substitute. Non-halocarbon refrigerants are still acceptable.
 - .3 When the unit is installed, serviced, or decommissioned by a contractor, the Halocarbon Reporting Form must be completed and submitted to the Project Authority.
 - .4 Report all halocarbon releases to the Project Authority, Det Fire Hall and Det Environment.
- 1.11 Spill Response and Report
- .1 Spill kits will be on site where there is potential for spillage onto the ground.
 - .2 Personnel on site will be educated in the use of spill kits and spill response based on the equipment on site.
 - .3 Secondary containment will be provided for generators or other fuel-powered equipment. This equipment will not be located within 30m of a waterway.
 - .4 Secondary containment for temporary fuel storage tanks, held on site by the contractor, will be implemented.
 - .5 Any spill, regardless of size, will be reported immediately to the Project Authority following the Environmental Incident and Emergency Plan, so proper reporting procedures can be implemented.
 - .6 An Environmental Incident Report will be completed and submitted to Det Environment to report the spill within 24 hrs, follow-up may be required. Environmental Incident Report forms are available from D Env or Project Authority.
 - .7 Should the spill exceed the capabilities of the spill kits and the personnel on site, the Fire Department shall be contacted.

PART 2 – PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 – EXECUTION

3.1 Not Used .1 Not Used.

PART 1 – GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 Associations .1 ANSI - American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, New York, U.S.A. 10036 URL <http://www.ansi.org>
- .2 ARI - Air Conditioning and Refrigeration Institute, 4100 N Fairfax Drive, Suite 200, Arlington, Virginia, U.S.A. 22203 URL <http://www.ari.org>
- .3 ASHRAE - American Society of Heating, Refrigeration and Air-Conditioning Engineers, 1791 Tullie Circle NE, Atlanta, Georgia, U.S.A. 30329 URL <http://www.ashrae.org>
- .4 ASTM - American Society for Testing and Materials, 100 Barr Harbor Drive West, Conshohocken, Pennsylvania 19428-2959 URL <http://www.astm.org>
- .5 AWWA - American Water Works Association, 801 N Fairfax Street, Suite 211, Alexandria, VA U.S.A. 22314-1757 URL <http://www.awwa.org>
- .6 AWWA - American Wood Preservers' Association, P.O. Box 5690, Granbury Texas, U.S.A. 76049-0690 URL <http://www.awpa.com>
- .7 AWS - American Welding Society, 550 N.W. LeJeune Road, Miami, Florida U.S.A. 33126 URL <http://www.amweld.org>
- .8 CCA Canadian Construction Association, 75 Albert St., Suite 400 Ottawa, Ontario, K1P 5E7 URL <http://www.cca-acc.com>
- .9 CCDC Canadian Construction Documents Committee, Refer to ACEC, CCA, CSC or RAIC
- .10 CFFM - Canadian Forces Fire Marshal, 101 Colonel By Drive, 8NT MGen George R. Pearkes Bldg., Ottawa, Ontario K1A 0K2
- .11 CGSB - Canadian General Standards Board, Place du Portage, Phase III, 6B1, 11 Laurier Street, Hull, Quebec K1A 0S5 URL <http://w3.pwgsc.gc.ca/cgsb>

- .12 CISC - Canadian Institute of Steel Construction, 201 Consumers Road, Suite 300, Willowdale, Ontario M2J 4G8 URL <http://www.cisc-icca.ca>
- .13 CLA - Canadian Lumbermen's Association, 27 Goulburn Avenue, Ottawa, Ontario, K1N 8C7 URL <http://www.cla-ca.ca>
- .14 CRCA - Canadian Roofing Contractors Association, 155 Queen Street, Suite 1300, Ottawa, Ontario K1P 6L1 URL <http://www.roofingcanada.com>
- .15 CSA - Canadian Standards Association International, 178 Rexdale Blvd., Toronto, Ontario M9W 1R3 URL <http://www.csa-international.org>
- .16 CSC - Construction Specifications Canada, 120 Carlton Street, Suite 312, Toronto, Ontario M5A 4K2 URL <http://www.csc-dcc.ca>
- .17 CSDMA - Canadian Steel Door Manufacturers Association, One Yonge Street, Suite 1801, Toronto, Ontario M5E 1W7
- .18 CSSBI - Canadian Sheet Steel Building Institute, 652 Bishop St. N., Unit 2A, Cambridge, Ontario N3H 4V6 URL <http://www.cssbi.ca>
- .19 CWC - Canadian Wood Council, 1400 Blair Place, Suite 210, Ottawa, Ontario K1J 9B8 URL <http://www.cwc.ca>
- .20 EC - Environment Canada, Conservation and Protection, Inquiry Centre, 351 St. Joseph Blvd, Hull, Québec KIA 0H3 URL <http://www.ec.gc.ca>
- .21 MPI - The Master Painters Institute, 4090 Graveley Street, Burnaby, BC V5C 3T6 URL <http://www.paintinfo.com>
- .22 NABA - National Air Barrier Association, PO Box 2747, Winnipeg, Manitoba R3C 4E7 URL <http://www.naba.ca>
- .23 NLGA - National Lumber Grades Authority, 406-First Capital Place, 960 Quayside Drive, New Westminster, B.C. V3M 6G2
- .24 NRC - National Research Council, Building M-58, 1200 Montreal Road, Ottawa, Ontario K1A 0R6 URL <http://www.nrc.gc.ca>

- .25 NSPE National Society of Professional Engineers, 1420 King Street, Alexandria, VA U.S.A. 22314-2794 URL <http://www.nspe.org>
- .26 QPL - Qualification Program List, c/o Canadian General Standards Board, Place du Portage, Phase III, 6B1, 11 Laurier Street, Hull, Quebec K1A 1G6 URL <http://www.pwgsc.gc.ca/cgsb>
- .27 RAIC Royal Architectural Institute of Canada, 55 Murray Street, Suite 330, Ottawa, Ontario, K1N 5M3 URL <http://www.raic.org>
- .28 SCC - Standards Council of Canada, 270 Albert Street, Suite 2000, Ottawa, Ontario K1P 6N7 URL <http://www.scc.ca>
- .29 UL - Underwriters' Laboratories, 333 Pfingsten Road, Northbrook, Illinois, U.S.A. 60062-2096 URL <http://www.ul.com>
- .30 ULC - Underwriters' Laboratories of Canada, 7 Crouse Road, Toronto, Ontario M1R 3A9 URL <http://www.ulc.ca>

1.3 Reference
Standards

- .1 Within the text of the specifications, reference may be made to the following standards:
 - .1 AA - Aluminum Association
 - .2 ACI - American Concrete Institute
 - .3 ACEC - Association of Consulting Engineers of Canada
 - .4 AISC - American Institute of Steel Construction
 - .5 ANSI - American National Standards Institute
 - .6 API - American Petroleum Institute
 - .7 ASPT - Association for Asphalt Paving Technologists
 - .8 ASME - American Society of Mechanical Engineers
 - .9 ASTM - American Society for Testing and Materials
 - .10 AWMAC - Architectural Woodwork Manufacturers Association of Canada
 - .11 AWPA - American Wire Producers Association
 - .12 AWS - American Welding Society
 - .13 CCA - Canadian Construction Association
 - .14 CCDC - Canadian Construction Documents Committee
 - .15 CCME - Canadian Council of Ministers of the Environment
 - .16 CEC - Canadian Electrical Code (published by CSA)
 - .17 CEMA - Canadian Electrical Manufacturer's Association
 - .18 CEPA - Canadian Environmental Protection Act
 - .19 CGSB - Canadian General Standards Board
 - .20 CISC - Canadian Institute of Steel Construction

- .21 CLA - Canadian Lumberman's Association
- .22 CPCA - Canadian Painting Contractors' Association
- .23 CPCI - Canadian Prestressed Concrete Institute
- .24 CPMA - Canadian Paint Manufacturers Association
- .25 CRCA - Canadian Roofing Contractors Association
- .26 CSA - Canadian Standards Association
- .27 CSC - Construction Specifications Canada
- .28 CSSBI - Canadian Sheet Steel Building Institute
- .29 ECP - Environmental Choice Program
- .30 EIMA - EIFS Industry Manufacturer's Association
- .31 EPA - Environmental Protection Agency
- .32 FGMA - Flat Glass Manufacturers Association
- .33 FM - Factory Mutual Engineering Corporation
- .34 GRI - Geosynthetic Research Institute
- .35 ICEA - Insulated Cable Engineers Association
- .36 IEEE - Institute of Electrical and Electronic Engineers
- .37 IPCEA - Insulated Power Cable Engineers Association
- .38 LSGA - Laminators Safety Glass Association
- .39 MSS Manufacturers Standardization Society of the Valve and Fittings Industry
- .40 NAAMM - National Association of Architectural Metal Manufacturers
- .41 NBC - National Building Code
- .42 NEMA - National Electrical Manufacturers Association
- .43 NFPA - National Fire Protection Association
- .44 NHLA - National Hardwood Lumber Association
- .45 NLGA - National Lumber Grades Authority
- .46 NSPE - National Society of Professional Engineers
- .47 RAIC - Royal Architectural Institute of Canada
- .48 SSPC - Steel Structures Painting Council
- .49 TTMAC - Terrazzo, Tile and Marble Association of Canada
- .50 ULC - Underwriters' Laboratories of Canada

PART 2 – PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 - EXECUTION

.2 Not Used.

PART 2 – PRODUCTS

2.1 Not Used .1 Not Used.

PART 1 – GENERAL

- 1.1 Precedence .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 Installation .1 Provide temporary utilities controls in order and Removal to execute work expeditiously.
- .2 Remove from site all such work after use.
- .3 Remove temporary facilities from site when directed by Engineer.
- 1.3 Dewatering .1 Provide temporary drainage and pumping facilities to keep excavations and site free from standing water.
- 1.4 Water Supply .1 DND can provide, free of charge, temporary water for construction purposes.
- .2 Engineer will determine delivery points and quantitative limits. Engineer's written permission is required before any connection is made.
- .3 Provide, at no cost to DND, all equipment and temporary lines to bring these services to work area.
- .4 Supply of temporary services by DND is subject to DND requirements and may be discontinued by Engineer at any time without notice, without any acceptance of any liability for damage or delay caused by such withdrawal of temporary services.
- 1.5 Temporary Power .1 DND can provide, free of charge, temporary and Light electric power for construction purposes.
- .2 Engineer will determine delivery points and quantitative limits. Engineer's written permission is required before any connection is made. Connect to existing power supply in accordance with Canadian Electrical Code.
- .3 Provide, at no cost to DND, all equipment and temporary lines to bring these services to work area.

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| | .4 | Supply of temporary services by DND is subject to DND requirements and may be discontinued by Engineer at any time without notice, without any acceptance of any liability for damage or delay caused by such withdrawal of temporary services. |
| | .5 | Provide and maintain temporary lighting throughout project. Ensure level of illumination on all floors and stairs is not less than 162 lx. |
| | .6 | Electrical power and lighting systems installed under this Contract may be used for construction requirements only with prior approval of Engineer provided that guarantees are not affected. Make good damage to electrical system caused by use under this Contract. Replace lamps which have been used for more than 3 months. |
| 1.6 Temporary Communication Facilities | .1 | Provide and pay for temporary telephone, fax, data hook up, lines and equipment necessary for own use. |
| 1.7 Fire Protection | .1 | Provide and maintain temporary fire protection equipment during performance of Work required by governing codes, regulations and bylaws. |
| | .2 | Burning rubbish and construction waste materials is not permitted on site. |

PART 2 – PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 – EXECUTION

3.1 Not Used .1 Not Used.

PART 1 – GENERAL

<u>1.1 Section</u>	.1	Construction aids.
<u>Includes</u>	.2	Office and sheds.
	.3	Parking.
	.4	Project identification.
<u>1.2 Precedence</u>	.1	For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
<u>1.3 Related Sections</u>	.1	Section 01 51 00 - Temporary Utilities.
<u>1.4 References</u>	.1	Canadian General Standards Board (CGSB)
	.1	CGSB 1-GP-189M, Primer, Alkyd, Wood, Exterior.
	.2	CAN/CGSB-1.59-97, Alkyd Exterior Gloss Enamel.
	.2	Canadian Standards Association (CSA International)
	.1	CAN/CSA-A23.1-00, Concrete Materials and Methods for Concrete Construction/Method of Test for Concrete.
	.2	CSA O121-M1978 (R1998), Douglas Fir Plywood.
	.3	CSA Z321-96, Signs and Symbols for the Occupational Environment.
<u>1.5 Installation and Removal</u>	.1	Provide construction facilities in order to execute work expeditiously.
	.2	Remove from site all such work after use.
	.3	Remove temporary facilities from site when directed by DND Rep.
<u>1.6 Scaffolding</u>	.1	Design and construct scaffolding in accordance with CAN/CSA-S269.2-M87 (R1998).
	.2	Construct and maintain scaffolding in rigid, secure and safe manner.
	.3	Erect scaffolding independent of walls. Remove promptly when no longer required.

