



## RETURN BIDS TO:

## RETOURNER LES SOUMISSIONS À:

Bid Receiving Box/Boîte de Réception des  
Soumissions

1st Floor/1<sup>ère</sup> étage, Suite 1212

100-1045 Main Street

Moncton

New Brunswick

E1C 1H1

Bid Fax: (506) 851-6759

## INVITATION TO TENDER

## APPEL D'OFFRES

**Tender To: Public Works and Government Services  
Canada**

We hereby offer to sell to Her Majesty the Queen in right of  
Canada, in accordance with the terms and conditions set  
out herein, referred to herein or attached hereto, the goods,  
services, and construction listed herein and on any attached  
sheets at the price(s) set out therefor.

### Soumission aux: Travaux Publics et Services Gouvernementaux Canada

Nous offrons par la présente de vendre à Sa Majesté la  
Reine du chef du Canada, aux conditions énoncées ou  
incluses par référence dans la présente et aux annexes  
ci-jointes, les biens, services et construction énumérés  
ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

### Comments - Commentaires

### Vendor/Firm Name and Address

Raison sociale et adresse du  
fournisseur/de l'entrepreneur

### Issuing Office - Bureau de distribution

Acquisitions NB/PEI (Moncton Office) – Bureau  
d'acquisitions N.-B./Î.-P.-É. (Moncton)

1045 Main Street / 1045, rue Main

Moncton

New Bruns

E1C 1H1

<b>Title - Sujet</b> Enlèvement et élimination de sols c Enlèvement et élimination de sols contaminés par du plomb Pennant Harbour N.-É.	
<b>Solicitation No. - N° de l'invitation</b> EC373-230330/A	<b>Date</b> 2022-06-22
<b>Client Reference No. - N° de référence du client</b> EC373-230330	<b>GETS Ref. No. - N° de réf. de SEAG</b> PW-\$PWJ-023-6223
<b>File No. - N° de dossier</b> PWJ-2-45025 (023)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> Atlantic Daylight Saving Time ADT <b>on - le 2022-07-19</b> Heure Avancée de l'Atlantique HAA	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> LeBlanc (PWJ), Kristelle	<b>Buyer Id - Id de l'acheteur</b> pwj023
<b>Telephone No. - N° de téléphone</b> (506) 377-7458 ( )	<b>FAX No. - N° de FAX</b> (506) 851-6759
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> DEPARTMENT OF PUBLIC WORKS AND GOVERNMENT SERVICES CANADA 126 PRINCE WILLIAM ST SUITE 14B, 5TH FLOOR SAINT JOHN New Brunswick E2L2B6 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

<b>Delivery Required - Livraison exigée</b> See Herein – Voir ci-inclus	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

## INVITATION À SOUMISSIONNER

Enlèvement et élimination de sols contaminés par du plomb Pennant Harbour  
West Pennant, Nouvelle-Écosse

### AVIS IMPORTANT AUX SOUMISSIONNAIRES

**Avis aux soumissionnaires : Il n'y aura pas d'ouverture publique aux fins de la présente demande de soumissions. Voir l'IP06 pour de plus amples instructions.**

### LISTE DES SOUS-TRAITANTS ET FOURNISSEURS

Noter que R2710T, IG07 « Liste des sous-traitants et fournisseurs » a été modifié. Voir IP10 des Instruction particulières.  
**Le non-respect de ces exigences donnera lieu au rejet de la soumission.**

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## INSTRUCTIONS PARTICULIÈRES AUX SOUMISSIONNAIRES (IP)

### IP01 DOCUMENTS DE SOUMISSION

1. Les documents suivants constituent les documents de soumission:

- a. Appel d'offres - Page 1;
- b. Instructions particulières aux soumissionnaires
- c. Instructions générales – services de construction – exigences relatives à la garantie de soumission R2710T (2021-04-01)
- d. Clauses et conditions identifiées aux “Documents du contrat”;
- e. Dessins et devis;
- f. Formulaire de soumission et d'acceptation et tout appendice s'y rattachant; et
- g. Toute modification émise avant la clôture de l'invitation.

La présentation d'une soumission constitue une affirmation que le soumissionnaire a lu ces documents et accepte les modalités qui y sont énoncées.

2. Les Instructions générales - Services de construction - Exigences relatives à la garantie de soumission R2710T sont incorporées par renvoi et reproduites dans le Guide des clauses et conditions uniformisées d'achat (CCUA) publié par Travaux publics et Services gouvernementaux Canada (TPSGC). Le guide des CCUA est disponible sur le site Web de TPSGC: <https://achatsetventes.gc.ca/politiques-et-lignes-directrices/guide-des-clauses-et-conditions-uniformisees-d-achat/5/R>

### IP02 DEMANDES DE RENSEIGNEMENTS PENDANT L'APPEL D'OFFRES

1. Toute demande de renseignements sur l'appel d'offres doit être présentée par écrit à l'autorité contractante dont le nom figure à l'Appel d'offres - Page 1 à l'adresse courriel [kristelle.leblanc@tpsgc-pwgsc.gc.ca](mailto:kristelle.leblanc@tpsgc-pwgsc.gc.ca). À l'exception de l'approbation de matériaux de remplacement, comme cela est décrit à l'IG15 de la R2710T toutes les autres demandes de renseignements devraient être reçues au moins 5 jours ouvrables avant la date de clôture de l'invitation afin de laisser suffisamment de temps pour y répondre. Pour ce qui est des demandes de renseignements reçues après cette date, il est possible qu'on ne puisse y répondre.
2. Pour assurer la cohérence et la qualité de l'information fournie aux soumissionnaires, l'autorité contractante examinera le contenu de la demande de renseignements et décidera s'il convient ou non de publier une modification.
3. Toutes les demandes de renseignements et autres communications envoyées avant la clôture de l'appel d'offres doivent être adressées UNIQUEMENT à l'autorité contractante dont le nom figure à l'Appel d'offres - Page 1. Le défaut de se conformer à cette exigence pourrait avoir pour conséquence que la soumission soit déclarée non recevable.

### IP03 RÉVISION DES SOUMISSIONS

Une soumission peut être révisée par lettre, service Connexion de la Société canadienne des postes (SCP) ou par télécopie conformément à l'IG10 de la R2710T. Le numéro du télécopieur pour la réception de révisions est le (506) 851-6759.

## IP04 EXIGENCES RELATIVES À LA GARANTIE DE SOUMISSION

R2710T – Instructions générales – Services de construction – Les modifications suivantes sont apportées aux Exigences relatives à la garantie de soumission :

Supprimer l'IG08.2 et remplacer par ce qui suit :

2. Le cautionnement de soumission (formulaire PWGSC-TPSGC 504) doit être présenté dans un formulaire approuvé, dûment rempli et portant des signatures valides et exécutoires ainsi que le sceau d'une compagnie de cautionnement approuvée dont les cautionnements sont acceptés par le gouvernement du Canada au moment de la clôture des soumissions ou d'une compagnie désignée à l'Appendice L, Compagnies de cautionnement reconnues, du Conseil du Trésor.

2.1 Un cautionnement de soumission peut être soumis dans un format électronique (Cautionnement Électronique) s'il répond aux critères suivants :

- a. La version soumise par le soumissionnaire doit être un fichier électronique crypté d'un certificat numérique intégré vérifiable par le Canada en ce qui a trait à la totalité et l'intégralité du formulaire de cautionnement, y compris le contenu, toutes les signatures numériques et tous les sceaux numériques, auprès de la compagnie de cautionnement ou d'un fournisseur de services de vérification approuvé de la compagnie de cautionnement.
- b. La version soumise doit être consultable, imprimable et stockable dans des formats de fichiers électroniques standards compatibles avec les systèmes du Canada et doit être présentée dans un seul fichier, le format autorisé étant le format PDF.
- c. La vérification peut être effectuée par le Canada immédiatement ou à tout moment pendant la durée du cautionnement, et ce, à la discrétion du Canada.
- d. Les résultats de la vérification doivent fournir une indication claire, immédiate et imprimable de réussite ou d'échec relativement à l'article 2.1.a.
- e. Il n'est pas acceptable de présenter des copies (**non originales, non vérifiables ou copie numérisée**) d'un cautionnement de soumission portant une signature et un sceau. Si un cautionnement original ou vérifiable n'est pas présenté, la soumission sera jugée non conforme. Les soumissions non conformes seront rejetées. Une copie numérisée d'une caution ne constitue pas un cautionnement électronique.

2.2 Les cautionnements qui échouent au processus de vérification ne seront PAS considérés comme valides.

2.3 Les cautionnements qui réussissent au processus de vérification seront considérés comme originaux et authentiques.

## IP05 LIVRAISON DES SOUMISSIONS

L'IG09 de R2710T est modifié comme-suit :

Ajouter le sous-alinéa 5 – Présentation des soumissions en format électronique à l'aide du service Connexion de la Société canadienne des postes (SCP)

- a. Sauf indication contraire dans la demande de soumissions, les soumissions peuvent être transmises à l'aide du service Connexion de la SCP.
- b. L'unique adresse courriel servant à répondre à la demande de soumissions au moyen du service Connexion de la SCP est la suivante :

Région de l'Atlantique (N.-B./Î.-P.-É.) : [TPSGC.RARceptionSoumisNBPE-ARBidReceivingNBPE.PWGSC@tpsgc-pwgsc.gc.ca](mailto:TPSGC.RARceptionSoumisNBPE-ARBidReceivingNBPE.PWGSC@tpsgc-pwgsc.gc.ca)

**Remarque :** Les soumissions envoyées directement à l'adresse courriel susmentionnée seront jugées non conformes et seront rejetées. Cette adresse doit être utilisée pour ouvrir une conversation de service Connexion de la SCP comme il est indiqué à la clause c., ou pour envoyer des soumissions au moyen d'un message Connexion de la SCP si le soumissionnaire utilise sa propre licence d'utilisateur du service Connexion de la SCP.

- c. Pour livrer une soumission à l'aide du service Connexion de la SCP, le soumissionnaire doit :
- i. Envoyer directement sa soumission uniquement au Module de réception des soumissions précisé de TPSGC, à l'aide de sa propre licence d'utilisateur du service Connexion de la SCP; ou
  - ii. Envoyer dès que possible, et, en tout cas, au moins six jours ouvrables avant la date et l'heure de clôture de la demande de soumissions (afin de garantir une réponse), un courriel qui contient le numéro de la demande de soumissions au Module de réception des soumissions désigné de TPSGC pour demander d'ouvrir une conversation Connexion de la SCP. Les demandes d'ouverture de conversation Connexion de la SCP reçues après ce délai pourraient demeurer sans réponse.
- d. Si le soumissionnaire envoie un courriel demandant le service Connexion de la SCP au Module de réception des soumissions désigné dans la demande de soumissions, un agent du Module de réception des soumissions entamera alors la conversation Connexion de la SCP. La conversation du service Connexion de la SCP créera une alerte par courriel de la Société canadienne des postes invitant le soumissionnaire à accéder et à répondre au message dans la conversation. Le soumissionnaire sera alors en mesure de transmettre sa soumission à n'importe quel moment avant la date et l'heure de clôture de la demande de soumissions.
- e. Si le soumissionnaire utilise sa propre licence pour envoyer sa soumission, il doit maintenir la conversation Connexion de la SCP ouverte pendant au moins trente (30) jours ouvrables après la date et l'heure de clôture de la demande de soumissions.
- f. Le numéro de la demande de soumissions doit être indiqué dans le champ réservé aux messages de Connexion de la SCP lors de toutes les transmissions électroniques.
- g. Il est important de noter qu'il faut avoir une adresse postale canadienne pour utiliser le service Connexion de la SCP. Si le soumissionnaire n'en a pas, il peut utiliser l'adresse du Module de réception des soumissions indiquée dans la demande de soumissions pour s'inscrire au service Connexion de la SCP.
- h. Dans le cas des soumissions transmises à l'aide du service Connexion de la SCP, le Canada ne pourra être tenu responsable d'aucune défaillance attribuable à l'utilisation de ce mode de transmission ou de réception. Entre autres, le Canada n'assumera aucune responsabilité pour ce qui suit :
- i. Réception d'une soumission brouillée, corrompue ou incomplète;
  - ii. Indisponibilité ou mauvais état du service Connexion de la SCP;
  - iii. Incompatibilité entre le matériel utilisé pour l'envoi et le matériel utilisé pour la réception;
  - iv. Retard dans la transmission ou la réception de la soumission;
  - v. Mauvaise identification de la soumission par le soumissionnaire;
  - vi. Illisibilité de la soumission;
  - vii. Sécurité des données contenues dans la soumission;
  - viii. Incapacité de créer une conversation électronique à l'aide du service Connexion de la SCP.
- i. Le Module de réception des soumissions enverra un accusé de réception des documents de la soumission au moyen de la conversation Connexion de la SCP, peu importe si la conversation a été initiée par le fournisseur à l'aide de sa propre licence ou par le Module de réception des soumissions. Cet

accusé de réception ne confirmera que la réception des documents de la soumission et ne confirmera pas si les pièces jointes peuvent être ouvertes ou si le contenu est lisible.

- j. Les soumissionnaires doivent veiller à utiliser la bonne adresse courriel du Module de réception des soumissions lorsqu'ils amorcent une conversation dans Connexion de la SCP ou qu'ils communiquent avec le Module de réception des soumissions, et ne doivent pas supposer que l'adresse courriel est exacte s'ils font un copier-coller dans le système Connexion de la SCP.
- k. Une soumission transmise par le service Connexion de la SCP constitue la soumission officielle du soumissionnaire.

## **IP06 RÉSULTATS DE L'APPEL D'OFFRES**

- 1. Il n'y aura pas de dépouillement public des soumissions pour cette invitation.
- 2. L'entrepreneur ayant fourni la soumission recevable la plus basse sera recommandée pour l'octroi du contrat.
- 3. Après la date de clôture pour la réception des soumissions, on peut demander les résultats de l'appel d'offres en communiquant au numéro de téléphone 506-851-7525.

## **IP07 FONDs INSUFFISANTS**

Si la soumission conforme la plus basse dépasse le montant des fonds alloués par le Canada pour les travaux, le Canada pourra

- a. annuler l'appel d'offres; ou
- b. obtenir des fonds supplémentaires et attribuer le contrat au soumissionnaire ayant présenté la soumission conforme la plus basse.

## **IP08 PÉRIODE DE VALIDITÉ DES SOUMISSIONS**

- 1. Le Canada se réserve le droit de demander une prorogation de la période de validité des soumissions tel que précisé à la SA04 du Formulaire de soumission et d'acceptation. Dès réception d'un avis écrit du Canada, les soumissionnaires auront le choix d'accepter ou de refuser la prorogation proposée.
- 2. Si la prorogation mentionnée à l'alinéa 1. ci-haut est acceptée par écrit par tous les soumissionnaires qui ont présenté une soumission, le Canada pourra poursuivre alors sans tarder l'évaluation des soumissions et les processus d'approbation.
- 3. Si la prorogation mentionnée à l'alinéa 1. ci-haut n'est pas acceptée par écrit par tous les soumissionnaires qui ont présenté une soumission, le Canada pourra alors, à sa seule discrétion,
  - a) poursuivre l'évaluation des soumissions de ceux qui auront accepté la prorogation proposée et obtenir les approbations nécessaires; ou
  - b) annuler l'appel d'offres.
- 4. Les conditions exprimées dans les présentes ne limitent d'aucune façon les droits du Canada définis dans la loi ou en vertu de l'IG11 de R2710T

## IP09 DROITS DU CANADA

1. Le Canada se réserve le droit :
  - a. de rejeter l'une quelconque ou la totalité des soumissions reçues en réponse à la demande de soumissions;
  - b. de négocier avec les soumissionnaires n'importe quel aspect de leur soumission;
  - c. d'accepter une soumission en totalité ou en partie, sans négociation;
  - d. d'annuler la demande de soumissions à n'importe quel moment;
  - e. d'émettre de nouveau la demande de soumissions;
  - f. si aucune soumission recevable n'est reçue et que le besoin n'est pas modifié substantiellement, d'émettre de nouveau la demande de soumissions en invitant uniquement les soumissionnaires qui ont soumissionné, à soumissionner de nouveau dans un délai indiqué par le Canada; et
  - g. de négocier avec le seul soumissionnaire qui a déposé une soumission recevable pour s'assurer que le Canada profitera du meilleur rapport qualité/prix

## IP10 LISTE DES SOUS-TRAITANTS ET FOURNISSEURS

R2710T, IG07 a été modifié comme-suit.

### **IG07 (2015-02-25) Liste des sous-traitants et fournisseurs**

Le soumissionnaire devra soumettre les noms des sous-traitants et fournisseurs pour la ou les parties des travaux énumérées. Voir l'appendice 3. **Le non-respect de ces exigences donnera lieu au rejet de la soumission.**

## IP11 PROCESSUS DE CONTESTATION DES OFFRES ET MÉCANISMES DE RECOURS

- (a) Les fournisseurs potentiels ont accès à plusieurs mécanismes pour contester des aspects du processus d'approvisionnement jusqu'à l'attribution du marché, inclusivement.
- (b) Le Canada invite les fournisseurs à porter d'abord leurs préoccupations à l'attention de l'autorité contractante. Le site Web du Canada [Achats et ventes](#), sous le titre « [Processus de contestation des soumissions et mécanismes de recours](#) », fournit de l'information sur les organismes de traitement des plaintes possibles, notamment :
  - Bureau de l'ombudsman de l'approvisionnement (BOA)
  - Tribunal canadien du commerce extérieur (TCCE)
- (c) Les fournisseurs devraient savoir que des **délais stricts** sont fixés pour le dépôt des plaintes et qu'ils varient en fonction de l'organisation concernée. Les fournisseurs devraient donc agir rapidement s'ils souhaitent contester un aspect du processus d'approvisionnement.

## IP12 DOCUMENTS DE CONSTRUCTION

À l'attribution du contrat, **(1 copie électronique)** des dessins signés et scellés, du devis et des modifications sera fournie à l'entrepreneur retenu.



## IP13 SITES WEB

La connexion à certains des sites Web se trouvant aux documents d'appel d'offres est établie à partir d'hyperliens. La liste suivante énumère les adresses de ces sites Web.

Appendice L du Conseil du Trésor, Compagnies de cautionnement reconnues

<http://www.tbs-sct.gc.ca/pol/doc-fra.aspx?id=14494&section=text#appL>

Achats et ventes

<https://achatsetventes.gc.ca/>

Sanctions économiques canadiennes

<http://www.international.gc.ca/sanctions/index.aspx?lang=fra>

Rapport d'évaluation du rendement de l'entrepreneur (Formulaire PWGSC-TPSGC 2913)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>

Cautionnement de soumission (formulaire PWGSC-TPSGC 504)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>

Cautionnement d'exécution (formulaire PWGSC-TPSGC 505)

[http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505\\_fra.pdf](http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505_fra.pdf)

Cautionnement pour le paiement de la main-d'œuvre et des matériaux (formulaire PWGSC-TPSGC 506)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>

Guide des clauses et conditions uniformisées d'achats (CCUA)

<https://achatsetventes.gc.ca/politiques-et-lignes-directrices/guide-des-clauses-et-conditions-uniformisees-d-achat/5/R>

TPSGC, Programme de sécurité des contrats

<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-fra.html>

TPSGC, Code de conduite pour l'approvisionnement

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-fra.html>

TPSGC, Formulaire relatifs à l'administration des contrats de construction et de services d'experts-conseils

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-fra.html>

Formulaire de déclaration

<http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-fra.html>

Accord Commerciaux

<https://achatsetventes.gc.ca/politiques-et-lignes-directrices/Cadre-strat-gique-et-juridique/Accords-commerciaux>

## **R2710T INSTRUCTIONS GÉNÉRALES - SERVICES DE CONSTRUCTION - EXIGENCES RELATIVES À LA GARANTIE DE SOUMISSION(IG) (2021-04-01)**

Les articles suivants sont reproduits sur le site Web <https://achatsetventes.gc.ca/politiques-et-lignes-directrices/guide-des-clauses-et-conditions-uniformisees-d-achat/5/R/R2710T/23>

- IG01 Dispositions relatives à l'intégrité - soumission
- IG02 La soumission
- IG03 Identité ou capacité civile du soumissionnaire
- IG04 Taxes applicables
- IG05 Frais d'immobilisation
- IG06 Immatriculation et évaluation préalable de l'outillage flottant
- IG07 Liste des sous-traitants et fournisseurs
- IG08 Exigences relatives à la garantie de soumission
- IG09 Livraison des soumissions
- IG10 Révision des soumissions
- IG11 Rejet de la soumission
- IG12 Coûts relatifs aux soumissions
- IG13 Numéro d'entreprise – approvisionnement
- IG14 Respect des lois applicables
- IG15 Approbation des matériaux de remplacement
- IG16 Évaluation du rendement
- IG17 Conflit d'intérêts / Avantage indus.
- IG18 Code de conduite pour l'approvisionnement-soumission

## DOCUMENTS DU CONTRAT (DC)

1. Les documents suivants constituent le contrat:
  - a. Page « Contrat » une fois signée par le Canada;
  - b. Formulaire de soumission et d'acceptation et tout Appendice s'y rattachant rempli(s) en bonne et due forme;
  - c. Dessins et devis;
  - d. Conditions générales et clauses:

CG1	Dispositions générales – Services de construction	R2810D	(2017-11-28);
CG2	Administration du contrat	R2820D	(2016-01-28);
CG3	Exécution et contrôle des travaux	R2830D	(2019-11-28);
CG4	Mesures de protection	R2840D	(2008-05-12);
CG5	Modalités de paiement	R2850D	(2019-11-28);
CG6	Retards et modifications des travaux	R2860D	(2019-05-30);
CG7	Défaut, suspension ou résiliation du contrat	R2870D	(2018-06-21);
CG8	Règlement des différends	R2880D	(2019-11-28);
CG9	Garantie contractuelle	R2890D	(2018-06-21);
CG10	Assurances	R2900D	(2008-05-12);
	Coûts admissibles pour les modifications de contrat sous CG6.4.1	R2950D	(2015-02-25);
  - e. Conditions supplémentaires
  - f. Toute modification émise ou toute révision de soumission recevable, reçue avant l'heure et la date déterminée pour la clôture de l'invitation;
  - g. Toute modification incorporée d'un commun accord entre le Canada et l'entrepreneur avant l'acceptation de la soumission; et
  - h. Toute modification aux documents du contrat qui est apportée conformément aux conditions générales.
2. Les documents identifiés par titre, numéro et date ci-dessus sont intégrés par renvoi et sont reproduits dans le Guide des clauses et conditions uniformisées d'achat (CCUA) publié par Travaux publics et Services gouvernementaux Canada (TPSGC). Le guide des CCUA est disponible sur le site Web de TPSGC: <https://achatsetventes.gc.ca/politiques-et-lignes-directrices/guide-des-clauses-et-conditions-uniformisees-d-achat/5/R>
3. La langue des documents du contrat est celle du Formulaire de soumission et d'acceptation présenté.

## CONDITIONS SUPPLÉMENTAIRES (CS)

### CS01 EXIGENCES RELATIVES À LA SÉCURITÉ, LIEUX DE SAUVEGARDE DES DOCUMENTS.

Ce contrat ne comporte aucune exigence relative à la sécurité.

### CS02 CONDITIONS D'ASSURANCE

#### 1) Polices d'assurance

- a) L'entrepreneur souscrit et maintient, à ses propres frais, les polices d'assurance conformément aux exigences de l'Attestation d'assurance. L'assurance doit être souscrite auprès d'un assureur autorisé à faire affaire au Canada.
- b) Le respect des exigences en matière d'assurance ne dégage pas l'entrepreneur de sa responsabilité en vertu du contrat, ni ne la diminue. L'entrepreneur est responsable de décider si une assurance supplémentaire est nécessaire pour remplir ses obligations en vertu du contrat et pour se conformer aux lois applicables. Toute assurance supplémentaire souscrite est à la charge de l'entrepreneur ainsi que pour son bénéfice et sa protection.

#### 2) Période d'assurance

- a) Les polices exigées à l'Attestation d'assurance doivent prendre effet le jour de l'attribution du contrat et demeurer en vigueur pendant toute la durée du contrat.
- b) Il incombe à l'entrepreneur de fournir et de maintenir la couverture pour produits/travaux complétés de sa police d'assurance responsabilité civile des entreprises et ce pour un délai minimum de (6) six ans suivant la date du Certificat d'achèvement substantiel.

#### 3) Preuve d'assurance

- a) Avant le début des travaux, et au plus tard trente (30) jours après l'acceptation de sa soumission, l'entrepreneur doit remettre au Canada une Attestation d'assurance sur le formulaire fournis.
- b) À la demande du Canada, l'entrepreneur doit fournir les originaux ou les copies certifiées de tous les contrats d'assurance auxquels l'entrepreneur a souscrit conformément à l'Attestation d'assurance.

#### 4) Indemnités d'assurance

En cas de sinistre, l'entrepreneur doit faire sans délai toutes choses et exécuter tous documents requis pour le paiement de l'indemnité d'assurance.

#### 5) Franchise

L'entrepreneur doit assumer le paiement de toutes sommes d'argent en règlement d'un sinistre, jusqu'à concurrence de la franchise.

### CS03 RESPECT DES MESURES, DES ORDRES PERMANENTS, DES POLITIQUES ET DES RÈGLES SUR PLACE

L'entrepreneur doit se conformer et s'assurer que ses employés et ses sous-traitants se conforment à toutes les mesures de sécurité, ordres permanents, politiques et règles sur place qui sont en vigueur sur le lieu où le travail est effectué.

