



**RETURN BIDS TO:**

**RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des soumissions - TPSGC**

**11 LaurierSt./ 11, rue Laurier**

**Place du Portage, Phase III**

**Core 0B2 / Noyau 0B2**

**Gatineau**

**Québec**

**K1A 0S5**

**Bid Fax: (819) 997-9776**

**SOLICITATION AMENDMENT**

**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT.

CE DOCUMENT CONTIENT UNE CONDITION DE SÉCURITÉ.

**Vendor/Firm Name and Address**

**Raison sociale et adresse du fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Infrastructure Maintenance and Solution Services

Division (FK)

L'Esplanade Laurier,

East Tower 4th Floor

L'Esplanade Laurier,

Tour est 4e étage

140 O'Connor, Street

Ottawa

Ontario

K1A 0R5

<b>Title - Sujet</b> FIRM-1272 Grounds Maintenance	
<b>Solicitation No. - N° de l'invitation</b> EJ196-190315/B	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> 20190315	<b>Date</b> 2019-06-21
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$FK-279-77177	
<b>File No. - N° de dossier</b> fk279.EJ196-190315	<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> <b>on - le 2019-07-08</b>	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Ladouceur, Joanne	<b>Buyer Id - Id de l'acheteur</b> fk279
<b>Telephone No. - N° de téléphone</b> (613) 296-4701 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<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>

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**The purpose of this Solicitation Amendment is to provide details from the Site Visit and Bidders Conference held on June 17, 2019.**

**1. Points from the Site Visit and Bidders Conference**

- Did tour of all the ranges, base and perimeter road areas. No contractors had any questions.
- Joanna Wichers addressed the following:
  - Advised contractors of why we retendered - to add in the call up work for the ranges and that there is a lot of call up work on this site ;
  - Explained operational requirements take precedence,
  - Grass cutting is not like other sites – must be cutting every day, start early, finish late, work behind where they are shooting on the ranges, etc.;
  - Winter conditions can be bad with the blowing snow, conditions can change quickly;
  - There is a lot of wildlife on the site;
  - It is up to the contractor to plan their day;

Joanne Ladouceur addressed the following:

- Review of bid process, closing date, technical proposal, etc.
- Bids to be Hand Delivered – 3 copies of the Technical and 1 copy of the Financial as detailed in the Request for Proposal;
- Ensure individuals proposed in the technical proposal are also referenced in Part 6: Security Requirement.

No questions were asked by the contractors in attendance at the bidder's conference.

2. The stachions were not a part of the existing contract. The Statement of Work has been amended to include the stachions, as such:

**DELETE Annex "A" Statement of Work in its entirety.  
INSERT Annex "A" Revised Statement of Work in its entirety.**

**All other terms and conditions will remain the same.**

## **GROUNDS MAINTENANCE SPECIFICATIONS**

### **SECTION 1 SCOPE**

#### **1.1 Purpose**

The purpose of this Statement of Work (SOW) is to provide the Connaught Range and Primary Training Centre (CRPTC) with year round grounds maintenance services and outdoor range maintenance services for the pistol and rifle ranges and the combat training facilities.

#### **1.2 Background**

Connaught Range and Primary Training Centre is a large complex with numerous training zones, federal buildings and occupants. The primary work conducted on-site relates to military and police training. There are up to one thousand (1000) cadets living on-site during the summer months. The site is very busy with numerous people walking around at all times.

Operational requirements require flexibility with working on-site. Depending on the type of training on the ranges, the safety template will determine what zones to the side and back of the ranges are available to work in. The base zone, including the obstacle course, is also used for training exercises and work in these zones also needs to be scheduled to ensure work under this contract does not interfere with operational requirements.

#### **1.3 Safety**

The site is an active live fire training facility. The Contractor must demonstrate safe working practices and ensure that all employees are briefed and trained on ammunition related safety procedures. Safety procedures to be provided by the Department of National Defence (DND).

### **SECTION 2 GENERAL**

#### **2.1 Pesticides**

1.1 The Contractor will comply with the Treasury Board Personnel Policy Manual, Chapter 2-15 Pesticide Directive, [http://www.tbs-sct.gc.ca/pubs\\_pol/hrpubs/tbm\\_119/chap2\\_15\\_e.asp](http://www.tbs-sct.gc.ca/pubs_pol/hrpubs/tbm_119/chap2_15_e.asp) and the Federal and Provincial Regulations. No pesticides shall be used or stored on-site unless prior written approval from the Technical Authority is received. The Contractor must provide advance notice to the Technical Authority when the spraying will occur so that follow up inspections can be scheduled.

#### 1.2 Documentation

The Contractor must be licensed to work in the Province of Ontario. The Contractor shall provide a valid copy of company's Pesticide Operator license for the Province of Ontario. The Contractor's technicians must be in possession of a valid Pesticide Applicators - Landscape license for the Province of Ontario.

The Contractor must complete, in its entirety, the Pesticide Records Keeping System form (PestRec) and any/all other required documentation immediately following the implementation of any pest control measures. Pesticide Records Keeping System forms must be submitted within one (1) working day following any pesticide applications (aquacide, horticultural vinegar, etc.). Copies of the required documents will be available in the PWGSC office located at 180 Kent St, 18<sup>th</sup> floor, Ottawa.

Locations sprayed must be very detailed on the form to ensure the Technical Authority can do the necessary follow up inspections. If there is insufficient space on the form for the details of the locations sprayed, another sheet may be attached.

## 2.2 Response Time

The Contractor will advise the Technical Authority of the telephone number, including cellular, where their Supervisors can be reached twenty-four (24) hours per day seven (7) days per week in the event of an emergency.

The Contractor must take corrective action of any deficiencies in the service of this Contract within one (1) hour of notification.

The Contractor will not refuse any call or service requested by the Technical Authority or his/her authorized representatives such as, the National Service Call Centre (NSCC), the Royal Canadian Mounted Police (RCMP) National Tactical Training Centre (NTTC) Fleet Manager and the 7 Vickers Gun Fleet Manager, relating to snow and ice removal.

## 2.3 Site access

ONLY SECURITY CLEARED STAFF WITH THE NECESSARY RANGE SAFETY TRAINING WILL BE ALLOWED TO WORK ON-SITE.

The Contractor's personnel must sign in and out daily at Public Works and Government Services (PWGSC) Connaught Rifle Range and Primary Training Centre (CRPTC), 31 Shirley, immediately upon arrival on-site and at the completion of all work. The employees signing in daily will be verified by PWGSC Connaught and a copy of the sheet will be sent weekly to the Technical Authority.

Access to the Ranges for regular maintenance must be coordinated directly with Range Control and the Contractor's Delegated Authority. Site access to the Range and related military zones for extra work issued under Call-Ups must be coordinated with Range Control by the Technical Authority in association with the Property Facility Manager or his/her representative.