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| | .4 | Provide and maintain scaffolding, ramps, ladders, swing staging, platforms or temporary stairs. |
| <u>1.7 Hoisting</u> | .1 | Provide, operate and maintain hoists required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof. |
| | .2 | Hoists shall be operated by qualified operator. |
| <u>1.8 Elevators</u> | .1 | Designated existing and permanent elevators may be used by construction personnel and transporting of materials. Co-ordinate use with DND Rep. |
| | .2 | Provide protective coverings for finish surfaces of cars and entrances. |
| <u>1.9 Site Storage/Loading</u> | .1 | Confine work and operations of employees by by Contract Documents. Do not unreasonably encumber premises with products. |
| | .2 | Do not load or permit to load any part of Work with a weight or force that will endanger the Work. |
| <u>1.10 Construction Parking</u> | .1 | Parking will be permitted on site provided it does not disrupt performance of Work. |
| | .2 | Provide and maintain adequate access to project site. |
| | .3 | Build and maintain temporary roads where Parking indicated and provide snow removal during period of Work. |
| | .4 | If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads. |
| <u>1.11 Security</u> | .1 | Erect temporary site enclosure using new 1.2 m high snow fence wired to rolled steel "T" bar fence posts spaced at 2.4 m oc. Provide one lockable truck gate. Maintain fence in good repair. |
| | .2 | Provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays as directed by DND Rep. |

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| 1.12 Equipment,
Tool and Materials
<u>Storage</u> | .1 | Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials. |
| | .2 | Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities. |
| 1.13 Sanitary
<u>Facilities</u> | .1 | Provide sanitary facilities for work force in accordance with governing regulations and ordinances. |
| | .2 | Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition. |
| | .3 | Permanent facilities may be used on approval of DND Rep. |
| 1.14 Construction
<u>Signage</u> | .1 | Signs and notices for safety and instruction shall be in English or symbols and shall conform to Z321-96. |
| | .2 | Maintain approved signs and notices in good condition for duration of project, and dispose of off-site on completion of project or earlier if directed by DND Rep. |

PART 2 – PRODUCTS

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| <u>2.1 Not Used</u> | .1 | Not Used. |
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PART 3 – EXECUTION

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| <u>3.1 Not Used</u> | .1 | Not Used. |
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PART 1 – GENERAL

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| <p>1.1 Section
<u>Includes</u></p> | <p>.1</p> | <p>Progressive cleaning.</p> |
| | <p>.2</p> | <p>Final cleaning.</p> |
| <p>1.2 Precedence
<u></u></p> | <p>.1</p> | <p>For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.</p> |
| <p>1.3 Related Section
<u></u></p> | <p>.1</p> | <p>Section 01 77 00 - Closeout Procedures.</p> |
| <p>1.4 Project
<u>Cleanliness</u></p> | <p>.1</p> | <p>Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.</p> |
| | <p>.2</p> | <p>Remove waste materials from site at regularly scheduled times or dispose of as directed by DND Rep. Do not burn waste materials on site.</p> |
| | <p>.3</p> | <p>Clear snow and ice from access to building, bank/pile snow in designated areas only.</p> |
| | <p>.4</p> | <p>Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.</p> |
| | <p>.5</p> | <p>Remove all waste materials and debris from site and dispose off DND property. Provide following information to DND Rep:</p> |
| | <p>.1</p> | <p>Provide a Certificate of Disposal indicating the following:</p> |
| | <p>.1</p> | <p>Date of disposition.</p> |
| | <p>.2</p> | <p>Time of disposition.</p> |
| | <p>.3</p> | <p>Location of disposition.</p> |
| | <p>.4</p> | <p>Name of Vehicle operator.</p> |
| | <p>.5</p> | <p>Vehicle License Number.</p> |
| | <p>.6</p> | <p>Provide on-site containers for collection of waste materials and debris.</p> |
| | <p>.7</p> | <p>Provide and use clearly marked separate bins for recycling.</p> |
| | <p>.8</p> | <p>Remove waste material and debris from site at Cleanliness end of each working day.</p> |

- .9 Clean interior areas prior to start of finish work, and maintain areas free of dust and other contaminants during finishing operations.
- .10 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .11 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .12 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .13 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

1.5 Final Cleaning

- .1 In preparation for acceptance of the project, on an interim or final certificate of completion, perform final cleaning.
- .2 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .3 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .4 Prior to final review, remove surplus products, tools, construction machinery and equipment.
- .5 Remove waste products and debris other than that caused by Owner or other Contractors.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .8 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, and floors.

- .9 Clean lighting reflectors, lenses, and other lighting surfaces.
- .10 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .11 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .12 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .13 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .14 Remove dirt and other disfiguration from exterior surfaces.
- .15 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .16 Sweep and wash clean paved areas.
- .17 Clean equipment and fixtures to a sanitary condition; clean or replace filters of mechanical equipment.
- .18 Clean roofs, downspouts, and drainage systems.
- .19 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.
- .20 Remove snow and ice from access to building.
- .21 Leave entire work area neat and clean.

PART 2 – PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 – EXECUTION

3.1 Not Used .1 Not Used.

PART 1 – GENERAL

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| <u>1.1 Section Includes</u> | .1 | Administrative procedures preceding preliminary and final inspections of Work. |
| <u>1.2 Precedence</u> | .1 | For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual. |
| <u>1.3 Related Sections</u> | .1 | Section 01 78 00- Closeout Submittals. |
| <u>1.4 Inspection and Declaration</u> | .1 | <p>Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.</p> <p>.1 Notify DND Rep in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.</p> <p>.2 Request DND Rep's Inspection.</p> <p>.2 DND Rep's Inspection: DND Rep and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.</p> <p>.3 Completion: submit written certificate that following have been performed:</p> <p>.1 Work has been completed and inspected for compliance with Contract Documents.</p> <p>.2 Defects have been corrected and deficiencies have been completed.</p> <p>.3 Equipment and systems have been tested, adjusted and balanced and are fully operational.</p> <p>.4 Operation of systems have been demonstrated to Owner's personnel.</p> <p>.5 Work is complete and ready for Final Inspection.</p> <p>.4 Final Inspection: when items noted above are completed, request final inspection of Work by DND Rep. and Contractor. If Work is deemed incomplete by DND Rep, complete outstanding items and request re-inspection.</p> |

PART 2 – PRODUCTS

2.1 Not Used.....1 Not Used.

PART 3 – EXECUTION

3.1 Not Used.....1 Not Used.

PART 1 – GENERAL

1.1 Section	.1	As-built, samples, and specifications.
<u>Includes</u>	.2	Equipment and systems.
	.3	Product data, materials and finishes, and related information.
	.4	Operation and maintenance data.
	.5	Spare parts, special tools and maintenance materials.
	.6	Warranties and bonds.
	.7	Final site survey.
<u>1.2 Precedence</u>	.1	For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
<u>1.3 Related Sections</u>	.1	Section 01 77 00 - Closeout Procedures.
<u>1.4 Submission</u>	.1	Prepare instructions and data using personnel experienced in maintenance and operation of described products.
	.2	Prior to Substantial Performance of the Work, submit to the DND Rep, three final copies of operating and maintenance manuals in English.
	.3	Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
	.4	If requested, furnish evidence as to type, source and quality of products provided.
	.5	Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
	.6	Pay costs of transportation.

- 1.5 Format .1 Assemble, coordinate, bind and index required data into Operation and Maintenance Manual. Organize data in the form of an instructional manual.
- .2 Organize data into same numerical order as contract specifications.
- .3 Provide O & M manual in PDF format on CD. Manual is to be FULLY INDEXED or BOOKMARKED.
- .4 Provide 1:1 scaled CAD files in dwg format on CD.
- .5 Only If requested by the DND Rep provide O % M Manuals in Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .6 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .7 When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.
- .8 Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .9 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .10 Text: Manufacturer's printed data, or typewritten data.
- 1.6 Contents - Each Volume .1 Cover sheet containing:
.1 Date submitted.
.2 Project title, location and project number.
.3 Names and addresses of Contractor, and all Sub-contractors.
- .2 Table of Contents.
- .3 Warranties, guarantees.
- .4 Copies of approvals, and certificates.
- .5 Provide data as specified in individual Volume sections of this specification with schedule of products and systems, indexed to content of volume.

- .6 For each product or system: list names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
 - .7 Nameplate information including equipment number, make, size, capacity, model number and serial number.
 - .8 Parts list.
 - .9 Installation details.
 - .10 Operating instructions.
 - .11 Maintenance instructions for equipment.
 - .12 Maintenance instructions for finishes.
 - .13 One complete set of reviewed final shop drawings and product data.
 - .14 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
 - .15 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- 1.7 As-builts and
Samples
- .1 In addition to requirements in General Conditions, maintain one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to the Contract.
 - .5 Reviewed shop drawings, product data, and samples.
 - .6 Field test records.
 - .7 Inspection certificates.
 - .8 Manufacturer's certificates.
 - .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.

- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
 - .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
 - .5 Keep record documents and samples available for inspection by DND Rep.
 - .6 Identify each drawing in lower right hand corner in letters 12 mm high to read: "As Built Drawings", with Signature of Contractor and Date.
- 1.8 Recording
Actual Site
Conditions
- .1 Record information on set of black line opaque drawings, provided by DND Rep.
 - .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
 - .3 Maintain project record drawings and record accurately any deviations from Contract documents.
 - .4 Record information concurrently with construction progress to show all work as actually installed including change orders. Do not conceal Work until required information is recorded.
 - .5 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
 - .6 Specifications: legibly mark each item to record actual construction, including:

- .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
- .2 Changes made by Addenda and change orders.
- .7 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- 1.9 As Built Drawings .1 At completion of project and prior to final inspections, transfer as-built notations to second paper drawing set and submit to DND Rep for review.
 - .1 Prepare as-built drawings in AutoCAD format following same conventions used for original design drawings or use DND CAD Standards ie: levels, colors, weights, etc.
 - .2 In addition to as-built printed set, drawings shall be submitted in electronic file format (both AutoCAD and PDF) on CD or DVD media.
- 1.10 As Built Survey Drawings .1 Provide "As-Built Survey" with project deviations relative to DND survey monuments and obtain an accurate record of all manhole locations, catch basins, storm outfalls, sewer alignment, utilities (ie: elec, gas, telecom, etc), paint lines, roads, sidewalks, etc. pertinent to the project.
 - .2 Submit survey with final record drawing submission.
 - .3 Use GPS and Total station to survey new installations and surface features, including underground utility lines.
 - .4 All surveys to be performed by a Registered Saskatchewan Land Surveyor.
 - .5 Horizontal and vertical accuracy shall be minimum Third Order. Vertical and horizontal control in the vicinity of survey shall be used.
 - .6 All control point information and coordinate system (NAD 83-UTM) used must be obtained at 17 Wing Det Dundurn RP Op's Drafting cell prior to starting the survey.
 - .7 Accuracy: Horizontal - third order (Northing & Easting coordinates); Vertical (control points, Building floor elevation, Manhole & catch basin only), - third order. Vertical (all other features), total station elevations.