## CS04 TYPES ET MONTANTS DE LA GARANTIE CONTRACTUELLE

### Supprimer la CG9.2.2 et remplacer par ce qui suit :

Le cautionnement d'exécution (formulaire PWGSC-TPSGC 505) et le cautionnement pour le paiement de la main-d'œuvre et des matériaux (formulaire TPSGC-PWGSC 506) mentionnés au sous-alinéa 1a) de la CG9.2 doivent être présentés dans un formulaire et provenir d'une compagnie de cautionnement reconnue par le Canada (voir l'Appendice L, *Compagnies de cautionnement reconnues*, du Conseil du Trésor). Les cautionnements peuvent être présentés en format papier portant une signature et un sceau, OU en format électronique/numérique.

Les versions électroniques/numériques doivent être conformes aux exigences suivantes :

1. Le cautionnement d'exécution et le cautionnement pour le paiement de la main-d'œuvre et des matériaux peuvent être soumis dans un format électronique ou numérique s'ils répondent aux critères suivants :
  - 1.1 Les versions soumises par l'entrepreneur doivent être vérifiables par le Canada en ce qui a trait à la totalité et l'intégralité du formulaire de cautionnement, y compris le contenu, toutes les signatures numériques et tous les sceaux numériques, auprès de la compagnie de cautionnement ou d'un fournisseur de services de vérification approuvé de la compagnie de cautionnement.
  - 1.2 Les versions soumises doivent être consultables, imprimables et stockables dans des formats de fichiers électroniques standards compatibles avec les systèmes du Canada et doivent être présentées dans un seul fichier, le format autorisé étant le format PDF
  - 1.3 La vérification peut être effectuée par le Canada immédiatement ou à tout moment pendant la durée du cautionnement, à la discrétion du Canada, et ne doit pas nécessiter de mots de passe ni de frais.
  - 1.4 Les résultats de la vérification doivent fournir une indication claire, immédiate et imprimable de réussite ou d'échec relativement à l'article 1.1.
2. Les cautionnements qui échouent au processus de vérification ne seront PAS considérés comme valides.

## FORMULAIRE DE SOUMISSION ET D'ACCEPTATION (SA)

### SA01 IDENTIFICATION DU PROJET

Enlèvement et élimination de sols contaminés par du plomb, Pennant Harbour, West Pennant, Nouvelle-Écosse

### SA02 NOM LÉGAL ET ADRESSE DU SOUMISSIONNAIRE

Raison sociale:					
Nom Commercial (si applicable):					
Adresse:					
Téléphone:		Télécopieur:		NEA:	
Adresse courriel :					
Le Numéro d'organisation du Programme de sécurité des contrats (si requis) :					

### SA03 OFFRE

Le soumissionnaire offre au Canada d'exécuter les travaux du projet mentionné ci-dessus, conformément aux documents de soumission pour le **MONTANT TOTAL DE LA SOUMISSION INDIQUÉ DANS L'APPENDICE 1.**

### SA04 PÉRIODE DE VALIDITÉ DES SOUMISSIONS

La soumission ne peut être retirée pour une période de (30) jours suivant la date de clôture de l'invitation.

### SA05 ACCEPTATION ET CONTRAT

À l'acceptation de l'offre de l'entrepreneur par le Canada, un contrat exécutoire sera formé entre le Canada et le soumissionnaire. Les documents constituant le contrat sont ceux mentionnés à la section Documents du contrat.

### SA06 DURÉE DES TRAVAUX

L'entrepreneur doit exécuter et compléter les travaux dans les (8) semaines à partir de l'avis de l'acceptation de l'offre.

### SA07 GARANTIE DE SOUMISSION

Le soumissionnaire doit joindre à sa soumission une garantie de soumission conformément à l'IG08 - Exigences relatives à la garantie de soumission de la R2710T -Instructions générales - Services de construction - Exigences relatives à la garantie de soumission.

### SA08 SIGNATURE

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Nom et titre de la personne autorisée à signer au nom du soumissionnaire (Tapés ou lettres moulées)

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Signature

--

Date

**APPENDICE 1 - FORMULAIRE DE PRIX COMBINÉS**

- 1) Les prix unitaires seront retenus pour établir le montant total des prix calculés. Toute erreur arithmétique à cet appendice sera corrigée par le Canada.
- 2) Le Canada peut rejeter la soumission si quelconque des prix soumis ne tient pas fidèlement compte du coût de l'exécution de la partie des travaux à laquelle ce prix s'applique.

**MONTANT FORFAITAIRE**

Le montant forfaitaire désigne la partie des travaux qui est assujettie à un arrangement à prix forfaitaire.

- (a) Les travaux inclus dans le montant forfaitaire représentent tous les travaux qui ne sont pas inclus dans le tableau des prix unitaires.

<b>MONTANT FORFAITAIRE (MF)</b> Excluant les taxes applicable(s)	Sans objet
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**TABLEAU DES PRIX UNITAIRES**

Le tableau des prix unitaires désigne la partie des travaux qui est assujettie à un arrangement à prix unitaires.

- a) Les travaux faisant partie de chaque article sont tels que décrits aux sections du devis en référence.
- b) Le prix unitaire ne doit pas inclure de montants pour des travaux qui ne sont pas inclus aux articles de prix unitaires.

Article	Section du devi	Catégorie de main-d'œuvre, d'usine ou de matériel	Unité de Mesure	Quantité Estimé (QE)	Prix unitaire taxes applicables en sus (PU)	Montant étendu (QE x PU) taxes applicables en sus
1.0	Section 01	<b>Conditions générales</b>  y compris (mais sans s'y limiter) la main-d'œuvre, les outils, l'équipement, les matériaux, la supervision, les frais généraux, les bénéfices, la gestion/l'administration du projet, la mobilisation/la démobilisation, les permis, la remorque de chantier, l'entreposage, la sécurité, les exigences environnementales, le nettoyage, la signalisation, les clôtures, la sécurité, et clôturer les exigences décrites dans l'énoncé des travaux et les spécifications	Somme Forfaitaire	1		
2.0	EDT 01 11 00 01 71 00	Limites et levés topographiques	Somme Forfaitaire	1		
3.0	01 35 00.06	Contrôle de la circulation	Somme Forfaitaire	1		

Article	Section du devi	Catégorie de main-d'œuvre, d'usine ou de matériel	Unité de Mesure	Quantité Estimé (QE)	Prix unitaire taxes applicables en sus (PU)	Montant étendu (QE x PU) taxes applicables en sus
4.0	01 35 13.43	Contrôle de l'érosion et de la sédimentation	Somme Forfaitaire	1		
5.0	EDT 02 83 10 31 11 00	<b>Dégagement et l'arrachage</b>  y compris la main-d'œuvre, l'équipement, les matériaux, la supervision, le chargement, le déchargement, l'entreposage, la protection, l'enlèvement et l'élimination, comme décrit dans l'énoncé des travaux et les spécifications	m <sup>2</sup>	7,396		
6.0	EDT 02 83 10 31 23 33.01	<b>Creusage du sol contaminé et de la mise en tas</b>  incluant la main-d'œuvre, l'équipement, les matériaux, la supervision, le chargement, le déchargement, l'entreposage, la protection et l'enlèvement des roches de plus de 50 mm tel que décrit dans l'énoncé des travaux et devis				
6.1		Creusage manuelle	m <sup>2</sup>	37		
6.2		Excavation du sol contaminé et de l'empilage à profondeur de 0 a 150mm	m <sup>2</sup>	5,804		
6.3		Excavation du sol contaminé et de l'empilage à profondeur de 150- 300mm	m <sup>2</sup>	3,810		
6.4		Excavation du sol contaminé et de l'empilage à profondeur de 300- 450mm	m <sup>2</sup>	2,013		
6.5		Excavation du sol contaminé et de l'empilage à profondeur de 450- 750mm	m <sup>2</sup>	425		
7.0	EDT 02 83 10 31 23 33.01	<b>Contaminated Soil Removal and Disposal</b>  y compris la main-d'œuvre, l'équipement, les matériaux, la supervision, le chargement, le déchargement, l'entreposage, la protection, le transport,				



Article	Section du devi	Catégorie de main-d'œuvre, d'usine ou de matériel	Unité de Mesure	Quantité Estimé (QE)	Prix unitaire taxes applicables en sus (PU)	Montant étendu (QE x PU) taxes applicables en sus
		l'élimination dans des installations d'élimination enregistrées et la fourniture de manifestes de déchets, comme décrit dans l'énoncé des travaux et les spécifications				
7.1		Élimination dans la province	Tonnes	3,255		
7.2		Élimination à l'extérieur de la province	Tonnes	360		
8.0	EDT 31 23 33.01	<b>Fourniture et l'installation de matériaux de remblai communs</b>  y compris la main-d'œuvre, l'équipement, les matériaux, la supervision, le chargement, le déchargement, l'entreposage, la protection, le transport, la fourniture de matériaux de remblai courants, la réutilisation des roches et des pierres récupérées de l'excavation et le nivellement tel que décrit dans l'énoncé des travaux et le devis	Somme Forfaitaire	1		
9.0	EDT 32 91 19.13	<b>Approvisionnement et l'installation de terre végétale</b>  y compris la main-d'œuvre, l'équipement, les matériaux, la supervision, le chargement, le déchargement, l'entreposage, la protection, le transport, la fourniture/installation de 100 mm de terre végétale sur toutes les zones perturbées et le nivellement tel que décrit dans l'énoncé des travaux et les spécifications	m <sup>2</sup>	7,396		

Article	Section du devi	Catégorie de main-d'œuvre, d'usine ou de matériel	Unité de Mesure	Quantité Estimé (QE)	Prix unitaire taxes applicables en sus (PU)	Montant étendu (QE x PU) taxes applicables en sus
10.0	EDT 32 92 19.16	<b>Approvisionnement et l'installation de semence hydraulique</b>  y compris la main-d'œuvre, l'équipement, les matériaux, la supervision, le chargement, le déchargement, l'entreposage, la protection, le transport, la fourniture/installation de l'hydroensemencement sur toutes les zones perturbées, l'application d'engrais, l'arrosage, l'entretien et la garantie, tel que décrit dans l'énoncé des travaux et les spécifications	m <sup>2</sup>	7,396		
<b>TOTAL DES PRIX CALCULÉS (TPC)</b> Excluant les taxes applicable (s)						

<b>MONTANT TOTAL DE LA SOUMISSION (MF+TPC)</b> Excluant les taxes applicable (s)	
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APPENDICE 2 - DISPOSTION RELATIVES À L'INTÉGRITÉ

(Texte provenant de la Politique d'inadmissibilité et de suspension <http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-fra.html> en date du 2016-04-04)

**Liste des noms :** Tous les soumissionnaires, peu importe leur situation au titre de la Politique, doivent présenter les renseignements ci-dessous au moment de prendre part à un processus d'approvisionnement ou à une transaction immobilière :

- les soumissionnaires constitués en personne morale, y compris ceux qui présentent une soumission à titre de coentreprise, doivent fournir la liste complète des noms de tous les administrateurs actuels ou, dans le cas d'une entreprise privée, des propriétaires de la société;
- les soumissionnaires soumissionnant à titre d'entreprise à propriétaire unique, y compris ceux soumissionnant en tant que coentreprise, doivent fournir la liste complète des noms de tous les propriétaires;
- les soumissionnaires soumissionnant à titre de société en nom collectif n'ont pas à soumettre une liste de noms.

Si la liste des noms n'a pas été fournie à la fin de l'évaluation des soumissions ou des offres ou dans le cadre d'un processus d'approvisionnement ou d'une transaction immobilière où aucune soumission ou offre ne sera présentée, l'autorité contractante informera le soumissionnaire du délai à l'intérieur duquel il doit donner l'information. Fournir les noms requis est une exigence obligatoire d'attribution d'un accord immobilier ou d'un contrat. Le défaut de fournir la liste des noms dans le délai prescrit rendra la soumission ou l'offre irrecevable, ou autrement entraînera l'exclusion du soumissionnaire du processus d'attribution de l'accord immobilier ou du contrat.


### APPENDICE 3 - LISTE DES SOUS-TRAITANTS ET FOURNISSEURS

Les soumissionnaires doivent fournir les noms des sous-traitants et fournisseurs pour les travaux des divisions énumérées au tableau ci-dessous. Si les « propres forces » de l'entrepreneur général sont planifié d'être utilisé pour accomplir certains des travaux de division(s) il faut aussi l'indiquer.

	Sous-traitants et fournisseurs	Division
1		Division 31
2		
3		
4		

## APPENDICE 4 - ATTESTATION VOLONTAIRE À L'APPUI DU RECOURS AUX APPRENTIS (page 1 de 2)

### INITIATIVE DE TRAVAUX PUBLICS ET SERVICES GOUVERNEMENTAUX CANADA POUR L'EMBAUCHE D'APPRENTIS

1. Pour les encourager à participer à la formation d'apprentis, on demande aux employeurs qui soumissionnent pour des contrats de construction ou d'entretien de Travaux publics et Services gouvernementaux Canada (TPSGC) de signer une attestation volontaire, attestation signalant leur engagement à embaucher et former des apprentis.
2. Le Canada doit composer avec des pénuries de main-d'œuvre dans divers secteurs et dans diverses régions, en particulier dans des métiers spécialisés. Faciliter l'acquisition de compétences et la formation chez les Canadiens est une responsabilité partagée. Le gouvernement du Canada a pris l'engagement de faciliter l'utilisation d'apprentis dans le cadre des contrats fédéraux de construction et d'entretien. Les soumissionnaires ont un rôle important à jouer au titre du soutien des apprentis, à savoir les embaucher et les former. On les encourage à attester qu'ils proposent des possibilités d'emploi à des apprentis dans le cadre de leurs relations d'affaires avec le gouvernement du Canada.
3. Le gouvernement du Canada encourage les Canadiens à faire l'apprentissage de métiers spécialisés et à y faire carrière. En outre, le gouvernement offre un crédit d'impôt aux employeurs afin de les encourager à embaucher des apprentis. Vous trouverez de l'information à propos de ces mesures fiscales administrées par l'Agence du revenu du Canada dans son site Web à : [www.cra-arc.gc.ca](http://www.cra-arc.gc.ca). Les employeurs sont aussi invités à se renseigner à propos de l'information et des mesures de soutien additionnelles dont ils pourraient tirer profit auprès de leur autorité provinciale ou territoriale en matière d'apprentissage.
4. Les attestations signées à la page 2 de 2 aideront à mieux comprendre comment les entrepreneurs utilisent des apprentis dans le cadre de contrats fédéraux de construction et d'entretien et pourraient éclairer l'élaboration, dans l'avenir, de nouvelles politiques et de nouveaux programmes.
5. L'entrepreneur atteste ce qui suit :

En vue de contribuer à la satisfaction de la demande en travailleurs qualifiés, l'entrepreneur convient de déployer et d'exiger de ses sous-traitants qu'ils déploient des efforts commerciaux raisonnables pour embaucher et former des apprentis inscrits, de s'efforcer d'utiliser pleinement les ratios compagnon/apprenti \* autorisés et de respecter toutes les exigences liées à l'embauche prescrites dans les lois provinciales et territoriales.

L'entrepreneur consent, par la présente, à ce que cette information soit recueillie et conservée par TPSGC et Emploi et Développement social Canada en vue d'appuyer la compilation de données sur l'embauche et la formation d'apprentis dans le cadre de contrats fédéraux de construction et d'entretien.

Pour appuyer cette initiative, une attestation volontaire signalant que le fournisseur s'engage à embaucher et former des apprentis est disponible à la page 2 de 2.

Si vous acceptez, veuillez compléter et apposer votre signature à la page 2 de 2.

*\* Le ratio compagnon/apprenti, c'est le nombre de compagnons qualifiés/agrérés qu'un employeur doit employer dans une profession ou un métier désigné afin d'être admissible à inscrire un apprenti conformément à la législation, aux règlements, aux directives d'orientation ou aux arrêtés provinciaux/territoriaux émis par les autorités ou les organismes responsables.*

Attestation volontaire

(A être volontairement retourner avec la soumission)  
(page 2 de 2)

Avis; L'entrepreneur sera appelé à compléter à tous les six mois ou à la fin des travaux un rapport tel qu'inclus à l'annexe C « Rapport volontaire d'apprentis employés pendant les contrats ».

Nom :	
Signature :	
Nom de la compagnie :	
Dénomination sociale :	
Numéro de l'invitation à soumissionner :	
Nombre d'employés de l'entreprise :	
Nombre planifié d'apprentis qui travailleront sur ce contrat :	

Métiers spécialisés de ces apprentis :


## **ANNEXE A – DEVIS & DESSINS**

(voir ci-joint)

**ANNEXE B - ATTESTATION D'ASSURANCE**

(Pour informations seulement, n'est pas requise lors du dépôt de soumission)

**ATTESTATION D'ASSURANCE**Travaux publics et  
Services gouvernementaux  
CanadaPublic Works and  
Government Services  
Canada**Page 1 de 2**

Description et emplacement des travaux	N° de contrat.
	N° de projet

Nom de l'assureur, du courtier ou de l'agent postal	Adresse (N°, rue)	Ville	Province	Code
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Nom de l'assuré (Entrepreneur) Postal	Adresse (N°, rue)	Ville	Province	Code
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Assuré additionnel
<b>Sa majesté la Reine du chef du Canada représentée par le Ministre des Travaux publics et des Services gouvernementaux</b>

Genre d'assurance	Compagnie et N° de la police	Date d'effet J / M / A	Date d'expiration J / M / A	Plafonds de garantie		
<b>Responsabilité civile des entreprises</b> <b>Responsabilité complémentaire/exc édentaire.</b>				Par sinistre	Global général annuel	Global - Risque après travaux
				\$	\$	\$
				\$	\$	\$
<b>Assurance des chantiers / Risques d'installation</b>				\$		
<b>Responsabilité pollution des entreprises</b>				\$ <input type="checkbox"/> Par incident <input type="checkbox"/> Par événement		Global \$
<b>Responsabilité maritime</b>				\$		

J'atteste que les polices ci-dessus ont été émises par des assureurs dans le cadre de leurs activités d'assurance au Canada et que ces polices sont présentement en vigueur, comprennent les garanties et dispositions applicables de la page 2 de l'Attestation d'assurance, incluant le préavis d'annulation ou de réduction de garantie.

Nom de la personne autorisée à signer au nom de(s) l'(s)assureur(s) (Cadre, agent, courtier)

Numéro de téléphone

Signature

Date J / M / A



## ATTESTATION D'ASSURANCE Page 2 de 2

### Généralités

Les polices exigées à la page 1 de l'Attestation d'assurance doivent être en vigueur et doivent inclure les garanties énumérées sous le genre d'assurance correspondant de cette page-ci.

Les polices doivent assurer l'entrepreneur et doivent inclure, en tant qu'assuré additionnel, Sa majesté la Reine du chef du Canada représentée par le Ministre des Travaux publics et des Services gouvernementaux.

La police d'assurance doit comprendre un avenant prévoyant un préavis écrit d'au moins trente (30) jours en cas d'annulation de l'assurance ou de toute réduction de la garantie d'assurance.

Sans augmenter la limite de responsabilité, la police doit couvrir toutes les parties assurées dans la pleine mesure de la couverture prévue.

De plus, la police doit s'appliquer à chaque assuré de la même manière et dans la même mesure que si une police distincte avait été émise à chacun d'eux.

### Responsabilité civile des entreprises

La garantie d'assurance fournie ne doit pas être substantiellement inférieure à la garantie fournie par la dernière publication du formulaire BAC 2100.

La police doit inclure ou avoir un avenant pour l'inclusion d'une garantie pour les risques et dangers suivants si les travaux y sont assujettis :

- a) Dynamitage.
- b) Battage de pieux et travaux de caisson.
- c) Reprise en sous-œuvre.
- d) Enlèvement ou affaiblissement d'un support soutenant toute structure ou terrain, que ce support soit naturel ou non, si le travail est exécuté par l'entrepreneur assuré.

La police doit comporter:

- a) un « Plafond par sinistre » d'au moins **5 000 000 \$**;
- b) un « Plafond global général » d'au moins **10 000 000 \$** par année d'assurance, si le contrat d'assurance est assujéti à une telle limite.
- c) un « Plafond pour risque produits/après travaux » d'au moins **5 000 000 \$**.

Une assurance responsabilité complémentaire ou excédentaire peut être utilisée pour atteindre les plafonds obligatoires.

### Assurance des chantiers / Risques d'installation

La garantie d'assurance fournie ne doit pas être inférieure à la garantie fournie par la plus récente édition des formulaires BAC 4042 et BAC 4047.

Le contrat doit permettre la mise en service et l'occupation du projet, en totalité ou en partie, pour les fins auxquelles le projet est destiné à son achèvement.

Le contrat d'assurance peut exclure ou avoir un avenant pour l'exclusion d'une garantie pour les pertes et dommages occasionnés par l'amiante, les champignons et spores, le cyber et le terrorisme.

La police doit avoir un plafond qui n'est **pas inférieur à la somme de la valeur du contrat** plus la valeur déclarée (s'il y a lieu) dans les documents contractuels de tout le matériel et équipement fourni par le Canada sur le chantier pour être incorporé aux travaux achevés et en faire partie. Si la valeur des travaux est modifiée, la police doit être modifiée pour refléter la valeur révisée du contrat.

Le contrat d'assurance doit stipuler que toute indemnité en vertu d'icelle doit être payée à sa Majesté ou selon les directives du Canada conformément à la CG10.2, « Indemnité d'assurance » (<https://achatsetventes.gc.ca/politiques-et-lignes-directrices/guide-des-clauses-et-conditions-uniformisees-d-achat/5/R/R2900D/2>).

### Responsabilité pollution des entreprises

La limite de responsabilité doit avoir un plafond équivalant à celui habituellement fixé pour un contrat de cette nature; toutefois, la limite de responsabilité ne doit pas être inférieure à **1 000 000 \$** par incident ou par événement et suivant le plafond global.

### Responsabilité maritime

La garantie d'assurance doit être fournie par une police d'assurance protection et indemnisation mutuelle et doit comprendre une responsabilité additionnelle en matière de collision et de pollution.

L'assurance doit être souscrite auprès d'un membre du groupe international de sociétés d'assurance mutuelle, ou avec un marché fixe, et le montant ne doit pas être inférieur aux limites fixées par la *Loi sur la responsabilité en matière maritime*, L.C. 2001, ch. 6. La protection doit comprendre les membres d'équipage, s'ils ne sont pas couverts par l'assurance contre les accidents du travail du territoire ou de la province ayant juridiction sur ces employés.

La police doit renoncer à tout droit de subrogation contre le Canada, représenté par Travaux publics et Services gouvernementaux Canada, relativement à toute perte ou dommage au navire, peu en importe la cause.

**ANNEXE C - RAPPORT VOLONTAIRE D'APPRENTIS EMPLOYÉS PENDANT LES CONTRATS (EXEMPLE)**

*(Ce rapport volontaire n'est pas requis lors du dépôt de soumission)*

L'entrepreneur devrait compiler et tenir à jour des données sur le nombre d'apprentis ayant été embauchés pour travailler sur le contrat, ainsi que leur métier spécialisé.

L'entrepreneur devrait fournir ces données conformément au format ci-dessous. Si aucun apprenti n'a été embauché pendant la durée du contrat, l'entrepreneur devrait soumettre un rapport portant la mention « néant ».

Les données devraient être présentées à l'autorité contractante au plus tard six mois après l'octroi du contrat ou à la fin du contrat, selon la première éventualité.

Nombre d'apprentis embauchés	Métier spécialisé

NUMBER	TITLE	PAGES
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**APPENDIX**

Remedial Statement of Work (28 Pages)  
580 West Pennant Road (PID # 00480335), West Pennant, Halifax County, NS  
(Adjacent to Pennant Harbour Former Aid site (DFRP # 02840, LL # 501, RPIS # MC00418))

**END OF SECTION**

## 1 GENERAL

### 1.1 DESCRIPTION OF WORK

- .1 Work under this Contract is as described in the Statement of Work and as outlined in the Specifications, and includes the following:
  - .1 Obtaining and paying for relevant permits.
  - .2 Property survey, including delineation of the work areas and topographical survey.
  - .3 Providing access to the site, including reinstating properties to original condition upon completion of the work.
  - .4 Traffic control.
  - .5 Supply and installation of fencing to delineate the Work areas and to provide privacy and safety control for the property owner.
  - .6 Supply, installation, maintenance, and removal (upon completion) of dust, erosion, and sedimentation control for the duration of the Work.
  - .7 Removal of vegetation and felling of trees as necessary to perform the work, including stockpiling felled trees.
  - .8 Preparing a staging area for stockpiling contaminated materials.
  - .9 Excavation of contaminated soils to depths of 150 mm, 300 mm, 450 mm, 600 mm, or 750 mm depending on the area as shown on Figures 1 through 4 of the Statement of Work, including some hand digging around trees, septic field/tank, and other sensitive areas, as well as separation of rocks over 50 mm diameter for reuse as backfill material.
  - .10 Temporarily stockpiling and protecting contaminated soils to be sampled and analyzed for lead and lead leachate.
  - .11 Removal and disposal of the contaminated soils in accordance with the results of the lead testing in appropriate facilities within or outside of Province, including provision of waste manifests.
  - .12 Maintaining existing drainage ditch and other property features, including reinstatement to original condition

upon completion of the work.

- .13 Supply, installation, and grading of clean backfill material.
- .14 Supply, installation, and grading of clean topsoil.
- .15 Supply, installation, and maintenance of grass seed, fertilizer, and straw / mulch or hydroseed, including watering and fertilizing to ensure optimal growth.
- .16 Provision of a one-year warranty for grassed areas.

## **1.2 CONTRACT METHOD**

- .1 Construct Work under unit price contract.

## **1.3 SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit Project construction progress schedule in accordance with Section 01 32 16.19 - Construction Progress Schedule - Bar (GANTT) Chart.
- .3 Submit site-specific and Work Plan Health and Safety Plan in accordance with Section 01 35 29 - Health and Safety Requirements.