Range Control is the DND Site Authority and as such all operational requirements supersede all maintenance program timing. **Flexibility in scheduling is required.** All movements on the site are controlled by DND due to troop movements, live shooting range activities and a grenade and small explosives zone. Some activities are classified and/or restricted, further affecting access.

## 2.4 Sustainable landscaping

In order to meet the environmental (Wildlife Sanctuary) obligations of the site, the Contractor will follow a sustainable approach to materials and methodologies used in the landscape maintenance so as to reduce greenhouse gas emissions, protect public health through safe management of potentially hazardous substances and to protect soils and groundwater.

In order to reduce carbon emissions and noise pollution, equipment will only be used as required. The Contractor will select equipment and fuel to limit air-pollutant emissions and ensure that all equipment used on-site is properly maintained. The Contractor will clean equipment prior to bringing it on-site to prevent transportation of invasive species.

The Contractor will make all efforts to minimize disturbance and protect the storm water management system and the sensitive wildlife zones located on the property.

The Contractor will follow best salt management practices.

### **2.5 Working hours**

The site is operational twenty four (24) hours per day, seven (7) days per week. During the summer months noise restrictions are in effect in the zones around the Cadets camp, Officers camp and Alpha 1 Range. No heavy equipment is to be used prior to 0600 hours or after 2200 hours in and around these zones without prior clearance from Range Control.

### **2.6 Addition or deletion of work**

The Department may from time to time, require changes to the zones to be maintained due to operational requirements, on-site projects, or construction of new zones to be maintained or deletion of zones to be maintained.

### **2.7 Garbage Receptacles and Cigarette Butt Stops**

All garbage receptacles: from April 1 to November 30, will never be more than 90% full and emptied at least once a day; from December 1 to March 30, will never be more than 90% full and emptied at least once a week. Garbage bags must fit snugly around the perimeter of the wire liner of the receptacle. All cigarette butt stops will be emptied daily year round.

The Department has the right at any time to add or remove garbage cans to any location(s) on-site, accordingly to the needs of the users or the client at no additional cost to the Department. If however, garbage cans are added for a limited time special event on the site and the Contractor is required to maintain them during the special event, then a Call-Up will be issued for that additional work.

### **2.8 Pick up litter**

The entrances and grounds must be free of litter year round. Litter includes cigarette butts, weeds, sand as well as organic and inorganic debris. After the spring thaw, all hard surfaces and grass zones must be free of ice-control agents by May 15. Suspicious objects will not be tampered with and must be left in place and reported to Range Control immediately

### **2.9 Disposal Costs**

The Contractor is responsible for all disposal costs related to the removal of snow, leaves, litter and garbage from the sites within the terms of the Contract. The Contractor is responsible for all disposal, related to litter and weed removed from the bullet catchers and pistol ranges.

### **2.10 Damages**

The Contractor must tour the site with the Technical Authority at the beginning of the season. The Contractor is to request pictures of all damages on-site from the Technical Authority. At the end of the season, another joint inspection will be carried out.

The Contractor must immediately report to Technical Authority all damages on-site caused by the Contractor's personnel, equipment or by a third party. Any damages caused by the Contractor will be repaired at the Contractor's cost and within a mutually agreed timeframe. All repairs will be completed to the satisfaction of the PWGSC Site Authority. The Contractor must receive confirmation from the Technical Authority that repairs are have been approved.

### **2.11 Maintenance schedules and contractor inspections**

The Snow Clearing Daily Maintenance Schedules and Landscape Daily Maintenance Schedules must be kept at the PWGSC Connaught building, 31 Shirley, to record the Contractor's inspections and work completed. All relevant activities will be verified and signed by the Contractor's Supervisor on a daily basis with the required copies sent via email to the Technical Authority along with the monthly invoice.

### **2.12 Identification**

The company employees and vehicles must be clearly identified with company name and/or logo.

### **2.13 Vehicles**

All vehicles used on the site must be licensed by the Provincial Department of Transportation (DOT), clean and meet provincial safety standards. Parking and driving on turf is to be avoided. All motorized vehicles must have the required safety features and be in good working order. The Contractor must supply a list of all equipment required for site operations complete with the make, model, Vehicle Identification Number (VIN) and licence numbers.

### **2.14 Plan of Operation**

The Plan of Operation will be reviewed by the Technical Authority and PWGSC Site Authority. A revised plan must be submitted within one (1) week of contract award. The Contractor will make any necessary adjustments to meet the operational requirements of the site and the required services as outlined in the Statement of Work.

Stipulate the exact working hours for the full time employees required on-site. A minimum of two (2) year round day-time is required. Full time employment in the terms of this contract means that the full time employees will work in accordance with the rules and codes of the Provincial Ministry of Labour.

Contractor agrees the levels of staff and equipment agreed to in the approved Plan of Operation will be maintained and available throughout the life of the maintenance Contract. The Technical Authority must be notified of any changes to the equipment list.

Contractor must advise the Technical Authority in writing if there is any change made to the site, within one (1) business day after the change has been made, which may affect the maintenance as per the terms of the Contract.

### **2.15 Additional Work**

The Contractor must have written approval from the Technical Authority, in the form of a Call-Up, in advance of performance of any extra work and removal of snow in excess of two hundred and fifty four (254) cm or outside of the regular season.

### **2.16 Health and Safety**

**1. The chosen Contractor will have to submit a site-specific Health and Safety Plan within three (3) days of contract award.** A sample list of potential items to be included in the site specific Health and Safety plan has been included as a reference guide but is not limited to:

- A site-specific safety hazard assessment

*e.g. H&S plans to include a traffic control plan where work is conducted in or next to a road. Safety measures for mowing on steep slopes. Procedures for: working in zones with poisonous plants such as poison ivy and wild parsnip; working on the ranges or within the range safety template; **dealing with live ammunition if found on the ranges; dealing with lead contaminated soils**; using pesticides; working around the storm water management pond, creeks, steep ditches, and in environmentally sensitive zones; protection from dust and noise; for working in zones with wildlife which may include but is not limited to bears, deer, wolves, coyotes, wild turkeys, etcetera; working around cadets and operational zones; working on the green roof.*

- Safety and health risk or hazard analysis for site tasks and operations
- The use of personal protective equipment including those required for working around poisonous plants
- Procedures to be implemented during emergency situations
- **All necessary staff certifications must be attached to the plan including but not limited to working from heights certificates, chain saw certifications, first aid, WHMIS, Health and Safety Awareness Training for Supervisors and Employees, Pesticide Operators License, Pesticide Applicators License.**
- **All necessary MSDS/SDS sheets for all products used on-site must be included. Insure that the MSDS/SDS sheets are current.**
- **A binder will be kept on-site at 31 Shirley with up to date copies of all licenses, WSIB certifications, liability insurance, MSDS sheets, labels and a copy of all staff training certificates, service records, pest records and PestRec Forms.**

2. All employees must undergo site specific health and safety training and a Range Control safety briefing for the rules and regulations governing operations on the ranges and the base. The Technical Authority must co-ordinate arrangements for the Contractor to be briefed by the Health and Safety Officer and the Range Control Officer. The Site Authority will arrange a mandatory health and safety meeting to be held on-site prior to the commencement of the summer and winter. All Contractor's staff assigned to the site will be required to be in attendance. The Contractor will be responsible to notify the Technical Authority of all staffing changes so Range Control site specific health and safety training can be arranged for new employees.

