

**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 0A1 / Noyau 0A1**  
**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**  
**Maintenance & Professional Consulting Services**  
**Division (FK)**  
**11 Laurier St./ 11, rue Laurier**  
**3C2, Place du Portage, Phase III**  
**Gatineau**  
**Québec**  
**K1A 0S5**

<b>Title - Sujet</b> Fire Alarm/Sprinkler - Maint. Contr	
<b>Solicitation No. - N° de l'invitation</b> EJ196-141167/A	<b>Amendment No. - N° modif.</b> 002
<b>Client Reference No. - N° de référence du client</b> 20141167	<b>Date</b> 2014-05-13
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$FK-289-64993	
<b>File No. - N° de dossier</b> fk289.EJ196-141167	<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 2014-05-21</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT
<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> Maquiling(fk div), Amalia O.	<b>Buyer Id - Id de l'acheteur</b> fk289
<b>Telephone No. - N° de téléphone</b> (819) 956-5978 ( )	<b>FAX No. - N° de FAX</b> (819) 956-3600
<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>

Solicitation No. - N° de l'invitation

EJ196-141167/A

Amd. No. - N° de la modif.

002

Buyer ID - Id de l'acheteur

fk289

Client Ref. No. - N° de réf. du client

20141167

File No. - N° du dossier

fk289EJ196-141167

CCC No./N° CCC - FMS No/ N° VME

---

This solicitation amendment 001 is issued to include the Statement of Work (SOW) at amendment 001.

**No other changes apply**

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 1 of 56

## Table of Contents

<b>PART 1 GENERAL</b>	<b>5</b>
1.1 DEFINITIONS	5
1.1.1 Actions	5
1.1.2 Individuals	5
1.2 CODES, STANDARDS, REGULATIONS AND REQUIREMENTS	7
1.2.1 General	7
1.2.2 National, Provincial, and/or Territorial Codes	7
1.2.3 Standards	7
1.2.4 Health and Safety	9
1.2.5 Environmental Codes, Standards, Regulations and Requirements	9
1.2.6 Authority Having Jurisdiction (AHJ)	9
1.3 SUBMITTALS	10
1.3.1 Fees, Permits and Certificates	10
1.3.2 Required Permits	10
1.3.3 Site/Work Specific Implementation Plan	10
1.3.4 Site- Specific Inspection schedule	12
1.3.5 Work Plan and Sequence of Operation for the Annual inspection	12
1.3.6 Health and Safety	13
1.3.7 Inspection Checklists	14
1.3.8 Building Life Safety Compliance Testing Manual	14
1.3.9 Material Removal Records	15
1.3.10 Reports for Tests, Checks, Maintenance and Service	15
1.4 GENERAL REQUIREMENTS	16
1.4.1 Purpose	16
1.4.2 Objective	16
1.4.3 Service Calls	17
1.4.4 Problem escalation	17
1.4.5 Notification	18
1.4.6 Operational Requirements	18
1.4.7 Extra Work	19
1.4.8 Building Access Hours	20
1.5 RESPONSIBILITIES	21
1.5.1 Completion of the Statement of Work	21
1.5.2 Negligence on the Part of Canada and Other Parties	22
1.5.3 Documentation	22
1.5.4 Health and Safety	22
1.5.5 Work Alone Policy	23
1.6 SUMMARY OF WORK	23
1.6.1 Inclusions of the Statement of Work	23
1.6.2 Schedule	24
1.6.3 Seasonal Site Schedule	24
1.6.4 Hazardous Waste Management Plan	25