## **1.4 WORK BY OTHERS**

- .1 Co-operate with the Consultant for the collection of leachate and confirmatory sampling.

## **1.5 CONTRACTOR USE OF PREMISES**

- .1 Refer to Section 01 14 00 - Work Restrictions.
- .2 Conduct work to prevent damage to adjacent areas of the property.
- .3 Reinstate property to original condition upon completion of the work as directed by Departmental Representative.

## **1.6 PROPERTY OWNER OCCUPANCY**

- .1 Property Owner will occupy premises during entire construction period.
- .2 Co-operate with Departmental Representative in scheduling operations to minimize conflict and to facilitate Property Owner usage.

- .3 Contractor to ensure all communication regarding the work and property are through the Departmental Representative. Contractor shall not communicate with the Property Owner without the presence of the Departmental Representative.

#### 1.7 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING PROPERTY

- .1 Execute work with least possible interference or disturbance to the Property Owner. Arrange with Departmental Representative to facilitate execution of work.

#### 1.8 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy of each document as follows:
  - .1 Remedial Statement of Work.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Reviewed Shop Drawings.
  - .5 List of Outstanding Shop Drawings.
  - .6 Change Orders.
  - .7 Other Modifications to Contract.
  - .8 Field Test Reports.
  - .9 Copy of Approved Work Schedule.
  - .10 Health and Safety Plan and Other Safety Related Documents.
  - .11 Permits.
  - .12 Other documents as specified.

#### 2 PRODUCTS

##### 2.1 NOT USED

- .1 Not used.

#### 3 EXECUTION

##### 3.1 NOT USED

- .1 Not used.

END OF SECTION

## **1 GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 35 29 - Health and Safety Requirements.
- .4 Section 01 35 29.13 - Health, Safety, And Emergency Response Procedures For Contaminated Sites
- .4 Section 01 35 44 - Environmental Procedures.
- .5 Section 01 41 00 - Regulatory Requirements.

### **1.2 USE OF SITE AND FACILITIES**

- .1 Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative.
- .2 Maintain existing services to property and provide for personnel and vehicle access.
- .3 Contractor is responsible to provide sanitary facilities for use by Contractor's personnel. Keep facilities clean.

### **1.3 EXISTING SERVICES**

- .1 Notify utility companies and Departmental Representative of intended interruption of services and obtain required permission.
- .2 Where Work involves breaking into or connecting to existing services, give Departmental Representative 48 hours notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as directed by governing authorities with minimum disturbance to the Property Owner.
- .3 Provide alternative routes for vehicular traffic as required facilitate the Work.
- .4 Establish location and extent of service lines in area of work before starting Work. Notify Departmental Representative of findings.
- .5 Provide temporary services when directed by Departmental Representative to maintain critical property services.
- .6 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.

- .7 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .8 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction.
- .9 Record locations of maintained, re-routed and abandoned service lines.

#### **1.4 SECURITY**

- .1 Where security has been reduced by Work of Contract, provide temporary means to maintain security.

#### **1.5 SMOKING**

- .1 Smoking is not permitted on the property.

#### **1.6 PUBLIC COMMUNICATIONS, MEDIA, AND MARKETING**

- .1 Contractor shall notify PSPC immediately if contacted by the media, members of the community, and/or the public regarding the project. The Contractor shall provide the name and contact information of the person or organization requesting the information to the PSPC Project Manager for further action.
- .2 Contractor shall not communicate directly with the media, members of the community, and/or the public regarding this project under any circumstance unless prior express written consent is provided from PSPC.
- .3 Contractor is not permitted to use photos, names, descriptions, or any other project details on social media unless prior express written consent is provided from PSPC.
- .4 Contractor is not permitted to use photos, names, descriptions, or any other project details for promotional or marketing materials unless prior express written consent is provided from PSPC.

## **2 PRODUCTS**

### **2.1 NOT USED**

- .1 Not Used.



PENNANT HARBOUR	WORK RESTRICTIONS	SECTION 01 14 00
SOIL REMEDIATION		PAGE 3
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3 EXECUTION

3.01 NOT USED

.1 Not Used.

END OF SECTION

**1 GENERAL**

**1.1 REFERENCE STANDARDS**

.1 Owner / Contractor Agreement.

**1.2 PROJECT MEASUREMENT**

.1 This section details the measurement method to be used for payment purposes. Incidental items covered in the various sections of the Specification are to be allowed for in the pricing of each pay item.

**1.3. MEASUREMENT FOR PAYMENT**

.1 LUMP SUM ITEMS: The following items are to be measured separately for costing purposes, then combined and submitted as one item under Lump Sum items in the tender Documents:

**Division 1**

General Conditions: Will be paid as lump sum. This is including (but not limited to) labour, tools, equipment, materials, supervision, overhead, profit, project management / administration, mobilization / demobilization, permits, site trailer, storage, safety, environmental requirements, cleaning, signage, fencing, security, and close out requirements as described in the statement of work and specifications

Boundary and Topographical Survey: Will be paid lump sum.

Traffic Control: Will be paid lump sum.

Erosion and Sedimentation Control: Will be paid as lump sum. Included is the provision of an Erosion and Sedimentation Control Plan. No separate payment will be made for maintenance of erosion and sedimentation control elements or removal upon project completion. Also includes repairs to site upon removals.

**Division 31**

Common Backfill Material: Supply and installation of clean backfill material will be paid under lump sum. Material is to be from an approved source and free of contaminants. Included in this item is the backfill / placement of rocks salvaged from the excavations over 50 mm to be reused as directed by the Departmental Representative.

- .2 UNIT PRICE ITEMS: The following items outline the unit of measurement for unit price items as indicated in the tender documents:

**Division 31**

Clearing and Grubbing: Clearing and grubbing will be measured in square meters within limits as indicated. Clearing isolated trees and grubbing isolated tree stumps along with disposal is to be included in the unit cost for clearing and grubbing.

Contaminated Soil Excavation and Stockpiling: Excavation of contaminated soils will be measured in square meters for each remedial depth required under the Contract as outlined in the statement of work (i.e. hand excavation, 0-150 mm, 150-300 mm, 300-450 mm, and 450-750 mm). Payment for stockpiling and protection of stockpiled materials as well as sorting out and stockpiling rocks and stones over 50mm to be reused will be under this item.

Contaminated Soil Removal and Disposal: Removal and disposal of contaminated soils will be measured in tonnes of material disposed within Province and tonnes of material disposed out of Province. No separate payment will be made for storage, transport, loading or unloading, or provision of waste manifest.

## Division 32

Topsoil: Supply and installation of clean topsoil, free of contaminants, will be measured in square metres determined by the actual area covered by 100 mm of topsoil. No additional payment will be provided for finish grading and blending into adjacent areas.

Hydraulic Seeding: Hydraulic seeding will be measured in square metres of actual surface area applied for grass mixture including fertilizer. Areas of blending into existing turf grass will not be measured separately for payment. No additional payment will be provided for watering, fertilizing, or maintenance during the establishment and/or warranty periods.

### 1.4 APPLICATIONS FOR PROGRESS PAYMENT

- .1 Make applications for payment on account monthly as Work progresses.
- .2 Date applications for payment last day of agreed monthly payment period and ensure amount claimed is for value, proportionate to amount of Contract, of Work performed and Products delivered to Place of Work at that date.
- .3 Submit to Departmental Representative, at least 10 working days before first application for payment a schedule of values for parts of Work, aggregating total amount of Contract Price, to facilitate evaluation of applications for payment.

### 1.5 SCHEDULE OF VALUES

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

**1.6 PREPARING SCHEDULE OF UNIT PRICE TABLE ITEMS**

- .1 Submit separate schedule of unit price items of Work requested in Bid form.
- .2 Make form of submittal parallel to Schedule of Values, with each line item identified same as line item in Schedule of Values. Include in unit prices only:
  - .1 Cost of material.
  - .2 Delivery and unloading at site.
  - .3 Installation, overhead, and profit.

**1.7 PROGRESS PAYMENT**

- .1 Departmental Representative Departmental RepresentativeNN No later than 10 working days after receipt of an application for payment, certificate for payment will be issued in amount applied for or in such other amount as Departmental Representative Departmental Representative determines to be due. If Departmental Representative amends application, notification will be provided in writing giving reasons for amendment.

**1.8 SUBSTANTIAL PERFORMANCE OF WORK**

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

**1.9 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF WORK**

- .1 After issuance of certificate of Substantial Performance of Work:
  - .1 Submit application for payment of holdback amount.
  - .2 Submit sworn statement that accounts for labour, subcontracts, products, construction machinery and equipment, and other indebtedness which may have been incurred in Substantial

Performance of Work and for which Owner might in be held responsible have been paid in full, except for amounts properly retained as holdback or as identified amount in dispute.

- .2 After receipt of application for payment and sworn statement, Departmental Representative will issue certificate for payment of holdback amount.
- .3 Amount authorized by certificate for payment of holdback amount is due and payable on day following expiration of holdback period stipulated in lien legislation applicable to Place of Work. Where lien legislation does not exist or apply, holdback amount is due and payable in accordance with other legislation, industry practice, or provisions which may be agreed to between parties. Canada may retain out of holdback amount sums required by law to satisfy liens against Work or, if permitted by lien legislation applicable to Place of Work, other third party monetary claims against Contractor which are enforceable against Owner.

#### 1.10 FINAL PAYMENT

- .1 Submit application for final payment when Work is completed.
- .2 Departmental Representative will, no later than 10 working days after receipt of application for final payment, review Work to verify validity of application. Departmental Representative will give notification that application is valid or give reasons why it is not valid, no later than 7 working days after reviewing Work.
- .3 Departmental Representative will issue final certificate for payment when application for final payment is found valid.

## 2 PRODUCTS

### 2.1 NOT USED

- .1 Not Used.

## 3 EXECUTION

### 3.1 NOT USED

- .1 Not Used.

END OF SECTION

**1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Section 01 29 00 - Payment Procedures.

**1.2 APPOINTMENT AND PAYMENT**

- .1 Departmental Representative will appoint and pay for services of testing laboratory except follows:
  - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
  - .2 Inspection and testing performed exclusively for Contractor's convenience.
  - .3 Tests specified to be carried out by Contractor under supervision of Departmental Representative.

**1.3 CONTRACTOR'S RESPONSIBILITIES**

- .1 Provide labour, equipment and facilities to:
  - .1 Provide access to Work for inspection and testing.
  - .2 Facilitate inspections and tests.
  - .3 Make good Work disturbed by inspection and test.
  - .4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2 Notify Departmental Representative 48 hours minimum sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by Departmental Representative.

**2 Products**

**2.1 NOT USED**

- .1 Not Used.

**3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

## **1 GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 32 16.19 - Construction Progress Schedule - Bar (Gantt) Chart.

### **1.2 ADMINISTRATIVE**

- .1 Schedule and administer project meetings weekly throughout the progress of the work at the call of Departmental Representative.
- .2 Prepare agenda for meetings.
- .3 Distribute written notice of each meeting 5 working days in advance of meeting date to Departmental Representative.
- .4 Provide online meeting space (e.g. MS Teams) and make arrangements for meetings.
- .5 Preside at and chair all meetings.
- .6 Record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- .7 Reproduce and distribute copies of minutes within 3 calendar days after meetings and transmit to meeting participants and Departmental Representative.
- .8 Representative of Contractor, Subcontractor, and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

### **1.3 PRECONSTRUCTION MEETING**

- .1 Within 2 working days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Departmental Representative, Contractor, major Subcontractors, field inspectors and supervisors will be in attendance.
- .3 Establish time and location of meeting and notify parties concerned minimum 3 working days before meeting.
- .4 Departmental Representative will chair the meeting and distribute minutes following the meeting to the Contractor.
- .5 Agenda to include, but not limited to:



ITEM	DESCRIPTION
1.0	INTRODUCTION
1.1	Introduction of all team members and roles
1.2	Purpose of meeting
1.3	Project overview
1.4	Contractor role
2.0	COMMUNICATION
2.1	Correspondence and documentation
2.2	Lines of communication
2.3	Subcontractors
2.4	Media
2.5	Construction progress meetings
3.0	PRELIMINARY DOCUMENTATION
3.1	Forms
3.2	Contract
3.3	Contract security
3.4	Insurance
3.5	Permits
3.6	Schedule
4.0	HEALTH, SAFETY, AND SECURITY
4.1	Compliance
4.2	Health and safety plan
4.3	PPE
4.4	Training
4.5	Orientation
4.6	Documents maintained on-site
4.7	Signage
4.8	Contractor health and safety representative
4.9	Incident reporting
4.10	Notification
4.11	Security requirements

5.0	SUBMITTALS
5.1	General
5.2	Shop drawings
5.3	Samples
5.4	Mock-ups
5.5	Turnaround time
5.6	Tracking log
5.7	Close-out submittals
6.0	FINANCIALS
6.1	Progress payments
6.2	Cash-flow forecast
6.3	Payment for materials/equipment
6.4	Change orders
7.0	SCHEDULE
7.1	Key milestones
7.2	Submittals
7.3	Hours of work
7.4	Delays
7.5	Job specific schedule considerations
8.0	GENERAL REQUIREMENTS
8.1	Pre-construction inspection
8.2	Use of site
8.3	Testing and inspection
9.0	CONTRACT CLOSE OUT
9.1	Warranty
9.2	Project specific warranties
9.3	Warranty inspection
9.4	Record drawings
9.5	Substantial completion
9.6	Final completion
9.7	Performance evaluation reports
10.0	OTHER BUSINESS
10.1	

#### 1.4 PROGRESS MEETINGS

- .1 During course of Work schedule progress meetings weekly.
- .2 Contractor, major Subcontractors involved in Work, and Departmental Representative are to be in attendance.
- .3 Notify parties minimum 5 working days prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within 3 calendar days after meeting.
- .5 Agenda will follow the agenda of the preconstruction meeting, including:
  - .1 Review, approval of minutes of previous meeting.
  - .2 Review of Work progress since previous meeting.

- .3 Field observations, problems, conflicts.
- .4 Problems which impede construction schedule.
- .5 Review of off-site fabrication delivery schedules.
- .6 Corrective measures and procedures to regain projected schedule.
- .7 Revision to construction schedule.
- .8 Progress schedule, during succeeding work period.
- .9 Review submittal schedules: expedite as required.
- .10 Maintenance of quality standards.
- .11 Review proposed changes for effect on construction schedule and on completion date.
- .12 Other business.

## 2 PRODUCTS

### 2.1 NOT USED

- .1 Not Used.

## 3 EXECUTION

### 3.1 NOT USED

- .1 Not Used.

END OF SECTION

# 1 GENERAL

## 1.1 RELATED REQUIREMENTS

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 31 19 - Project Meetings.
- .4 Section 01 33 00 - Submittal Procedures.

## 1.2 DEFINITIONS

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually completion of major deliverable.
- .8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.

- .9 Project Planning, Monitoring and Control System: overall system operated by Departmental Representative to enable monitoring of project work in relation to established milestones.

### 1.3 REQUIREMENTS

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

### 1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit to Departmental Representative within 5 working days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- .3 Submit Project Schedule to Departmental Representative within 2 working days of receipt of acceptance of Master Plan.

### 1.5 PROJECT MILESTONES

- .1 Project milestones form interim targets for Project Schedule.
  - .1 Property survey provided to Departmental Representative within 15 calendar days of Award of Contract date.
  - .2 Excavation completed within 45 calendar days of Award of Contract date.
  - .3 Substantial Completion within 60 calendar days of Award of Contract date.

### 1.6 MASTER PLAN

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 Departmental Representative will review and return revised schedules within 5 working days.
- .3 Revise impractical schedule and resubmit within 2 working days.

- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

## 1.7 PROJECT SCHEDULE

- .1 Develop detailed Project Schedule derived from Master Plan.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
  - .1 Award.
  - .2 Shop Drawings, Sampling.
  - .3 Permits.
  - .4 Mobilization.
  - .5 Property survey.
  - .6 Work area delineation.
  - .7 Erosion and sedimentation control.
  - .8 Clearing / grubbing.
  - .9 Excavation.
  - .10 Lead sampling / analysis.
  - .11 Removal / disposal of contaminated materials.
  - .12 Backfill.
  - .13 Topsoil.
  - .14 Seeding.
  - .15 Final clean up.
  - .16 Demobilization.

## 1.8 PROJECT SCHEDULE REPORTING

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

## 1.9 PROJECT MEETINGS

- .1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.
- .2 Weather related delays with their remedial measures will be discussed and negotiated.

## 2 PRODUCTS

### 2.01 NOT USED

- .1 Not used.

PENNANT HARBOUR	CONSTRUCTION	SECTION 01 32 16.19
SOIL REMEDIATION	PROGRESS SCHEDULE -	PAGE 4
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3 EXECUTION

3.01 NOT USED

.1 Not used.

END OF SECTION

## 1.1 RELATED SECTIONS

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 78 00 - Closeout Submittals.

## 1.2 SUBMITTAL GENERAL REQUIREMENTS

- .1 Submit to Departmental Representative for review requested submittals specified in various sections of the specifications including shop drawings, samples, permits, compliance certificates, test reports, work management plans and other data required as part of the work.
- .2 Submit with reasonable promptness and in orderly sequence so as to allow for Departmental Representative's review and not cause delay in Work. Failure to submit in ample time will not be considered sufficient reason for an extension of Contract time and no claim for extension by reason of such default will be allowed.
- .3 Do not proceed with work until relevant submissions have been reviewed.
- .4 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .5 Where items or information is not produced in SI Metric units, provide soft converted values.
- .6 Review submittals prior to submission. Ensure that necessary requirements have been determined and verified and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents.
  - .1 Submittals not stamped, signed, dated and identified as to specific project will be returned unexamined by Departmental Representative and considered rejected.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .9 Contractor's responsibility for errors, omissions or deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative's review.
- .10 Submittal format:
  - .1 Submit in electronic format as pdf files. Forward pdf and in the native program format, MS Word, MS Excel, MS Project and Autocad dwg and photograph jpg files through email or alternate electronic file sharing service such as ftp, as directed by Departmental Representative.

- .11 Make changes or revision to submissions which Departmental Representative may require, consistent with Contract Documents and resubmit as directed by Departmental Representative. When resubmitting, identify in writing of any revisions other than those requested.
- .12 Keep one reviewed copy of each submittal document on site for duration of Work.

### 1.3 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means fabrication drawings, erection drawings, diagrams, illustrations, schedules, performance charts, technical product data, brochures, specifications, test reports installation instructions and other data which are to be provided by Contractor to illustrate compliance with specified materials and details of a portion of work.
- .2 Shop Drawings Format:
  - .1 PDFs or high resolution scans of original drawings or standard drawings modified to clearly illustrate work specific to project requirements.
  - .2 Product Data from manufacturer's standard catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products, to be original full colour brochures, clearly marked indicating applicable data and deleting information not applicable to project.
  - .3 Non or poorly legible drawings, photocopies, scans, or facsimiles will not be accepted and returned not reviewed.
- .3 Shop Drawings Content:
  - .1 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where items or equipment attach or connect to other items or equipment, confirm that all interrelated work have been coordinated, regardless of section or trade from which the adjacent work is being supplied and installed.
  - .2 Supplement manufacturer's standard drawings and literature with additional information to provide details applicable to project.
  - .3 Delete information not applicable to project on all submittals.
- .4 Allow 5 working days for Departmental Representative's review of each submission.
- .5 Adjustments or corrections made on shop drawings by Departmental Representative are not intended to change Contract Amount. If adjustments affect value of Work, advise Departmental Representative in writing prior to proceeding with Work.
- .6 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections and comments are made, fabrication and installation may proceed upon receipt of shop drawings. If shop drawings are rejected and noted to be Resubmitted, do not proceed with that portion of work until resubmission and review of corrected shop



drawings, through same submission procedures indicated above.

- .7 Be advised that costs and expenses incurred by Departmental Representative to conduct more than one review of incorrectly prepared shop drawing submittal for a particular material, equipment or component of work may be assessed against the Contractor in the form of a financial holdback to the Contract.
- .8 Accompany each submissions with transmittal letter containing:
  - .1 Date.
  - .2 Project title and project number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.
- .9 Submissions shall include:
  - .1 Date and revision dates.
  - .2 Project title and project 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 Cross references to particular details of contract drawings and specifications section number for which shop drawing submission addresses.
  - .6 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.
- .10 After Departmental Representative's review, distribute copies.
- .11 The review of shop drawings by the Departmental Representative or by an authorized Consultant or designate is for sole purpose of ascertaining conformance with general concept. This review shall not mean that Canada approves the detail design inherent in the 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 the 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.

#### 1.4 SAMPLES

- .1 Submit for review samples as specified in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples to Departmental Representative's office or to other address as directed. Do not drop off samples at construction site except for pre-approved circumstances previously approved by Departmental Representative.
- .3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Departmental Representative are not intended to change Contract Amount. If adjustments will result in a cost increase to the Contract notify Departmental Representative in writing prior to proceeding with Work.
- .6 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

END OF SECTION

**Part 1      General**

**1.1            RELATED REQUIREMENTS**

- .1      Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2      Section 01 14 00 - Work Restrictions.
- .3      Section 01 33 00 - Submittal Procedures.
- .4      Section 01 35 29 - Health and Safety Requirements.
- .5      Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .6      Section 01 35 29 - Health and Safety Requirements.
- .7      Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.

**1.2            REFERENCES**

- .1      Nova Scotia Ministry of Transportation and Infrastructure Renewal.
  - .1      Nova Scotia Temporary Workplace Traffic Control Manual.
- .2      U.S. Department of Transportation
  - .1      Manual of Uniform Traffic Control Devices for Streets and Highways (UTCD) - 2009.

**1.3            PROTECTION OF PUBLIC TRAFFIC**

- .1      Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment.
- .2      When working on travelled way:
  - .1      Place equipment in position to minimize interference and hazard to travelling public.
  - .2      Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
  - .3      Do not leave equipment on travelled way overnight.
- .3      Close lanes of road only after receipt of written approval from Departmental Representative.

- .1 Before re-routing traffic erect suitable signs and devices to Temporary Workplace Traffic Control Manual.
- .4 Keep travelled way graded, free from pot holes and of sufficient width for required number of lanes of traffic.
- .5 Provide detours or temporary roads to facilitate passage of traffic around restricted construction area.
- .6 Provide and maintain road access and egress to property fronting along Work under Contract and in other areas as indicated, except where other means of road access exist that meet approval of Departmental Representative.

#### 1.4 INFORMATIONAL AND WARNING DEVICES

- .1 Provide and maintain signs, [flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices to Temporary Workplace Traffic Control Manual.
- .3 Place signs and other devices in locations recommended in [ Temporary Workplace Traffic Control Manual.
- .4 Meet with Departmental Representative prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Departmental Representative.
- .5 Continually maintain traffic control devices in use:
  - .1 Check signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
  - .2 Remove or cover signs which do not apply to conditions existing from day to day.

#### 1.5 CONTROL OF PUBLIC TRAFFIC

- .1 Provide competent flag personnel, trained in accordance with, and properly equipped to Temporary Workplace Traffic Control Manual for situations as follows:
  - .1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled roadway.
  - .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.

- .3 When workmen or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
- .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
- .5 For emergency protection when other traffic control devices are not readily available.
- .6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.
- .7 At each end of restricted sections where pilot cars are required.
- .8 Delays to public traffic due to contractor's operators: 10 minutes maximum.
- .2 Provide pilot cars as required or as directed by the Departmental Representative. Equip pilot cars with orange flashing lights and signs clearly designating vehicles as pilot cars.
- .3 Where roadway, carrying two-way traffic, is restricted to one lane, for 24 hours each day, provide portable traffic signal system.
  - .1 Adjust, as necessary, and regularly maintain system during period of restriction.
  - .2 Ensure signal system meets requirements of Temporary Workplace Traffic Control Manual.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 14 00 - Work Restrictions.
- .4 Section 01 32 16.19 - Construction Progress Schedule - Bar (GANTT) Chart.
- .5 Section 01 33 00 - Submittal Procedures.
- .6 Section 01 35 29 - Health and Safety Requirements.

**1.2 REFERENCE STANDARDS**

- .1 Canadian General Standards Board (CGSB)
  - .1 CGSB 51-GP-51M-81 , Polyethylene Sheet for Use in Building Construction.
- .2 Transportation and Dangerous Goods Act (1999)
- .3 Canadian Council of Ministers of the Environment (CCME) Documentation

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures .
- .2 Site Layout: within 10 calendar days after date of Notice to Proceed and prior to mobilization to site, submit site layout drawings showing existing conditions and facilities, construction facilities, and temporary controls provided by Contractor including following:
  - .1 Soil stockpile / staging areas.
  - .2 Means of ingress, egress and temporary traffic control facilities.
  - .3 Equipment and material staging areas.
- .3 Submit documentation verifying that hazardous materials employees have been trained, tested, and certified to safely and effectively carry out their assigned duties in accordance with Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.

#### **1.4 REGULATORY REQUIREMENTS**

- .1 Provide erosion and sediment control in accordance with the Remedial Statement of Work and Specifications.
- .2 Comply with federal, provincial, and local anti-pollution laws, ordinances, codes, and regulations when disposing of waste materials, debris, and rubbish.
- .3 Work to meet or exceed minimum requirements established by federal, provincial, and local laws and regulations which are applicable.
  - .1 Contractor: responsible for complying with amendments as they become effective.
- .4 In event that compliance exceeds scope of work or conflicts with specific requirements of contract notify Departmental Representative immediately.

#### **1.5 SOIL STOCKPILING FACILITIES**

- .1 Provide, maintain, and operate storage/stockpiling facilities as outlined in the Remedial Statement of Work and Specifications.

Install liner below proposed stockpile locations to prevent contact between stockpile material and ground. Use tarps capable of covering stockpiled material until lead sampling / analysis is completed and Departmental Representative advises Contractor to dispose of material off site.