3. Annually, submit an updated copy of the Contractor's Health and Safety Plan. Ensure that the Health and Safety Policy and the Violence and Harassment Policy are both dated and signed to confirm that they have been reviewed annually as required.

#### 4. General Conditions

- .1 Continue to implement, maintain, and enforce plan until final demobilization from site.
- .2 Relief from or substitution for any portion or provision of reviewed site-specific health and safety plan must be submitted to the Technical Authority in writing, either accepting or requesting improvements.
- .3 Update health and safety plan as required.

#### 5. Responsibility

- .1 The Contractor must be responsible for safety of persons and property on-site and for the protection of persons off-site and environment to the extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of the Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

.3 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of work, immediately stop work and advise the Technical Authority verbally and in writing.

6. Correction

- .1 Immediately address health and safety noncompliance issues identified by the Technical Authority.
- .2 Provide the Technical Authority with written report of action taken to correct noncompliance of health and safety issues identified.
- .3 The Technical Authority may stop work if noncompliance of health and safety regulations is not corrected.

7. Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

8. Training

The Contractor will provide a training report with supporting documented proof to demonstrate staff have received training to operate and maintain equipment they utilize on-site. Staff must have received training on Best Salt Management practices and winter maintenance training must include, but not limited to: anti-icing and de-icing products and technologies, salt management plans, proper plowing techniques, equipment maintenance and calibration, material selection to mitigate environmental impacts, mitigating blowing snow and winter maintenance management. Staff must date and sign the documentation that they have received the training. The Contractor will provide the Technical Authority with updated training records for all staff training during the life of this contract.

**2.17 Fire safety requirements**

The Contractor and its employees must understand and adhere to the following requirements:

Fires and the burning of rubbish are not permitted anywhere on this site. No smoking is allowed in hazardous zones. Precautions must be taken when smoking in non-restrictive zones.

Throughout this Contract the term “Chief Fire Inspector” must refer to the Unit Chief Fire Inspector or their delegated representative, as he/she may designate.

The handling, storage and use of flammable materials must be governed by the *National Fire Code of Canada*. If the work entails the use of any toxic or hazardous materials, chemicals and or explosive materials they must be directed to and cleared by the Technical Authority who will verify with the Chief Fire Inspector.

Any questions or clarifications on Fire Safety in addition to the above must be directed, in writing, to the Technical Authority who will verify with the Chief Fire Inspector. The Chief Fire Inspector must be granted unrestricted access to the work site. The Contractor must cooperate with the Chief Fire Inspector during routine inspections of the work site. The Contractor must immediately remedy all unsafe fire situations observed by the Chief Fire Inspector.

## **2.18 Supervisors and Full time Employees**

### **Full time Supervisors duties**

The full time Supervisors must inspect the site daily, or more frequently as required, for the Section 3 requirements and weekly, or more frequently as required, for the Section 4 requirements to ensure all Contractual obligations are being met.

The full time Supervisors are responsible for ensuring that the full time employees are on-site during the mandatory hours stipulated in the approved Plan of Operation. If for some reason the full time employees are not on-site for any period of time during the mandatory hours stipulated in the Plan of Operation, the Supervisors must immediately notify the Technical Authority, verbally and in writing, and advise what measures are in place, to ensure that the work continues.

### **Daytime full time employees' duties**

A minimum of two daytime year round full time employees are required on the site to ensure that ongoing maintenance can be conducted around the operational requirements. Litter, including cigarette butts, is to be picked up on a continuous basis. The full time employees are required to implement snow removal operations, as per the Statement of Work, to ensure that the zone remains safe for pedestrian and vehicle traffic at all times. The full time employees, along with other staff the Contractor assigns to the site, are required to work towards completing all other tasks in the Statement of Work.

Employees are required to be working on-site in accordance to the hours stipulated in the **approved** Contractors Plan of Operation. If they leave the site for any reason they must sign out at 31 Shirley log book and sign back in when they have returned.

### **Part time Gardener duties**

If the Contractor wishes to change the part time Gardener named in the Contract, proof of their training must be provided to the Contract Authority in order to obtain acceptance.

The Part time gardener must be working on-site as stipulated in the **approved** Plan of Operation from May 1 to October 31. The gardener is required to provide horticultural technical expertise: to maintain the LEED designated RCMP NTTC landscape and green roof; to maintain all trees, shrubs and flowering plants; to provide pest identification and pest management in turf, trees, shrubs and flowering plants; and to ensure all the horticultural standards are being adhered to by all other Contractor employees as per the Statement of Work.

If Call-Ups are issued relating to trees, turf, shrubs and flowering plants the part time Gardener will provide technical expertise.

## **SECTION 3 SNOW REMOVAL**

### **3.1 Stock piling**

Snow removed from the RCMP NTTC and the RCMP Ammo depot must be dumped in the RCMP snow dump as per the Site Plan.

Should snow piles around the DND areas need to be relocated to the DND snow dump as per the Site Plan Drawing, the Technical Authority will issue a Call-Up.

The Contractor is responsible for all costs associated with moving and stock piling snow within the snow dump zones as indicated in the Site Plan drawing or designated stock piling zones as indicated by the Technical Authority. The Contractor is responsible for managing the snow dump zones to ensure the zones are utilized to their maximum capacity. The Contractor may be required to blow or pile the snow higher in the snow dump zones to maximize the use of these spaces, at their cost, if required by the Technical Authority.

All other snow may be pushed to the side of the roads and parking lots excluding the ammo dumps and along the range roads. Piled snow must not encroach on any parking spaces or obscure visibility for vehicular or pedestrian traffic. No snow may be stock piled on the Ranges at any time

### 3.2 Safety

The Contractor is responsible to treat all main roads, parking lots and walks as illustrated in the attached Site Plan to ensure that they are safe for vehicle and pedestrian traffic. The Contractor must also ensure that vehicle access to and from the property and municipal roads is free of hazards that may interfere with safe flow of traffic. The Contractor is obliged to monitor the site according to the weather in the vicinity and apply ice melting or abrasive products as appropriate. In determining whether or not to apply these products in any particular circumstance, the Contractor must act reasonably, and apply the standards of the custom of the snow and ice maintenance industry.

### 3.3 Clear snow and ice from building entrances, roads, parking lots, sea containers

Building entrances, emergency exits, sidewalks, steps, doorways, ramps and parking for disabled persons must be free of snow and ice to bare pavement to their full width by the times stated below, seven (7) days a week. If snow accumulation occurs after this time, clearing of these zones will commence once there is an accumulation of four (4) cm. During ice forming conditions, ice-control agents will be applied to these zones as needed.