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 2 of 56

1.6.5	Disposal of Waste .....	27
1.7	WORK RESTRICTIONS .....	29
1.7.1	Use of site and facilities .....	29
1.7.2	Maintenance of existing services .....	29
1.7.3	Interruption of Building Services .....	30
<b>PART 2</b>	<b>EXECUTION .....</b>	<b>30</b>
2.1	GENERAL .....	30
2.1.1	Performance.....	30
2.1.2	Scheduling and Planning .....	31
2.1.3	Inspection Closeout Tasks.....	33
2.1.4	Personnel on site.....	34
2.2	FIRE ALARM SYSTEMS – WITH OR WITHOUT EMERGENCY VOICE COMMUNICATION CAPABILITIES .....	36
2.2.1	Performance.....	36
2.2.2	Additional requirements.....	36
2.3	WATER BASE FIRE PROTECTION SYSTEM .....	37
2.3.1	Performance.....	37
2.3.2	Additional requirements.....	37
2.4	KITCHEN WET CHEMICAL SUPPRESSIONS SYSTEM .....	38
2.4.1	Performance.....	38
2.5	BATTERY POWERED EMERGENCY LIGHTING .....	38
2.5.1	Performance.....	38
2.5.2	Additional requirements.....	38
2.6	PORTABLE FIRE EXTINGUISHERS.....	39
2.6.1	Performance.....	39
2.6.2	Additional requirements.....	39
<b>PART 3</b>	<b>EQUIPMENT INVENTORY.....</b>	<b>40</b>
3.1	GENERAL .....	40
3.1.1	Inventory.....	40
3.2	MAIN DEPARTMENT OF DEFENCE COMPLEX .....	40
3.2.1	Gas Hut.....	40
3.2.2	Building Air 1– Seasonal Site .....	40
3.2.3	Building No. 11 Shirley.....	40
3.2.4	Building No. 15 Shirley – Lift Station .....	41
3.2.5	Building No. 21 Shirley.....	41
3.2.6	Building No. 23 Shirley.....	41
3.2.7	Building No. 25 Shirley.....	41
3.2.8	Building No. 29 Shirley.....	42
3.2.9	Building No. 31 Shirley – PWC Office.....	42
3.2.10	Building No. 33 Shirley.....	42
3.2.11	Building No. 33 Shirley.....	43
3.2.12	Building No. 35 Shirley Mess Hall.....	43
3.2.13	Building No. 45 Shirley DCRA House.....	43
3.2.14	Building No. 1 Lee Enfield Range Control.....	43

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 3 of 56

3.2.15	Building No. 3 Lee Enfield Machine Shop .....	43
3.2.16	Building No. 7 Besley Gym .....	43
3.2.17	Building No. 9 Besley.....	44
3.2.18	Building No. 1 Webley.....	44
3.2.19	Building No. 5 Webley.....	44
3.2.20	Building No. 7 Webley.....	44
3.2.21	Building No. 8 Webley Barracks .....	44
3.2.22	Building No. 9 Webley Barracks .....	45
3.2.23	Building No. 10 Webley Barracks .....	45
3.2.24	Building No. 11 Webley Barracks .....	46
3.2.25	Building No. 4 Snider – New Mess Hall –Kitchen System .....	46
3.2.26	Building No. 2 Bren Gun Barracks .....	47
3.2.27	Building No. 2 Bren Gun Barracks .....	47
3.2.28	Building No. 4 Bren Gun Barracks .....	47
3.2.29	Building No. 4 Bren Gun Barracks .....	48
3.2.30	Building No. 6 Bren Gun Barracks .....	48
3.2.31	Building No. 6 Bren Gun Barracks .....	48
3.2.32	Building Alpha Troop Shelter Shirley Blvd.....	48
3.2.33	Building Bravo Troop Shelter Shirley Blvd.....	48
3.2.34	Building Charlie Troop Shelter Shirley Blvd .....	48
3.2.35	Building Delta Troop Shelter Shirley Blvd.....	48
3.2.36	Building 4 Lewis Gun.....	49
3.2.37	Building 6 Lewis Gun.....	49
3.2.38	Building 15/17 Shirley - Ammo Compound.....	49
3.3	CADET AREA COMPLEX .....	49
3.3.1	Building No. 18 Brouillette – Cadet Camp Seasonal Site.....	49
3.3.2	Building No. 21 Brouillette – Cadet Camp- Seasonal Site.....	49
3.3.3	New Cadet Air Pistol Range – Dome .....	50
3.3.4	Tents No. G 1 and G 2 – Brouillette and Vickers Gun -seasonal.....	50
3.3.5	Building No. 5 Brouillette – Seasonal Site.....	50
3.3.6	Building No. 9 Brouillette – Ablution Module 1 – Seasonal Site .....	50
3.3.7	Building No. 10 Brouillette – Seasonal Site.....	50
	Building No. 10 Brouillette .....	51
3.3.8	Building No. 11 Brouillette – Seasonal Site.....	51
	Building No. 11 Brouillette .....	51
3.3.9	Building No. 15 Brouillette – Seasonal Site.....	51
3.3.10	Building No. 17 Brouillette – Seasonal Site.....	51
	Building No. 17 Brouillette .....	51
3.3.11	Building No. 1 Lewis Gun .....	52
3.3.12	Building No. 1 Vickers Gun – Seasonal Site .....	52
3.3.13	Building No. 7 Vickers Gun.....	52
3.3.14	Cadet Permanent Tent Complex- Seasonal site .....	53
3.3.15	Building Cadet Mess – Seasonal Site.....	53
3.3.16	Building Cadet Bar – Seasonal Site .....	53
3.3.17	Storage Tents – Seasonal Site .....	53

**DND Connaught Rifle Ranges**  
**Shirley's Bay Complex**  
**Carling Avenue**  
**Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 4 of 56