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| <p>.8</p> <p>.9</p> <p>.10</p> <p>.11</p> <p>.12</p> <p>.13</p> <p>.14</p> <p>.15</p>
<p>1.11 Water Valve
<u>Markers</u></p>
<p>1.12 Equipment and
<u>Systems</u></p> | <p>.1</p> <p>.2</p> <p>.3</p> <p>.4</p> | <p>Control points and temporary iron bars used, along with their coordinates and elevations must be indicated on each survey drawing.</p> <p>An electronic drawing copy of existing site will be provided by RP Op's Drafting cell.</p> <p>Provide one as-built hard copy drawing set. Submit final drawing set on full size media using DND CAD Standard Drawing Sheet.</p> <p>In addition to as-built printed set, drawings shall be submitted in electronic file format (both AutoCAD and PDF) on CD/DVD.</p> <p>Provide as-built electronic copy in AutoCAD 3D file format. Ensure all features are drawn in 3D (x y z).</p> <p>Follow DND CAD and GIS Standards for easy incorporation of data into existing GIS spatial database.</p> <p>Provide comma delimited ASCII text file for each survey point: Point Number, Easting, Northing, Elevation, Feature Class Name/Layer Name/Survey Code and optional description.</p> <p>For information regarding WCE GIS system contact: 17 Det Dundurn GIS Co-ordinator at (306) 492-2135 ext 4377.</p> <p>Install DND supplied blue marker stake at each water valve location. Markers are provided by DND RP Op's Water Treatment Plant @ loc: 4228.</p> <p>Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.</p> <p>Panel board circuit directories: provide electrical service characteristics, controls, and communications.</p> <p>Include installed colour coded wiring diagrams.</p> <p>Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation,</p> |
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control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide Contractor's coordination drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare Systems parts, current prices, and recommended quantities to be maintained in storage.
- .14 Include test and balancing reports.
- .15 Additional requirements: As specified in individual specification sections.

1.13 Materials and
Finishes

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

- .3 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional Requirements: as specified in individual specifications sections.
- 1.14 Spare Parts .1 Provide spare parts, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to location as directed; place and store.
- .4 Receive and catalogue all items. Submit inventory listing to DND Rep. Include approved listings in Maintenance Manual. Include the following:
 - .1 Part number.
 - .2 Identification of equipment or system for which parts are applicable.
 - .3 Installation instructions as applicable.
 - .4 Name and address of nearest supplier.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- 1.15 Maintenance Materials .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to location as directed; place and store.
- .4 Receive and catalogue all items. Submit inventory listing to DND Rep. Include approved listings in Maintenance Manual.
- .5 Identify, on carton or package, colour, room No., system or area as applicable where item is used
- .6 Obtain receipt for delivered products and submit prior to final payment.

- 1.16 Special Tools .1 Provide special tools, in quantities specified in individual specification section.
- .2 Provide items with tags identifying their associated function and equipment.
- .3 Deliver to location as directed; place and store.
- .4 Receive and catalogue all items. Submit inventory listing to DND Rep. Include approved listings in Maintenance Manual and Include the following:
- .1 Identification tag reference.
- .2 Identification of equipment or system for which tools are applicable.
- .3 Instruction on intended use of tool.
- 1.17 Storage, Handling and Protection .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and to satisfaction of DND Rep.
- 1.18 Warranties and Bonds .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- .4 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.

- .5 Verify that documents are in proper form, contain full information, and are notarized.
- .6 Co-execute submittals when required.
- .7 Retain warranties and bonds until time specified for submittal.

PART 2 – PRODUCTS

2.1 Not Used .1 Not Used.

PART 3 – EXECUTION

3.1 Not Used .1 Not Used.

PART 1 - GENERAL

- 1.1 Related .1 Excavating, Trenching Requirements and Backfilling.
- 1.2 References .1 American Society for Testing and Materials (ASTM)
.1 ASTM D 698-91(1998), Test Method for Laboratory
Compaction Characteristics of Soil Using Standard Effort (600 kN-
m/m³).
- 1.3 Existing .1 Known underground and surface utility lines and Conditions
buried objects are as indicated on site plan.
- .2 Refer to dewatering in Section 31 23 33.01 Excavating Trenching
and Backfilling.
- 1.4 Protection .1 Protect and/or transplant existing fencing trees, landscaping,
natural features, bench marks, buildings, pavement, surface or
underground utility lines which are to remain as directed by
Departmental Representative . If damaged, restore to original or
better condition unless directed otherwise.
- .2 Maintain access roads to prevent accumulation of construction
related debris on roads.

PART 2 - PRODUCTS

- 2.1 Materials .1 Fill material: Type 2 or 3 in accordance with of Section 31 23
33.01 - Excavating, Trenching and Backfilling.
- .2 Excavated or graded material existing on site may be suitable to
use as fill for grading work if approved by Departmental
Representative .

PART 3 - EXECUTION

- 3.1 Stripping of Topsoil .1 Do not handle topsoil while in wet or frozen condition or in any
in which soil structure is adversely affected as determined by
Departmental Representative.
- .2 Commence topsoil stripping of areas as indicated as directed by
Departmental Representative after area has been cleared of brush,
weeds and grasses and removed from site.
- .3 Strip topsoil to depths as indicated as directed by Departmental
Representative. Rototill weeds and grasses and retain as topsoil on
site. Avoid mixing topsoil with subsoil.

- .4 Stockpile in locations as indicated or directed by Departmental Representative. Stockpile height not to exceed 2 m.
- .5 Dispose of unused topsoil to location as indicated or as directed by Departmental Representative.
- 3.2 Grading .1 Rough grade to levels, profiles, and contours allowing for surface treatment as indicated.
- .2 Slope rough grade away from building 1:50 minimum as indicated or as directed (offers more choice).
- .3 Grade ditches to depth required for maximum run-off as indicated or as directed.
- .4 Prior to placing fill over existing ground, scarify surface to depth of 150 mm. Maintain fill and existing surface at approximately same moisture content to facilitate bonding.
- .5 Compact filled and disturbed areas to corrected maximum dry density maximum dry density to ASTM D 698, as follows:
 - .1 85% under landscaped areas.
 - .2 95 % under paved and walk areas.
- .6 Do not disturb soil within branch spread of trees or shrubs to remain.
- 3.3 Testing .1 Inspection and testing of soil compaction will be carried out by testing laboratory designated by ULC. Costs of tests will be paid under a set rate by Departmental Representative.
- .2 Submit testing procedure, frequency of tests, testing laboratory as designated by ULC or certified testing personnel to Departmental Representative for approval review.
- 3.4 Surplus Material .1 Remove surplus material and material unsuitable for fill, grading or landscaping off site as directed by Departmental Representative.

PART 1 - GENERAL

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| 1.1 Related Requirements | .1 | Section 01 33 00 - Submittal Procedures. |
| | .2 | Section 01 35 43 - Environmental Procedures. |
| | .3 | 01 74 21 - Construction/Demolition Waste Management and Disposal |
| 1.2 Measurement Procedure | .1 | Work performed under this section will be of prime contract. |
| | .2 | Excavated materials will be measured in cubic metres in their original location. |
| | .1 | Common excavation quantities measured will be actual volume removed within following limits: |
| | .1 | Width for trench excavation as indicated. |
| | .2 | Width for excavation for structures as indicated. |
| | .3 | Depth from ground elevation and surface of pavement or surface of sidewalk immediately prior to excavation, to elevation as indicated or as directed by Departmental Representative. |
| | .2 | Rock quantities measured will be actual volume removed within following limits: |
| | .1 | Width for trench excavation as indicated. |
| | .2 | Width for excavation for structures to be bounded by vertical planes up to 500 mm outside of and parallel to neat lines of footings as indicated. |
| | .3 | Depth from rock surface elevations immediately prior to excavation, to elevation as indicated. |
| | .4 | Where design elevation is less than 300 mm below original rock surface, depth will be considered to be 300 mm below original rock surface. |
| | .5 | Volume of individual boulders and rock fragments will be determined by measuring three maximum mutually perpendicular dimensions. |
| | .3 | Sheeting and bracing left in place on direction of Departmental Representative will be measured in square metres of surface area of plane surface of sheeting. |
| | .4 | Shoring, bracing, cofferdams, underpinning and de-watering of excavation will not be of plane surface of sheeting. Measured separately for payment. |
| | .5 | Backfilling to authorized excavation limits will be measured in cubic metres compacted in place for each type of material specified. |

- .6 Placing and spreading of topsoil will be measured for payment in cubic metres calculated from cross sections taken in area of excavation from original location.
- .1 If double handling of topsoil is directed by Departmental Representative (stockpiling and later placing), then quantities will be measured twice; on excavation from original location and on excavation from stockpile.

1.3 References

- .1 American Society for Testing and Materials International (ASTM)
- .1 ASTM C 117-04, Standard Test Method for Material Finer than 0.075 mm (No.200) Sieve in Mineral Aggregates by Washing.
- .2 ASTM C 136-05, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- .3 ASTM D 422-63/2002, Standard Test Method for Particle-Size Analysis of Soils.
- .4 ASTM D 698-00a/1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³) (600 kN-m/m³).
- .5 ASTM D 1557-02e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³) (2,700 kN-m/m³).
- .6 ASTM D 4318-05, Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- .2 Canadian General Standards Board (CGSB)
- .1 CAN/CGSB-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
- .2 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wire, Metric.
- .3 Canadian Standards Association (CSA International)
- .1 CAN/CSA-A3000-03, Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).
- .1 CSA-A3001-03, Cementitious Materials for Use in Concrete.
- .2 CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
- .4 U.S. Environmental Protection Agency (EPA)/Office of Water
- .1 EPA 832R92005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

1.4 Definitions .1

Excavation classes: two classes of excavation will be recognized; common excavation and rock excavation.

.1 Rock: solid material in excess of 1.00 m³ and which cannot be removed by means of heavy duty mechanical excavating equipment with 0.95 to 1.15 m³ bucket. Frozen material not classified as rock.

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

.2 Unclassified excavation: excavation of deposits of whatever character encountered in work.

.3 Topsoil:

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

.2 Material reasonably free from subsoil, clay lumps, brush, objectionable weeds, and other litter, and free from cobbles, stumps, roots, and other objectionable material larger than 25 millimeters in any dimension.

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

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

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

.7 Unsuitable materials:

.1 Weak, chemically unstable, and compressible materials.

.2 Frost susceptible materials:

.1 Fine grained soils with plasticity index less than 10 when tested to ASTM D 4318, and gradation within limits specified when tested to ASTM D 422 and ASTM C 136: Sieve sizes to CAN/CGSB-8.1 and CAN/CGSB-8.2.

.2 Table:

Sieve Designation	% Passing
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2.00 mm	100
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0.10 mm	45 - 100
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0.02 mm	10 - 80
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0.005 mm	0 - 45
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.3 Coarse grained soils containing more than 20 % by mass passing 0.075 mm sieve.

- .8 Unshrinkable fill: very weak mixture of cement, concrete aggregates and water that resists settlement when placed in utility trenches, and capable of being readily excavated.
- 1.5 Action and Information
- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Quality Control: in accordance with Section 01 45 00 - Quality Control:
- .1 Submit condition survey of existing conditions as described in EXISTING CONDITIONS article of this Section.
- .2 Submit for review by Departmental Representative proposed dewatering and heave prevention methods as described in PART 3 of this Section.
- .3 Submit to Departmental Representative written notice at least 7 days prior to excavation work, to ensure cross sections are taken.
- .4 Submit to Departmental Representative written notice when bottom of excavation is reached.
- .5 Submit to Departmental Representative testing results or inspection report as described in PART 3 of this Section.
- .3 Preconstruction Submittals:
- .1 Submit construction equipment list for major equipment to be used in this section prior to start of Work.
- .2 Submit records of underground utility locates, indicating: location plan of existing utilities as found in field, clearance record from utility authority, and location plan of relocated and abandoned services, as required.
- .4 Samples:
- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Inform Departmental Representative at least 4 weeks prior to beginning Work, of proposed source of fill or unshrinkable fill materials and provide access for sampling.
- .3 Submit 70 kg samples of type of fill or unshrinkable fill specified including representative samples of excavated material.
- .4 Ship samples prepaid to Departmental Representative, in tightly closed containers to prevent contamination and exposure to elements.
- .5 At least 4 weeks prior to beginning Work, inform Departmental Representative source of fly ash and submit samples to Departmental Representative.
- .1 Do not change source of Fly Ash without written approval of Departmental Representative.

1.6 Quality Assurance.1

Qualification Statement: submit proof of insurance coverage for professional liability.