Roads, gates, ramps, loading dock zones, parking lots, access to main roads, and emergency vehicle routes and sea containers will be clear of snow and ice to bare pavement to their full width by the times stated below, seven (7) days a week. If snow accumulation occurs after this time, clearing will commence once there is an accumulation of five (5) cm. During ice forming conditions, ice-control agents will be applied as required.

Priority of clearance - unless otherwise directed by the Technical Authority:

Level 1- 4 Snider is to be completed by **0400 hour**.

Level 2- 1 Lewis Gun, 7 Vickers Gun, 1 Lee Enfield, 4 Snider, 7 Bisley, 5 Shirley, 35 Shirley, Shirley Boulevard parking lots and all roads, except Perimeter Rd., are to be completed by **0600 hour**.

Level 3 – 1 Shirley, 3 Shirley, 5 Shirley, 7 Shirley, 9 Bisley, Pistol Ranges, Training Centres and Sprung Shelters are to be completed by **0700 hour**.

Level 4 – All other buildings and shelters, sea containers and parking lots, as identified on the Site Plan drawing, are to be completed by **0900 hour**.

Operational Level – Range Roads, Perimeter Rd, Rappel Tower, Grenade Range, Bivouac Sites, Gas Hut, Field Latrines, shooting structures and the OBIUA zones to be completed by **1000 hour, unless operational requirements dictate otherwise**. Weekly operational requirements will be issued on Fridays and updated daily as required, by Range Control.

Malibar Road must have the snow removed to bare pavement at all times. This is a health and safety issue due to the deep ditches on either side of the road. Contractor must provide detail in the salt management plan what procedures will be followed and what products will be utilized to meet this requirement *e.g.: anti-icing and pre-wetting for de-icing*. The section of Malibar Road at the Watts Creek culvert must have the guard rails cleared of snow to allow for drainage during melting conditions.

Gravel roads and gravel parking lots will be cleared as necessary to ensure the roads and parking lots are not damaged and to ensure vehicular and pedestrian safety. Hard packed snow will not exceed five (5) cm and then be maintained with a sand/grit/salt mixture for ice-control.

Alpha 2 training zone snow must be removed in a manner that allows for maximum frost penetration into the stone dust to freeze the zone thoroughly. The first few snow falls must be back dragged or plowed in a manner that leaves two (2) cm of snow cover. It is imperative that no stone dust is mixed into this two (2) cm of snow pack as it presents a ricochet hazard.

The grass zone of Alpha 2 must be cleared. A two (2) centimetre cover of snow must be left to prevent winter kill from exposure.

All snow, from the removal operations on Alpha 2, must be relocated to the west side of the range as per the Site Plan. When required, a Call-Up will be issued to relocate the snow from the west side of the range to the designated snow dump, as per the Site Plan.

All target facade clearing and debris cleanup will be performed with written approval from the Technical Authority in the form of a Call-Up. All target facades need to be cleared by hand to allow access. Facades may change as operational requirements dictate. Any wood debris from the facades must be cleaned up and removed as part of the Call-Up. Suspicious objects will not be tampered with, must be left in place and reported to Range Control immediately. Visible bullets, bullet fragments or bullet casings are not debris and must not be removed from site but must be reported to and removed by Range Control prior to continuing snow removal operations.

No platforms or raised shooting zones need to be cleared. Ice control agents for the stone dust and grass zones will be sand and stone dust. During ice forming conditions, ice control agents will be applied to these zones as needed.

The snowbanks on all range roads must be blown back once they reach forty-five (45) cm high. No snow may be blown onto the firing points or the bullet catchers on the ranges at any time. Snow windrows cannot impede Range access. A two vehicle parking zone and a turnaround zone must be plowed at the end of each of the range roads as designated in the Site Plan. Snow may be blown along the Range Parking lots as per the designated zones on the Site Plan. Snow cannot be blown onto the range safety berms. No snow may be piled south of the range fences or near the hydro poles as per the Site Plan.

Snowbanks, at all intersections, are to be winged back to enable clear visibility. Snow banks along roads, intersections and parking lots must not exceed one (1) metre in height at any time. A

Call-Up will be issued if snow needs to be winged back on Perimeter Road, to provide clear visibility down the road.

Maintain a safe distance from all equipment, materials, gas pipes, sheds and sprung shelters within all compounds. The 7 Vickers Gun compound cannot have any snow piled within three (3) metres of the fence, inside or outside of the compound.

Ammunition compounds are high security zones and all work will be monitored in these zones.

The DND ammo compound is to have the snow blown over the fence away from operational zones as directed by the Technical Authority. Contractor must obtain the key from Range Control, 1 Lee Enfield, for the DND Ammo Compound. No snow piles are allowed on or around the fence of the DND ammo compound, as the zone must be visible at all times.

The RCMP ammo compound is to be cleared to the front entrance of the building and sea container. Snow can be piled temporarily inside the RCMP compound as per the Site Plan. When required, the Technical Authority will issue a Call-Up to move the piled snow to the designated snow dump zone as per the Site Plan. The Contractor must obtain the key from the security staff at RCMP NTTC, 5 Shirley Blvd., from 0730 hours onwards and must be returned by 1530 hours.

A snow fence must be installed along the shrub bed on the south side of the RCMP NTTC to prevent the shrubs from being damaged by salt.

Clearance of fleet vehicle parking zones at RCMP NTTC and 7 Vickers Gun must be completed with the co-operation of the Fleet Managers, who must move the vehicles to facilitate clearing the parking lots the full width. The Fleet Managers will contact the Contractor directly to coordinate snow clearing operations in these two (2) zones.

All gates must be maintained free of ice and snow to facilitate closing and opening of the gates. The entire travel path of the mechanical gates must be cleared to ensure there are no ice jams preventing the opening or closing of the gates.

All sea container and storage bins must be accessible.

The Biathlon ski trail zone, as per the Site Plan, must not be obstructed by plowed snow.

Proof of training and prior approval from the Technical Authority is required for any work performed using a grader on-site.

### **3.4 Clear snow and ice from target galleries**

No snow must be blown, piled or pushed into the target stanchions on any of the ranges, at any time. The walkways of the target galleries must have the snow blown over and out of the target gallery zones. The clearing of snow and ice from the target stanchions is included herein.

As per the Site Plan drawing, clear snow and ice from the target galleries as follows:

1. Alpha1 Range - the stairs at the east side of the target gallery, the walkway access to the latrine, the walkway access to the shooting structures and the walkway for lanes 31 to 40.
2. The centre staircase between Charlie Left and Charlie Right.

3. Charlie Left - the stairs and walkway to access lanes 1-10.
4. Charlie Right - the stairs and walkway for lanes 31 – 41.
5. Delta Range - the stairs at the east side of the target gallery and the stairs to the latrine and access door.