#### **1.6 DRUMS**

- .1 Storage of Solid Waste: 200 L steel drums meeting Transportation and Dangerous Goods Act, closable lids, complete with labels for marking contents and date filled.

#### **1.7 VEHICULAR ACCESS AND PARKING**

- .1 Maintenance and Use:
  - .1 Prevent contamination of access roads. Immediately scrape up debris or material on access roads which is suspected to be contaminated as determined by Departmental Representative; transport and place into designated area approved by Departmental Representative.
  - .2 Departmental Representative may collect soil samples for chemical analyses from traveling surfaces of constructed and existing access routes prior to, during, and upon completion of Work. Excavate and

dispose of clean soil contaminated by Contractor's activities at no additional cost to Canada.

#### **1.8 DUST AND PARTICULATE CONTROL**

- .1 Execute Work by methods to minimize raising dust from construction operations.
- .2 Implement and maintain dust and particulate control measures immediately during construction and in accordance with applicable regulations.
- .3 Provide positive means to prevent airborne dust from dispersing into atmosphere. Use potable water for water misting system for dust and particulate control.
- .4 As minimum, use appropriate covers on trucks hauling fine or dusty material. Use watertight vehicles to haul wet materials.
- .5 Prevent dust from spreading to adjacent property sites.
- .6 Keep roads clean by mechanical means such as a power broom at all times.
- .7 Departmental Representative will stop work at any time when Contractor's control of dusts and particulates is inadequate for wind conditions present at site, or when air quality monitoring indicates that release of fugitive dusts and particulates into atmosphere equals or exceeds specified levels.
- .8 If Contractor's dust and particulate control is not sufficient for controlling dusts and particulates into atmosphere, stop work. Contractor must discuss procedures that Contractor proposes to resolve problem. Make necessary changes to operations prior to resuming excavation, handling, processing, or other work that may cause release of dusts or particulates.

#### **1.9 DEWATERING**

- .1 Dewater various parts of Work including, without limitation, excavations, structures, foundations, and work areas.
- .2 Employ construction methods, plant procedures, and precautions that ensure Work, including excavations, are stable, free from disturbance, and dry.
- .3 Dewatering Methods: includes sheeting and shoring; groundwater control systems; surface or free water control systems employing ditches, diversions, drains, pipes and/or pumps; and other measures necessary to enable Work to be carried out in dry conditions.



**1.10 EROSION AND SEDIMENT CONTROL**

- .1 Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow areas, staging areas, and other work areas. Prevent erosion and sedimentation.
- .2 Minimize amount of bare soil exposed at one time. Stabilize disturbed soils as quickly as practical. Strip vegetation, regrade, or otherwise develop to minimize erosion. Remove accumulated sediment resulting from construction activity from adjoining surfaces, drainage systems, and water courses, and repair damage caused by soil erosion and sedimentation as directed by Departmental Representative.
- .3 Provide and maintain temporary measures which may include, silt fences, hay or straw bales, ditches, geotextiles, drains, berms, terracing, riprap, temporary drainage piping, sedimentation basins, vegetative cover, dikes, and other construction required to prevent erosion and migration of silt, mud, sediment, and other debris off site or to other areas of site where damage might result, or that might otherwise be required by Laws and Regulations. Make sediment control measures available during construction. [Place silt fences and/or hay or straw bales in ditches to prevent sediments from escaping from ditch terminations] .
- .4 Hay or Straw Bale: wire bound or string tied; securely anchored by at least 2 stakes or rebars driven through bale 300 mm to 450 mm.
- .5 Silt Fence: assembled, ready to install unit consisting of geotextile attached to driveable posts. Geotextile: uniform in texture and appearance, having no defects, flaws, or tears that would affect its physical properties; and contain sufficient ultraviolet ray inhibitor and stabilizers to provide minimum 2-year service life from outdoor exposure.
- .6 Net Backing: industrial polypropylene mesh joined to geotextile at both top and bottom with double stitching of heavy-duty cord, with minimum width of 750 mm.
- .7 Posts: sharpened wood, approximately 50 mm square, protruding below bottom of geotextile to allow minimum 450 mm embedment; post spacing 2.4 m maximum. Securely fasten each post to geotextile and net backing using suitable staples.
- .8 Plan construction procedures to avoid damage to work or equipment encroachment onto water bodies or drainage ditch banks. In event of damage, promptly take action to mitigate

effects. Restore affected bank or water body to existing condition.

.9 Installation:

- .1 Construct temporary erosion control items as indicated. Actual alignment and/or location of various items as directed by Departmental Representative.
- .2 Do not construct bale barriers and silt fence in flowing streams or in swales.
- .3 Check erosion and sediment control measures weekly before and after each rainfall; during prolonged rainfall check daily.
- .4 Bales and/or silt fence may be removed at beginning of work day, replace at end of work day.
- .5 Whenever sedimentation is caused by stripping vegetation, regrading, or other development, remove it from adjoining surfaces, drainage systems, and watercourses, and repair damage as quickly as possible.
- .6 Prior to or during construction, Departmental Representative may require installation or construction of improvements to prevent or correct temporary conditions on site. Improvements may include berms, mulching, sediment traps, detention and retention basins, grading, planting, retaining walls, culverts, pipes, guardrails, temporary roads, and other measures appropriate to specific condition. Temporary improvements must remain in place and in operation as necessary or until otherwise directed by Departmental Representative.
- .7 Repair damaged bales, end runs, and undercutting beneath bales.
- .8 Unless Departmental Representative advises otherwise remove temporary erosion and sediment control devices upon completion of Work. Spread accumulated sediments to form a suitable surface for seeding or dispose of, and shape area to permit natural drainage to satisfaction of Departmental Representative. Materials once removed become property of Contractor.
- .10 Do not disturb existing embankments or embankment protection.
- .11 Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- .12 If soil and debris from site accumulate in low areas, storm sewers, roadways, gutters, ditches, or other areas where in

Departmental Representative's determination it is undesirable, remove accumulation and restore area to original condition.

**1.11 PROGRESS CLEANING**

- .1 Maintain cleanliness of Work and surrounding site to comply with federal, provincial, and local fire and safety laws, ordinances, codes, and regulations.
- .2 Co-ordinate cleaning operations with disposal operations to prevent accumulation of dust, dirt, debris, rubbish, and waste materials.

**1.12 REMOVAL AND DISPOSAL**

- .1 Remove and disposal surplus materials and temporary facilities from site.
- .2 Dispose of non-contaminated waste materials, litter, debris, and rubbish off site at a registered disposal facility.
- .3 Do not burn or bury rubbish and waste materials on site.
- .4 Do not dispose of volatile or hazardous wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
- .5 Do not discharge wastes into streams or waterways.
- .6 Dispose of following materials at appropriate registered disposal facilities identified by Contractor and approved by Departmental Representative:
  - .1 Debris including excess construction material.
  - .2 Non-contaminated litter and rubbish.
  - .3 Material generated from clearing and grubbing.
  - .4 Contaminated soil.
  - .5 Erosion and sedimentation control elements.
  - .6 Liners and covers used for stockpiled materials.

**1.13 RECORD KEEPING**

- .1 Maintain adequate records to support information provided to Departmental Representative regarding exception reports, annual reports, and biennial reports.
- .2 Maintain bills of lading for minimum of 375 days from date of shipment or longer period required by applicable law or regulation.
- .3 Provide all disposal slips to the Departmental Representative monthly.

Part 2      Products

2.1          NOT USED

.1      Not Used.

Part 3      Execution

3.1          NOT USED

.1      Not Used.

END OF SECTION

## 1.1 SECTION INCLUDES

- .1 Fire Safety Requirements.
- .2 Hot Work Permit.
- .3 Existing Fire Protection and Alarm Systems.

## 1.2 RELATED SECTIONS

- .1 Section 01 35 29 - Health and Safety Requirements.
- .2 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.

## 1.3 REFERENCES

- .1 National Fire Code 2015
- .2 National Building Code 2015
- .3 CAN/CSA-W117.2, "Safety in Welding, Cutting and Allied Processes."
- .4 Applicable OHS legislation

## 1.4 DEFINITIONS

- .1 Hot Work - applies to hot works involving open flames or producing heat or sparks, including, without being limited to, cutting, welding, soldering, brazing, grinding, adhesive bonding, thermal spraying and thawing pipes.

## 1.5 SUBMITTALS

- .1 Submit copy of Hot Work Procedures and sample of Hot Work permit to Departmental Representative for review, within 10 calendar days of acceptance of bid.
- .2 Submit in accordance with Section 01 33 00 - Submittal Procedures.

## 1.6 FIRE SAFETY REQUIREMENTS

- .1 Implement and follow fire safety measures during Work. Comply with following:
  - .1 National Fire Code 2015.
  - .2 National Building Code 2015.
  - .3 Provincial OHS Acts and Regulations.
  - .4 CAN/CSA-W117.2, "Safety in Welding, Cutting and Allied Processes."
- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.

## 1.7 HOT WORK AUTHORIZATION

- .1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot Work on site.
- .2 To obtain authorization submit to Departmental Representative:
  - .1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
  - .2 Description of the type and frequency of Hot Work required.
  - .3 Sample Hot Work Permit to be used.
- .3 Upon review and confirmation that effective fire safety measures will be implemented and followed during performance of hot work, Departmental Representative will give authorization to proceed as follows:
  - .1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;
  - .2 Subdivide the work into pre-determined, individual activities, each activity requiring a separately written authorization to proceed.
- .4 Requirement for individual authorization will be based on:
  - .1 Nature or phasing of work;
  - .2 Risk to Facility operations;
  - .3 Quantity of various trades needing to perform hot work on project or;
  - .4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.
- .5 Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.
- .6 In tenant occupied Facility, coordinate performance of Hot Work with Facility Manager through the Departmental Representative. When directed, perform Hot Work only during non-operative hours of the Facility. Follow Departmental Representative's directives in this regard.
- .7 Hot works shall be performed only by personnel trained in the safe use of equipment in conformance with this Section

## 1.8 HOT WORK EQUIPMENT

- .1 Maintenance
  1. Hot work equipment shall be maintained in good operating condition.
- .2 Inspection
  1. Hot work equipment shall be examined for leakage or defects prior to each use.
  - .2 Leaks or defects found in hot work equipment shall be repaired prior to use.
- .3 Equipment Not in Use

1. All valves shall be closed and gas lines bled when Class 2 gas hot work equipment is not in use.
2. Electric hot work equipment shall be de-energized when not in use.

.4 Compressed Gas Equipment

1. The design and installation of oxygen-fuel gas equipment shall conform to NFPA 51, "Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes."
2. Unalloyed copper piping shall not be used for acetylene gas.
3. Oil or grease shall not be used with equipment for oxygen.
4. Cylinders of Class 2 gases shall conform to Part 3.

## 1.9 PREVENTION OF FIRES

.1 Location of Operations

- .1 Except as provided in Sentence (2), hot work shall be carried out in an area free of combustible and flammable contents, with walls, ceilings and floors of noncombustible construction or lined with noncombustible materials.
- .2 When it is not practicable to undertake hot work in an area described in Sentence (1),
  - a) combustible and flammable materials within a 15 m distance from the hot work shall be protected against ignition in conformance with Article 4 below
  - b) a fire watch shall be provided during the hot work and for a period of not less than 60 min after its completion.
  - c) a final inspection of the hot work area shall be conducted 4 h after completion of work.
- .3 When there is a possibility of sparks leaking onto combustible materials in areas adjacent to the area where hot work is carried out,
  - a). openings in walls, floors or ceilings shall be covered or closed to prevent the passage of sparks to such adjacent areas, or
  - b) Sentence (2) shall apply to such adjacent areas.
- .4 Protection of Combustible and Flammable Materials
  1. Any combustible and flammable material, dust or residue shall be:
    - a) removed from the area where hot work is carried out, or
    - b) protected against ignition by the use of noncombustible materials.
- .5 Combustible materials or building surfaces that cannot be removed or protected against ignition as required in Sentence (1) shall be thoroughly wetted where hot work is carried out. Any process or

activity that produces flammable gases or vapours, combustible dusts or combustible fibres in quantities sufficient to create a fire or explosion hazard shall be interrupted and the hazardous conditions shall be removed before any hot work is carried out.

## 1.10 HOT WORK PROCEDURES

- .1 Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.
- .2 Hot Work Procedures to include:
  - .1 Requirement to perform hazard assessment of site and immediate work area beforehand for each hot work event in accordance with Safety Plan specified in section [01 35 29].
  - .2 Use of a Hot Work Permit system with individually issued permit by Contractor's Superintendent to worker or subcontractor granting permission to proceed with Hot Work.
  - .3 Permit required for each Hot Work event.
  - .4 Designation of a competent person on site as a Fire Safety Watcher responsible to conduct a fire safety watch for a minimum duration of [-60] minutes immediately following the completion of the Hot Work.
  - .5 Compliance with fire safety codes, standards and occupational health and safety regulations specified.
  - .6 Site specific rules and procedures in force at the site as provided by the Facility Manager.
- .3 Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Label document as being the Hot Work Procedures for this contract.
- .4 Procedures shall clearly establish responsibilities of:
  - .1 Worker performing hot work,
  - .2 Person issuing the Hot Work Permit,
  - .3 Fire Safety Watcher,
  - .4 Subcontractor(s) and Contractor.
- .5 Brief all workers and subcontractors on Hot Work Procedures and of Permit system. Stringently enforce compliance.

## 1.11 HOT WORK PERMIT

- .1 Hot Work Permit to include the following:
  - .1 Project name and project number;
  - .2 Building name and specific room or area where hot work will be performed;
  - .3 Date of issue;
  - .4 Description of hot work type needed;
  - .5 Special precautions to be followed, including type of fire extinguisher needed;



- .6 Name and signature of permit issuer.
  - .7 Name of worker to which the permit is issued.
  - .8 Permit validity period not to exceed 8 hours. Indicate start time/date and termination time/date.
  - .9 Worker's signature with time/date of hot work completion.
  - .10 60 minute - minimum time period of fire watch.
  - .11 Fire Safety Watcher's signature with time/date.
- .2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.
- .3 Each Hot Work Permit to be completed in full, signed and returned to Contractor's Superintendent for safe keeping on site.

#### 1.12 FIRE PROTECTION AND ALARM SYSTEMS

- .1 Fire protection and alarm systems shall not be:
- .1 Obstructed.
  - .2 Shut-off, unless approved by Departmental Representative.
  - .3 Left inactive at the end of a working day or shift.
- .2 Do not use fire hydrants, standpipes and hose systems for purposes other than firefighting
- .3 Costs incurred, from the fire department, Facility owner [and tenants], resulting from negligently setting off false alarms will be charged to the Contractor in the form of financial progress payment reductions and holdback assessments against the Contract.

#### 1.13 DOCUMENTS ON SITE

- .1 Keep Hot Work Permits and Hazard assessment documentation on site for duration of Work.
- .2 Upon request, make available to Departmental Representative or to authorized safety Representative for inspection.

END OF SECTION

## 1.1 RELATED SECTIONS

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 14 00 - Work Restrictions.
- .4 Section 01 33 00 - Submittal Procedures.
- .5 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .6 Section 01 50 00 - Temporary Facilities.

## 1.2 DEFINITIONS

- .1 Competent Person: means a person who is:
  - .1 Qualified by virtue of personal knowledge, training and experience to perform assigned work in a manner that will ensure the health and safety of persons in the workplace, and;
  - .2 Knowledgeable about the provisions of occupational health and safety statutes and regulations that apply to the Work and;
  - .3 Knowledgeable about potential or actual danger to health or safety associated with the Work.
- .2 Medical Aid Injury: any injury for which medical treatment was provided and the cost of which is covered by Workers' Compensation Board of the province in which the injury was incurred.
- .3 PPE: personal protective equipment.
- .4 Work Site: where used in this section shall mean areas, located at the premises where Work is undertaken, used by Contractor to perform all of the activities associated with the performance of the Work.
- .5 Incident - occurrence, condition, or situation arising in the course of work that resulted in or could have resulted in injury, illness, property damage, environmental issues or fatality.

## 1.3 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 **Submit Site-Specific Health and Safety Plan prior to commencement of Work.**
  - .1 Submit within 7 working days of notification of Bid Acceptance. Allow for 7 working days for Department review

- and recommendations prior to the commencement of work.  
Provide electronically.
- .2 Departmental Representative will review Health and Safety Plan and provide comments.
  - .3 Revise the Plan as appropriate and resubmit within 3 working days after receipt of comments.
  - .4 Departmental Representative's review and comments made of the Plan shall not be construed as an endorsement, approval or implied warranty of any kind by Canada and does not reduce Contractor's overall responsibility for Occupational Health and Safety of the Work.
  - .5 Submit revisions and updates made to the Plan during the course of Work.
- .3 Submit name of designated Health and Safety Site Representative and support documentation specified in the Safety Plan.
  - .4 Submit building permit, compliance certificates and other permits obtained.
  - .5 Submit copy of Letter in Good Standing from Provincial Workers Compensation or other Department of Labour organization.
    - .1 Submit update of Letter of Good Standing whenever expiration date occurs during the period of Work.
  - .6 Submit copies of reports or directions issued by Federal or Provincial authorities within 24 hours after the visit to the Departmental Representative.
  - .7 Submit copies of incident reports (incident, accident, injury, near-miss, fire, explosion, chemical spill or damage to property occurring at the work site) 24 hours after the event to the Departmental Representative.
  - .8 Submit documented plans as prescribed through Public Health requirements, directions, orders and declarations. Include industry best practices when preparing the plan and revise/update accordingly and in a timely manner as per Public Health requirements and recommended industry best practices. (Covid 19 - a source of advice can be found in the link below

<https://www.cca-acc.com/wp-content/uploads/2020/06/CCA-COVID-19-Standardized-Protocols-for-All-Canadian-Construction-Sites-05-26-20.pdf>)

#### 1.4 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act for Province of **Nova Scotia**, and Regulations made pursuant to the Act.

- .2 Comply with Provincial/Federal Public Health requirements, directions, and declarations. Prepare documented plans as prescribed by Public Health and/or industry best practices in consultation with the Departmental Representative.
- .3 Canadian Standards Association (CSA):
  - .1 CSA S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.
- .4 Observe construction safety measures of:
  - .1 NBC 2015, Division B, Part 8.
  - .2 NFC 2015,
  - .3 Municipal by-laws and ordinances.
- .5 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .6 In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.
- .7 Maintain Workers Compensation Coverage in good standing for duration of Contract. Provide proof of clearance through submission of Letter in Good Standing.
- .8 Medical Surveillance: Where prescribed by legislation or regulation, obtain and maintain worker medical surveillance documentation.

#### 1.5 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons and environment adjacent to the site to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by all workers, sub-contractors and other persons granted access to Work Site with safety requirements of Contract Documents, applicable federal, provincial, and local by-laws, regulations, and ordinances, and with site-specific Health and Safety Plan.

#### 1.6 SITE CONTROL AND ACCESS

- .1 Control the Work and entry points to Work Site. Approve and grant access only to workers and authorized persons. Immediately stop and remove non-authorized persons.
  - .1 Departmental Representative will provide names of those persons authorized by Departmental Representative to enter onto Work Site and will ensure that such

authorized persons have the required knowledge and training on Health and Safety pertinent to their reason for being at the site, however, Contractor remains responsible for the health and safety of authorized persons while at the Work Site.

- .2 Isolate Work Site from other areas of the premises by use of appropriate means.
  - .1 Erect fences, hoarding, barricades and temporary lighting as required to effectively delineate the Work Site, stop non-authorized entry, and to protect pedestrians and vehicular traffic around and adjacent to the Work and create a safe environment. See Section 01 50 00 for minimum acceptable requirements.
  - .2 Post signage at entry points and other strategic locations indicating restricted access and conditions for access.
  - .3 Use professionally made signs with bilingual message in the 2 official languages or international known graphic symbols.
- .3 Provide safety orientation session to persons granted access to Work Site. Advise of hazards and safety rules to be observed while on site. Maintain records of such orientation on site for review and audit by the Departmental Representative or their authorized inspector.
- .4 Ensure persons granted site access wear appropriate PPE. Supply PPE to inspection authorities who require access to conduct tests or perform inspections.
- .5 Secure Work Site against entry when inactive or unoccupied and to protect persons against harm. Provide security guard where adequate protection cannot be achieved by other means.

## 1.7 PROTECTION

- .1 Give precedence to safety and health of persons and protection of environment over cost and schedule considerations for Work.
- .2 Should unforeseen or peculiar safety related hazard or condition become evident during performance of Work, immediately take measures to rectify situation and prevent damage or harm. Advise Departmental Representative verbally and in writing.

## 1.8 FILING OF NOTICE

- .1 File Notice of Project with pertinent provincial health and safety

authorities prior to beginning of Work. Departmental Representative will assist in locating address if needed.

## 1.9 PERMITS

- .1 Is responsible to pay all fees to obtain all permits required to conduct the work.
- .2 Is responsible to provide authorities with plans and information for acceptance certificates and the costs arising from same.
- .3 Is responsible to provide inspections certificates as evidence that work conforms to requirements of Authorities Having Jurisdiction (AHJ).
- .4 Post permits, licenses and compliance certificates at Work Site.
- .5 Where a particular permit or compliance certificate cannot be obtained, notify Departmental Representative in writing and obtain approval to proceed before carrying out applicable portion of work.

## 1.10 HAZARD ASSESSMENTS

- .1 Perform a documented site specific Project hazard assessment for the Work. Include any site issues / hazards / concerns identified arising from the site visit that must be considered.
- .2 Carryout initial assessment prior to commencement of Work with further assessments completed and documented as needed during progress of work, including when new trades and subcontractors arrive on site.
- .3 Record results and address in Health and Safety Plan.
- .4 Share information and controls identified from original and updated Project hazard assessments with project workers. Record this information sharing complete with names and dates. Keep documentation on site for entire duration of the Work.

## 1.11 PROJECT/SITE CONDITIONS

- .1 Following are potential health, environmental and safety hazards at the site for which Work may involve contact with:
  - .1 Existing hazardous substances or contaminated materials:
    - .1 Lead impacted soil.
  - .2 Above items shall not be construed as being complete and inclusive of potential health and safety hazards encountered during Work.
  - .3 Include above items in the hazard assessment of the Work.
  - .4 MSDS Data sheets of pertinent hazardous and controlled products

stored on site can be obtained from Departmental Representative.

#### 1.12 MEETINGS

.1 Attend pre-construction health and safety meeting, convened and chaired by Departmental Representative, prior to commencement of Work, at time, date and location determined by Departmental Representative. Ensure attendance of:

- .1 Superintendent of Work.
- .2 Designated Health & Safety Site Representative.
- .3 Subcontractors.

.2 Conduct pre shift tool box talks with the crew and conduct regularly scheduled (minimum weekly) safety meetings during the Work.

.3 Keep documents on site for review by Departmental Representative or their authorized rep.

#### 1.13 HEALTH AND SAFETY PLAN

.1 Prior to commencement of Work, develop a written Site Specific Safety Plan for the Project. Implement, maintain, and enforce Plan for entire duration of Work and until final demobilization from site.

Items to include in the Site Specific Safety Plan;

a/ Name of the designated Site Safety Rep showing proof of his/her competence and reporting relationship in Contractor's company. This person is expected to be on site during all work execution.

b/ A copy of a current WCB Letter of Good Standing

c/ Details as to how WHMIS 2015 / GHS will be managed on site.

d/ Details as to how the Project work areas will be delineated /protected from other areas of the premises.(fences, signs). Must be project specific.

e/ Details as to how Safety orientations will be managed. Include a summary of what topics are covered in the safety orientation described in this section?

f/A copy of a Notice of Project that was sent to the Provincial OHS regulator.

g/Project site specific hazard assessment.

h/Details as to how tool box and safety meetings will be held and recorded.

i/An organizational chart illustrating supervision and subs (if available) that are assigned to this Project?

j/On-site Emergency Response Plans that cover all potential emergency situations that could arise. This should harmonize with the facility if possible. Emergency Contacts: name and telephone number of officials from:

- .1 General Contractor and subcontractors (key personnel)
- .2 Pertinent Federal and Provincial Departments and Authorities having jurisdiction.
- .3 Local emergency resource organizations.

k/List of critical work activities which have a risk of endangering health and safety of Facility users and/or others.

l/Details as to how the subcontractors documented safety program will be reviewed and managed prior to allowing them to work on site.

m/Details as to how the site safety inspection program will be managed. Include frequency, assignment of responsibility as well as standard inspection form to be used.

n/Basic PPE requirements as well as specialized PPE requirements; minimum being hard hat, safety footwear, safety glasses and high vis vest.

o/General safety rules as well as the disciplinary protocols to be taken for noncompliance.

p/Details as to how Incident investigations will be managed. Include procedure and incident form.

- .2 Post copy of the Plan, and updates, prominently on Work Site.

#### 1.14 SAFETY SUPERVISION

- .1 Employ Health & Safety Site Representative responsible for daily supervision of health and safety of the Work.
- .2 Health & Safety Site Representative may be the Superintendent of the Work or other person designated by Contractor and shall be assigned the responsibility and authority to:
  - .1 Implement, monitor and enforce daily compliance with health and safety requirements of the Work
  - .2 Monitor and enforce Contractor's site-specific Health and Safety Plan.
  - .3 Conduct site safety orientation session to persons granted access to Work Site.
  - .4 Ensure that persons allowed site access are knowledgeable and trained in health and safety pertinent to their activities at the site or are escorted by a competent person while on the Work Site.



.5 Stop the Work as deemed necessary for reasons of health and safety.