- .2 Where Departmental Representative is employee of Contractor, submit proof that Work by Departmental Representative is included in Contractor's insurance coverage.
- .3 Submit design and supporting data at least 2 weeks prior to beginning Work.
- .4 Design and supporting data submitted to bear stamp and signature of qualified professional engineer registered or licensed in Province of Saskatchewan, Canada.
- .5 Keep design and supporting data on site.
- .6 Engage services of qualified professional Engineer who is registered or licensed in be carried out to design and inspect cofferdams, shoring, bracing and underpinning required for Work.
- .7 Do not use soil material until written report of soil test results are reviewed and approved by Departmental Representative.
- .8 Health and Safety Requirements:
 - .1 Do construction occupational health and safety in accordance with Section 01 35 30 - Health and Safety Requirements.

1.7 Waste Management and Disposal

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21- Construction/Demolition Waste Management and Disposal.
- .2 Divert excess aggregate materials from landfill to local recycling facility for reuse as directed by Departmental Representative.

1.8 Existing Conditions

- .1 Buried services:
 - .1 Before commencing work verify and establish location of buried services on and adjacent to site.
 - .2 Arrange with appropriate authority for relocation of buried services that interfere with execution of work: pay costs of relocating services.
 - .3 Remove obsolete buried services within 2 m of foundations: cap cut-offs.
 - .4 Size, depth and location of existing utilities and structures as indicated are for guidance only. Completeness and accuracy are not guaranteed.

- .5 Prior to beginning excavation Work, notify applicable Departmental Representative or authorities having jurisdiction and establish location and state of use of buried utilities and structures.
 - .6 Confirm locations of buried utilities by careful test excavations or soil hydro vac methods.
 - .7 Maintain and protect from damage, water, sewer, gas, electric, telephone and other utilities and structures encountered as indicated.
 - .8 Where utility lines or structures exist in area of excavation, obtain direction of Departmental Representative before removing or re-routing. Costs for such Work to be finalized with Departmental Representative.
 - .9 Record location of maintained, re-routed and abandoned underground lines.
 - .10 Confirm locations of recent excavations adjacent to area of excavation.
- .2 Existing buildings and surface features:
- .1 Conduct, with Departmental Representative, condition survey of existing buildings, trees and other plants, lawns, fencing, service poles, wires, rail tracks, pavement, survey bench marks and monuments which may be affected by Work.
 - .2 Protect existing buildings and surface features from damage while Work is in progress. In event of damage, immediately make repair as directed by Departmental Representative
 - .3 Where required for excavation, cut roots or branches as directed by Departmental Representative.

PART 2 - PRODUCTS

PART 3 - EXECUTION

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| <p>3.1 Temporary
Erosion and
Sedimentation
Control</p> <hr/> | <p>.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 and sediment and erosion control plan, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.</p> <p>.2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.</p> |
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| | .3 | Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal. |
| 3.2 Site Preparation | .1 | Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated. |
| | .2 | Cut pavement or sidewalk neatly along limits of proposed excavation in order that surface may break evenly and cleanly. |
| 3.3 Preparation/Protect | .1 | Protect existing features in accordance with Departmental and applicable local regulations. |
| | .2 | Keep excavations clean, free of standing water, and loose soil. |
| | .3 | Where soil is subject to significant volume change due to change in moisture content, cover and protect to Departmental Representative approval. |
| | .4 | Protect natural and man-made features required to remain undisturbed. Unless otherwise indicated or located in an area to be occupied by new construction, protect existing trees from damage. |
| | .5 | Protect buried services that are required to remain undisturbed. |
| 3.4 Stripping of Topsoil | .1 | Begin topsoil stripping of areas as indicated or as directed by Departmental Representative after area has been cleared of brush, weeds and grasses and removed from site. |
| | .2 | Strip topsoil to depths as indicated or as directed by Departmental Representative. |
| | .1 | Do not mix topsoil with subsoil. |
| | .3 | Stockpile in locations as indicated or as directed by Departmental Representative. |
| | .1 | Stockpile height not to exceed 2 m and should be protected from erosion. |
| | .4 | Dispose of unused topsoil to location as indicated or as directed by Departmental Representative. |
| 3.5 Stockpiling | .1 | Stockpile fill materials in areas designated by Departmental Representative. |
| | .1 | Stockpile granular materials in manner to prevent segregation. |
| | .2 | Protect fill materials from contamination. |

- .3 Implement sufficient erosion and sediment control measures to prevent sediment release off construction boundaries and into water bodies.

3.6 Cofferdams,
Shoring, Bracing
and Underpinning

- .1 Maintain sides and slopes of excavations in safe condition by appropriate methods and in accordance with Section 01 35 30 - Health and Safety Requirements and Health and Safety Act for the Province of Saskatchewan.
 - .1 Where conditions are unstable, Departmental Representative to verify and advise methods.
- .2 Obtain permit from authority having jurisdiction for temporary diversion of water course.
- .3 Construct temporary Works to depths, heights and locations as indicated or directed by Departmental Representative.
- .4 During backfill operation:
 - .1 Unless otherwise indicated or directed by Departmental Representative, remove sheeting and shoring from excavations.
 - .2 Do not remove bracing until backfilling has reached respective levels of such bracing.
 - .3 Pull sheeting in increments that will ensure compacted backfill is maintained at elevation at least 500 mm above toe of sheeting.
- .5 When sheeting is required to remain in place, cut off tops at elevations as indicated.
- .6 Upon completion of substructure construction:
 - .1 Remove cofferdams, shoring and bracing.
 - .2 Remove excess materials from site and restore watercourses as indicated or as directed by Departmental Representative.

3.7 Dewatering and
Heave Prevention

- .1 Keep excavations free of water while Work is in progress.
- .2 Avoid excavation below groundwater table if quick condition or heave is likely to occur.
 - .1 Prevent piping or bottom heave of excavations by groundwater lowering, sheet pile cut-offs, or other means.
- .3 Protect open excavations against flooding and damage due to surface run-off.

- .4 Dispose of water in accordance with Section 01 35 43 - Environmental Procedures to approved collection and in manner not detrimental to public and private property, or portion of Work completed or under construction.
 - .1 Provide and maintain temporary drainage ditches and other diversions outside of excavation limits.
 - .5 Provide flocculation tanks, settling basins, or other treatment facilities to remove suspended solids or other materials before discharging to storm sewers, watercourses or drainage areas.
- 3.8 Excavation
- .1 Advise Departmental Representative at least 7 days in advance of excavation operations for initial cross sections to be taken.
 - .2 Excavate to lines, grades, elevations and dimensions as indicated or as directed by Departmental Representative.
 - .3 Remove concrete/ masonry/ paving walks /demolished foundations and rubble and other obstructions encountered during excavation.
 - .4 Excavation must not interfere with bearing capacity of adjacent foundations.
 - .5 Do not disturb soil within branch spread of trees or shrubs that are to remain.
 - .1 If excavating through roots, excavate by hand and cut roots with sharp axe or saw.
 - .6 For trench excavation, unless otherwise authorized by Departmental Representative in writing, do not excavate more than 30 m of trench in advance of installation operations and do not leave open more than 15 m at end of day's operation.
 - .7 Keep excavated and stockpiled materials safe distance away from edge of trench as directed by Departmental Representative.
 - .8 Restrict vehicle operations directly adjacent to open trenches.
 - .9 Dispose of surplus and unsuitable excavated material in approved location on site.
 - .10 Do not obstruct flow of surface drainage or natural watercourses.
 - .11 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft or organic matter.

- .12 Notify Departmental Representative when bottom of excavation is reached.
- .13 Obtain Departmental Representative's approval of completed excavation.
- .14 Remove unsuitable material from trench bottom including those that extend below required elevations to extent and depth as directed by Departmental Representative.
- .15 Correct unauthorized over-excavation as follows:
 - .1 Fill under bearing surfaces and footings with concrete specified for footings or fill concrete Type 2 fill compacted to not less than 100% of corrected Standard Proctor maximum dry density.
 - .2 Fill under other areas with Type 2 fill compacted to not less than 95 % of corrected Standard Proctor maximum dry density.
- .16 Hand trim, make firm and remove loose material and debris from excavations.
 - .1 Where material at bottom of excavation is disturbed, compact foundation soil to density at least equal to undisturbed soil.
 - .2 Clean out rock seams and fill with concrete mortar or grout to approval of Departmental Representative.
- .17 Install geotextiles as directed by Departmental Representative.

3.9 Fill Types and Compaction

- .1 Use types of fill as indicated or specified below. Compaction densities are percentages of maximum densities obtained from ASTM D 698 and ASTM D 1557.
 - .1 Exterior side of perimeter walls: use Type 3 fill to subgrade level. Compact to 95% of corrected maximum dry density.
 - .2 Within building area: use Type 2 to underside of base course for floor slabs. Compact to 100 % of corrected maximum dry density.
 - .3 Under concrete slabs: provide 150 mm compacted thickness base course of Type 1 fill topped with shearmat filler as indicated to underside of slab. Compact base course to 100 %.
 - .4 Retaining walls: use Type 2 fill to subgrade level on high side for minimum 500 mm from wall and compact to 95 %. For remaining portion, use Type 3 fill compacted to 95 %.
 - .5 Place unshrinkable fill in areas as indicated.

- 3.10 Bedding and Surround of Underground Services .1 Place and compact granular material for bedding and surround of underground services as indicated.
- .2 Place bedding and surround material in unfrozen condition.
- 3.11 Backfilling .1 Do not proceed with backfilling operations until completion of following:
- .1 Departmental Representative has inspected and approved installations.
- .2 Departmental Representative has inspected and approved of construction below finish grade.
- .3 Inspection, testing, approval, and recording location of underground utilities.
- .4 Removal of concrete formwork.
- .5 Removal of shoring and bracing; backfilling of voids with satisfactory soil material.
- .2 Areas to be backfilled to be free from debris, snow, ice, water and frozen ground.
- .3 Do not use backfill material which is frozen or contains ice, snow or debris.
- .4 Place backfill material in uniform layers not exceeding 150 mm compacted thickness up to grades indicated. Compact each layer before placing succeeding layer.
- .5 Backfilling around installations:
- .1 Place bedding and surround material as specified elsewhere.
- .2 Do not backfill around or over cast-in-place concrete within 24 hours after placing of concrete.
- .3 Place layers simultaneously on both sides of installed Work to equalize loading. Difference not to exceed 0.60 m.
- .4 Where temporary unbalanced earth pressures are liable to develop on walls or other structures:
- .1 Permit concrete to cure for minimum 14 days or until it has sufficient strength to withstand earth and compaction pressure and approval obtained from Departmental Representative or:
- .2 If approved by Departmental Representative, erect bracing or shoring to counteract unbalance, and leave in place until removal is approved by Departmental Representative.
- .6 Place unshrinkable fill in areas as indicated.

- .7 Consolidate and level unshrinkable fill with internal vibrators.
- .8 Install filter system in backfill as indicated or as directed by Departmental Representative.
- 3.12 Restoration .1 Upon completion of Work, remove waste materials and debris in accordance to Section 01 74 21 - Construction/Demolition Waste Management and Disposal, trim slopes, and correct defects as directed by Departmental Representative.
- .2 Replace topsoil as indicated or as directed by Departmental Representative.
- .3 Reinstall lawns to elevation which existed before excavation.
- .4 Reinstall pavements and sidewalks disturbed by excavation to thickness, structure and elevation which existed before excavation.
- .5 Clean and reinstall areas affected by Work as directed by Departmental Representative.
- .6 Use temporary plating to support traffic loads over unshrinkable fill for initial 24 hours.
- .7 Protect newly graded areas from traffic and erosion and maintain free of trash or debris.