### **3.5 Clear snow from fire route, fire hydrants, standpipes, fuel filler pipes, gas shut offs, air conditioners, exterior heaters, and vents**

Keep fire routes, including routes to standpipes and access to fire hydrants clear of snow and ice at all times. Keep fire hydrants, fuel filler pipes, gas shut offs, air conditioners, exterior heaters and vents clear to a diameter of 250 cm.

### **3.6 Clear snow from garbage and recycling dumpsters and cans**

Keep access to all garbage and recycling dumpsters and cans clear of snow and ice at all times.

### **3.7 Clear snow from directional signs**

Directional signage must be free of snow obstruction.

### **3.8 Ice-control agents**

The Contractor must submit a Salt management Plan. The Salt Management Plan must be submitted by ninety (90) days after contract award. This plan will be reviewed by the Site Authority and Technical Authority and the Contractor will make any necessary adjustments to meet the operational requirements of the site and the required services as outlined in the Statement of Work. The Salt Management Plan must outline under the Best Practices section what products will be used and under what conditions.

Ice melter such as Landscaper's Choice, Geomelt or Ecosalt is to be used on steps, doorways, and entrance walkways. Products such as sand, white salt, treated salt such as Thawrox, and liquids such as Caliber M1000 and M2000 to be added to the treated salt are to be used in the parking lot and roads as per the approved Salt Management Plan. For gravel roads and gravel parking lots, ice-control agents may include grit, sand, gravel, salt. Excess ice-control agents will be removed when requested by the Technical Authority.

Storage boxes for ice-control agents will be provided by DND. Ice-control agent levels in bins are to be maintained as required. The Contractor will distribute the storage boxes prior to first snow fall as directed by the Technical Authority. The Contractor will return clean, empty storage boxes to the PWGSC compound for storage as directed by the Technical Authority, no later than May 15.

At the end of the snow removal season, the Contractor must report the amount of salt and other ice-control agents used on-site. After the spring thaw, all hard surfaces and grass zones must be free of ice-control agents by May 15.

### **3.9 Snow piles**

Blown, plowed or piled snow is to be kept away from obstacles, including but not limited to, hydro and telephone poles or their guy wires, trees, shrubs, fences, memorial cairns, DND equipment displays, buildings and trailers, shrub and flower beds and planters.

Snow piled temporarily, with the written approval of the Technical Authority, will be removed within 24 hours after storm. Temporary snow piles must not obscure or impede visibility for vehicular or pedestrian traffic.

### **3.10 Snow coverage on grass**

A minimum of fifteen (15) cm of snow must be left on the grass where snow is removed or pushed.

### **3.11 Delineate walkways, approaches, catch basins, and curbs**

Walkways, approaches, catch basins and curbs must be delineated prior to first snow fall to provide guides for snow clearing. Snow markers will be removed with spring thaw. Should the Contractor wish to put in wooden stakes on the range roads to delineate the roads for snow removal operations, the Contractor will request that the Technical Authority seek prior approval from the Site Authority.

The Contractor must advise the Technical Authority if curbs are in zones that impede snow removal operations that they would like to move at their own cost for the snow season and return upon completion of the snow season. The Contractor must arrange a storage zone for those curbs with the Technical Authority.

The Contractor is responsible for replacing any curbs damaged during this operation at their cost.

### **3.12 Catch Basins and Culverts**

Keep catch basins and culverts free of snow and debris and anything that interferes with the free flow of run-off water at all times.

### **3.13 Repairs**

Repairs to signs damaged by winter snow clearing will be completed to satisfaction of the Technical Authority by May 15<sup>th</sup>. Repairs to curbs damaged by winter snow clearing will be completed to satisfaction of the Technical Authority by May 15<sup>th</sup>. Repairs to buildings, walkways, turf zones, removal of ice-control agents, replacement of damaged shrubs and trees due to snow removal damage will be completed by May 15<sup>th</sup>.

### **3.14 Shrub protection**

Installation of protective screening along the shrub bed at the south side of RCMP NTTC is required to prevent salt damage to shrubs.

## **SECTION 4 LANDSCAPE:**

### **4.1 General Cleanup**

#### **1. Clear drains, catch basins**

Drains and catch basins must be free of all ice, litter, leaves, soil, or anything which interferes with the free flow of runoff water.

#### **2. Sweeping**

All paved zones including parking lots, walkways, ramps for disabled persons, loading dock zones, and paved roads must be free of litter, dirt, sand and grit, by sweeping with a sweeper vacuum. All tar chip roads will be flushed to push all grit to the shoulder of the road. The

sweeping and flushing will be done by May 5 or as directed by the Technical Authority. All debris, grit and dust must be removed and disposed off-site.

#### **4.2 Turf**

##### **1. Spring raking**

Grass must be raked, as required, in spring no later than May 15 to allow for ease of air and water penetration, and to remove ice-control agents, snow mold and organic/inorganic debris.

##### **2. Mowing grass**

**Range Maintenance will be conducted on Fridays unless otherwise instructed by the Technical Authority.** The Contractor must check in regularly throughout the day with Range Control to determine access times to mow on the ranges as operational requirements change frequently throughout the day. **The first 100 metres of all the ranges, the butt stops and around all the bullet traps must be completed by 07:30 hours.** After 07:30 hours, mowing can continue on the ranges as directed from Range Control. Range Control may advise that mowing may continue behind the line of fire until operational requirements dictate otherwise. Follow range safety rules and regulations as per the safety briefing received from Range Control.

If range mowing is restricted by operational requirements, the base and training zones will be available to crews mowing until the ranges are available again.

**No mowing is permitted in the cadet and officers tent zones prior to 0600 hour due to the noise impact on the base residents.** Mowing in the Cadets camp and Officers camp zones and ranges will be subject to operational requirements.

Grass on the base and ranges must be maintained at a uniform height between seven (7) cm and ten (10) cm with no grass trimmings present on flower beds, walkways, paved or crushed stone zones. Mowing and trimming must be completed as a single operation. Mowers and line trimmers must not be used around the base of trees and shrubs. No scalping of the turf will be tolerated.

Grass on the butt stops and around the bullet traps, as per the Site Plan, must be maintained at a height of ten (10) to fifteen (15) cm to ensure that there is never thick undergrowth or tall grass impeding visibility or presenting a fire hazard.

Grass clippings may be left on the mowed zones provided that they are evenly distributed. If the Technical Authority determines, in association with the Fire Chief, that the quantity of clippings is excessive and pose a fire threat, the Contractor will be directed to rake and dispose of all clippings off-site at their cost.

The Regular Cutting Flail Mowing zone located at the cadet firing range is rough ground with visible stumps and rocks. A flail or hammer type mower is recommended for use in this zone.

##### **3. Trim grass edges of beds and other turf edges**

Turf edges must be clearly defined by June 30 to maintain design layout and to ensure no overgrowth of beds, walkways and curbs.