- .3 Health & Safety Site Representative must:
  - .1 Be qualified and competent person in occupational health and safety.
  - .2 Have site-related working experience specific to activities of the Work.
  - .3 Be on Work Site at all times during execution of the Work.
- .4 All supervisory personnel assigned to the Work shall also be competent persons.
- .5 Inspections:
  - .1 Conduct regularly scheduled safety inspections of the Work on a minimum [weekly] basis. Record deficiencies and remedial action taken.
  - .2 Follow-up and ensure corrective measures are taken.
  - .3 Share inspection reports with crews / subs
- .6 Cooperate with the Facility's and / or the PSPC Occupational Health and Safety representative.
- .7 Keep inspection reports and supervision related documentation on site.

#### **1.15 TRAINING**

- .1 Use only skilled workers on Work Site who are deemed competent and are trained in occupational health and safety procedures and practices pertinent to their assigned task.
- .2 Permit employees registered in Provincial apprenticeship program to perform specific tasks only if under direct supervision of qualified licensed workers. Determine permitted activities and tasks by apprentices, based on level of training attended and demonstration of ability to perform specific duties.
- .3 Maintain employee records and evidence of training received. Make data available to Departmental Representative upon request.
- .4 When unforeseen or peculiar safety-related hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.

#### **1.16 MINIMUM SITE SAFETY RULES**

- .1 Notwithstanding requirement to abide by federal and provincial health and safety regulations; the company shall

establish rules to govern the conduct and actions of their employees. These rules should leave no room for discretion and argument. The rules must be enforced and action should be taken every time a rule is violated.

.2 Brief persons of the documented disciplinary protocols to be taken for noncompliance. Post rules on site.

#### **1.17 CORRECTION OF NON-COMPLIANCE**

.1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.

.2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.

.3 Departmental Representative will stop Work if non-compliance of health and safety regulations is not corrected in a timely manner.

#### **1.18 INCIDENT REPORTING**

.1 Investigate and report all incidents to Departmental Representative.

.2 Notify the Departmental representative as soon as reasonably practicable following the incident.

.3 Ensure the Authority having Jurisdiction is notified as prescribed by applicable legislation.

.4 Submit report in writing.

#### **1.19 HAZARDOUS PRODUCTS**

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).

.2 Keep MSDS data sheets for all products delivered to site.

.1 Post on site.

.2 Submit copy to Departmental Representative.

#### **1.20 CONFINED SPACES**

.1 Abide by occupational health and safety regulations regarding work in confined spaces.

.2 Obtain an Entry Permit in accordance with Part XI of the Canada

Occupational

Health and Safety Regulations for entry into an existing identified confined space located at the Facility or premises of Work.

- .1 Obtain permit from Facility Manager.
- .2 Keep copy of permit issued.

#### 1.21 SITE RECORDS

- .1 Maintain on Work Site copy of safety related documentation and reports stipulated to be produced in compliance with Acts and Regulations of authorities having jurisdiction and of those documents specified herein.
- .2 Upon request, make available to Departmental Representative or authorized Safety Officer for inspection.

#### 1.24 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in a conspicuous location on the Work Site in accordance with Acts and Regulations of Province. See local legislation for specifics.
- .2 Post other documents as specified herein, including:
  - .1 Site specific Health and Safety Plan.
  - .2 WHMIS data sheets.

END OF SECTION

**Part 1      General**

**1.1          RELATED REQUIREMENTS**

- .1      Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2      Section 01 11 00 - Summary of Work.
- .3      Section 01 14 00 - Work Restrictions.
- .4      Section 01 33 00 - Submittal Procedures.
- .5      Section 01 35 29 - Health and Safety Requirements
- .6      Section 01 50 00 - Temporary Facilities.

**1.2          REFERENCE STANDARDS**

- .1      Province of Nova Scotia
  - .1      Occupational Health and Safety Act, S.N.S.
- .2      Canada Labour Code, Canada Occupational Safety and Health Regulations, SOR/86-304.

**1.3          ACTION AND INFORMATIONAL SUBMITTALS**

- .1      Make submittals in accordance with Section 01 33 00-Submittal Procedures.
- .2      Submit site-specific Health and Safety Plan, within 7 working days after date of Notice to Proceed and prior to mobilization to site. Address following items:
- .3      Safety and health risk or hazard analysis for each site task and operation found in work plan .
- .4      Develop checklist for items to be inspected on a daily basis. Document actions taken.
- .5      Personnel training requirements including:
  - .1      Names of personnel and alternates responsible for site safety and health, hazards present on site, and use of personal protective equipment.
  - .2      Work practices by which personnel can minimize risks from hazards, safe use of engineering controls and equipment on site, medical surveillance requirements,

including recognition of symptoms and signs which might indicate overexposure to hazards, and elements of site-specific Health and Safety Plan.

- .6 Personal protective equipment (PPE) program addressing:
  - .1 Donning and doffing procedures.
  - .2 PPE selection based upon site hazards.
  - .3 PPE use and limitations of equipment.
  - .4 Work mission duration, PPE maintenance and storage.
  - .5 PPE decontamination and disposal.
  - .6 PPE inspection procedures prior to, during, and after use.
  - .7 Evaluation of effectiveness of PPE program, and limitations during temperature extremes, and other appropriate medical considerations.
  - .8 Medical surveillance requirements for personnel assigned to work at site.
  - .9 Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment.
  - .10 Site control measures employed at site including site map, site work zones, use of 'buddy system', site communications including site security, alerting means for emergencies, standard operating procedures or safe work practices, and identification of nearest medical assistance.
  - .11 Decontamination procedures for both personnel and equipment.
  - .12 Emergency response requirements addressing: pre-emergency planning, personnel roles, lines of authority and communication, emergency recognition and prevention, safe distances and places of refuge, site security and control, evacuation routes and procedures, decontamination procedures not covered under decontamination section, emergency medical treatment and first aid, emergency alerting and response procedures, critique of response and follow-up, PPE and emergency equipment, site topography, layout, prevailing weather conditions, and procedures for reporting incidents to local, provincial, or federal agencies.

- .13 Written respiratory protection program for project activities.
- .14 Procedures dealing with heat and/or cold stress.
- .15 Confined space entry procedures.
- .16 Spill containment program if drummed waste material is generated, excavated, stored, or managed on site.
- .7 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 7 working days.
- .8 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.
- .9 Off-site Contingency and Emergency Response Plan:
  - .1 Prior to commencing Work involving handling of hazardous materials, develop off-site Contingency and Emergency Response Plan.
  - .2 Plan must provide immediate response to serious site occurrence such as explosion, fire, or migration of significant quantities of toxic or hazardous material from site.

#### **1.4 REGULATORY REQUIREMENTS**

- .1 Comply with specified standards and regulations to ensure safe operations at site containing hazardous or toxic materials.

#### **1.5 SITE CONDITIONS**

- .1 Work at site will involve contact with:
  - .1 Lead impacted soil.

#### **1.6 GENERAL REQUIREMENTS**

- .1 Develop written site-specific Health and Safety Plan prior to commencing site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Ensure Health and Safety guidelines provide for safe and minimal risk working environment for site personnel and minimize impact of activities involving contact with hazardous materials or hazardous wastes on general public and surrounding environment.

- .3 Relief from or substitution for portion or provision of minimum Health and Safety Guidelines specified or reviewed site-specific Health and Safety Plan must submitted to Departmental Representative in writing. Departmental Representative will respond in writing, either accepting or requesting improvements.

#### **1.7 RESPONSIBILITY**

- .1 Be responsible for safety of persons and property on site and for protection of persons off 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, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

#### **1.8 HAZARD COMMUNICATION REQUIREMENTS**

- .1 Comply with Chemical Hazards Regulation, Alta. Reg.
- .2 Comply with Occupational Health and Safety Regulation, B.C. Reg., Part 5 - Chemical and Biological Substances, Workplace Hazardous Materials Information System (WHMIS).
- .3 Comply with Workplace Hazardous Materials Information System (WHMIS) Regulations, N.S. Reg.
- .4 Comply with Information on Controlled Products Regulation, O.C.
- .5 Comply with Occupational Health and Safety Regulations, Part XXII Controlled Products - Workplace Hazardous Materials Information System.
- .6 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations, Part X - Hazardous Substances.
- .7 Provide Departmental Representative with Material Safety Data Sheets (MSDS) and documentation on any "hazardous" chemical that Contractor or Contractor Representatives plan to bring onto site.

#### **1.9 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.
- .2 Assign responsibility and obligation to Health and Safety Officer where required to stop or start Work when, at Health and Safety Officer's discretion, it is necessary or

advisable for reasons of health or safety. Departmental Representative may also stop Work for health and safety considerations.

**1.10 UNFORESEEN HAZARDS**

- .1 Should unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, stop work and immediately advise Departmental Representative verbally and in writing.

**1.11 HEALTH AND SAFETY OFFICER AND REGISTERED OCCUPATIONAL HYGIENIST / CERTIFIED INDUSTRIAL HYGIENIST**

- .1 Employ and assign to Work competent and authorized representative as Health and Safety Adviser. Health and Safety Adviser shall:
  - .1 Have minimum 2 years' site-related working experience specific to activities associated with lead contaminated materials.
  - .2 Have basic working knowledge of specified occupational safety and health regulations.
  - .3 Be responsible for completing Health and Safety Training Session and ensuring that personnel not successfully completing the required training are not permitted to enter site to perform Work in Exclusion Zone or Contaminant Reduction Zone.
  - .4 Be responsible for implementing, enforcing daily and monitoring site-specific Health and Safety Plan.
- .2 Employ and assign to Work, competent and authorized Certified Industrial Hygienist shall:
  - .1 Oversee operations as necessary to ensure Work is performed in accordance with site-specific Health and Safety Plan.
  - .2 Oversee and be present during Health and Safety Training Sessions.
  - .3 Oversee Health and Safety Officer's activities.
  - .4 Be available as required for emergency situations.

**1.12 PERSONNEL HEALTH, SAFETY, AND HYGIENE**

- .1 Medical Surveillance:
  - .1 Conduct medical surveillance of personnel as required by specified regulations.



- .2 Training: ensure personnel entering site are trained in accordance with specified personnel training requirements. Training session must be completed by Health and Safety Officer.
- .3 Personal Protective Equipment:
  - .1 Furnish site personnel with appropriate PPE. Ensure that safety equipment and protective clothing is kept clean and maintained.
- .4 Develop protective equipment usage procedures and ensure that procedures are strictly followed by site personnel; include following procedures as minimum:
  - .1 Ensure prescription eyeglasses worn are safety glasses and do not permit contact lenses on site within work zones.
  - .2 Ensure footwear is steel-toed safety shoes or boots and is covered by rubber overshoes when entering or working in potentially contaminated work areas.
  - .3 Dispose of or decontaminate PPE worn on site at end of each workday.
  - .4 Decontaminate reusable PPE before reissuing.
  - .5 Ensure site personnel have passed respirator fit test prior to entering potentially contaminated work areas.
  - .6 Ensure facial hair does not interfere with proper respirator fit.
- .5 Heat Stress/Cold Stress: implement heat stress monitoring program as applicable and include in site-specific Health and Safety Plan.
- .6 Personnel Hygiene and Personnel Decontamination Procedures. Provide minimum as follows:
  - .1 Suitable containers for storage and disposal of used disposable PPE.
  - .2 Potable water and suitable sanitation facility.
- .7 Emergency and First-Aid Equipment:
  - .1 Locate and maintain emergency and first-aid equipment in appropriate location on site including first-aid kit to accommodate number of site personnel; portable emergency eye wash; two 9 kg ABC type dry chemical fire extinguishers.

- .2 2 self-contained breathing apparatus units; blankets and towels; stretcher; and 1 hand-held emergency siren.
- .3 As minimum, provide 1 certified first-aid technician on site at all times when work activities are in progress.
- .8 Site Communications:
  - .1 Post emergency numbers near site telephones.
  - .2 Ensure personnel use of "buddy" system and develop hand signal system appropriate for site activities.
  - .3 Provide employee alarm system to notify employees of site emergency situations or to stop Work activities if necessary.
  - .4 Furnish selected personnel with 2-way radios.
  - .5 Safety Meetings: conduct mandatory daily safety meetings for personnel, and additionally as required by special or work-related conditions; include refresher training for existing equipment and protocols, review ongoing safety issues and protocols, and examine new site conditions as encountered. Hold additional safety meetings on as-needed basis.
- .9 Custodian: employ and assign to Work Custodian to report directly to Health and Safety Officer and who is responsible for keeping safety equipment and facilities clean, properly equipped, and maintained. Custodian may perform other duties for Contractor but Custodian's first priority is maintenance of protective equipment and personnel decontamination area.

#### **1.13 CONTINGENCY AND EMERGENCY RESPONSE**

- .1 Meet specified requirements.
- .2 Arrange and attend co-ordination meeting held with appropriate authorities including City, Fire, Hospital, Provincial and City Police, Ministry of Transportation, Ministry of Health, and Community Emergency Co-ordinator; meeting will identify off-site Emergency Response Co-ordinator through whom information and co-ordination will occur in event of incident.

#### **1.14 SITE CONTROL**

- .1 Before work involving handling of drums and other containers begins, submit procedures for safe handling of drums and other containers. Implement and enforce drum

handling program during activities involving drummed waste characterization including but not limited to handling, opening, sampling, staging, and consolidating.

- .2 Confined Space Entry Program: meet requirements of:
  - .1 Occupational Health and Safety Act, Industrial Safety Regulations N.S. Reg., Part 21 - Ventilation.
  - .2 Occupational Health and Safety Act, Regulations for construction projects, O. Reg., Part II - General Construction.
  - .3 Occupational Health and Safety Act, Health Care and Residential Facilities Regulation, O. Reg., Confined Spaces.
  - .4 Occupational Health and Safety Act, Industrial Establishments Regulation, R.R.O., Part I - Safety Regulations.
  - .5 Occupational Health and Safety Act, Industrial and Commercial Establishments Regulation, R.R.Q., Division IX - Maintenance and Repair Works and Hazardous Works, 9.3 Work in a closed space.
  - .6 Occupational Health and Safety Act, Safety Code For The Construction Industry, R.R.Q., Division III - Construction Sites, 3.21. Work in confined space.
  - .7 Occupational Health and Safety Act, Occupational Health and Safety Regulations, Confined Space Entry.
  - .8 Occupational Health and Safety Act, General Safety Regulations, O.I.C.
  - .9 Canada Labour Code, Canada Occupational Safety and Health Regulations, Part XI - Confined Spaces.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**1 GENERAL**

**1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 14 00 - Work Restrictions.
- .3 Section 01 33 00 - Submittal Procedures.
- .4 Section 01 35 29 - Health and Safety Requirements.
- .5 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .6 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .7 Section 01 41 00 - Regulatory Requirements.
- .8 Section 01 50 00 - Temporary Facilities.
- .9 Section 01 51 00 - Temporary Utilities.
- .10 Section 01 74 19 - Waste Management and Disposal.
- .11 Section 31 11 00 - Clearing and Grubbing.
- .12 Section 31 23 33.01 - Excavating, Trenching, and Backfilling.
- .13 Section 32 91 19.13 - Topsoil Placement and Grading.
- .14 Section 32 92 19.16 - Hydraulic Seeding.

**1.2 REFERENCE STANDARDS**

- .1 Contractor to Submit methods, means, and sequences for compliance with: applicable permits, certificates, approvals, or any other form of authorizations; other federal, provincial, or municipal requirements; and in accordance with the Contract.
- .2 Generally, provincial, territorial and municipal laws, regulations, bylaws and other requirements do not apply to federal lands, works or undertakings. Soil, sediment, water or other materials that are removed from federal lands may become subject to provincial, territorial or municipal laws and regulations.
- .3 Provincial, territorial or municipal standards may be used in relation to federal lands only as guidelines for the purpose

of establishing remediation goals and objectives. The term "standards" is used in this part in order to maintain consistency in terminology throughout this document, and does not imply that standards contained in provincial, territorial or municipal laws and regulations apply on Federal lands, activities or undertakings.

### 1.3 DEFINITIONS

- .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.
- .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.
- .3 Environmental Protection Plan: plan developed by the Contractor to ensure Environmental Protection and prevent Environmental Pollution and Damage identifying all environmental risks and mitigation measures, including: personnel requirements, emergency contacts, Environmental Protection methods, procedures, and equipment, and emergency response including a Spill Control Plan.

### 1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for all products to be used on-site and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2 Submit WHMIS Safety Data Sheets (SDS) in accordance with Section 01 35 29 - Health and Safety Requirements.
- .3 Before commencing construction activities or delivery of materials to site, submit Environmental Protection Plan for review and approval by Departmental Representative.

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

- .9 Spill Control Plan to include procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
- .10 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
- .11 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, are contained on project site.
- .12 Contaminant Prevention Plan identifying potentially hazardous substances to be used on job site; intended actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.
- .13 Historical, archaeological, cultural resources, biological resources, and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources, and wetlands.
- .14 Pesticide treatment plan to be included and updated, as required.

#### 1.5 FIRES

- .1 Fires and burning of rubbish on site is not permitted.
- .2 Provide supervision, attendance and fire protection measures during performance of work required by governing codes, regulations, and bylaws.

#### 1.6 DRAINAGE

- .1 Develop and submit erosion and Sediment Control Plan (ESC) identifying type and location of erosion and sediment controls provided. Plan to include monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.
- .2 Provide temporary drainage and pumping required to keep excavations and site free from water.

- .3 Manage disposal or runoff of water in accordance with local authority requirements.

#### 1.7 SITE CLEARING AND PLANT PROTECTION

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

#### 1.8 WORK ADJACENT TO WATERWAYS

- .1 Construction equipment to be operated on land only.
- .2 Use waterway beds for borrow material only after written receipt of approval from Departmental Representative.
- .3 Waterways to be kept free of excavated fill, waste material, and debris.
- .4 Design and construct temporary crossings to minimize the potential for erosion and prevent equipment from entering waterways.
- .5 Do not skid logs or construction materials across waterways.

#### 1.9 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this Contract.
- .2 Control emissions from equipment and plant in accordance with local authorities' emission requirements.
- .3 Cover or wet down dry materials to prevent blowing dust and debris. Provide dust control for temporary roads.



#### 1.10 NOTIFICATION

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

#### 2 PRODUCTS

##### 2.1 NOT USED

- .1 Not Used.

#### 3 EXECUTION

##### 3.01 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 00 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.
- .3 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 00 - Cleaning.

END OF SECTION

## **Part 1 General**

### **1.1 SUMMARY**

- .1 This Section references to laws, by laws, ordinances, rules, regulations, codes, orders of Authority Having Jurisdiction, and other legally enforceable requirements applicable to Work and that are; or become, in force during performance of Work.

### **1.2 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 14 00 - Work Restrictions.
- .4 Section 01 33 00 - Submittal Procedures.
- .5 Section 01 35 29 - Health and Safety Requirements.
- .6 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .7 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .8 Section 01 35 44 - Environmental Procedures.
- .9 Section 01 50 00 - Temporary Facilities.
- .10 Section 01 51 00 - Temporary Utilities.
- .11 Section 01 74 19 - Waste Management and Disposal.

### **1.3 REFERENCES TO REGULATORY REQUIREMENTS**

- .1 Perform Work in accordance with all applicable codes, legislation, acts, regulations, standards, bylaws, ordinances, and contract documents including amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.

### **1.4 QUALITY ASSURANCE**

- .1 Regulatory Requirements: Except as otherwise specified, Contractor shall apply for, obtain, and pay fees associated with, permits, licenses, certificates, and approvals required by

regulatory requirements and Contract Documents, based on General Conditions of Contract and the following:

- .1 Regulatory requirements and fees in force on date of Bid submission, and
- .2 A change in regulatory requirements or fees scheduled to become effective after date of tender submission and of which public notice has been given before date of tender submission

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not Used.

### **2.2 EASEMENTS AND NOTICES**

- .1 Contractor shall give notices required by regulatory requirements.

## **Part 3 Execution**

### **3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 33 00 - Submittal Procedures.
- .3 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .4 Section 01 71 00 - Examination and Preparation.
- .5 Section 01 73 00 - Execution.
- .6 Section 31 11 00 - Clearing and Grubbing.
- .7 Section 31 23 33.01 - Excavating, Trenching, and Backfilling.
- .8 Section 32 91 19.13 - Topsoil Placement and Grading.
- .9 Section 32 92 19.16 - Hydraulic Seeding.

**1.2 INSPECTION**

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

**1.3 INDEPENDENT INSPECTION AGENCIES**

- .1 Independent Inspection/Testing Agencies will be engaged by Departmental Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Departmental Representative.

- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Departmental Representative at no cost to Departmental Representative. Pay costs for retesting and reinspection.

#### 1.4 ACCESS TO WORK

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

#### 1.5 PROCEDURES

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

#### 1.6 REJECTED WORK

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

#### 1.7 REPORTS

- .1 Submit electronic copies of inspection and test reports to Departmental Representative.

#### 1.8 TESTS AND MIX DESIGNS

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

**Part 2 Products**

**2.1 NOT USED**

.1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

.1 Not Used.

END OF SECTION

## **1.1 SITE ACCESS AND PARKING**

- .1 The Contractor is advised that while parking facilities for his workers and subcontractors will be on property, such parking facilities may be remote from the actual site of the work. In any case, follow all instructions from the Departmental Representative in regards to parking facilities.
- .2 Build and maintain temporary access roads and provide snow removal and dust control during period of work.
- .3 Maintain new and existing roads and parking areas at site, where used by Contractor, for duration of contract.
  - .1 Keep clean and free of mud and dirt by washing on a regular basis.
  - .2 Provide snow removal in areas located within construction site or enclosed by work.
  - .3 Make good and repair damage resulting from Contractor's use of existing roads, asphalted areas and lawns on site.

## **1.2 MATERIAL STORAGE**

- .1 Locate site storage trailers where directed by Departmental Representative. Place in location of least interference with existing property operations.
- .2 Material storage space on site is limited. Coordinate delivery to minimize storage period on site before being needed for incorporation into work.
- .3 Make arrangements elsewhere as deemed required and pay all costs for storage of materials not ready for incorporation into work.

## **1.3 SITE ENCLOSURES**

- .1 Provide temporary fence to enclose various construction areas of work site.
- .2 Erect plastic mesh fence constructed as follows:
  - .1 1200 mm height, constructed of high density polyethylene mesh fence fabric, orange in color.
  - .2 Supported by steel T-bar posts or other similar framing, of sufficient quantity, adequate spacing and set firmly in ground to secure fence against sags.
  - .3 Inspect fence regularly, repairing sags and damaged sections.
- .3 Obtain Departmental Representative's approval beforehand of location and layout of all temporary fence enclosures.
- .4 Provide warning signs affixed to all fenced areas, identifying those enclosed areas as "Construction Zones" with access restricted to only those persons so authorized by General Contractor.

## **1.4 SANITARY FACILITIES**

- .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.

#### **1.5 POWER**

- .1 Arrange, pay for and maintain temporary electrical power supply in accordance with governing regulations and ordinances.
- .2 Supply and install all temporary facilities for power such as pole lines, meter socket, underground cables, etc. as required and to approval of local power supply authority.
- .3 Provide and pay all costs to supply and install temporary cabling, panelboards, switching devices and other equipment as required to connect into power source, provide adequate ground fault protection and extend power supply from existing source to work areas. Perform work and make all connections in accordance with the CSA C22.1-12 Canadian Electrical Code, in compliance with the federal and provincial Occupational Health and Safety Regulations as specified in section 01 35 29.

#### **1.6 WATER SUPPLY**

- .1 Arrange, pay for and maintain temporary water supply in accordance with governing regulations and ordinances.

#### **1.7 CONSTRUCTION SIGN AND NOTICES**

- .1 Install signs plumb and level in neat wood framework and securely anchor in ground by posts to withstand wind pressure of 160 km/h.
- .2 Contractor or subcontractor advertisement signboards are not permitted on site.
- .3 Safety and Instruction Signs and Notices:
  - .1 Signs and notices for safety and instruction shall be in both official languages or commonly understood graphic symbols conforming to CAN/CSA-Z321-96(R2006).
- .4 Maintenance and Disposal of Site Signs:
  - .1 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 Departmental Representative.

#### **1.8 REMOVAL OF TEMPORARY FACILITIES**

- .1 Remove temporary facilities from site when directed by Departmental Representative.

**END OF SECTION**



## **1 GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 33 00 - Submittal Procedures.

### **1.2 REFERENCE STANDARDS**

- .1 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.

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

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

### **1.4 INSTALLATION AND REMOVAL**

- .1 Provide temporary utilities controls in order to execute work expeditiously.
- .2 Remove from site all such work after use.

### **1.5 DEWATERING**

- .1 Provide temporary drainage and pumping facilities to keep excavations and site free from standing water.

### **1.6 FIRE PROTECTION**

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on Site.

## **2 PRODUCTS**

### **2.1 NOT USED**

- .1 Not Used.

### 3 EXECUTION

#### 3.1 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties, specific to site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
- .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

END OF SECTION

## **1 GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.

### **1.2 REFERENCE STANDARDS**

- .1 Contractor is responsible to provide survey control points and property limits.

### **1.3 QUALIFICATIONS OF SURVEYOR**

- .1 Qualified registered land surveyor, licensed to practice in Place of Work, acceptable to Departmental Representative.

### **1.4 SURVEY REFERENCE POINTS**

- .1 Contractor is responsible to provide survey control points and property limits.
- .2 Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
- .3 Make no changes or relocations without prior written notice to Departmental.
- .4 Report to Departmental Representative when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- .5 Require surveyor to replace control points in accordance with original survey control.

### **1.5 SURVEY REQUIREMENTS**

- .1 Establish two permanent bench marks on site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
- .2 Establish lines and levels, locate and lay out, by instrumentation.
- .3 Stake for grading, fill and topsoil placement.
- .4 Stake slopes and berms.
- .5 Establish pipe invert elevations.
- .6 Stake batter boards.

## **1.6 EXISTING SERVICES**

- .1 Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.