---

3.4 RCMP COMPLEX .....	54
3.4.1 Building No. 1 Shirley – CQB.....	54
3.4.2 Building No. 3 Shirley – Indoor Range.....	55
3.4.3 Building No. 3 Shirley – Water Based Fire Protection.....	55
3.4.4 Building No. 5 Shirley – New Administration Building - NTTC .....	55

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 5 of 56

**PART 1 GENERAL**

**1.1 Definitions**

1.1.1 Actions

- 1.1.1.1 Checking/check: visual observation to ensure the device or system is in place and is not obviously damaged or obstructed.
- 1.1.1.2 Inspect/inspection: physical examination to determine that the device or system will perform in accordance with its intended function.
- 1.1.1.3 Testing/test: full operation of a device or system to ensure that it will perform in accordance with its intended operation or function.
- 1.1.1.4 Maintenance/Maintain/Maintaining: routine recurring work; checking, inspecting, testing & service required to keep the components, sub-systems, system and integrated systems as identified in Part 3 – Equipment Inventory, in such condition that they may be continuously utilized, at their original or designed capacity and efficiency for their intended purpose.
- 1.1.1.5 Service: to make fit for use, adjust, repair, or maintain in order to keep the equipment identified in Part 3 – Equipment Inventory, in an operational condition as per their original design intent.
- 1.1.1.6 Service call: onsite diagnosis and correction made by a qualified person as outlined in 1.4.3 – Service Call.

1.1.2 Individuals

1.1.2.1 Qualified Person

- 1) Someone who is in possession of a valid and recognized Canadian university or college degree, certificate, license, manufacturer-specific training/certification or professional standing. The university or college must have a provincial or territorial degree-granting status.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 6 of 56

- 2) Someone who has the appropriate minimum of five years of experience in the related field.
- 1.1.2.2 Qualified Electrician: someone who is in possession of a valid Certificate of Qualification (C of Q) at the Journeyman level in the province that the work is to be performed.
- 1.1.2.3 Master Electrician: an individual who is licensed under the Ontario Electricity Act, Regulation 570/05 to assume the responsibilities for the carrying out of electrical work on behalf of an electrical Contractor.
- 1.1.2.4 Sprinkler and Fire Protection Installer someone who is certified in the trade regulated by the Trades Qualification and Apprenticeship Act. Persons undertaking the work of the sprinkler and fire protection installer have successfully completed the apprenticeship program and are in possession of a valid Certificate of Qualification in accordance with the provincial or territorial law in which the work is to be performed.
- 1.1.2.5 Fire Alarm Technician: someone who is in possession of a valid Canadian Fire Alarm Association (CFAA) certification OR a Certified Fire Alarm Electrician (CFAE) certification.
- 1.1.2.6 Backflow Technician: an individual who has completed and passed a Cross Connection Control course in Backflow Preventer Testing at a Canadian accredited school or college and that has a certificate issued by an accrediting organization.
- 1.1.2.7 Kitchen Suppressions Systems Technician: someone who is properly trained qualified with kitchen suppressions systems and holds a certified Kitchen Suppressions Certificate issued from an organization recognized by Authority Having Jurisdiction (AHJ).
- 1.1.2.8 Portable Fire extinguisher Technician: someone who is properly trained, qualified with portable fire extinguishers and holds a certified Portable Fire Extinguisher certificate issued from an organization recognized by Authority Having Jurisdiction (AHJ).



**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 7 of 56

**1.2 Codes, Standards, Regulations and Requirements**

1.2.1 General

- 1.2.1.1 The Contractor must comply with all Codes, Standards, Regulations and Requirements listed in this section.
- 1.2.1.2 The Contractor must keep within his possession a copy of the most current edition of the applicable Codes, Standards, Regulations and Requirements in force at the time of entering into the Statement of Work for the duration of the Contract.
- 1.2.1.3 In the event that concurrent documents exist, the most stringent set of Codes, Standards, Regulations and Requirements must apply.

1.2.2 National, Provincial, and/or Territorial Codes

- 1.2.2.1 National and Provincial Building Codes - As they pertain to the installation, verification and maintenance of Fire Alarm and Fire Protection Systems.
- 1.2.2.2 National and Provincial Fire Codes - As they pertain to the installation, verification and maintenance of Fire Alarm and Fire Protection Systems.
- 1.2.2.3 National and Provincial Electrical Safety Codes - As they pertain to the installation, verification and maintenance of Fire Alarm and Fire Protection Systems.
- 1.2.2.4 National and Provincial Health & Safety Codes - As they pertain to the works undertaken on site.