PART 1 - GENERAL

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| <u>1.1 Related Requirement</u> | .1 | Section. |
| <u>1.2 Action and Informational Submittals</u> | .1 | Product Data: |
| | .1 | Submit product data in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Provide product data for: |
| | .1 | Seed. |
| | .2 | Fertilizer. |
| <u>1.3 Quality Assurance</u> | .1 | Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties. |
| | .2 | Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements. |
| | .3 | Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements. Comply with Section. |
| <u>1.4 Scheduling</u> | .1 | Schedule completion of work immediately prior to hydraulic mulching. |
| <u>1.5 Waste Management and Disposal</u> | .1 | Separate and recycle waste materials in accordance with Section 01 74 21- Construction/Demolition Waste Management and Disposal. |
| | .2 | Divert unused fertilizer from landfill to official hazardous material collections site approved by Departmental Representative. |
| | .3 | Do not dispose of unused fertilizer into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard. |

PART 2 - PRODUCTS

<u>2.1 Grass Seed</u>	.1	Canada "Certified" seed, "Canada No. 1 2 Lawn Grass Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations". .1 Grass seed mixture. .1 % % % %.
	.2	Canada "Certified" seed, "Canada No. 1 2 Ground Cover Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations". .1 Grass seed mixture. .1 % % % %.
	.3	In packages individually labelled in accordance with "Seeds Regulations" and indicating name of supplier.
<u>2.2 Water</u>	.1	Free of impurities that would inhibit germination and growth.
	.2	Supplied by Departmental Representative Consultant at designated source.
<u>2.3 Fertilizer</u>	.1	To Canada "Fertilizers Act" and "Fertilizers Regulations".

PART 3 - EXECUTION

<u>3.1 Quality of Work</u>	.1	Do not perform work under adverse field conditions as determined by Departmental Representative.
	.2	Remove and dispose of weeds; debris; stones 50 mm in diameter and larger; soil contaminated by oil, gasoline and other deleterious materials; to a licenced contaminated soils disposal site in location as directed by Departmental Representative
	.2	Complete synthetic fertilizer with guaranteed minimum analysis as specified.
<u>3.2 Seed Bed Preparation</u>	.1	Verify that grades are correct. If discrepancies occur, notify Departmental Representative DCC Representative and do not commence work until instructed by Departmental Representative.
	.2	Fine grade surface free of humps and hollows to smooth, even grade, to contours and elevations indicated to tolerance of plus or minus 15 mm, surface draining naturally.

- .3 Cultivate fine grade approved by Departmental Representative to 25 mm depth immediately prior to seeding.

3.3 Seed Placement .1

For mechanical seeding:

.1 Use "Brillion" type mechanical landscape seeder which accurately places seed at specified depth and rate and rolls in single operation.

.2 Use equipment and method acceptable to Departmental Representative.

- .2 For manual seeding:

.1 Use "Cyclone" type manually operated seeder.

.2 Use manually operated, water ballast, landscaping type, smooth steel drum roller. Ballast as directed by Departmental Representative.

.3 Use equipment and method acceptable to Departmental Representative.

- .3 Blend applications 150 mm into adjacent grass areas previous applications to form uniform surfaces.

- .4 Sow half of required amount of seed in one direction and remainder at right angles as applicable.

- .5 Incorporate seed by light raking in cross directions.

- .6 Consolidate mechanically seeded areas by rolling area if soil conditions warrant or if directed by Departmental Representative with equipment approved by Departmental Representative immediately after seeding.

3.4 Seed Protection .1

Cover seeded slopes where 3:1 or greater with on Slopes turf blanket. Roll blanket down slopes without stretching or pulling.

- .2 Lay blanket smoothly on soil surface, burying tip end of each section in narrow 150 mm trench. Leave 300 mm overlap from top roll over bottom roll. Leave 100 mm overlap over adjacent section.

- .3 Staple outside edges and overlaps at 500 mm intervals and at intermediate points to ensure close contact between blanket and soil.

3.5 Maintenance .1
During Establishment
Period

Perform following operations from time of seed application until acceptance by Departmental Representative:

- .1 Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.
- .2 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
- .3 Cut grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass as directed by Departmental Representative.
- .4 Fertilize seeded areas after first cutting in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
- .5 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.
 - .1 If chemical means are used, comply with Section 31 19.13 – Chemical Control of Vegetation.

3.6 Final Acceptance .1

Seeded areas will be accepted by Departmental Representative provided that:

- .1 Areas are uniformly established and turf is free of rutted, eroded, bare or dead spots and free of weeds.
- .2 Areas have been cut at least twice.
- .3 Areas have been fertilized.

.2 Areas seeded in fall will be accepted in following spring, one month after start of growing season provided acceptance conditions are fulfilled.

3.7 Maintenance .1
During Warranty
Period

Perform following operations from time of acceptance until end of warranty period.

- .1 Water seeded area to maintain optimum soil moisture level for continued growth of grass. Control watering to prevent washouts.
- .2 Repair and reseed dead or bare spots to satisfaction of Departmental Representative
- .3 Cut grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass as directed by Departmental Representative.
- .4 Fertilize seeded areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well
- .5 Control weeds by mechanical means utilizing acceptable integrated pest management practices.

3.8 Cleaning .1

Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

PART 1 - GENERAL

1.1 Related
Requirements

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| <u>1.2 Measurement
Procedures</u> | .1 | Measure hydraulic seeding square metres of actual surface area for:
.1 Grass mixture including fertilizer.
.2 Legume mixture including fertilizer.
.3 Areas of blending into existing turf grass will not be measured for payment. |
| | .2 | Measure maintenance during establishment period and warranty period of areas seeded in square metres. |
| <u>1.3 Action and
Information
Submittals</u> | .1 | Product Data.
.1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Provide product data for:
.1 Seed.
.2 Mulch.
.3 Tackifier.
.4 Fertilizer. |
| | .3 | Submit in writing to Departmental Representative days prior to commencing work:
.1 Volume capacity of hydraulic seeder in litres.
.2 Amount of material to be used per tank based on volume.
.3 Number of tank loads required per hectare to apply specified slurry mixture per hectare. |
| <u>1.4 Quality Assurance</u> | .1 | Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties. |
| | .2 | Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements. |
| | .3 | Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements. Comply with Section. |
| <u>1.5 Scheduling</u> | .1 | Schedule hydraulic seeding to coincide with preparation of soil surface. |

- .2 Schedule hydraulic seeding using grass mixtures and mixtures containing Crown vetch or Trefoil between dates recommended by the Provincial Agricultural Department.
- 1.6 Waste Management and Disposal
 - .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.
 - .2 Divert unused fertilizer from landfill to official hazardous material collections site approved by Departmental Representative.
 - .3 Do not dispose of unused fertilizer into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

PART 2 - PRODUCTS

- 2.1 Materials
 - .1 Seed: "Canada pedigreed grade" in accordance with Government of Canada Seeds Act and Regulations.
 - .1 Grass mixture: "Certified", "Canada No.1 Lawn Grass Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
 - .1 Legume mixture: "Certified", "Specialty Seed", "Canada No. 1 " in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
 - .2 Mulch: specially manufactured for use in hydraulic seeding equipment, non-toxic, water activated, green colouring, free of germination and growth inhibiting factors with following properties:
 - .1 Type I mulch:
 - .1 Made from wood cellulose fibre.
 - .2 Organic matter content: 95% plus or minus 0.5%.
 - .3 Value of pH: 6.0.
 - .4 Potential water absorption: 900%.
 - .2 Type II mulch:
 - .1 Made from newsprint, raw cotton fibre and straw, processed to produce fibre lengths of 15 mm minimum and 25 mm maximum. Greater proportions of ingredients to be straw.
 - .3 Tackier: water dilatable, liquid dispersion water soluble vegetable carbohydrate powder.
 - .4 Water: free of impurities that would inhibit germination and growth.

- .5 Fertilizer:
 - .1 To Canada "Fertilizers Act" and "Fertilizers Regulations".
 - .2 Complete synthetic, slow release with 35% of nitrogen content in water-insoluble form.
- .6 Inoculants: inoculant containers to be tagged with expiry date.

PART 3 - EXECUTION

- 3.1 Workmanship
 - .1 Do not spray onto structures, signs, guide rails, fences, plant material, utilities and other than surfaces intended.
 - .2 Clean-up immediately, any material sprayed where not intended, to satisfaction of Departmental Representative.
 - .3 Do not perform work under adverse field conditions such as wind speeds over 10 km/h, frozen ground or ground covered with snow, ice or standing water.
 - .4 Protect seeded areas from trespass until plants are established.
- 3.2 Preparation of Surfaces
 - .1 Fine grade areas to be seeded free of humps and hollows. Ensure areas are free of deleterious and refuse materials.
 - .2 Cultivated areas identified as requiring cultivation to depth of 25mm.
 - .3 Ensure areas to be seeded are moist to depth of 150 mm before seeding.
 - .4 Obtain Departmental Representative approval of grade and topsoil depth before starting to seed.
- 3.3 Preparation of Slurry
 - .1 Measure quantities of materials by weight or weight-calibrated volume measurement satisfactory to Departmental Representative. Supply equipment required for this work.
 - .2 Charge required water into seeder. Add material into hydraulic seeder under agitation. Pulverize mulch and charge slowly into seeder.
 - .3 After all materials are in the seeder and well mixed, charge tackier into seeder and mix thoroughly to complete slurry.

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| <p>3.4 Slurry
<u>Application</u></p> | <p>.1</p> | <p>Hydraulic seeding equipment:</p> <ul style="list-style-type: none"> .1 Slurry tank. .2 Agitation system for slurry to be capable of operating during charging of tank and during seeding, consisting of recirculation of slurry and/or mechanical agitation method. .3 Capable of seeding by 50 m hand operated hoses and appropriate nozzles. .4 Tank volume to be certified by certifying authority and identified by authorities "Volume Certification Plate". <ul style="list-style-type: none"> .1 Slurry mixture applied per hectare: <ul style="list-style-type: none"> .1 Seed: 200-300 kg. .5 Mulch: 1500 kg. .6 Tackifier: 300 kg. .7 Water: quantity as required to form slurry in accordance with manufacturer's recommendations. .8 Fertilizer: Type 1, 1000 kg. |
| | <p>.3</p> | <p>Apply slurry uniformly, at optimum angle of application for adherence to surfaces and germination of seed.</p> <ul style="list-style-type: none"> .1 Using correct nozzle for application. .2 Using hoses for surfaces difficult to reach and to control application. |
| | <p>.4</p> | <p>Blend application 300 mm into adjacent grass areas or sodded areas previous applications to form uniform surfaces.</p> |
| | <p>.5</p> | <p>Re-apply where application is not uniform.</p> |
| | <p>.6</p> | <p>Remove slurry from items and areas not designated to be sprayed.</p> |
| | <p>.7</p> | <p>Protect seeded areas from trespass satisfactory to Departmental Representative.</p> |
| | <p>.8</p> | <p>Remove protection devices as directed by Departmental Representative.</p> |
| <p>3.5 Maintenance
<u>Period</u></p> | <p>.1</p> | <p>Perform following operations from time of seed application until acceptance by Departmental Representative.</p> |
| | <p>.2</p> | <p>Grass Mixture:</p> |

- .1 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
- .2 Mow grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass as directed by Departmental Representative.
- .3 Fertilize seeded areas after first cutting or 10 weeks after germination provided plants have mature true leaves in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles ;water in well.
- .4 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.
 - .1 If chemical means are used, comply with Section 31 31 19.13 - Chemical Control of Vegetation.
- .5 Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.
 - .1 Repair minor dead and bare spots as determined by Departmental Representative to allow establishment of seed prior to acceptance.
 - .2 Negotiate repair of major dead and bare spots as determined by Departmental Representative in accordance with site climatic averages and recommendations of local agricultural governmental representative.
- .3 Legume Mixture: Mow legume mixtures to 100mm whenever height reaches 200 mm and as follows:
 - .1 Do not mow within period commencing 3 weeks before and ending 3 weeks after first severe, average fall frost date and 3 weeks after actual severe fall frost.
 - .2 When mowing after first severe fall frost, mow at a height of not less than 300 mm.
- .4 Remove clippings which will smother plants as directed by Departmental Representative.
- .5 Water seeded areas to maintain optimum soil moisture level for germination and continued growth. Control watering to prevent washouts.

3.6 Acceptance

- .1 Seeded areas will be accepted by Departmental Representative provided that:
 - .1 Plants are uniformly established. Seeded areas are free of rutted, eroded, bare or dead spots.
 - .2 Areas have been mown at least twice.
 - .3 Areas have been fertilized.