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### **4.3 Garden Beds**

#### **1. Shrub beds**

Shrub beds must be free of visible weeds and cultivated to allow for moisture and other nutrient penetration. In beds where there is mulch, the Contractor is responsible to supply and install mulch to maintain it to a depth of eighty (80) mm. Only shredded natural white cedar mulch, approved by the Technical Authority is to be used on-site.

#### **2. Deadwood from shrubs**

There must be no dead, diseased or broken branches or dead flower heads in shrubs.

#### **3. Pruning shrubs and hedges**

Prune deciduous shrubs once a year. Remove up to 25% of older branches at ground level to force new shoots. Shearing is not acceptable. Maintain natural shape of species. Prune hedges, if required, to maintain shape.

#### **4. Replacing shrubs and perennials**

Replace shrubs and perennials that, in the opinion of the Technical Authority, are no longer acceptable due to maintenance practices during the term of this contract. Replace with the same species and the same size as the plants next to the replacements or as directed in writing by the Technical Authority.

#### **5. Cultivate garden beds**

Garden beds and planters must be cultivated to ensure removal of weeds and debris. Nutrient materials must be added to ensure optimum flower display and plant vigour.

#### **6. Maintain garden beds**

Garden beds must be maintained to ensure faded blooms and weeds are removed. Dead, damaged, diseased or missing plants must be replaced. Ensure that the soil is kept moist and friable.

### **4.4 Trees**

The Work, as per the Statement of Work, applies to trees in maintained zones only. If other trees require work outside of the maintained zones on-site then a Call-Up will be issued for this work.

#### **1. Prune suckers, dead, diseased or broken branches of trees**

Written approval from the Technical Authority must be received before proceeding with any tree pruning work. Trees must be pruned to remove suckers, dead, diseased, or broken branches, and crossed or rubbing branches. Pruning work will be restricted to a maximum height of four (4) metres unless a certified arborist is undertaking the work.

**All work over the height of four (4) metres must be conducted by a certified arborist.** A Call-Up will be issued for all work over four (4) metres. All tree work conducted by the arborist must follow the *Arborist Industry Safe Work Practices*.

#### **2. Dead or dangerous trees**

All dead or dangerous trees up to two hundred (200) mm Diameter at Breast Height (DBH) must be removed to ground level as directed in writing by the Technical Authority.

### **3. Branch clearance**

There is to be a minimum clearance of tree branches; four (4) metres over roadways and two (2) metres over walkways.

### **4. Mulched tree rings**

Supply and install mulch to maintain existing mulch rings around tree bases to a depth of eight (8) cm. Mulch should not be in contact with tree trunk. Remove grass or vegetation within a twenty (20) cm diameter around the trunk of all other trees. Only shredded natural white cedar mulch, approved by the Technical Authority, may be used on-site.

### **5. Hazardous conditions**

Report any conditions detrimental to plant health or public safety.

### **6. Replace tree**

Replace all trees that according to the Technical Authority have lost their aesthetic value due to improper maintenance during the term of this Contract. The Contractor must remove the unacceptable tree at the request of the Technical Authority, and replace it with one of the same species and size up to a maximum of ninety (90) mm diameter for a deciduous tree and three hundred (300) cm high for conifers.

#### **4.5 Watering**

##### **1. Water garden beds, shrubs, trees and grass**

All existing vegetation must be watered as required to ensure plants receive enough moisture to sustain optimum aesthetic value and maintain vigour throughout the growing season. Watering of newly planted vegetation until establishment will be included in the planting call up as per the specifications of the call up.

#### **4.6 Pest Control**

##### **1. Insects and disease**

Monitor all vegetation for the presence of pest and disease. Notify the Technical Authority of any infestations. Use Integrated Pest Management practices such as traps, water blast, physical removal or pruning. Do not apply any registered chemical control unless approved in writing by the Technical Authority. Keep records of plant condition, positive pest identification and corrective actions taken to combat pest and disease. Keep PestRec forms and all other required documentation in the binder on-site at 31 Shirley.

#### **4.7 Sports Zone Maintenance**

Advise the Technical Authority when the work is scheduled so an inspection can be conducted to verify the tasks have been completed.

##### **1. Volley ball court maintenance June 1 – August 31**

Once a week level sand and remove all foreign objects including all vegetative growth from inside the volley ball court zone. Once a month remove sand from surrounding grass.

##### **2. Volley ball court maintenance May 1-31, September 1- October 31**

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Once a month level sand and remove all foreign objects including all vegetative growth from inside the volley ball court zone. Once a month remove sand from surrounding grass.

**3. Sports track and ball diamonds June 1 – August 31**

Harrow the sports track and ball diamonds gravel surfaces bimonthly from June 1 to August 31 to prevent weeds. Remove and dispose of all weeds from stone dust surface.

**4. Sports track and ball diamonds May 1-31, September 1- October 31**

Harrow the sports track and ball diamonds gravel surfaces once a month in May, September and October to prevent weeds. Remove and dispose of all weeds from stone dust surface.

**4.8 Winter Preparation**

Advise the Technical Authority when the work is scheduled so an inspection can be conducted to verify the tasks have been completed.

**1. Garden beds**

Garden beds must be prepared for winter by trimming perennials, weeding and raking the soil.

**2. Remove fallen leaves**

Leaves must be mulched or raked and removed from site whenever fallen leaf accumulation exceeds 40% of a square metre of any surface. All mulched leaves must be spread evenly to avoid damages to the turf. If the Technical Authority determines that the quantity of mulched leaves is excessive the Contractor will be directed to rake and dispose of all mulched leaves off-site.

**4.9 Green roof**

**1. Safety**

The Contractor must ensure all employees doing maintenance on the green roof have Fall Protection/ Working from Heights certification.

**2. Sopranature maintenance**

The SOPRANATURE system must be maintained as per the supplier's instructions, [www.soprema.ca](http://www.soprema.ca)

**3. Green roof maintenance staff**

All work undertaken on the green roof must be completed under the direct on-site supervision of the Part-time Gardener.

**4. Clear drains**

Drains must be free of all litter, leaves, soil, vegetation, or anything that will interfere with the free flow of runoff water.

**5. Watering**

All vegetation must be watered as required to ensure optimum aesthetic value and to maintain vigour throughout the growing season.

**6. Plant maintenance**

Provide maintenance of all vegetation, including mowing, weeding, pruning, and other incidental maintenance deemed necessary to ensure healthy plant material. No weeds are allowed on the roof.

The grass on the green roof is to be cut to a height of ten (10) to fifteen (15) cm twice a year as authorized by the Technical Authority. Approximate timing of the cuts is June and September. The grass clippings are to be removed immediately after mowing has been completed.

Provide spring cleanup and winter preparation of planted zones including cleanup of drain inspection boxes within planting zones. Fertilizing requirements will be determined by the Technical Authority and a call up will be issued if required. All zones not designated for vegetation such as gravel zones, pavers, and drains must be free of vegetation at all times.