## **1.7 LOCATION OF EQUIPMENT AND FIXTURES**

- .1 Location of equipment, fixtures and outlets 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 Departmental Representative of impending installation and obtain approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

## **1.8 RECORDS**

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.

## **1.9 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit name and address of Surveyor to Departmental Representative.
- .2 On request of Departmental Representative, submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying and noting those elevations and locations of completed Work that conform and do not conform with Contract Documents.

## **1.10 SUBSURFACE CONDITIONS**

- .1 Promptly notify Consultant in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should Consultant determine that conditions do differ materially, instructions will be issued for changes in Work as provided in Changes and Change Orders.

2 PRODUCTS

2.01 NOT USED

.1 Not Used.

3 EXECUTION

3.01 NOT USED

.1 Not Used.

END OF SECTION

## **1 GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 14 00 - Work Restrictions.
- .4 Section 01 32 16.19 - Construction Progress Schedule - Bar (GANTT) Chart.
- .5 Section 01 33 00 - Submittal Procedures.
- .6 Section 01 35 29 - Health and Safety Requirements.
- .7 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .8 Section 31 11 00 - Clearing and Grubbing.
- .9 Section 31 23 33.01 - Excavating, Trenching, and Backfilling.
- .10 Section 32 91 19.13 - Topsoil Placement and Grading.
- .11 Section 32 92 19.16 - Hydraulic Seeding.

### **1.2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit written request in advance of cutting or alteration which affects:
  - .1 Structural integrity of elements of project.
  - .2 Integrity of weather-exposed or moisture-resistant elements.
  - .3 Efficiency, maintenance, or safety of operational elements.
  - .4 Visual qualities of sight-exposed elements.
  - .5 Work of Owner or separate contractor.
- .3 Include in request:
  - .1 Identification of project.
  - .2 Location and description of affected Work.
  - .3 Statement on necessity for cutting or alteration.
  - .4 Description of proposed Work, and products to be used.
  - .5 Alternatives to cutting and patching.
  - .6 Effect on Work of Owner or separate contractor.
  - .7 Written permission of affected separate contractor.
  - .8 Date and time work will be executed.

### **1.3 MATERIALS**

- .1 Required for original installation.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00 - Submittal Procedures.

### **1.4 PREPARATION**

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering, inspect conditions affecting performance of Work.
- .3 Beginning of cutting or patching means acceptance of existing conditions.
- .4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.
- .5 Provide protection from elements for areas which are to be exposed by uncovering work; maintain excavations free of water.

### **1.5 EXECUTION**

- .1 Execute cutting, fitting, and patching including excavation and fill, to complete Work.
- .2 Fit several parts together, to integrate with other Work.
- .3 Uncover Work to install ill-timed Work.
- .4 Remove and replace defective and non-conforming Work.
- .5 Remove samples of installed Work for testing.
- .6 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .7 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .8 Restore work with new products in accordance with requirements of Contract Documents.

## **2 PRODUCTS**

### **2.1 NOT USED**

- .1 Not Used.

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3 EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION



## **1 GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 14 00 - Work Restrictions.
- .3 Section 01 33 00 - Submittal Procedures.
- .4 Section 01 35 29 - Health and Safety Requirements.
- .5 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .6 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .7 Section 01 41 00 - Regulatory Requirements.
- .8 Section 01 45 00 - Quality Control.
- .9 Section 01 50 00 - Temporary Facilities.
- .10 Section 01 51 00 - Temporary Utilities.
- .11 Section 01 74 19 - Waste Management and Disposal.
- .12 Section 31 11 00 - Clearing and Grubbing.
- .13 Section 31 23 33.01 - Excavating, Trenching, and Backfilling.
- .14 Section 32 91 19.13 - Topsoil Placement and Grading.
- .15 Section 32 92 19.16 - Hydraulic Seeding.

### **1.2 PROJECT CLEANLINESS**

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, including that caused by Owner or other Contractors.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .3 Clear snow and ice from work areas, remove from site.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on-site containers for collection of waste materials and debris as required.
- .6 Provide and use marked separate bins for recycling. Refer to Section

01 74 19 - Waste Management and Disposal.

- .7 Dispose of waste materials and debris off site.
- .8 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .9 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

### **1.3 FINAL CLEANING**

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 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.
- .5 Clean lighting reflectors, lenses, and other lighting surfaces.
- .6 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .7 Remove dirt and other disfiguration from exterior surfaces.
- .8 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .9 Sweep and wash clean paved areas.
- .10 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
- .11 Clean roofs, downspouts, and drainage systems.

### **1.4 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 19 - Waste Management and Disposal.

## **2 PRODUCTS**

### **2.01 NOT USED**

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

.1 Not Used.

END OF SECTION

## 1 GENERAL

### 1.1 SUMMARY

- .1 This Section includes requirements for management of construction waste and disposal, which forms the Contractor's commitment to reduce and divert waste materials from landfill.

### 1.2 RELATED REQUIREMENTS

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 14 00 - Work Restrictions.
- .3 Section 01 33 00 - Submittal Procedures.
- .4 Section 01 35 29 - Health and Safety Requirements.
- .5 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .6 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .7 Section 01 41 00 - Regulatory Requirements.
- .8 Section 01 45 00 - Quality Control.
- .9 Section 01 50 00 - Temporary Facilities.
- .10 Section 01 51 00 - Temporary Utilities.
- .11 Section 01 73 00 - Execution.
- .12 Section 01 74 00 - Cleaning.
- .13 Section 31 11 00 - Clearing and Grubbing.
- .14 Section 31 23 33.01 - Excavating, Trenching, and Backfilling.
- .15 Section 32 91 19.13 - Topsoil Placement and Grading.
- .16 Section 32 92 19.16 - Hydraulic Seeding.

### 1.3 REFERENCE STANDARDS

- .1 American Society for Testing and Materials (ASTM):
  - .1 ASTM E 1609 01, Standard Guide for Development and Implementation of a Pollution Prevention Program
- .2 Canada Green Building Council (CaGBC)
  - .1 LEED Reference Guide for Building Design and Construction, Version 4

- .3 Recycling Certification Institute (RCI):
  - .1 RCI Certification Construction and Demolition Materials Recycling

#### 1.4 DEFINITIONS

- .1 Clean Waste: Untreated and unpainted; not contaminated with oils, solvents, sealants or similar materials.
- .2 Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, re modeling, repair and demolition operations.
- .3 Hazardous: Exhibiting the characteristics of hazardous substances including properties such as ignitability, corrosiveness, toxicity or reactivity.
- .4 Non-hazardous: Exhibiting none of the characteristics of hazardous substances, including properties such as ignitability, corrosiveness, toxicity, or reactivity.
- .5 Non toxic: Not poisonous to humans either immediately or after a long period of exposure.
- .6 Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- .7 Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- .8 Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form; recycling does not include burning, incinerating, or thermally destroying waste.
- .9 Return: To give back reusable items or unused products to vendors for credit.
- .10 Reuse: To reuse a construction waste material in some manner on the project site.
- .11 Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- .12 Sediment: Soil and other debris that has been eroded and transported by storm or well production run off water.
- .13 Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- .14 Toxic: Poisonous to humans either immediately or after a long period of exposure.
- .15 Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

- .16 Volatile Organic Compounds (VOC's): Chemical compounds common in and emitted by many building products over time through outgassing:
  - .1 Solvents in paints and other coatings;
  - .2 Wood preservatives; strippers and household cleaners;
  - .3 Adhesives in particleboard, fiberboard, and some plywood; and foam insulation.
  - .4 When released, VOC's can contribute to the formation of smog and can cause respiratory tract problems, headaches, eye irritations, nausea, damage to the liver, kidneys, and central nervous system, and possibly cancer.
- .17 Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.
- .18 Construction Waste Management Plan: A project related plan for the collection, transportation, and disposal of the waste generated at the construction site; the purpose of the plan is to ultimately reduce the amount of material being landfilled.

## **1.5 ADMINISTRATIVE REQUIREMENTS**

- .1 Coordination: Coordinate waste management requirements with all Divisions of the Work for the project.

## **1.6 SUBMITTALS**

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

## **1.7 DELIVERY, STORAGE AND HANDLING**

- .1 Storage Requirements: Implement a recycling/reuse program that includes separate collection of waste materials as appropriate to the project waste and the available recycling and reuse programs in the project area.
- .2 Handling Requirements: Clean materials that are contaminated before placing in collection containers and ensure that waste destined for landfill does not get mixed in with recycled materials:
  - .1 Deliver materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to recycling process.
  - .2 Arrange for collection by or delivery to the appropriate recycling or reuse facility.
- .3 Hazardous Waste and Hazardous Materials: Handle in accordance with applicable regulations.

## **2 PRODUCTS**

### **2.1 NOT USED**

- .1 Not Used.

3 EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION

## 1.1 SECTION INCLUDES

- .1 Administrative procedures preceding inspection and acceptance of Work by Departmental Representative.

## 1.2 RELATED SECTIONS

- .1 Section 01 78 00 - Closeout Submittals.

## 1.3 INSPECTION AND DECLARATION

- .1 Contractor's Inspection: Coordinate and perform, in concert with subcontractors, an inspection and check of all Work. Identify and correct deficiencies, defects, repairs and perform outstanding items as required to complete work in conformance with Contract Documents.
  - .1 Notify Departmental Representative in writing when deficiencies from Contractor's inspection have been rectified and that Work is deemed to be complete and ready for Departmental Representative's inspection of the completed work.
- .2 Departmental Representative's Inspection: Accompany Departmental Representative during all substantial and final inspections of the Work.
  - .1 Address defects, faults and outstanding items of work identified by such inspections.
  - .2 Advise Departmental Representative when all deficiencies identified have been rectified.
- .3 Note that Departmental Representative will not issue a Certificate of Substantial Performance of the work until such time that Contractor performs following work and turns over the specified documents:
  - .1 Project record as-built documents.
  - .2 Final Operations and Maintenance manuals.
  - .3 Maintenance materials, parts and tools.
  - .4 Compliance certificates from applicable authorities.
  - .5 Reports resulting from designated tests.
  - .6 Demonstration and training complete with user manuals.
  - .7 Manufacturer's Guarantee certificates.
  - .8 Waste manifests from disposal of contaminated soil.
  - .9 Survey data.
  - .10 Project and product warranty letters/certificates.
- .4 Correct all discrepancies before Departmental Representative will issue the Certificate of Completion.

END OF SECTION



## 1.1 SECTION INCLUDES

- .1 Project Record Documents.
- .2 Operations and Maintenance data.

## 1.2 RELATED SECTIONS

- .1 Section 01 77 00 - Closeout Procedures.

## 1.3 PROJECT RECORD DOCUMENTS

- .1 Maintain at site one set of the contract drawings and specifications to record actual As-Built site conditions.
- .2 Maintain up-to-date, real time as-built drawings and specifications in good condition and make available for inspection by the Departmental Representative upon request.
- .3 As-Built Drawings:
  - .1 Record changes in red ink on the prints. Mark only on one set of prints and at completion of work, neatly transfer notations to second set (also by use of red ink).
  - .2 Submit both sets to Departmental Representative prior to application for Certificate of Substantial Performance.
  - .3 Stamp all drawings with "As-Built". Label and place Contractor's signature and date.
  - .4 Show all modifications, substitutions and deviations from what is shown on the contract drawings.
  - .5 Record following information:
    - .1 Depths of various elements of foundation in relation to survey datum.
    - .2 Horizontal and vertical location of exterior underground utilities and appurtenances referenced to permanent surface improvements.
    - .3 Horizontal and vertical location of various elements in relation to Geodetic Datum.
    - .4 Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
    - .5 Field changes of dimension and detail.
    - .6 Location of all capped or terminated services and utilities.
    - .7 Any details produced in the course of the contract by the Departmental Representative to supplement or to change existing design drawings.
    - .8 All change orders issued over the course of the contract must be documented on the finished As-Built documents, accurately and consistently depicting the changed condition as it applies to all affected drawing details.
- .4 As-Built Specifications: legibly mark in red each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each

product actually installed, particularly items substituted from that specified.

- .2 Changes made by Addenda and Change Orders.
- .3 Mark up both copies of specifications; stamp "As-Built", sign and date similarly to drawings as per above clause.

- .5 Maintain As-Built documents current as the contract progresses. Departmental Representative will conduct reviews and inspections of the documents on a regular basis. Failure to maintain as-builts current and complete to satisfaction of the Departmental Representative shall be subject to financial penalties in the form of progress payment reductions and holdback assessments.
- .6 Submit on paper and in electronic format as pdf files. Forward pdf and in the native program format, MS Word, MS Excel, MS Project and Autocad dwg and photograph jpg files on USB compatible with PSPC encryption requirements or through email or alternate electronic file sharing service such as ftp, as directed by Departmental Representative.

#### 1.4 REVIEWED SHOP DRAWINGS

- .1 Provide a complete set of all shop drawings reviewed for project to incorporate into each copy of the Operations and Maintenance Manuals.
- .2 Submit full sets at same time and as part of the contents of the Operation and Maintenance Manuals specified.

#### 1.5 UPDATING OF DIGITAL DRAWINGS

- .1 Obtain and pay for the services of a qualified drafting firm to update the digital files which were used to produce the contract drawings.
  - .1 Update the digital drawing files with the same As-Built information as specified for the paper As-Built drawings.
  - .2 Supply of digital documents does not replace the requirement to provide marked-up white prints specified above.
- .2 The Departmental Representative will provide a copy of the digital drawing files.
- .3 Incorporate the as-built changes to the digital drawings by following the standards specified in the latest version of the PWGSC National CADD Standard. A copy of this manual will be provided by the Departmental Representative.
- .4 Make revisions to electronic files found to be in non-conformance with the PWGSC National CADD Standard as directed by Departmental Representative.
- .5 In regards to updating the digital files to reflect changes resulting from Change Orders, the change in cost of completing the As-Built documentation of changes is to be included in the amount for each Change Order issued. The amount included will constitute only the increase or decrease in CADD related costs resulting directly from the change. In

determining the cost difference, full consideration will be given to the fact that other clauses of this section require As-Built CADD updates to the drawings irrespective of any Change Orders.

- .6 Deliver the digital As-Built information in same format and sequence as the contract drawings and specifications.
  - .1 Submit on PWGSC encrypted USB or upload to ftp or similar site.
  - .2 Provide 1 full set of paper plots.
  - .3 Submit the digital As-Built at the same time as the marked-up paper white prints.

## 1.6 OPERATIONS & MAINTENANCE MANUAL

- .1 O&M Manual - Definition: an organized compilation of operating and maintenance data including detailed technical information, documents and records describing operation and maintenance of individual products or systems as specified in individual sections of the specifications.
- .2 Manual Language: final manuals to be in both English and French languages.
- .3 Upon review and acceptance by Departmental Representative, submit 4 final copies and an electronic copy. Interim copies are not to be considered as part of the final copies unless they have been fully revised and are identical to the final approved version.
- .4 Submission Date: submit complete operation and maintenance manual to Departmental Representative prior to application for Certificate of Substantial Performance of the work.
- .5 Binding:
  - .1 Assemble, coordinate, bind and index required data into Operation and Maintenance Manual.
  - .2 Use vinyl, hard covered, 3 "D" ring binders, loose leaf, sized for 215 x 280 mm paper, with spine pocket.
  - .3 Where multiple binders are needed, correlate data into related consistent groupings.
  - .4 Identify contents of each binder on spine.
  - .5 Organize and divide data following same numerical system as the section numbers of the Specification Manual.
  - .6 Dividers: separate each section by use of cardboard dividers and labels. Provide tabbed fly leaf for each individual product and system and give description of product or component.
  - .7 Type lists and notes. Do not hand write.
  - .8 Drawings, diagrams and manufacturers' literature must be legible. Provide with reinforced, punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .6 Manual Contents:
  - .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: provide full table of contents in each binder(s), clearly indicate which contents are in each binder.
- .3 List of maintenance materials.
- .4 List of spare parts.
- .5 List of special tools.
- .6 Original or certified copy of warranties and product guarantees.
- .7 Copy of approval documents and certificates issued by Inspection Authorities.
- .8 Copy of reports and test results performed by Contractor as specified.
- .9 Product Information (PI Data) on materials, equipment and systems as specified in various sections of the specifications. Data to include:
  - .1 List of equipment including manufacturer's name, supplier, local source of supplies and service depot(s). Provide full addresses and telephone numbers.
  - .2 Nameplate information including equipment number, make, size, capacity, model number and serial number.
  - .3 Parts list.
  - .4 Installation details.
  - .5 Operating instructions.
  - .6 Maintenance instructions for equipment.
  - .7 Maintenance instructions for finishes.
- .7 Shop drawings:
  - .1 Include complete set of reviewed shop drawings into each copy of the operations and maintenance manual.
  - .2 Fold and bind material professionally in a manner that corresponds with the specification section numbering system.
  - .3 When large quantity of data is submitted, place into separate binders of same size as O&M binders.
- .8 Materials and Finishes Maintenance Data:
  - .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.
- .9 Warranty:
  - .1 Include original copy of one year warranty for hydroseed. One full growing season following the completion of the work is required.

END OF SECTION

## **1 GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 14 00 - Work Restrictions.
- .4 Section 01 33 00 - Submittal Procedures.
- .5 Section 01 35 29 - Health and Safety Requirements.
- .6 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .7 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .8 Section 01 41 00 - Regulatory Requirements.
- .9 Section 01 45 00 - Quality Control.
- .10 Section 01 50 00 - Temporary Facilities.
- .11 Section 01 51 00 - Temporary Utilities.
- .12 Section 01 73 00 - Execution.
- .13 Section 01 74 00 - Cleaning.
- .15 Section 31 23 33.01 - Excavating, Trenching, and Backfilling.
- .16 Section 32 91 19.13 - Topsoil Placement and Grading.

### **1.2 MEASUREMENT PROCEDURES**

- .1 Measure following items in square meters within limits as indicated:
  - .1 Clearing and grubbing.
- .2 Clearing isolated trees and grubbing isolated tree stumps is to be included in the unit cost for clearing and grubbing.

### **1.3 REFERENCE STANDARDS**

- .1 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 Clearing consists of cutting off trees and brush vegetative growth to

not more than specified height above ground and cutting to length and stockpiling of felled trees, previously uprooted trees and stumps, and surface debris.

- .2 Close-cut clearing consists of cutting off standing trees, brush, scrub, roots, stumps and embedded logs, removing at, or close to, existing grade and disposing of fallen timber and surface debris.
- .3 Clearing isolated trees consists of cutting off to not more than specified height above ground of designated trees, and disposing of felled trees and debris.
- .4 Underbrush clearing consists of removal from treed areas of undergrowth, deadwood, and trees smaller than 50 mm trunk diameter and disposing of fallen timber and surface debris.
- .5 Grubbing consists of excavation and disposal of stumps and roots, and boulders and rock fragments of specified size to not less than specified depth below existing ground surface.
- .6 EAB refers to Emerald Ash Borer a non-native, invasive beetle that is highly destructive to ash trees where it occurs.
  - .1 Woodchips in the context of EAB consist of untreated, raw bark and wood fragments broken or shredded from logs or branches. Woodchips are to be less than 2.5 cm in at least any two dimensions.
  - .2 Firewood in the context of EAB consists of non-manufactured, solid wood material, with or without bark, cut into sizes less than 1.2 metres long and less than 25 cm in diameter which may be handled manually.
  - .3 Logs in the context of EAB consist of untreated, raw wood greater than 1.2 metres in length and greater than 25 cm diameter.
  - .4 Enclosed vehicle in the context of EAB consist of any vehicle transporting regulated wood material that is equipped to preclude the loss of materials or the escape of EAB while in transit.

## **1.5 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .3 Provide manufacturer's installation instructions.

## **1.6 QUALITY ASSURANCE**

- .1 Do construction occupational health and safety in accordance with Section 01 35 29 - Health and Safety Requirements.

## **1.7 STORAGE AND PROTECTION**

- .1 Prevent damage to landscaping and water courses which are to remain.
  - .1 Repair damaged items to approval of Departmental Representative.

- .2 Replace trees designated to remain, if damaged, as directed by Departmental.

## **1.8 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 19 - Waste Management and Disposal and the Statement of Work.
- .2 Cut and stockpile felled timber.
  - .1 Trim and dispose limbs and tops and saw felled timber into 1.2 m lengths.
  - .2 Stockpile as directed by Departmental Representative.
- .3 Separate boulders and rock fragments greater than 50 mm for reuse as backfill materials as outlined in the Statement of Work.
- .4 Ash wood mixed with the wood of other species is to all be managed and disposed of as ash wood.

## **2 PRODUCTS**

### **2.1 MATERIALS**

- .1 Soil Material for Fill:
  - .1 Excavated soil material: free of debris, roots, wood, scrap material, vegetable matter, refuse, soft unsound particles, deleterious, or objectionable materials.
  - .2 Remove and store soil material for reuse.

## **3 EXECUTION**

### **3.1 TEMPORARY EROSION AND SEDIMENTATION CONTROL**

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

### **3.2 PREPARATION**

- .1 Inspect site and verify with Departmental Representative items designated to remain.

- .2 Locate and protect utility lines: preserve in operating condition active utilities traversing site.
  - .1 Notify Departmental Representative immediately of damage to or when unknown existing utility lines are encountered.
  - .2 When utility lines which are to be removed are encountered within area of operations, notify Departmental Representative in ample time to minimize interruption of service.
- .3 Notify utility authorities before starting clearing and grubbing.
- .4 Keep roads and walks free of dirt and debris.

### **3.3 APPLICATION**

- .1 Manufacturer's instructions: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

### **3.4 CLEARING**

- .1 Clearing includes felling, trimming, and cutting of trees into sections and satisfactory disposal of trees and other vegetation designated for removal, including downed timber, snags, brush, and rubbish occurring within cleared areas.
- .2 Clear as directed by Departmental Representative to ground level.
- .3 Cut off branches and cut down trees overhanging area cleared as directed by Departmental Representative.
- .4 Cut off unsound branches on trees designated to remain as directed by Departmental Representative.

### **3.5 ISOLATED TREES**

- .1 Cut off isolated trees as directed by Departmental Representative at height of not more than 300 mm above ground surface.
- .2 Grub out isolated tree stumps.
- .3 Prune individual trees as indicated.
- .4 Trim trees designated to be left standing within cleared areas of dead branches 4 cm or more in diameter; and trim branches to heights as indicated.
- .5 Cut limbs and branches to be trimmed close to bole of tree or main branches.
- .6 Paint cuts more than 3 cm in diameter with approved tree wound paint.

### **3.6 UNDERBRUSH CLEARING**

- .1 Clear underbrush from areas as indicated to ground level.



### 3.7 GRUBBING

- .1 Remove and dispose of roots larger than 7.5 cm in diameter, matted roots, and designated stumps from indicated grubbing areas.
- .2 Grub out stumps and roots to not less than 200 mm below ground surface.
- .3 Grub out visible rock fragments and boulders, greater than 50 mm in greatest dimension, but less than 0.25 m<sup>3</sup>. Stockpile for reuse as backfill material.
- .4 Fill depressions made by grubbing with suitable material and to make new surface conform with existing adjacent surface of ground.

### 3.8 REMOVAL AND DISPOSAL

- .1 Remove cleared and grubbed materials off site to disposal area.
- .2 Cut timber greater than 125 mm diameter 1200 mm lengths and stockpile as indicated in the Statement of Work. Stockpiled timber becomes property of the private property owner.
- .3 Remove diseased trees identified by Departmental Representative and dispose of this material to approval of Departmental Representative
- .4 Any ash wood materials in the form of wood chips or logs are to be scattered widely, to maximum 75 mm depth as directed by Departmental Representative.
- .5 Any ash wood materials or firewood which is removed from the site is to be transported in an enclosed vehicle and disposed of at an authorized disposal facility.
- .6 The Contractor is responsible for monitoring all cut ash wood and firewood until it is properly disposed of as determined by Departmental Representative.

### 3.9 CLEANING

- .1 Proceed in accordance with Section 01 74 00 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, flagging tape, tools and equipment.

END OF SECTION

**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 14 00 - Work Restrictions.
- .4 Section 01 33 00 - Submittal Procedures.
- .5 Section 01 35 29 - Health and Safety Requirements.
- .6 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .7 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .8 Section 01 41 00 - Regulatory Requirements.
- .9 Section 01 45 00 - Quality Control.
- .10 Section 01 50 00 - Temporary Facilities.
- .11 Section 01 51 00 - Temporary Utilities.
- .12 Section 01 73 00 - Execution.
- .13 Section 01 74 00 - Cleaning.
- .15 Section 31 11 00 - Clearing and Grubbing.
- .16 Section 32 91 19.13 - Topsoil Placement and Grading.

**1.2 MEASUREMENT PROCEDURES**

- .1 Excavation of contaminated soils will be measured in square meters for each remedial depth required under the Contract as outlined in the statement of work (i.e. hand excavation, 0-150 mm, 150-300 mm, 300-450 mm, and 450-750 mm).
- .2 Payment for stockpiling and protection of stockpiled materials as well as sorting out and stockpiling rocks and stones over 50mm to be reused will be under this item.
- .3 Shoring, bracing, cofferdams, over-excavation, underpinning and de-watering of excavation will not be measured separately for payment.

- .4 Supply and installation of clean backfill material to authorized excavation limits will be paid as lump sum. Included in this item is the backfill / placement of rocks salvaged from the excavations over 50 mm to be reused as directed by the Departmental Representative.
- .5 Backfilling to authorized excavation limits with 100 mm of topsoil will be measured in square metres (see Section 32 91 19.13 - Topsoil Placement and Grading).

### 1.3 REFERENCE STANDARDS

- .1 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 Unclassified excavation: excavation of deposits of whatever character encountered in Work.
- .2 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.
- .3 Waste material: excavated material unsuitable for use in Work or surplus to requirements.
- .4 Borrow material: material obtained from locations outside area to be graded, and required for construction of fill areas or for other portions of Work.
- .5 Recycled fill material: material, considered inert, obtained from alternate sources and engineered to meet requirements of fill areas.
- .6 Unsuitable materials:
  - .1 Weak, chemically unstable, and compressible materials.