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| | .2 | Areas seeded in fall will achieve final acceptance in following spring, one month after start of growing season provided acceptance conditions are fulfilled. |
| 3.7 Maintenance
During Warranty
<u>Period</u> | .1 | Perform following operations from time of acceptance until end of warranty period:
.1 Repair and reseed dead or bare spots to satisfaction of Departmental Representative |
| | .2 | Mow areas seeded, remove clippings, as directed by Departmental Representative. |
| | .3 | Fertilize seeded areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well. |
| 3.8 Cleaning | .1 | Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers. |

PART 1 - GENERAL

<u>1.1 Related Requirements</u>	.1	Section.
<u>1.2 Measurement Procedures</u>	.1	<p>Payment for sodding will be made at unit price bid of actual area surface measurements taken and computed by Departmental Representative for:</p> <p>.1 Turf Grass Nursery Sod Type per square metre.</p> <p>.2 Commercial Grade Turf Grass Nursery Sod per square metre.</p> <p>.3 Pegged Turf Grass Nursery Sod Type Commercial Grade Turf Grass Nursery Sod per square metre.</p>
<u>1.3 Action and Information Submittals</u>	.1	<p>Samples.</p> <p>.1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.</p> <p>.2 Submit:</p> <p>.1 Sod for each type specified.</p> <p>.1 Install approved samples in one square metre mock-ups and maintain in accordance with maintenance requirements during establishment period.</p> <p>.2 Bio-degradable geotextile fabric.</p> <p>.3 Obtain approval of samples by Departmental Representative.</p>
<u>1.4 Quality Assurance</u>	.1	Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
	.2	Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
	.3	Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements. Comply with Section.
<u>1.5 Scheduling</u>	.1	Schedule sod laying to coincide with preparation of soil surface.
	.2	Schedule sod installation when frost is not present in ground.
<u>1.6 Waste Management and Disposal</u>	.1	Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

- .2 Divert unused fertilizer from landfill to official hazardous material collections site approved by Departmental Representative.
- .3 Do not dispose of unused fertilizer into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

PART 2 - PRODUCTS

2.1 Materials .1

Number One Turf Grass Nursery Sod: sod that has been especially sown and cultivated in nursery fields as turf grass crop.

.1 Turf Grass Nursery Sod types:

.1 Number One Kentucky Bluegrass Sod: Nursery Sod grown solely from seed of cultivars of Kentucky Bluegrass, containing not less than 50% Kentucky Bluegrass cultivars.

.2 Number One Kentucky Bluegrass Sod Fescue Sod: Nursery Sod grown solely from seed mixture of cultivars of Kentucky Bluegrass and Chewing Fescue or Creeping Red Fescue, containing not less than 40% Kentucky Bluegrass cultivars and 30% Chewing Fescue or Creeping Red Fescue cultivars.

.3 Number One Named Cultivars: Nursery Sod grown from certified seed.

.2 Turf Grass Nursery Sod quality:

.1 Not more than 2 broadleaf weeds or 10 other weeds per 40 square metres.

.2 Density of sod sufficient so that no soil is visible from height of 1500 mm when mown to height of 50 mm.

.3 Mowing height limit: 35 to 65 mm. .4 Soil portion of sod: 6 to 15 mm in thickness.

.3 Sod establishment support:

.1 Geotextile fabric: biodegradable, mm square mesh.

.2 Wooden pegs: 17 x 8 x 200mm.

.3 Biodegradable starch pegs: 17 x 8 x 200 mm.

.4 Water:

.1 Supplied by Departmental Representative at designated source.

.5 Fertilizer:

.1 To Canada "Fertilizers Act" and "Fertilizers Regulations".

.2 Complete, synthetic, slow release with 65 % of nitrogen content in water-insoluble form.

- 2.2 Source Quality Control .1 Obtain approval from Departmental Representative of sod at source.
- .2 When proposed source of sod is approved, use no other source without written authorization from Departmental Representative.

PART 3 - EXECUTION

- 3.1 Preparation .1 Verify that grades are correct and prepared in accordance with Section 32 91 19.13 Topsoil Placement and Grading. If discrepancies occur, notify Departmental Representative and do not commence work until instructed by Departmental Representative.
- .2 Do not perform work under adverse field conditions such as frozen soil, excessively wet soil or soil covered with snow, ice, or standing water.
- .3 Fine grade surface free of humps and hollows to smooth, even grade, to contours and elevations indicated, to tolerance of plus or minus 8 mm, for Turf Grass Nursery Sod and plus or minus 15 mm for Commercial Grade Turf Grass Nursery, surface to drain naturally.
- .4 Remove and dispose of weeds; debris; stones 50 mm in diameter and larger; soil contaminated by oil, gasoline and other deleterious materials; off site in location as directed by Departmental Representative.
- 3.2 Sod Placement .1 Lay sod within 24 hours of being lifted if air temperature exceeds 20 degrees C.
- .2 Lay sod sections in rows, joints staggered. Butt sections closely without overlapping or leaving gaps between sections. Cut out irregular or thin sections with sharp implements.
- .3 Roll sod as directed by Departmental Representative. Provide close contact between sod and soil by light rolling. Use of heavy roller to correct irregularities in grade is not permitted.
- 3.3 Sod Placement On Slopes and Pegging .1 Install and secure geotextile fabric in areas indicated, in accordance with manufacturer's instructions.
- .2 Start laying sod at bottom of slopes.

- .3 Peg sod on slopes steeper than 3horizontal to 1 vertical, within 1 m of catch basins and within 1 m of drainage channels and ditches to following pattern:
 - .1 100 mm below top edge at 200 mm on centre for first sod sections along contours of slopes.
 - .2 Not less than 3-6 pegs per square metre.
 - .3 Not less than 6-9 pegs per square metre in drainage structures. Adjust pattern as directed by Departmental Representative.
 - .4 Drive pegs to 20 mm above soil surface of sod sections.
- 3.4 Fertilizing Program .1 Fertilize during establishment and warranty periods.
- 3.5 Maintenance During Establishment Period .1 Perform following operations from time of installation until acceptance.
 - .2 Water sodded areas in sufficient quantities and at frequency required to maintain optimum soil moisture condition to depth of 75 to 100 mm.
 - .3 Cut grass to 50 mm when or prior to it reaching height of 75 mm. Remove clippings which will smother grassed areas as directed by Departmental Representative .
 - .4 Maintain sodded areas weed free 95%.
 - .5 Fertilize areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
- 3.6 Acceptance .1 Turf Grass Nursery Sod areas will be accepted by provided that:
 - .1 Sodded areas are properly established.
 - .2 Sod is free of bare and dead spots.
 - .3 No surface soil is visible from height of 1500 mm when grass has been cut to height of 50 mm.
 - .4 Sodded areas have been cut minimum 2 times prior to acceptance.
- .2 Sodded Commercial Grade Turf Grass Nursery Sod areas will be accepted by provided that:
 - .1 Sodded areas are properly established.
 - .2 Extent of surface soil visible when grass has been cut to height of 60 mm is acceptable.
 - .3 Sod is free of bare or dead spots and extent of weeds apparent in grass is acceptable.

- .4 Sodded areas have been cut minimum 2 times prior to acceptance.
- .5 Fertilizing in accordance with fertilizer program has been carried out at least once.
- .3 Areas sodded in fall will be accepted in following spring one month after start of growing season provided acceptance conditions are fulfilled.
- 3.7 Maintenance .1 Perform following operations from time of acceptance until end of
During Warranty warranty period:
Period
 - .1 Water sodded Turf Grass Nursery Sod and Commercial Grade Turf Grass Nursery Sod areas at weekly intervals to obtain optimum soil moisture conditions to depth of 100 mm.
 - .2 Repair and resod dead or bare spots to satisfaction of Departmental Representative.
 - .3 Cut grass and remove clippings that will smother grass as directed by Departmental Representative to height as follows:
 - .1 Turf Grass Nursery Sod:
 - .1 50 mm during normal growing conditions.
 - .2 Commercial Grade Turf Grass Nursery Sod :
 - .1 60 mm during normal growing conditions.
 - .3 Cut grass at 2 week intervals or as directed by Departmental Representative, but at intervals so that approximately one third of growth is removed in single cut.
 - .4 Fertilize areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
 - .5 Eliminate weeds by mechanical or chemical means to extent acceptable to Departmental Representative.
- 3.8 Cleaning .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

PART 1 - GENERAL

- 1.1 Summary .1 Section Includes:
- .1 Materials and installation for plant material, accessories, mulch, planting, tree support, mulching and maintenance.
 - .2 Sustainable requirements for construction and verification.
- .2 Related Requirements
- .1 Section 31 22 13 - Rough Grading.
 - .2 Section 32 91 19.13 - Topsoil Placement and Grading.
- 1.2 References .1 Agriculture and Agri-Food Canada (AAFC).
- .1 Plant Hardiness Zones in Canada-[2000].
- .2 Canadian Nursery Landscape Association (CNLA).
- .1 Canadian Standards for Nursery Stock-[2001].
- .3 Department of Justice Canada (Jus).
- .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
 - .2 Transportation of Dangerous Goods Act (TDGA), 1992, c.34.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
- .1 Material Safety Data Sheets (MSDS).
- 1.3 Definitions .1 Mycorrhiza: association between fungus and roots of plants. This symbiosis, enhances plant establishment in newly landscaped and imported soils.
- 1.4 Action and Informational Submittals .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit product data for:
- .1 Fertilizer.
 - .2 Mycorrhiza.
 - .3 Anti-desiccant.
 - .4 Guying assembly including clamps, collar, guying wire, anchors and wire tightens.
 - .5 Mulch.
- .3 Submit WHMIS MSDS - in accordance with Section 01 47 15 - Sustainable Requirements: Construction and Section 02 81 01 - Hazardous Materials.

- .4 Co-ordinate submittal requirements and provide submittals required by Section 01 47 15 - Sustainable Requirements: Construction.
- .5 Submit samples for:
 - .1 Mulch.
 - .2 Mycorrhiza.
- 1.5 Quality Assurance
 - .1 Health and Safety:
 - .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.
 - .2 Sustainable Requirements:
 - .1 Construction requirements: in accordance with Section 01 47 15 - Sustainable Requirements: Construction.
 - .2 Verification: contractor's verification in accordance with Section 01 47 17 - Sustainable Requirements: Contractor's Verification.
- 1.6 Storage and during Protection
 - .1 Protect plant material from frost, excessive heat, wind and sun delivery.
 - .2 Immediately store and protect plant material which will not be installed within 1 hour after arrival at site in storage location approved by Departmental Representative.
 - .3 Protect plant material from damage during transportation:
 - .1 When 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 When 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.
 - .4 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. Heel-in fibre pots.
- .3 For balled and bur lapped and wire basket root balls, place to protect branches from damage. Maintain moisture level in root zones.
- .5 Store and manage hazardous materials in accordance with Section 01 47 15 - Sustainable Requirements: Construction.
- .6 Waste Management and Disposal:
 - .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
 - .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan (WMP).
 - .4 Separate for reuse and recycling and place in designated containers Steel, Metal, Plastic waste in accordance with WMP.
 - .5 Place materials defined as hazardous or toxic in designated containers.
 - .6 Handle and dispose of hazardous materials in accordance with CEPA, TDGA, Regional and Municipal regulations.
 - .7 Divert unused metal materials from landfill to metal recycling facility as approved by Departmental Representative.
 - .8 Fold up metal and plastic banding, flatten and place in designated area for recycling.
 - .9 Divert discarded plastic plant containers materials from landfill to plastic recycling facility approved by Departmental Representative.
 - .10 Dispose of unused fertilizer at official hazardous material collection site approved by Departmental Representative.
 - .11 Dispose of unused anti-desiccant at official hazardous material collections site approved by Departmental Representative.
 - .12 Divert unused wood and mulch materials from landfill to recycling composting facility approved by Departmental Representative.
- 1.7 Scheduling.1 Obtain approval from Departmental 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.

1.8 Warranty .1

All workmanship carried out under this Standing Offer Agreement (SOA)/Contract must be warranted for a period of 12 months from date of repair or replacement. All material/ equipment replaced under this agreement will be warranted as per the manufacturers warrantee. The Contractor is to supply the Project Authority with the associated manufacturer warranties upon completion of the work.

.1 For plant material over 75 mm caliper plant material as itemized on plant list the 12 months warranty period prescribed in subsection GC 32.1 of General Conditions "C" is extended to [] months.