If infilling of bare spots with seed or replacing eroded substrate is required, the Technical Authority will issue a Call-Up for this work.

#### **7. Green roof inspections**

In addition to inspections during the growing season, the Contractor is to inspect the roof after major wind events and in the spring and fall to ensure that the green roof system including hardscape elements are still intact and to report any damage to the Technical Authority on the Maintenance Visit Documentation Form.

#### **8. Maintenance visit documentation form**

A Maintenance Visit Documentation Form will be completed after each visit to document what maintenance procedures were carried out. This form is to be submitted to the Technical Authority within one (1) business day after the visit.

The Contractor must advise the Technical Authority when the work is scheduled to be done so that the Technical Authority can verify that the work has been completed as per the Statement of Work and to advise the client in advance to ensure that the timing is acceptable to the client.

#### **4.10 Range Maintenance**

##### **Glossary of terms and specifications**

##### **Berm**

An artificial stop butt (Berm) is a bank built immediately behind the targets. It is free of stones and other hard materials and meets the following requirements:

- a. **Height:** The top of the berm must rise at least 1.2 m above the line of sight in the case of 1.8 m targets regardless of the firing position.
- b. **Length:** The length of the crest of the berm depends on the number of targets required. It must extend at least 6 m beyond the outer edges of the flank targets.
- c. **Thickness:** The crest line of the berm must be level and at least 1.5 m thick. The thickness at the base will depend on the slope.

For standard ranges, the berm acting as a bullet stop and a protective wall between 2 rifle ranges must be able to stop bullets over an area of 4 m high by a width extending to 2 m beyond the flank line of fire.

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### **Butt / Bullet Stop**

It is an embankment created behind the range to stop the bullets, prevent ricochet and to allow the markers to see, with some accuracy, where the bullet went. The butt stop ensures that the bullet is captured well in advance of its potential maximum ricochet range to prevent the widespread distribution of heavy metals, and to ensure the safety of personnel beyond the limits of the range facility. The construction materials for the butt stop will generally be sand, clay with sand or sand/sawdust. Construction materials must be free of stone and other hard objects that pose a ricochet hazard.

### **Bullet Trap - Catchers**

A sand or sand/sawdust bullet catcher must be provided to prevent back splash, to limit the ejection of bullet fragments, and to assist with marking the shots. The forward slope of the bullet catchers will be no less than the horizontal plane of the safety berm.

### **Butt / Bullet Stop and Pistol Range Berm Sizes**

Sizes are approximate and subject to change.

Alpha 1 Range: Bullet stop is 193.6 metres x 8.0 metres = 1,548.80 metres square.

Alpha 2 Left Range: Bullet stop is 86.5 metres x 7.8 metres = 674.70 metres square.

Alpha 2 Right Range: Bullet stop is 89.1 metres x 8.2 metres = 730.62 metres square.

Bravo Range: Bullet stop is 48 metres x 8.2 metres = 393.60 metres square.

Charlie Left Range: Bullet stop is 145.1 metres x 6.1 metres = 885.11 metres square.

Charlie Right Range: Bullet stop is 222.9 metres x 6.1 metres = 1,359.69 metres square.

Delta Range: Bullet stop is 109.4 metres x 5.8 metres = 634.5 metres square.

Pistol Range 1: North Bullet stop is 22 metres x 6.5 metres = 143 metres square.

Pistol Range 3: Bullet stop is 23.1 metres x 6.5 metres = 149.5 metres square.

Pistol Range 4: Bullet stop is 22 metres x 6.5 metres = 143 metres square.

Pistol Range 6: North Bullet stop is 23 metres x 6.5 metres = 149 metres square.

### **Tunnelling**

Tunnelling is caused by the repeated impact of bullets in a concentrated area resulting in the ejection of butt stop materials, and the formation of deep depressions. The resulting deformation of the butt stop shape will alter the ricochet trajectories and will pose a safety hazard.

### **Firing Points (Pistol Range and Rifle Range)**

The firing points are the areas where the shooters stand to fire their weapons. Firing points on classification rifle ranges are at 100, 200, 300, 400, 500 and 600 m. Some classification rifle ranges have firing points at up to 1000 m. From the last firing point and the target line, small mottos define the distance to the targets.

### **Required tasks:**

#### **1. Authority for Work**

The Contractor will provide services and materials on an “as and when” required basis where charges must be made of actual materials used, actual hours of a labour, and/or equipment with operator costs, as per the basis of pricing in the Contract.

The Call Up will indicate the time frame in which the Work must be completed. A description of the Work will be attached to each Call Up indicating the Work to be completed, and required materials.

When requested by the Technical Authority, estimates are to be provided by the Contractor to the Technical Authority, as per the sample format in Sample Work Quote within two (2) working days. A Call Up must be obtained from the Technical Authority prior to conducting any work.

Additional hours and materials must have prior approval from the Technical Authority. The Call Up will then be amended to reflect the additional hours and materials. Only actual hours worked and actual materials used may be invoiced.

## **2. Rifle and Pistol Range Inspections:**

Inspection will be conducted according to the Range Construction and Maintenance manual or on demand of the authorities. (Publication: B-GL-304-003/TS-002)

The Contractor's Supervisor must inspect all work against the Call Up to ensure that all work has been completed in accordance with the terms of the Contract, the SOW, and the Call Up.

The Contractor's Supervisor is to notify the Technical Authority when the Work is scheduled for completion. The Technical Authority and DND Site Authority will review the Work to verify that the Work is completed as per the Call Up. The DND Site Authority must sign the Call Up Log Report to verify acceptance of the Work. The site Call Up Log Report, is located at 1 Lee Enfield, Range Control. The Call Up Log report must be completed by both the Contractor and the DND Site Authority, in order for invoices to be processed.

## **3. Pick up litter**

The bullet catchers and pistol ranges must always be free of litter. Bullet fragments or bullet casings are not litter and must not be removed from site. Suspicious objects must not be tampered with and must be reported to Range Control immediately upon discovery.

## **4. Bullet Trap - Catcher and Butt / Bullet Stop Maintenance**

### **a. Pistol range firing point**

Bullet trap - catcher -stop maintenance, also includes the maintenance of the firing points. Firing points must be raked and/or filled and maintained with soil free of rocks and any hard foreign objects, that pose a potential ricochet as needed to maintain a 5 degree slope from the firing points to the targets.

All firing points must be cleaned of all debris and brass casings, at the conclusion of each training event by the RCMP designated staff. If apparent bullet casings, are not removed from site, notify PSPC or Range Control if and when there is munitions-related debris on-site.

### **b. Bullet tunneling**

Bullet trap - catcher - stop must be raked in a manner to correct tunnelling. Sand must be hand-raked to a depth of 5 cm and pushed up to correct bullet craters, to preserve the required slope, and rake sand back up that may have moved down the slope due to rain or snow. Raking is necessary to maintain material consistency to allow full penetration of projectiles, and to minimize material compaction and tunnelling at the site of the bullet impact.