### 1.5 ACTION AND INFORMATIONAL SUBMITTALS

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

<b>PENNANT HARBOUR</b>	<b>EXCAVATING,</b>	<b>SECTION 31 23 33.01</b>
<b>SOIL REMEDIATION</b>	<b>TRENCHING, AND</b>	<b>PAGE 3</b>
<b>WSBE No. R.120816.005</b>	<b>BACKFILLING</b>	<b>2022-06-10</b>

- .2 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, and location plan of relocated and abandoned services, as required.
- .3 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 and/or topsoil materials and provide access for sampling.

#### **1.6 QUALITY ASSURANCE**

- .1 Qualification Statement: submit proof of insurance coverage for professional liability.
- .2 Submit design and supporting data at least 2 weeks prior to beginning Work.
- .3 Design and supporting data submitted to bear stamp and signature of qualified professional engineer registered or licensed in Territory or Province where Work is to be conducted, Canada.
- .4 Keep design and supporting data on site.
- .5 Engage services of qualified professional Engineer who is registered or licensed in the Province or Territory, which Work is to be carried out to design and inspect cofferdams, shoring, bracing and underpinning required for Work.
- .6 Do not use soil material until written report of soil test results are approved by Departmental Representative.
- .7 Health and Safety Requirements:
  - .1 Do construction occupational health and safety in accordance with Section 01 35 29 - Health and Safety Requirements.

#### **1.7 WASTE MANAGEMENT AND DISPOSAL**

- .1 Excavated soil is to be disposed of at a provincially approved disposal facility.
- .2 Obtain official approval for the disposal from the facility prior to removing soil from the site. They may

request soil chemistry results and volumes prior to approving receipt and/or issuing any required Special Waste Permits. These are provided in the SOW.

## 1.8 EXISTING CONDITIONS

### .1 Site Access:

- .1 Please note the site location is indicated in the SOW. Should access to the site be required via another land owner, permission will be required for site access.
- .2 Minimize damage to any third party properties during work.
- .3 Repair damage and reinstate areas impacted on third party properties to the satisfaction of the Departmental Representative immediately following damage and at the completion of site work related to this contract.

### .2 Buried services:

- .1 Before commencing work 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. Have authorities having jurisdiction establish location and state of use of buried utilities and structures. Contractors are to clearly mark such locations to prevent disturbance during Work.
- .6 Confirm locations of buried utilities by careful test excavations/soil hydrovac methods.
- .7 Maintain and protect from damage, all water, sewer, gas, electric, telephone and other utilities and structures encountered.
- .8 Where utility lines or structures exist in area of excavation, obtain direction of Departmental Representative before removing or re-routing.
- .9 Record location of maintained, re-routed and abandoned underground lines.

- .10 Confirm locations of recent excavations adjacent to area of excavation.
- .3 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

### 2.1 MATERIALS

- .1 Topsoil: In accordance with Section 32 91 19.13 - Topsoil Placement and Grading.
- .2 Backfill Material: Clean suitable material with no contaminants from an approved source. It should not contain any brick, ceramics, concrete, asphalt, plastics, wood, glass, food or animal wastes or other materials. Nor should it contain any petroleum hydrocarbons, polyaromatic hydrocarbons, polychlorinated biphenyls or other organic or contaminants at concentrations above laboratory detection limits.
- .3 Topsoil and backfill metal concentrations should be below Nova Scotia Environment and Climate Change Tier I Environmental Quality Standards for Soil at a Residential Site with Potable Water (2013). Maximum acceptable concentrations of selected chemicals are as follows.

Maximum Acceptable Soil Concentrations for Fill or Topsoil	
Parameter	Maximum Concentration (mg/kg)
Aluminum	15,400
Antimony	7.5
Arsenic	31
Barium	10,000

Maximum Acceptable Soil Concentrations for Fill or Topsoil	
Parameter	Maximum Concentration (mg/kg)
Beryllium	38
Bismuth	---
Boron	4,300
Cadmium	14
Chromium	220
Cobalt	22
Copper	1,100
Iron	11,000
Lead	140
Lithium	---
Manganese	---
Mercury	6.6
Molybdenum	110
Nickel	330
Rubidium	---
Selenium	80
Silver	77
Strontium	9,400
Thallium	1
Tin	9,400
Uranium	23
Vanadium	39
Zinc	5,600

- .4 Department Representative will have soil samples tested for the identified parameters.
- .5 Department Representative will pay for first round of testing.
- .6 If soil concentrations do not meet targets, contractor to provide alternate source of topsoil and pay for all future testing-related requirements including travel, time and expenses.

**Part 3 Execution**

**3.1 TEMPORARY EROSION AND SEDIMENTATION CONTROL**

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

**3.2 SITE PREPARATION**

- .1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated in Statement of Work.
- .2 Remove other obstructions identified in the Statement of Work (i.e. fencing, outside stairs, etc.) prior to excavation. These obstructions are to be returned to their original place and condition once work is completed.
- .3 Minimum areas to be excavated are as indicated in the Statement of Work.
- .4 Remove trees, bushes from surfaces to be excavated within limits as indicated by Departmental Representative.

**3.3 PREPARATION/PROTECTION**

- .1 Protect existing features in accordance with 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 satisfaction.
- .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 STOCKPILING**

- .1 Stockpile fill materials in areas designated by Departmental Representative.
  - .1 Stockpile granular materials in manner to prevent segregation.
  - .2 Stockpile boulders and rock fragments greater than 50 mm to be reused as backfill material.
- .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.

### **3.5 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 29 - Health and Safety Requirements.

### **3.6 DEWATERING AND HEAVE PREVENTION**

- .1 Keep excavations free of water while Work is in progress.
- .2 Provide details of proposed dewatering or heave prevention methods, including dikes, well points, and sheet pile cut-offs to Departmental Representative for review.
- .3 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.
- .4 Protect open excavations against flooding and damage due to surface run-off.
- .5 Dispose of water in a 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.
- .6 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.

### 3.7 EXCAVATION

- .1 Advise Departmental Representative at least 7 days in advance of excavation operations.
- .2 Survey limits of areas to be remediated, including completion of a topographical survey. Data to be provided to Departmental Representative prior to proceeding with excavations.
- .3 Excavate to lines, grades, elevations and dimensions as directed by Departmental Representative.
- .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 off site at an approved facility.
- .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 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 with clean topsoil or approved backfill material.

- .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.

### 3.8 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.
  - .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.
    - .2 If approved by Departmental Representative, erect bracing or shoring to counteract unbalance, and leave in place until removal is approved by Departmental Representative.

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- .6 Place fill in areas as indicated.
- .7 Consolidate and level unshrinkable fill with internal vibrators.
- .8 Install drainage or filter system in backfill as indicated by Departmental Representative.
- .9 Backfill with imported common material and top with 100 mm of topsoil as described in Section 32 91 19 13 - Topsoil Placement, Grading and Capping.

### 3.9 RESTORATION

- .1 Upon completion of Work, remove waste materials and debris, trim slopes, and correct defects as directed by Departmental Representative.
- .2 Replace topsoil as directed by Departmental Representative.
- .3 Reinstate lawns to elevation which existed before excavation.
- .4 Clean and reinstate areas affected by Work as directed by Departmental Representative.
- .5 Protect newly graded areas from traffic and erosion and maintain free of trash or debris.

END OF SECTION

**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 11 00 - Summary of Work.
- .3 Section 01 14 00 - Work Restrictions.
- .4 Section 01 33 00 - Submittal Procedures.
- .5 Section 01 35 29 - Health and Safety Requirements.
- .6 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .7 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .8 Section 01 41 00 - Regulatory Requirements.
- .9 Section 01 45 00 - Quality Control.
- .10 Section 01 50 00 - Temporary Facilities.
- .11 Section 01 51 00 - Temporary Utilities.
- .12 Section 01 73 00 - Execution.
- .13 Section 01 74 00 - Cleaning.
- .14 Section 31 11 00 - Clearing and Grubbing.
- .15 Section 31 23 33.01 - Excavating, Trenching, and Backfilling.

**1.2 MEASUREMENT PROCEDURES**

- .1 Measure supplying, placing and spreading topsoil in square metres as determined from actual surface area covered and depth of topsoil specified in Statement of Work (SOW).
  - .1 Specified depth of topsoil is 100 mm over all disturbed areas: measured and approved by Departmental Representative after settlement and consolidation.
- .2 Separate payment will not be made for finish grading or blending into adjacent areas.

**1.3 PAYMENT**

- .1 Testing of topsoil: Payment for tests are specified in Section 2.3.

**1.4 REFERENCE STANDARDS**

- .1 Agriculture and Agri-Food Canada
  - .1 The Canadian System of Soil Classification, Third Edition, 1998.
- .2 Canadian Council of Ministers of the Environment
  - .1 PN1340-2005, Guidelines for Compost Quality.
- .3 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.

**1.5 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Quality control submittals:
  - .1 Soil testing: submit certified test reports showing compliance with specified performance characteristics and physical properties as described in the SOW.
  - .2 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

**1.6 QUALITY ASSURANCE**

- .1 Conduct pre-installation meeting to verify project requirements, installation instructions, and warranty requirements.

**1.7 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse or recycling.
- .2 Divert unused soil amendments to suppliers or dispose of unused soil amendments in accordance with applicable regulations.
- .3 Do not dispose of unused soil amendments into sewer systems, into waterways, onto ground, or in locations where it will pose health or environmental hazard.

## Part 2 Products

### 2.1 TOPSOIL

- .1 Topsoil for areas to be seeded and for capping contaminated sites: mixture of particulates, micro-organisms and organic matter which provides suitable medium for supporting intended plant growth.
  - .1 Soil texture based on The Canadian System of Soil Classification, to consist of 20 to 70 % sand, minimum 7 % clay, and contain 2 to 10 % organic matter by weight.
  - .2 Contain no toxic elements or growth inhibiting materials.
  - .3 Finished surface free from:
    - .1 Debris and stones over 50 mm diameter.
    - .2 Course vegetative material, 10 mm diameter and 100 mm length, occupying more than 2% of soil volume.
  - .4 Consistence: friable when moist.

### 2.2 SOIL AMENDMENTS

- .1 Fertilizer:
  - .1 Fertility: major soil nutrients present in following amounts:
  - .2 Nitrogen (N): 20 to 40 micrograms of available N per gram of topsoil.
  - .3 Phosphorus (P): 40 to 50 micrograms of phosphate per gram of topsoil.
  - .4 Potassium (K): 75 to 110 micrograms of potassium per gram of topsoil.
  - .5 Calcium, magnesium, sulphur and micro-nutrients present in balanced ratios to support germination and/or establishment of intended vegetation.
  - .6 Ph value: 6.5 to 8.0.
- .2 Peatmoss:
  - .1 Derived from partially decomposed species of Sphagnum Mosses.
  - .2 Elastic and homogeneous, brown in colour.
  - .3 Free of wood and deleterious material which could prohibit growth.
  - .4 Shredded particle minimum size: 5 mm.
- .3 Sand: washed coarse silica sand, medium to course textured.

- .4 Organic matter: compost Category A or B in accordance with CCME PN1340, unprocessed organic matter, such as rotted manure, hay, straw, bark residue or sawdust, meeting the organic matter, stability and contaminant requirements.
- .5 Use composts meeting Category B requirements for land fill reclamation and large scale industrial applications.
- .6 Limestone:
  - .1 Ground agricultural limestone.
  - .2 Gradation requirements: percentage passing by weight, 90% passing 1.0 mm sieve, 50% passing 0.125 mm sieve.
- .7 Fertilizer: industry accepted standard medium containing nitrogen, phosphorous, potassium and other micro-nutrients suitable to specific plant species or application or defined by soil test.

## **2.3 SOURCE QUALITY CONTROL**

- .1 Advise Departmental Representative of sources of topsoil to be utilized with sufficient lead time for testing.
- .2 Contractor is responsible for amendments to supply topsoil as specified.
- .3 Testing of topsoil will be carried out by testing laboratory designated by Departmental Representative.
  - .1 Soil sampling, testing and analysis to be in accordance with Federal and Provincial standards.
  - .2 Topsoil should be natural soil with no contaminants. It should not contain any brick, ceramics, concrete, asphalt, plastics, wood, glass, food or animal wastes or other materials. Nor should it contain any petroleum hydrocarbons, polyaromatic hydrocarbons, polychlorinated biphenyls or other organic or contaminants at concentrations above laboratory detection limits.
  - .3 Soil metal concentrations should be below Nova Scotia Environment and Climate Change Tier I Environmental Quality Standards for Soil at a Residential Site with Potable Water (2013). Maximum acceptable concentrations of selected chemicals are as follows.



Maximum Acceptable Soil Concentrations for Fill or Topsoil	
Parameter	Maximum Concentration (mg/kg)
Aluminum	15,400
Antimony	7.5
Arsenic	31
Barium	10,000
Beryllium	38
Bismuth	---
Boron	4,300
Cadmium	14
Chromium	220
Cobalt	22
Copper	1,100
Iron	11,000
Lead	140
Lithium	---
Manganese	---
Mercury	6.6
Molybdenum	110
Nickel	330
Rubidium	---
Selenium	80
Silver	77
Strontium	9,400
Thallium	1
Tin	9,400
Uranium	23
Vanadium	39
Zinc	5,600

- .4 Department Representative will have soil samples tested for the identified parameters.
- .5 Department Representative will pay for first round of testing.
- .6 If soil concentrations do not meet targets, contractor to provide alternate source of topsoil and pay for all future testing-related requirements including travel, time and expenses.

**Part 3 Execution**

**3.1 GENERAL**

- .1 Sodding, and topsoil placement, grading and capping for the site must wait for soil testing and analysis to be conducted by Departmental Representative.
- .2 Area to be backfilled or capped with a minimum of 0.1 m of compacted topsoil, as indicated in SOW. Hydroseed to be installed on topsoil.

**3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL**

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

**3.3 PREPARATION OF EXISTING GRADE**

- .1 Verify that grades are correct.
  - .1 If discrepancies occur, notify Departmental Representative and do not commence work until instructed by Departmental Representative.
- .2 Place filter fabric over area to be covered.
- .3 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage. Sufficient grading for drainage to be away from on site structures. Use good clean fill to the satisfaction of the Departmental Representative and compact to 98% Standard Proctor Density.
- .4 Ensure final grades will not impede building access. Remove debris, roots, branches, stones in excess of 50 mm diameter and other deleterious materials.
  - .1 Remove soil contaminated with calcium chloride, toxic materials and petroleum products.
  - .2 Remove debris which protrudes more than 75 mm above surface.
  - .3 Dispose of removed material off site at the direction of the Departmental Representative.

- .5 Cultivate entire area which is to receive topsoil to minimum depth of 100 mm.
- .1 Cross cultivate those areas where equipment used for hauling and spreading has compacted soil.

#### **3.4 PLACING AND SPREADING OF TOPSOIL/PLANTING SOIL**

- .1 Place topsoil after Departmental Representative has accepted subgrade.
- .2 Spread topsoil in uniform layers not exceeding 150 mm.
- .3 For sodded areas keep topsoil 15 mm below finished grade.
- .4 Spread topsoil to following minimum depths after compacting and allowing for settlement.
  - .1 100 mm for all areas.
- .5 Add sufficient topsoil and so outside the excavation area to blend into the surrounding ground with positive drainage. Manually spread topsoil/planting soil around trees, shrubs and obstacles.

#### **3.5 FINISH GRADING**

- .1 Grade to eliminate rough spots and low areas and ensure positive drainage.
  - .1 Prepare loose friable bed by means of cultivation and subsequent raking.
- .2 Consolidate topsoil to required bulk density using equipment approved by Departmental Representative.
  - .1 Leave surfaces smooth, uniform and firm against deep foot-printing.
- .3 Blend covered areas into surrounding soil to ensure positive drainage away from the site structures.

#### **3.6 ACCEPTANCE**

- .1 Departmental Representative will inspect and test topsoil in place and determine acceptance of material, depth of topsoil, finish grading, and capping.

#### **3.7 SURPLUS MATERIAL**

- .1 Dispose of materials except topsoil not required at a provincially approved disposal facility.

**3.8 CLEANING**

- .1 Proceed in accordance with Section 01 74 00 - Cleaning.
- .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

**END OF SECTION**

## **1 GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Remedial Statement of Work (SOW): 580 West Pennant Road, PID # 00480335, West Pennant, Halifax County, Nova Scotia.
- .2 Section 01 14 00 - Work Restrictions.
- .3 Section 01 33 00 - Submittal Procedures.
- .4 Section 01 35 29 - Health and Safety Requirements.
- .5 Section 01 35 13.43 - Special Project Procedures for Contaminated Sites.
- .6 Section 01 35 29.13 - Health, Safety, and Emergency Response Procedures for Contaminated Sites.
- .7 Section 01 35 44 - Environmental Procedures.
- .8 Section 01 41 00 - Regulatory Requirements.
- .9 Section 01 45 00 - Quality Control
- .10 Section 01 50 00 - Temporary Facilities.
- .11 Section 01 51 00 - Temporary Utilities.
- .12 Section 01 74 19 - Waste Management and Disposal.
- .13 Section 31 11 00 - Clearing and Grubbing.
- .14 Section 31 23 33.01 - Excavating, Trenching, and Backfilling.
- .15 Section 32 91 19.13 - Topsoil Placement and Grading.

### **1.2 MEASUREMENT AND PAYMENT**

- .1 Measure hydraulic seeding square metres of actual surface area for:
  - .1 Grass mixture including fertilizer.
  - .2 Areas of blending into existing turf grass will not be measured for payment.
- .2 No separate payment will be made for maintenance during establishment period and warranty period of areas seeded.
- .3 Payment for seeding made at unit price bid of actual area surface measurements taken and computed by Departmental Representative.

### **1.3 ADMINISTRATIVE REQUIREMENTS**

- .1 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.
- .2 Scheduling:
  - .1 Schedule hydraulic seeding to coincide with preparation of soil surface.

### **1.4 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for seed, mulch, tackifier, fertilizer, liquid soil amendments and micronutrients.
  - .2 Submit 2 copies of WHMIS SDS in accordance with Section 01 35 29 - Health and Safety Requirements and Section 01 35 44 - Environmental Procedures.
- .3 Submit in writing 10 working 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.
- .4 Samples:
  - .1 Submit 0.5 kg container of each type of fertilizer used.
- .5 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .6 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.

### **1.5 QUALITY ASSURANCE**

- .1 Qualifications:
  - .1 Landscape Planting Supervisor: Landscape Industry Certified Technician with Softscape Installation designation.
  - .2 Landscape Maintenance Supervisor: Landscape Industry Certified Technician with Turf Maintenance designation.

### **1.6 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements:
  - .1 Labelled bags of fertilizer identifying mass in kg, mix components and percentages, date of bagging, supplier's name and lot number.

- .2 Inoculant containers to be tagged with expiry date.
- .3 Storage and Handling Requirements:
  - .1 Store fertilizer in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Replace defective or damaged materials with new.

## **1.7 WARRANTY**

- .1 For seeding, 12 months warranty period is extended to 1 full growing season.
- .2 Contractor hereby warrants that seeding will remain free of defects in for 1 full growing season following the completion of the work.
- .3 End-of-warranty inspection will be conducted by Departmental Representative.

## **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 Mixture composition to be suitable for location and climate and approved by Departmental Representative.
- .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 Tackifier: water dilutable, liquid dispersion.
- .4 Water: free of impurities that would inhibit germination and growth.
- .5 Fertilizer:
  - .1 To Canada "Fertilizers Act" and 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.

### **3 EXECUTION**

#### **3.1 EXAMINATION**

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

#### **3.2 PROTECTION OF EXISTING CONDITIONS**

- .1 Protect structures, signs, guide rails, fences, plant material, utilities and other surfaces not intended for spray.
- .2 Immediately remove any material sprayed where not intended as directed by Departmental Representative.

#### **3.3 PREPARATION OF SURFACES**

- .1 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.
- .2 Fine grade areas to be seeded free of humps and hollows.
  - .1 Ensure areas are free of deleterious and refuse materials.
- .3 Cultivated areas identified as requiring cultivation to depth of 25 mm.
- .4 Ensure areas to be seeded are moist to depth of 100 mm before seeding.
- .5 Obtain Departmental Representative's approval of grade and topsoil depth before starting to seed.

#### **3.4 FERTILIZING PROGRAM**

- .1 Fertilize prior to fine grading applying fertilizer equally distributed.
- .2 Fertilize during establishment and warranty periods applying fertilizer equally distributed.

#### **3.5 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 materials are in seeder and well mixed, charge tackifier into seeder and mix thoroughly to complete slurry.

### 3.6 SLURRY APPLICATION

- .1 Ensure seed is placed under supervision of certified Landscape Planting Supervisor.
- .2 Hydraulic seeding equipment:
  - .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".
- .3 Apply slurry uniformly, at optimum angle of application for adherence to surfaces and germination of seed.
  - .1 Using correct nozzle for application.
  - .2 Using hoses for surfaces difficult to reach and to control application.
- .4 Blend application into adjacent grass areas or sodded areas to form uniform surfaces.
- .5 Re-apply where application is not uniform.
- .6 Remove slurry from items and areas not designated to be sprayed.

### 3.7 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 00 - Cleaning.
  - .1 Leave Work area clean at end of each day.
  - .2 Keep pavement and area adjacent to site clean and free from mud, dirt, and debris at all times.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 00 - Cleaning.
  - .1 Clean and reinstate areas affected by Work.
- .3 Waste Management: separate waste materials for reuse and recycling] in accordance with Section 01 74 19 - Waste Management and Disposal:
  - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.
  - .2 Divert unused fertilizer from landfill to official hazardous material collections site approved by Departmental Representative.

### 3.8 PROTECTION

- .1 Protect seeded areas from trespass until plants are established.
- .2 Remove protection devices as directed by Departmental Representative.

### 3.9 MAINTENANCE DURING ESTABLISHMENT PERIOD

- .1 Ensure maintenance is carried out under supervision of certified Landscape Maintenance Supervisor.
- .2 Perform following operations from time of seed application until acceptance by Departmental Representative.
- .3 Grass Mixture:
  - .1 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
  - .2 Fertilize seeded areas after 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.
  - .3 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.
  - .4 Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.

### 3.10 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 fertilized.
- .2 Areas seeded in fall will achieve final acceptance after one full growing season provided acceptance conditions are fulfilled.

### 3.11 MAINTENANCE DURING WARRANTY PERIOD

- .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 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.

END OF SECTION

**REMEDIAL STATEMENT OF WORK**

**580 WEST PENNANT ROAD, PID # 00480335**

**WEST PENNANT, HALIFAX COUNTY, NOVA SCOTIA**

**(ADJACENT TO PENNANT HARBOUR FORMER AID SITE, DFRP# 02840, LL# 501, RPIS# MC00418)**

## STATEMENT OF WORK

**580 WEST PENNANT ROAD, PID # 00480335**  
**WEST PENNANT, HALIFAX COUNTY, NOVA SCOTIA**  
**(ADJACENT TO PENNANT HARBOUR FORMER AID SITE, DFRP# 02840, LL# 501, RPIS# MC00418)**

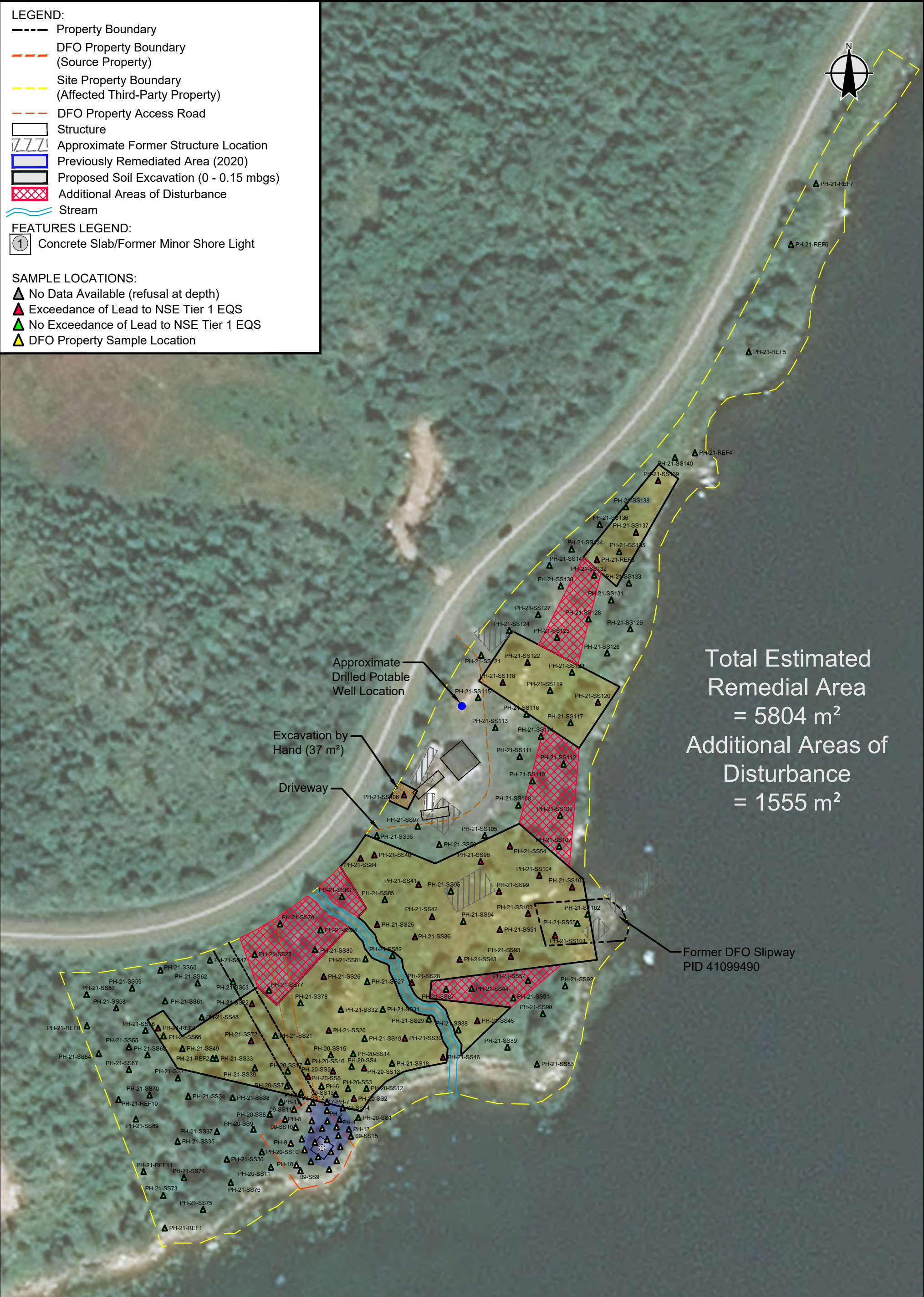
Work requirements for this Site are presented in the following table.