.2 End-of-warranty inspection will be conducted by Departmental Representative.

.3 Departmental Representative reserves the right to extend Contractor's warranty responsibilities for an additional one year if, at end of initial warranty period, leaf development and growth is not sufficient to ensure future survival.

PART 2 - PRODUCTS

2.1 Sustainable Requirements .1

Materials and products in accordance with Section 01 47 15 Sustainable Requirements: Construction.

2.2 Plant Material .1

Type of root preparation, sizing, grading and quality: comply to Canadian Standards for Nursery Stock.

.1 Source of plant material: grown in Zone [] in accordance with Plant Hardiness Zones in Canada.

.2 Plant material must be planted in zone indicated 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 except where specified otherwise.

.4 Trees larger than [200] mm in caliper: half root pruned during each of two successive growing seasons, the latter at least one growing season prior to arrival on site.

.5 Bare root stock: nursery grown, in dormant stage, not balled and bur lapped or container grown.

	.6	Collected stock: maximum 40 mm in caliper, with well-developed crowns and characteristically branched; no more than 40% of overall height may be free of branches.
<u>2.3 Water</u>	.1	Free of impurities that would inhibit plant growth.
<u>2.4 Stakes</u>	.1	T-bar, steel, 40 x 40 x 5 x 2440 mm wood, pointed one end, 38 x 38 x 2300 mm.
<u>2.5 Wire Tightened</u>	.1	Type 1: galvanized steel, stamped plate type, rod, triangular shape.
	.2	Type 2: turnbuckle, galvanized steel, 9.5 mm diameter with 270 mm open length.
<u>2.6 Guying Wire</u>	.1	Type 1: steel, 3 mm wire.
	.2	Type 2: 1.5 mm diameter multi-wire steel cable.
	.3	Type 3: 3 mm diameter multi-wire steel cable.
<u>2.7 Clamps</u>	.1	U-bolt: galvanized, [13] mm diameter, c/w curved retaining bar and hex nuts.
	.2	Crimp type.
<u>2.8 Anchors</u>	.1	Wood:
	.1	Type 1: 38 x 38 x 460 mm.
	.2	Type 2: 38 x 67 x 600 mm.
	.2	Drive-in type.
	.1	Type 1: 13 mm diameter x 75 mm long, aluminum.
	.2	Type 2: 18 mm diameter x 120 mm long, aluminum.
	.3	Screw-in type:
	.1	Type 1: 100 mm diameter steel disc.
	.2	Type 2: _____.
<u>2.9 Guying Collar</u>	.1	Tube: plastic, 13 mm diameter, nylon reinforced.

- | | | |
|------------------------------------|----|--|
| <u>2.10 Trunk Protection</u> | .1 | Wire mesh: galvanized, electrically welded 1.4 mm wire with 25 x 25 mm mesh and fastener. |
| | .2 | Plastic: perforated spiralled strip. |
| | .3 | Burlap: clean, minimum 2.5 kg/m ² mass and 150 mm wide, and twine fastener. |
| | .4 | Tar impregnated crepe paper and twine fastener. |
| <u>2.11 Mulch</u> | .1 | Bark chip: varying in size from 25 to 50 mm in diameter, from bark of coniferous trees. |
| | .2 | Wood chip: varying in size from 50 mm to 75 mm and 5 to 20 mm thick, free of bark, small branches and leaves. |
| | .3 | Shredded wood: varying in size from 25 to 125 mm in length, from coniferous trees. |
| | .4 | Synthetic or inorganic mulch. |
| <u>2.12 Fertilizer</u> | .1 | Synthetic commercial type as recommended by soil test report or manufacturer. |
| <u>2.13 Anti-Desiccant</u> | .1 | Wax-like emulsion. |
| <u>2.14 Flagging Tape</u> | .1 | Fluorescent, [_____] colour. |
| <u>2.15 Source Quality Control</u> | .1 | Obtain approval from Departmental 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

- | | | |
|-------------------------------------|----|--|
| <u>3.1 Pre-Planting Preparation</u> | .1 | Do construction occupational health and safety in accordance with Section 01 35 30 - Health and Safety Requirements. |
| | .2 | Ensure plant material acceptable to [Departmental Representative]. |
| | .3 | Remove damaged roots and branches from plant material. |
| | .4 | Apply anti-desiccant to conifers and deciduous trees in leaf in accordance with manufacturer's instructions. |

- 3.2 Excavation and Preparation of Planting Beds
- .1 Establishment of sub-grade for planting beds is specified in Section 31 22 13 - Rough Grading.
 - .2 Preparation of planting beds is specified in Section 32 91 19.13 - Topsoil Placement and Grading.
 - .3 For individual planting holes:
 - .1 Stake out location and obtain approval from Departmental Representative prior to excavating.
 - .2 Excavate to depth and width as indicated.
 - .3 Remove [subsoil,] 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 Departmental Representative if water source is ground water.
- 3.3 Planting
- .1 For bare root stock, place 50 mm backfill soil in bottom of hole. Plant trees and shrubs with roots placed straight out in hole.
 - .2 For jute bur lapped root balls, cut away top one third of wrapping and wire basket without damaging root ball. Do not pull burlap or rope from under root ball.
 - .3 For container stock or root balls in non-degradable wrapping, remove entire container or wrapping without damaging root ball.
 - .4 Plant vertically in locations as indicated. Orient plant material to give best appearance in relation to structure, roads and walks.
 - .5 For trees and shrubs:
 - .1 Backfill soil in 150 mm lifts. Tamp each lift to eliminate air pockets. When two thirds of depth of planting pit has been backfilled, fill remaining space with water. After water has penetrated into soil, backfill to finish grade.
 - .2 Form watering saucer as indicated.
 - .6 For ground covers, backfill soil evenly to finish grade and tamp to eliminate air pockets.
 - .7 Water plant material thoroughly.

- .8 After soil settlement has occurred, fill with soil to finish grade.
- .9 Dispose of burlap, wire and container material off site.

3.4 Trunk Protection .1 Install trunk protection on deciduous trees as indicated.

- .2 Install trunk protection prior to installation of tree supports when used.

3.5 Tree Supports .1 Install tree supports as indicated.

- .2 Use single stake tree support for deciduous trees less than 3 m and evergreens less than 2 m.
 - .1 Place stake on prevailing wind side and 150 mm from trunk.
 - .2 Drive stake minimum 150 mm into undisturbed soil beneath roots. Ensure stake is secure, vertical and un-split.
 - .3 Install 150 mm long guying collar 1500 mm above grade.
 - .4 Thread Type 1 guying wire through guying collar tube. Twist wire to form collar and secure firmly to stake. Cut off excess wire.
- .3 Use 3 guy wires and anchors for deciduous trees greater than 3 m and evergreens greater than 2 m.
 - .1 Use Type 2 guying wire with clamps for trees less than 75 mm in diameter and Type 3 guying wire with clamps for trees greater than 75 mm in diameter.
 - .2 Use Type 1 anchors for trees less than 75 mm in diameter and Type 2 anchors for trees greater than 75 mm in diameter.
 - .3 Install guying collars above branch to prevent slipping at approximately 2/3 height for evergreens and 1/2 height for deciduous trees. Collar mounting height not to exceed 2.5 m above grade.
 - .4 Guying collars to be of sufficient length to encircle tree plus 50 mm space for trunk clearance. Thread guy wire through collar encircling tree trunk and secure to lead wire by clamp or multi-wraps; cut wire ends close to wrap. Spread lead wires equally proportioned about trunk at 120 degrees.
 - .5 Install anchors at equal intervals about tree and away from trunk so that guy wire will form 30 degree angle with ground. Install anchor at angle to achieve maximum resistance for guy wire.
 - .6 Attach guy wire to anchors. Tension wire and secure by multi-wraps installing clamps.

- .7 Install wire tightener ensuring that guys are secure and leave room for slight movement of tree.
- .8 Saw tops off wooden anchors which extend in excess of 100 mm above grade or as directed by Departmental Representative.
- .9 Install flagging tape to guys as indicated.
- .4 After tree supports have been installed, remove broken branches with clean, sharp tools.
- 3.6 Mulching .1 Ensure soil settlement has been corrected prior to mulching.
- .2 Spread mulch as indicated.
- 3.7 Maintenance from During Establishment Period .1 Perform following maintenance operations time of planting to acceptance by Departmental 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 respreads damaged, missing or disturbed mulch.
 - .4 For non-mulched areas, cultivate as required to keep top layer of soil friable.
 - .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 Departmental Representative prior to application.
 - .6 Remove dead or broken branches from plant material.
 - .7 Keep trunk protection and guy wires in proper repair and adjustment. .8 Remove and replace dead plants and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings.
- 3.8 Maintenance During Warranty Period .1 From time of acceptance by Departmental 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 respreads damaged, missing or disturbed mulch.
- .5 For non-mulched areas, cultivate monthly to keep top layer of soil friable.
- .6 If required to control insects, fungus and disease, use appropriate control methods in accordance with Federal, Provincial and Municipal regulations. Obtain product approval from Departmental Representative prior to application.
- .7 Apply fertilizer in early spring as indicated by soil test.
- .8 Remove dead, broken or hazardous branches from plant material.
- .9 Keep trunk protection and tree supports in proper repair and adjustment.
- .10 Remove trunk protection, tree supports and level watering saucers at end of warranty period.
- .11 Remove and replace dead plants and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings.
- .12 Submit monthly written reports to Departmental 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.

3.9 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.
- .5 Low-emitting materials.

ANNEX A

17 WING WINNIPEG DETACHMENT DUNDURN EXCAVATION PERMIT

Legal Land Description
Section: North 1/2 of 19
Range: 4
Twp: 33
West of the 3rd Meridian

DATE: _____

PERMIT NO: _____

CE WO NO: _____

1. INSTRUCTIONS

The Det Dundurn (EP) is used for any work (contract or in house) that may disrupt vehicular traffic flow, base utility services, protection provided by fire and intrusion alarm systems, or routine activities of the installation. This form is used to co-ordinate the required work with key activities and keep customer inconvenience to a minimum. It is also used to identify potentially hazardous work conditions in an attempt to prevent accidents. The EP is processed just prior to the start of the work. If delays are encountered and the conditions at the job site change (or may have changed), this EP must be processed. All flags are to be removed upon completion of project. **This permit EXPIRES after 10 days from the date of preparation.**

2. IDENTIFICATION

PROJECT TITLE / LOCATION: _____

PROJECT SUPERVISOR: _____

DATE REQUIRED BY: _____

3. TYPE / PURPOSE OF WORK INVOLVED

4. CLEARANCE REVIEW

The undersigned, having examined the pertinent drawings for the subject project, agree that, to the best of their knowledge, the type and location of existing services under their jurisdiction are properly indicated.

SHOP	DATE	NAME	SIGNATURE	REMARKS
PLUMBING - LOCAL 4273				
SASK FIRST (If required)				
ELECTRICAL - LOCAL 4246				
HEATING - LOCAL 4248				
WTP - LOCAL 4228				
<u>This permit is to return to the Prod O once the above 4 shops have signed it</u>				
FIRE CHIEF - LOCAL 4366				
77 LINE - LOCAL 4316				
ENVIRONMENT Local 4674 or cell 306-229-2881				

The siting of underground utilities is only an approximation. It does not absolve the company or person digging from damage to utilities. All digging must first be preceded by hand digging to confirm actual siting of utilities.

Signature of Originator

Date

Approval Authority / Prod O

Date

ANNEX B

17 Wing Detachment Dundurn

Hot Work Permit

Prior to commencement of welding, cutting, soldering , heat guns etc, permission shall be obtained from the Fire Chief. A Fire Inspector shall complete the checklist on the reverse side of this form and any special considerations shall be noted below.

Shop / Contractor: _____ Bldg: _____
Description of Work: _____

The work site has been inspected and necessary precautions taken. Authority is granted for the work described above. The Shop / Contractor shall notify the Fire Hall upon completion of hot work.

Signature

Shop Contractor _____ Date _____ Phone _____

Signature

Fire Inspector _____ Date _____ Phone _____

Thirty (30) minutes after the Hot Work has ceased, the work site and adjacent areas were inspected an “No Hot Spots” found.