### **c. Weeding**

All Bullet traps must be weed free.

**d. De-compacting**

Fluffing bullet trap - catcher - stop, also called Deep tine de-compaction: must be done when a call up is issued, with a minimum depth of 90 cm and up to 125 cm of deep penetration, for loosening the material compaction.

**SECTION 5 - SPECIAL OPERATIONS**

Contractor must have written approval from the Technical Authority in advance of performance of any of the following operations. The Contractor must give prior notice to the Technical Authority when the work will be undertaken so the Technical Authority can verify that the work is completed.

**1. Berms**

The safety berms on the ranges, identified on the Site Plan, are to be cut to a height of 7.5 cm as directed by the Technical Authority. The Alpha 1 and Delta safety berms include the back of the Butt Stop berm as indicated in the site plan.

The safety berms include the zone from the toe of the slope to the top of the berm.

The berm at the cadet camp is to be cut to a height of 7.5 cm as directed by the Technical Authority.

**2. OBUA structures**

The grass around the OBUA building is to be cut to a height of 7.5 cm as directed by the Technical Authority.

**3. Lagoon road**

The snow must to be cleared to the full width of the road with a turnaround zone at the camera location.

**4. Perimeter fence clearing and gates**

The perimeter fence and gates and all the compound fences will be cleared as directed by the Technical Authority. This includes mowing the grass and removing all vines, weeds, brushwood, shrubs and tree limbs including fallen trees, to a width of two (2) metres on both sides.

**5. Sweeping**

In addition to sweeping required in Statement of Work Section 4.1.2, the DND parade square and RCMP parking lots are to be swept as and when requested in writing by the Technical Authority. These zones are to be free of litter, dirt, sand and grit, by sweeping with a self-contained sweeper/vacuum. All debris, grit and dust must be removed and disposed off-site.

**6. Mowing out of season**

Provide rates for mowing out of season based upon a cost per square metre. Zones to be mowed will be determined by the Technical Authority and identified in the Call-Up.

## **SECTION 6 EXTRA WORK**

### **1. Extra Work**

The Contractor will provide services and materials for extra work on an “as and when requested” basis where charges must be made for actual materials used, actual hours of a labourer and/or actual equipment with operator costs.

Estimates or amendments to estimates for extra work are to be provided by the Contractor to the Technical Authority within two (2) working days as per the sample format. A Call-Up must be obtained from the Technical Authority prior to conducting any extra work.

Additional hours and materials must have prior approval from the Technical Authority. The Call-Up will then be amended to reflect the additional hours and materials.

Advise the Technical Authority when the Call-Up work will be completed so an inspection can be conducted to verify the tasks have been completed as per the Statement of Work on the Call-Up.

### **2. Irrigation Extra Work**

The Contractor may be requested to do the spring start up and winter shut down of on-site irrigation systems. Irrigation extra work may include supplying parts and providing labour to repair broken irrigation systems.

### **3. Plant Material Extra Work**

The Contractor may be requested to supply and install trees, shrubs, perennials, and annuals including tropical plants. These plants may be to replace dead or missing plants from existing beds, planters or green roofs. The maintenance of any new gardens beds, trees, planters or green roofs added to the site will be amended into the contract as required.

The trees and shrubs must have a one year warranty. If a tree or shrub has to be replaced under warranty, than the one year warranty will commence again when the replacement tree or shrub is planted.

The extra work for the trees may include creating a soil saucer ring for a year, stakes and guy wires and tree guards to protect the trees from rodents. Following the first year, the soil saucer, stakes and guy wires are to be removed and a mulch tree ring is to be installed.

Amendments to the soil or growing media or additional soil or growing media may be required as extra work. Watering of all new plant material until established is an extra work requirement. Fertilizing plant material may be requested as extra work. Supplying and installing mulch on any new or existing beds not covered in the Statement of Work will be extra work. There may be weeding requirements as extra work.

### **4. Interlock stone, patio stone, permeable stone, and stack wall stone Extra Work**

The Contractor may be requested to lift and relay interlock or patio stones. This work will include fixing the base to ensure that there is 12” of compacted base, edging, and any replacements for broken interlock or patio stones. The Contractor must ensure that there is no pooling of water on the surface and that water drains away from any buildings.

The Contractor may be requested to replace broken patio stones or interlock on existing walkways, entrances and patios. This does not include stones that are broken due to the Contractors maintenance operations on site.

**5. Aggregates, Top Soil, Mulch Extra Work**

The Contractor may be requested to supply and install gravel, river rock, stone dust, sand, top soil, growing media or mulch.

**6. Road and Parking Lot Repair Extra Work**

The Contractor may be requested to repair roads and parking lots which includes asphalt cold patch repairs, adding gravel and grading.

**7. Tree, Brush and Shrub Extra Work**

The Contractor may be requested to remove dead or diseased trees, stump grind, chip wood, remove encroaching brush and trees from roads and sidewalks, prune trees, remove tree stakes, install mulch rings or mulch under grouping of trees and shrubs, and fertilize trees and shrubs.

**8. Turf Extra Work**

The Contractor may be requested to aerate, top dress, over seed, fertilize existing turf. The Contractor may be requested to supply and install seed or sod or repair damaged turf areas. This work will include the proper preparation of the area such as levelling or adding top soil, watering and fertilizing. This work will be warranted until acceptance by the Technical Authority after two cuts.

The Contractor may be requested to do additional mowing, line trimming or flail mowing.

**9. Sports Field Extra Work**

The Contractor may be requested to do line painting on soccer and baseball fields, harrowing of sports tracks, rototilling of playgrounds and volleyball courts.

**10. Material Supply and Install Extra Work**

The Contractor may be requested to supply and install items such as but not limited to garbage cans, cigarette butt holders, ashtrays, planters, tree guards, fencing, curbs, jersey barriers, salt storage boxes and speed bumps (may be temporary).

**11. Weed Control Extra Work**

The Contractor may be requested to spray weeds including poison ivy or oak on site. Spraying of moss and removal of moss on green roofs may be requested.

**12. Pest Control Extra Work**

The Contractor may be requested to provide additional pest control services such as putting dog hair in ground hog holes, back filling ground hog holes, and removal of dead birds.

**13. Green Roof Services and Repairs Extra Work**

The Contractor may be requested to provide additional services on the green roof which may include but is not limited to the installation or removal of growing media or patio stones or, installation of seed or plant material. Watering and fertilizing new materials may be requested.

**14. Extra Services**

The Contractor may be requested to provide extra services such as but not limited to snow removal, moving planters, salt storage boxes, fences, and garbage cans, painting or repairing benches and garbage receptacles, sweeping, pressure washing, watering, garbage pick-up and removal outside of regular litter, and repair fences.