Area of Concern	Remediation Requirements
General	The work generally consists of the removal and disposal of lead contaminated soil from a privately owned property in West Pennant, NS. The Contractor is required to supply all material, equipment, labour, and other items necessary to complete the work.
Schedule	The excavation, disposal, backfilling, and reinstatement described below must be completed within one month of contract award.
Site Visit	A non-mandatory Site visit is recommended to assess the following: <ul style="list-style-type: none"><li>• Site measurements and Site access.</li><li>• The current topography of the Site.</li><li>• Potential tree removal at the Site (tree removal to be discussed and approved by property owner).</li><li>• The Site visit must be scheduled with the Consultant and the property owner will be given 48 hours' notice.</li></ul>
Permits	Permits may be required for the remediation activities and property access. The Contractor is expected to fulfill all permitting requirements prior to the work.
Property Survey	Prior to remediation activities, Contractor must lay out the boundaries and complete a topographical survey of the areas to be excavated. Survey results are to be provided to the Consultant.
Access Issues	The following access issues are identified (see attached Figures, and photo log, attached): <ul style="list-style-type: none"><li>• Contractor is required to provide access to the Site for vehicles and machinery.</li><li>• Utilities may be within the areas identified as requiring remediation. The Contractor must clear all underground and overhead services and guywires prior to excavation. Note that a private septic field/tank is located within the area of remediation. According to the property owner, only 150 mm of soil cover the septic system geofabric.</li><li>• Public parking spaces are not readily available near the Site. Parking in the property owner's driveway is not permitted.</li><li>• An access road to the adjacent Former Aid Station was constructed during 2020 however, the condition of the road is unknown (appeared to be slumping in previous visits) and may require maintenance to be used again.</li><li>• An access agreement from the property owner has been granted. Any damage made to the property is to be repaired and reinstated to original condition.</li><li>• The Contractor is responsible for maintaining the stability of the surrounding area during remedial work.</li><li>• Any damage made to surrounding properties must be repaired and reinstated to original condition at the cost of the Contractor.</li></ul>
Traffic Control	Contractor to provide traffic control during Site activities to allow for safe movement of public vehicles near the Site and construction vehicles to and from the Site meeting the following requirements: <ul style="list-style-type: none"><li>• Nova Scotia Traffic Control Person and Temporary Workplace Signer certification.</li><li>• Nova Scotia Temporary Workplace Traffic Control Manual (latest revision).</li></ul>
Fencing	Snow fencing (or similar) will be required around the current property driveway and/or remedial areas, to ensure public safety and to maintain privacy for the property owner while remediation activities are ongoing at the Site.
Vegetation Removal	Prior to excavation, clear vegetation. Remove grass, brush, and trees and dispose off-Site at an approved facility. Trees will be removed only where necessary and will require

Area of Concern	Remediation Requirements
	approval from property owner. Trees that are felled shall be cut into 2.5 m sections and piled on Site for the Owner's use.
Dust / Erosion Control	Install and maintain throughout the work erosion control measures including silt fencing and straw/mulch or other similar measures as required to prevent dust and wind/water erosion of soil into adjacent waterbodies. Provide erosion control in accordance with the requirements of the Nova Scotia Erosion and Sedimentation Control Handbook for Construction Sites.
Stockpile Staging Preparation	Prior to remediation, a stockpile staging area must be prepared to ensure excavated contaminated material does not contact the ground surface.
Soil Excavation and Stockpiling	<p>Soil remediation/removal is required at the Site as shown on attached Figures 1 through 4. Sample locations are shown on Figures 1 through 4, attached. Soil requiring remediation/removal is illustrated on Figures 1 through 4, attached. Laboratory Certificates of Analysis for the Contractor's evaluation of disposal requirements, and for landfill acceptance are attached.</p> <ul style="list-style-type: none"> <li>• Soil is to be excavated from the Site to depths of 150 mm, 300 mm, 450 mm, 600 mm, or 750 mm depending on the area as shown on Figures 1 through 4, attached. Some areas will require hand digging to remove the top 150 mm of soil to prevent damage to trees.</li> <li>• As material is excavated, do not place excavated sod/weeds or soil directly on ground surface. Ground protection must be used in the placement areas for contaminated soil.</li> <li>• Remove and separate rocks and stones over 50 mm in diameter from the excavated material and stockpile for later use as backfill.</li> <li>• Stockpile excavated soil on-Site in 50 m<sup>3</sup> stockpiles. The stockpiles will remain on-Site until analytical results are received.</li> <li>• The ground surface below the stockpiles must be protected from potential leaching of the excavated piled material.</li> <li>• Cover all stockpiled soil with tarps or similar material to prevent erosion from wind and rain.</li> <li>• During all phases of this project, the Contractor is responsible for maintaining the Site clean of project debris.</li> <li>• Any buried debris encountered during excavation shall be reburied in the excavation.</li> </ul>
Leachate Sampling	<p>Leachate sampling will be required of the stockpiles:</p> <ul style="list-style-type: none"> <li>• Provide stockpile access to the Consultant for collecting samples for analysis of lead.</li> <li>• If stockpile soil lead concentrations are above the NS Landfill Disposal criteria, lead leachate analysis will be completed.</li> <li>• Stockpiled material will be permitted to be removed from the site within approximately two days of receiving the analytical results.</li> <li>• The stockpiles will remain on-Site until lead leachate analysis results are received.</li> </ul>
Confirmatory Sampling	As the material is excavated, the Consultant will complete confirmatory sampling of the excavation floor and sidewalls (boundaries). The Contractor must wait until confirmatory analytical results are received to confirm clean excavation boundaries were met. Additional excavation and disposal may be required depending on the results of the confirmatory analytical results.
Soil Removal and Disposal	<p>Soil removal is required at the Site and will be completed progressively as the project continues:</p> <ul style="list-style-type: none"> <li>• Stockpiles with lead concentrations in soil below the NS Landfill Disposal criteria will be disposed of at a provincially licensed facility, chosen by the Contractor.</li> <li>• Stockpile material with lead concentrations in soil and lead leachate concentrations above the NS Landfill Disposal criteria will be disposed of at an out of province facility, chosen by the Contractor.</li> <li>• Provide waste manifests proving that soil was disposed of properly.</li> </ul>
Ditch Protection	A drainage ditch is located on the Site, as shown on Figures 1 through 4. This drainage ditch is to remain in place and functional at the completion of the remediation. Rocks are currently bordering the drainage ditch, which will remain in place.
Backfilling	Soil backfilling is required for the areas requiring remediation/ removal.

Area of Concern	Remediation Requirements
	<ul style="list-style-type: none"> <li>• Backfilling must be completed progressively, as the excavation activities move across the Site.</li> <li>• Stockpiled rocks and stones will be placed in the bottom layers of excavations.</li> <li>• Additional backfill material must consist of imported common soil backfill from a facility or borrow pit approved by PSPC.</li> <li>• Soil backfill is required to be placed to 100 mm below original elevation or below ground surface prior to excavation, after compacting but prior to topsoil placement. Backfill must be graded to slope towards the Atlantic Ocean.</li> <li>• Select areas of the property will be backfilled/graded to either similar conditions as pre-remediation, or as agreed with property owner, including a pit area south of the current house.</li> </ul>
Topsoil Placement	<p>Placement of topsoil is required.</p> <ul style="list-style-type: none"> <li>• Rich, organic topsoil, free of rocks, sticks, and other deleterious materials, must be used and sourced from a facility approved by PSPC.</li> <li>• Topsoil will be placed to a thickness of 100 mm over all disturbed areas.</li> <li>• Soil must be placed and graded to be consistent with surrounding grades.</li> </ul>
Property Reinstatement and Landscaping	<p>The property must be reinstated and landscaped after remediation activities are complete. This will include:</p> <ul style="list-style-type: none"> <li>• Grass seed, fertilizer, and straw/mulch or hydroseed will be placed over all disturbed areas.</li> <li>• The Contractor will be responsible for watering the grass to ensure optimal growth. Note this task will exceed the one-month period for remediation activities.</li> <li>• There will be a one-year warranty period to ensure grass grows as desired by the property owner.</li> </ul>







LEGEND:

Property Boundary

DFO Property Boundary (Source Property)

Site Property Boundary (Affected Third-Party Property)

DFO Property Access Road

Structure

Approximate Former Structure Location

Previously Remediated Area (2020)

Proposed Soil Excavation (0.15 - 0.30 mbgs)

Stream

FEATURES LEGEND:

Concrete Slab/Former Minor Shore Light

SAMPLE LOCATIONS:

No Data Available (refusal at depth)

Exceedance of Lead to NSE Tier 1 EQS

No Exceedance of Lead to NSE Tier 1 EQS

DFO Property Sample Location

An aerial photograph of a coastal area with various property boundaries and sample locations. A yellow dashed line outlines the site property boundary. A red dashed line indicates the DFO property boundary. A blue dashed line shows the DFO property access road. A white rectangle represents a structure, and a hatched rectangle shows the approximate former structure location. A blue rectangle marks the previously remediated area (2020). A brown rectangle indicates the proposed soil excavation area (0.15 - 0.30 mbgs). A blue line represents a stream. A north arrow is located in the top right corner. A text box on the right side of the map states "Total Estimated Remedial Area = 3810 m²". Numerous sample locations are marked with triangles, some labeled with codes like PH-21-SS101, PH-21-SS102, etc. A blue dot marks the approximate drilled potable well location. A label "Driveway" points to a road. A label "Former DFO Slipway PID 41099490" points to a structure. A label "Approximate Drilled Potable Well Location" points to a blue dot.

Source: Bing Imagery; © 2021 Microsoft Corporation, © 2021 Maxar, © CNES (2021) Distribution Airbus DS.	CLIENT: PSPC for Fisheries and Oceans Canada		SCALE: <div><div>0m10203040</div><div>1 : 1000</div></div>	PROJECT: Remedial Scope of Work, 580 West Pennant Road, Halifax County, Nova Scotia	DWN BY: DM
	<div>wood.</div>				
	DATUM & PROJECTION: NAD83 UTM Zone 20	TITLE: Proposed Soil Excavation (0.15 - 0.30 mbgs)	CHK'D BY: LD		
	PROJECT NO: TE211208		DATE: Mar 2022		
					REV. NO: 0
					FIGURE NO: 2

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LEGEND:

Property Boundary

DFO Property Boundary (Source Property)

Site Property Boundary (Affected Third-Party Property)

DFO Property Access Road

Structure

Approximate Former Structure Location

Previously Remediated Area (2020)

Proposed Soil Excavation (0.30 - 0.45 mbgs)

Stream

FEATURES LEGEND:

Concrete Slab/Former Minor Shore Light

SAMPLE LOCATIONS:

No Data Available (refusal at depth)

Exceedance of Lead to NSE Tier 1 EQS

No Exceedance of Lead to NSE Tier 1 EQS

DFO Property Sample Location

The map displays an aerial view of a coastal area with various boundaries and features. A yellow dashed line outlines the site property boundary. A red dashed line indicates the DFO property boundary. A blue dashed line shows the DFO property access road. White outlines represent structures, and hatched areas indicate approximate former structure locations. A blue rectangle marks a previously remediated area from 2020. A grey rectangle shows the proposed soil excavation area (0.30 - 0.45 mbgs). A blue line represents a stream. A north arrow is located in the top right corner. Numerous sample locations are marked with triangles and labeled, including PH-21-REF1 through PH-21-REF11, PH-21-SS1 through PH-21-SS140, and PH-20-SS1 through PH-20-SS15. A blue dot indicates the approximate drilled potable well location. A black line points to the driveway. A black line points to the former DFO slipway (PID 41099490). A text box on the right states: Total Estimated Remedial Area = 2013 m².

Source: Bing Imagery; © 2021 Microsoft Corporation, © 2021 Maxar, © CNES (2021) Distribution Airbus DS.	CLIENT: PSPC for Fisheries and Oceans Canada	SCALE: <div>0m10203040</div> <div>1 : 1000</div>	PROJECT: Remedial Scope of Work, 580 West Pennant Road, Halifax County, Nova Scotia	DWN BY: DM		
	<div>wood.</div>			CHK'D BY: LD		
				DATE: Mar 2022		
		DATUM & PROJECTION: NAD83 UTM Zone 20	TITLE: Proposed Soil Excavation (0.30 - 0.45 mbgs)	REV. NO: 0		
		PROJECT NO: TE211208		FIGURE NO: 3		

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LEGEND:

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Property Boundary

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DFO Property Boundary  
(Source Property)

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Site Property Boundary  
(Affected Third-Party Property)

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DFO Property Access Road

Structure

Approximate Former Structure Location

Previously Remediated Area (2020)

Proposed Soil Excavation (0.45 - 0.75 mbgs)

Stream

FEATURES LEGEND:

Concrete Slab/Former Minor Shore Light

SAMPLE LOCATIONS:

No Data Available (refusal at depth)

Exceedance of Lead to NSE Tier 1 EQS

No Exceedance of Lead to NSE Tier 1 EQS

DFO Property Sample Location



Source: Bing Imagery; © 2021 Microsoft Corporation, © 2021 Maxar, © CNES (2021) Distribution Airbus DS.	CLIENT:  PSPC for Fisheries and Oceans Canada	<div>SCALE: <div>0m10203040</div><div>1 : 1000</div></div>	PROJECT:  Remedial Scope of Work, 580 West Pennant Road, Halifax County, Nova Scotia	DWN BY: DM
	<div>wood.</div>		<div>TITLE:  Proposed Soil Excavation (0.45 - 0.75 mbgs)</div>	CHK'D BY: LD
		DATE: Mar 2022		
		REV. NO: 0		
		<div>DATUM &amp; PROJECTION: NAD83 UTM Zone 20</div> <div>PROJECT NO: TE211208</div>		FIGURE NO: 4



Site Photo Log

580 West Pennant Road, West Pennant, NS

Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021


	<p><b>Photo 1:</b></p> <p>View of general Site terrain. DFO property shown with remaining concrete slab. Photo taken near soil sample PH-20-SS6.</p> <p>21 October 2020.</p>
	<p><b>Direction:</b></p> <p>Southwest</p>

	<p><b>Photo 2:</b></p> <p>View of one of several cleared paths on the Site. Photo taken near the DFO property near sample location PH-20-SS2.</p> <p>21 October 2020.</p>
	<p><b>Direction:</b></p> <p>Southwest</p>

Site Photo Log

580 West Pennant Road, West Pennant, NS

Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021

	<p><b>Photo 3:</b></p> <p>View looking towards the DFO property, looking southeast from the treed area on the southern portion of the Site. Photo taken near sample location PH-20-SS8.</p> <p>21 October 2020.</p>
	<p><b>Direction:</b></p> <p>Southeast</p>

	<p><b>Photo 4:</b></p> <p>View of Pennant Cove from the Site, east of the DFO property.</p> <p>21 October 2020.</p>
	<p><b>Direction:</b></p> <p>Southeast</p>



Site Photo Log

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	<p><b>Photo 5:</b></p> <p>Photo showing the Site shoreline, west of the DFO property. Photo taken near sample location PH-20-SS11.</p> <p>22 October 2020.</p>
	<p><b>Direction:</b></p> <p>East</p>

	<p><b>Photo 6:</b></p> <p>View of the shoreline and concrete pad on DFO property. Photo taken near sample location PH-20-SS12.</p> <p>22 October 2020.</p>
	<p><b>Direction:</b></p> <p>Southwest</p>



Site Photo Log

580 West Pennant Road, West Pennant, NS

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	<p><b>Photo 7:</b></p> <p>View of boulders located on the Site. Site dwelling and trailer visible in background of photo. Photo taken near sample location PH-21-SS19.</p> <p>15 February 2021.</p>
	<p><b>Direction:</b></p> <p>Northeast</p>

	<p><b>Photo 8:</b></p> <p>View of snow-covered DFO property access road leading to the Pennant Harbour FAS from West Pennant Road. Photo taken near sample location PH-21-SS23.</p> <p>15 February 2021.</p>
	<p><b>Direction:</b></p> <p>South</p>

Site Photo Log

580 West Pennant Road, West Pennant, NS

Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021

	<b>Photo 9:</b> View of general soil encountered on the Site. Soil mainly consisted of dark brown peaty material with organics and root matter, followed by a coarse light brown sand layer at select sample locations. Sample PH-21-SS24 shown in photo.  15 February 2021.
	<b>Direction:</b> North

	<b>Photo 10:</b> Photo showing general terrain at the Site. Boulder placement evident in photo which surrounds a man-made drainage ditch/pond. Photo taken near sample location PH-21-SS25.  15 February 2021.
	<b>Direction:</b> South




Site Photo Log

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	<b>Photo 11:</b> View of one of the man-made drainage ditches/ ponds in winter conditions, located on the Site. Photo taken near sample location PH-21-SS29.  15 February 2021.
	<b>Direction:</b> Northwest

	<b>Photo 12:</b> View of the man-made drainage ditch/pond in above Photo 11, looking southeast.  15 February 2021.
	<b>Direction:</b> Southeast




Site Photo Log

580 West Pennant Road, West Pennant, NS

Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021


	<b>Photo 13:</b> Photo showing general Site terrain including landscaped pathway constructed of fill. West Pennant Road shown in background in left of photo.  15 February 2021.
	<b>Direction:</b> Northwest


	<b>Photo 14:</b> View of the Site, looking towards the Site dwelling. Photo taken near sample location PH-21-SS32.  15 February 2021.
	<b>Direction:</b> Northeast

Site Photo Log

580 West Pennant Road, West Pennant, NS

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	<b>Photo 15:</b> Photo showing soil encountered at sample location PH-21-SS32.  15 February 2021.
	<b>Direction:</b> North


	<b>Photo 16:</b> Photo showing sample location PH-21-SS35 facing south towards Pennant Cove.  15 February 2021.
	<b>Direction:</b> South



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	<p><b>Photo 17:</b></p> <p>Photo showing view from treed Site area to the west of the DFO property, looking towards Pennant Cove. Photo taken near sample location PH-21-SS36.</p> <p>15 February 2021.</p>
	<p><b>Direction:</b></p> <p>South</p>

	<p><b>Photo 18:</b></p> <p>Photo showing sample location PH-21-SS38 facing the DFO property access road to the east.</p> <p>15 February 2021.</p>
	<p><b>Direction:</b></p> <p>East</p>



Site Photo Log

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**Photo 19:**

View of sample location PH-21-SS50 with the Site driveway, trailer, and dwelling in photo.

28 June 2021.

**Direction:**

North



**Photo 20:**

Photo showing general Site terrain and sample location PH-21-SS40 with Site driveway and trailer in the background.

28 June 2021.

**Direction:**

Northeast



Site Photo Log

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**Photo 21:**

View from sample location PH-21-SS51, looking toward Site dwelling and trailer. Former DFO slipway property shown in the photo to the right, and the area assumed to be used for fill (behind the boat).

28 June 2021.

**Direction:**

North



**Photo 22:**

View of small shed on the east side of the Site. Photo taken from sample location PH-21-SS55.

28 June 2021.

**Direction:**

East



Site Photo Log

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**Photo 23:**

View towards Site dwelling from sample location PH-21-SS43.

28 June 2021.

**Direction:**

North



**Photo 24:**

View of shoreline facing former light station foundation on DFO property. Photo taken from sample location PH-21-SS46.

28 June 2021.

**Direction:**

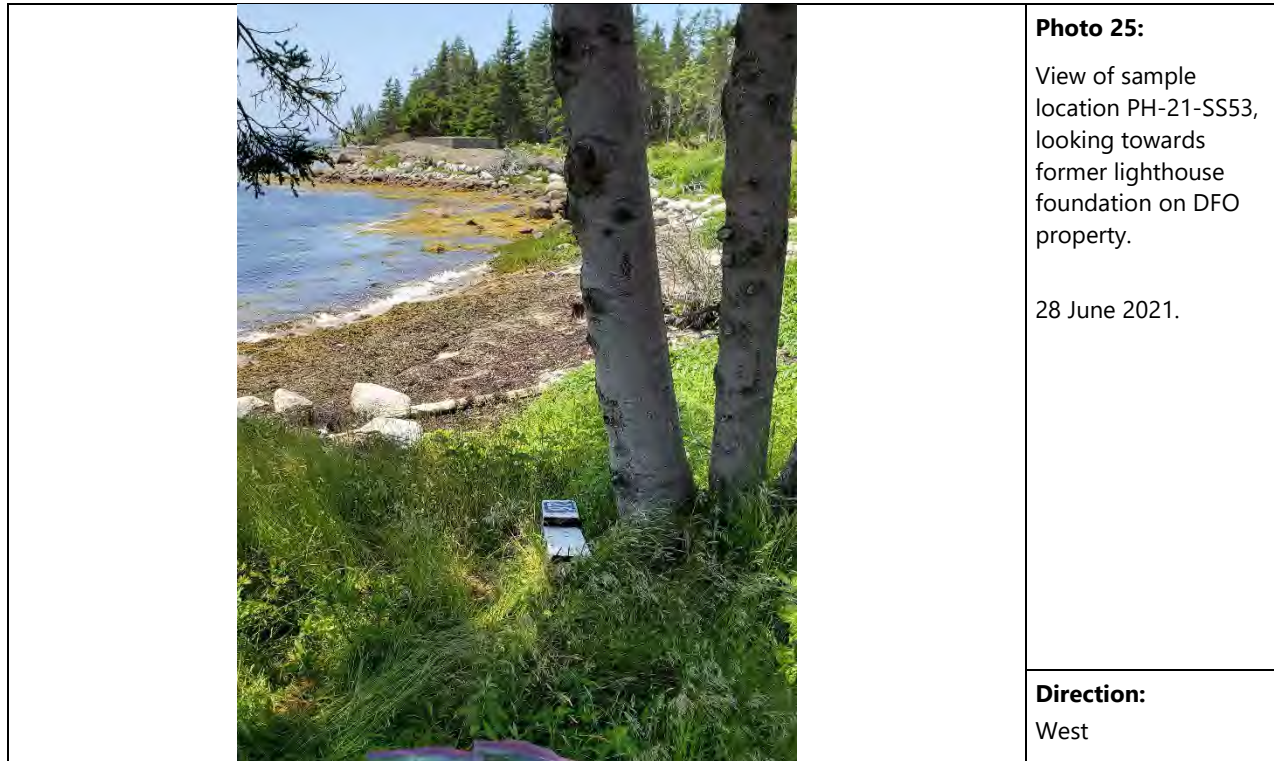
Southwest



Site Photo Log

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Site Photo Log

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**Photo 27:**

General Site conditions near sample location PH-21-SS71.

04 August 2021.

**Direction:**

West



**Photo 28:**

Photo showing previously disturbed area near sample location PH-21-SS80 looking towards the Site dwelling.

05 August 2021.

**Direction:**

Northeast



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Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021



**Photo 29:**

Photo showing general Site conditions near sample location PH-21-SS81. Man-man drainage ditch noted just beyond sample location. Site dwelling in background.

02 August 2021.

**Direction:**

Northeast



**Photo 30:**

Site conditions near sample location PH-21-SS86 looking towards DFO property. Concrete pad can be seen in background as well as drainage ditch from Photo 27.

02 August 2021.

**Direction:**

Southwest



Site Photo Log

580 West Pennant Road, West Pennant, NS

Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021



**Photo 31:**

Photo showing sample location PH-21-SS93 with former DFO slipway in background.

02 August 2021.

**Direction:**

East



**Photo 32:**

Photo showing sample location PH-21-SS103 on shoreline adjacent to the former DFO slipway area.

02 August 2021.

**Direction:**

West



Site Photo Log

580 West Pennant Road, West Pennant, NS

Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021





Site Photo Log

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Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021



**Photo 35:**

Photo showing sample location PH-21-SS105. Site dwelling and trailer shown in background.

03 August 2021.

**Direction:**

Northwest



**Photo 36:**

Photo showing proximity of sampling locations to Site trailer/driveway area. Photo taken from sample location PH-21-SS97.

02 August 2021.

**Direction:**

North



Site Photo Log

580 West Pennant Road, West Pennant, NS

Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021





Site Photo Log

580 West Pennant Road, West Pennant, NS

Site Visit Dates: 21-22 October 2020, 15 and 17 February 2021, 28 June 2021, 02-05 August 2021



**Photo 39:**

Photo showing previous ground disturbance and fill placement near sample location PH-21-SS137.

03 August 2021.

**Direction:**

North



**Photo 40:**

Photo showing previous ground disturbance and fill and boulder placement along shoreline near sample location PH-21-SS139.

03 August 2021.

**Direction:**

Northwest