Signature

Fire Inspector _____ Time _____

Checklist

Before authorizing welding, cutting or soldering the Fire Inspector will inspect the work site, confirm the required precautions have been taken and the following completed:

1. () The equipment is approved for its intended purpose.
2. () Combustibles have been removed from the area around the hot work and / or appropriate precautions taken.

ANNEX B

3. () Flammable and combustible liquids removed from the area or adequately protected.
4. () Wall and floor openings covered as required.
5. () Work on enclosed equipment. The equipment must be cleaned of all combustible material and the container purged of flammable vapors.
6. () Fire watch provided during and 30 minutes after hot work has ceased.
7. () Personnel were made aware of risks involved and briefed on “Action in the Event of a Fire”.
8. () Correct / serviceable extinguishers are immediately available.

Signature

Fire Inspector _____ Time _____

ANNEX C

Confined Space Entry Permit			
This permit is valid only for the work and time described!			
Fire hall must be notified prior to entry for an assessment to be filled out.			
Ph: 492-2135-Ext 4229			
EMERGENCY PHONE: 911			
Date: _____			
Time of Entry: _____			
Time of Expected Exit: _____			
Location of Entry: _____			
Unit / Section: _____			
Supervisor: _____			
Cell Phone _____			
Description of work: _____			
Name of Firehall Personnel Issuing Permit: _____			
Verification That An Emergency Plan Has Been Established and Discussed:			
_____		_____	
Name (contractor)		Signature	
I certify that I have reviewed the hazard assessment report and have been briefed on all tests and preventive measures for safe entry into this confined space.			
Name of person entering		Entry Time In	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
I certify that all personnel have exited this confined space and the fire hall has been notified.			
_____		_____	
Name (contractor)		Signature	

ANNEX C

CFB Det Dundurn Confined Space Hazard Assessment					
					page 1/3
I. CONFINED SPACE CLASSIFICATION					
This space is a :					
<input type="checkbox"/> Category I Space	Self Rescue	Permit required <input type="checkbox"/> Yes <input type="checkbox"/> No			
<input type="checkbox"/> Category II Space	Non-entry Rescue				
<input type="checkbox"/> Category III Space	Entry Rescue	Rescue Team Attendant Required <input type="checkbox"/> Yes <input type="checkbox"/> No			
II. CONFINED SPACE LOCATION/DESCRIPTION					
Building Number:		Area:			
Confined Space Description: _____					
<input type="checkbox"/> At Ground/Floor level		<input type="checkbox"/> Indoors		<input type="checkbox"/> Elevated	
<input type="checkbox"/> Below Ground/Floor level		<input type="checkbox"/> Outdoors			
If outdoors, give reference points: _____				GPS _____	
Dimensions: _____		Volume (cubic feet): _____			
# of Access Openings: _____		Primary Access Point: _____			
Dimension of Opening: _____		Secondary Access Point: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Means or Access Into Space:					
<input type="checkbox"/> Portable Ladder	<input type="checkbox"/> Stairwell	<input type="checkbox"/> Horizontal	<input type="checkbox"/> Vertical	<input type="checkbox"/> Easy	
<input type="checkbox"/> Existing Ladder	<input type="checkbox"/> Elevated	<input type="checkbox"/> Other	<input type="checkbox"/> Difficult/Ackward		
III. PROCESS PERFORMED IN SPACE					
Identification of Process:					
Chemicals/Hazardous Materials in Use? <input type="checkbox"/> Yes <input type="checkbox"/> No					
If Yes:	Chemical/Material Name	MSDS Number	Quantity		
<input type="checkbox"/>	_____	_____	_____		
<input type="checkbox"/>	_____	_____	_____		
<input type="checkbox"/>	_____	_____	_____		
<input type="checkbox"/>	_____	_____	_____		
<input type="checkbox"/> Copy of MSDS required at work site					
Waste Products/Residues Present When Space is Emptied <input type="checkbox"/> Yes <input type="checkbox"/> No					
IV. ENTRY PARAMETERS					
Primary Reason for Entry		<input type="checkbox"/> Preventative Maintenance	<input type="checkbox"/> Inspection	<input type="checkbox"/> Cleaning	
		<input type="checkbox"/> Maintenance Repair	<input type="checkbox"/> Other _____		
Frequency of Entry		<input type="checkbox"/> Daily	<input type="checkbox"/> Weekly	<input type="checkbox"/> Monthly	<input type="checkbox"/> Annual
		<input type="checkbox"/> Other _____			
V. NOTIFICATION			VI. SITE CONTROL		
<input type="checkbox"/> Notification to be given to affected department of service interruption and entry work			<input type="checkbox"/> Barricades		
			<input type="checkbox"/> Warning Signs		
			<input type="checkbox"/> Rope/Warning Tape		
			<input type="checkbox"/> Secure Access Doors		
<input type="checkbox"/> Pre-entry briefing on specific hazards and control measures to Confined Space Team			<input type="checkbox"/> Other: _____		
VII. SPACE PREPARATION METHODS					
<input type="checkbox"/> Empty	<input type="checkbox"/> Clean	<input type="checkbox"/> Purge	<input type="checkbox"/> Depressurize	<input type="checkbox"/> Cool	<input type="checkbox"/> Other

ANNEX C

VIII. LOCKOUT/TAGOUT/ISOLATION REQUIRED						page 2/3
<input type="checkbox"/> Electrical	<input type="checkbox"/> Hydraulic	<input type="checkbox"/> Pneumatic	<input type="checkbox"/> Chemical	<input type="checkbox"/> Thermal	<input type="checkbox"/> Radiation	
<input type="checkbox"/> Gases	<input type="checkbox"/> Blocking/Cribbing	<input type="checkbox"/> Other: _____				
IX. HAZARD IDENTIFICATION						
Check if the space has any of the following hazards:						
Atmospheric:			Content			
<input type="checkbox"/> Oxygen deficient			<input type="checkbox"/> Decomposing organic matter			
<input type="checkbox"/> Oxygen enrichment			<input type="checkbox"/> Shifting content			
<input type="checkbox"/> Flammable substances			<input type="checkbox"/> Dust/Explosive			
<input type="checkbox"/> Toxic gases, vapors, liquids			<input type="checkbox"/> Inerting agents (Gases)			
			<input type="checkbox"/> Other: _____			
Configuration:			Environmental			
<input type="checkbox"/> Interior shape or slope			<input type="checkbox"/> Slippery surfaces			
<input type="checkbox"/> Low overhead clearance			<input type="checkbox"/> Noise			
<input type="checkbox"/> Drop offs			<input type="checkbox"/> Vibration			
<input type="checkbox"/> Complex layout			<input type="checkbox"/> Extreme Temperature within space			
<input type="checkbox"/> Structural integrity			<input type="checkbox"/> Damp/wet conditions			
<input type="checkbox"/> Compartmentalized			<input type="checkbox"/> Rodents/insects			
<input type="checkbox"/> Elevated work surfaces			<input type="checkbox"/> Suspended loads			
<input type="checkbox"/> Sharp surfaces			<input type="checkbox"/> Fire suppression systems			
<input type="checkbox"/> Maneuverability			<input type="checkbox"/> Poor visibility			
<input type="checkbox"/> Other: _____			<input type="checkbox"/> Asbestos			
			<input type="checkbox"/> Other: _____			
Potential Energy			External			
<input type="checkbox"/> Electrical			<input type="checkbox"/> Traffic			
<input type="checkbox"/> Hydraulic			<input type="checkbox"/> Machinery/equipment			
<input type="checkbox"/> Pneumatic			<input type="checkbox"/> Terrain			
<input type="checkbox"/> Mechanical			<input type="checkbox"/> Weather			
<input type="checkbox"/> Steam			<input type="checkbox"/> Other: _____			
<input type="checkbox"/> Others: _____						
X. Hot Work/Smoking						
<input type="checkbox"/> Hot work permit is required for welding/cutting/grinding.						
Space must be re-evaluated for hazards and appropriate measures/precautions must be taken, before hot work may begin.						
<input type="checkbox"/> NO SMOKING PERMITTED IN SPACE AT ANY TIME						
<input type="checkbox"/> Portable Fire Extinguisher	<input type="checkbox"/> ABC	<input type="checkbox"/> BC	<input type="checkbox"/> CO2	<input type="checkbox"/> PW	<input type="checkbox"/> Other: _____	
XI. DOES THIS SPACE REQUIRE VENTILATION						
<input type="checkbox"/> Mechanical Fresh Air Supply			<input type="checkbox"/> Mechanical Exhaust Ventilation			
<input type="checkbox"/> Natural Ventilation						
Ventilator Specifications						
<input type="checkbox"/> Type Ventilator: _____			Size (cfm): _____ cfm = cubic feet per minute			
<input type="checkbox"/> Initial Ventilation Purge Time (min): _____						
Intrinsically Safe Blower Unit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No						
<input type="checkbox"/> Duct Diameter: _____ Inches/cm			Maximum Number of 90 Degree Bends: _____			
<input type="checkbox"/> Duct Length: _____ feet/m						
Access Openings to Remain Open (secured) to Space During Entry? <input type="checkbox"/> Yes <input type="checkbox"/> No						
Spark Proof Tools Required? <input type="checkbox"/> Yes <input type="checkbox"/> No						
XII. ELECTRICAL EQUIPMENT REQUIRED						
<input type="checkbox"/> Generator	<input type="checkbox"/> Battery Operated	<input type="checkbox"/> Low Voltage	<input type="checkbox"/> Ground Fault Circuit Interrupter			
<input type="checkbox"/> Double Insulated Tools	<input type="checkbox"/> Positive Grounded Tools/Equipment			<input type="checkbox"/> Explosive Proof Equipment		

ANNEX C

XIII. ILLUMINATION (TO TAKE INTO SPACE)				page 3/3	
<input type="checkbox"/> Portable Safety Lamps	<input type="checkbox"/> Low Voltage	<input type="checkbox"/> Battery Operated Lighting	<input type="checkbox"/> Light Stations		
<input type="checkbox"/> Light Sticks	<input type="checkbox"/> Explosion Proof Equipment	<input type="checkbox"/> Lighting Provided Within Space			
<input type="checkbox"/> String of Lights	<input type="checkbox"/> Others: _____				
XIV. DOES THE SPACE REQUIRE ATMOSPHERIC TESTING					
Oxygen	<input type="checkbox"/> Continuous	<input type="checkbox"/> Periodic	Test Level _____		
Combustable Gas	<input type="checkbox"/> Continuous	<input type="checkbox"/> Periodic	Test Level _____		
Toxic <input type="checkbox"/> H2S <input type="checkbox"/> CO	<input type="checkbox"/> Continuous	<input type="checkbox"/> Periodic	Test Level _____		
LEL	<input type="checkbox"/> Continuous	<input type="checkbox"/> Periodic	Test Level _____		
Instrumentation:	<input type="checkbox"/> Four Gas Meter ITX				
Last Calibration Date _____		Serial # _____			
XVI. MINIMUM PERSONAL PROTECTIVE EQUIPMENT					
<input type="checkbox"/> Safety Glasses	<input type="checkbox"/> Welding Helmet	<input type="checkbox"/> Protective Clothing (type) _____			
<input type="checkbox"/> Impact Goggles	<input type="checkbox"/> Hard Hat	<input type="checkbox"/> Protective Footwear			
<input type="checkbox"/> Chemical Goggles	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Gloves (type) _____			
<input type="checkbox"/> Cutting Goggles	<input type="checkbox"/> Hearing Protection				
Respiratory Protection	<input type="checkbox"/> Half Mask	<input type="checkbox"/> Full Mask (SCBA)			
XVII. REQUIRED FALL PROTECTION AND RESCUE DEVICES					
<input type="checkbox"/> Tripod System	<input type="checkbox"/> Lifeline With Safety Hooks				
<input type="checkbox"/> Personal Alert Safety System	<input type="checkbox"/> Full Body Harness with "D" Ring				
<input type="checkbox"/> Special Attachment/Anchor Requirements					
XVIII. COMMUNICATIONS					
<input type="checkbox"/> Verbal	<input type="checkbox"/> Radio	<input type="checkbox"/> Other: _____			
I certify that I SHALL perform all required tests and preventive measures for safe entry into this confined space.					
_____ Qualified Person (print)			_____ Signature		