1.2.3 Standards

- 1.2.3.1 Canadian Underwriters Laboratories of Canada (CAN/ULC) Standards

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 8 of 56

- 1) CAN/ULC - S524 - Standard for the Installation of Fire Alarm Systems
- 2) CAN/ULC - S536 - Inspection and Testing of Fire Alarm Systems
- 3) CAN/ULC - S537 - Verification of Fire Alarm Systems
- 4) CAN/ULC - S531 - Smoke Alarms
- 5) CAN/ULC - S553 - Installation of Smoke Alarms

1.2.3.2 Canadian Standards Association (CSA) Standards

- 1) CSA B64.10-07 - Maintenance and Field Testing of Backflow Preventers
- 2) CSA Z460 - Control of hazardous energy - Lockout and other methods
- 3) CSA Z462 - Workplace Electrical Safety (Arch Flash Protection)

1.2.3.3 National Fire Protection Association (NFPA) Standard

- 1) NFPA 10- Standard for Portable Fire Extinguishers
- 2) NFPA 13 - Standard for the Installation of Sprinkler Systems
- 3) NFPA 17A- Standard for Wet Chemical Extinguishing Systems
- 4) NFPA 25 - Standard for the Inspection, Testing, and Maintenance of Water -Based Fire Protection Systems
- 5) NFPA 96- Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 9 of 56

1.2.4 Health and Safety

1.2.4.1 *Canada Labour Code Part II*, Canada Occupational Safety and Health Regulations

1.2.4.2 Health Canada / Workplace Hazardous Materials Information System (WHMIS)

1.2.4.3 Material Safety Data Sheets (MSDS)

1.2.5 Environmental Codes, Standards, Regulations and Requirements

1.2.5.1 Canadian Environmental Protection Act (CEPA) 1999

1.2.5.2 Fisheries Act (R.S.C., 1985, c. F-14)

1.2.5.3 Transportation of Dangerous Goods Regulations (TDGR)

1.2.5.4 Provincial Environmental Protection Act – Ontario - R.R.O. 1990 Regulation 347 Waste Management

1.2.5.5 Guidelines related to the Discharge of Fire Protection Water

- 1) Canadian Council of Ministers of the Environment. (1999) Canadian Water Quality Guidelines for the Protection of Aquatic Life, Reactive Chlorine Species.

1.2.5.6 Municipal By-Law (Disposal of Fire Protection Water as per Subsection 1.6.4 - Disposal of Waste)

- 1) The City of Ottawa Sewer Use By-Law No. 2003-514

1.2.6 Authority Having Jurisdiction (AHJ)

1.2.6.1 The Departmental Fire Protection Coordinator, who is a senior official designated by the Deputy Head for the purpose of overseeing the implementation of the Fire Protection Standard.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 10 of 56

### **1.3 Submittals**

#### **1.3.1 Fees, Permits and Certificates**

- 1.3.1.1 Pay all fees and obtain all permits. Provide authorities with plans and information for acceptance certificate. Provide inspection reports as evidence that work conforms to the requirement of the Authority having Jurisdiction.

#### **1.3.2 Required Permits**

##### **1.3.2.1 Electrical Inspection Permits**

- 1) The Contractor is responsible to provide electrical inspection permits for all electrical work prior to electrical work taking place. Refer to the National, Provincial or Territorial electrical codes as mentioned in Section 1.2 – Codes, Standards, Regulations and Requirements.
- 2) If an electrical inspection permit is not required, it is the Contractor's responsibility to provide a letter from the Electrical Safety Authority (ESA) confirming that the contractor is not required to provide electrical inspection permits for that specific work.

##### **1.3.2.2 Fire Protection Water Discharge Permit**

- 1) The Contractor must provide a Municipal Permit, approval letter, or acknowledgement to proceed from the City of Ottawa as appropriate, prior to discharging Fire Protection Water to a municipal non-sanitary sewer as per Article 1.6.4. – Disposal of Waste.

#### **1.3.3 Site/Work Specific Implementation Plan**

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 11 of 56

1.3.3.1 The Contractor must submit a detailed, site/work specific implementation plan to the Technical Authority twenty working days prior to the commencement of work as identified in the Contract.

- 1) The site/work specific implementation plan must include:
  - a) A detailed site specific inspection schedule.
  - b) A detailed work plan and sequence of operation for the annual inspection.
  - c) The site-Specific Health and Safety Plan.
  - d) Hazardous Waste Management Plan
  - e) Samples of relevant inspection checklists.
- 2) As part of the site/work specific implementation plan the Contractor must perform:
  - a) A site-specific safety hazard assessment;
  - b) A health and safety risk/hazard analysis for site tasks and operations found within the implementation plan.
  - c) A Hazardous Waste Audit

1.3.3.2 The Technical Authority will review the Contractor's site/work specific implementation plan and provide comments to the Contractor within ten working days after the receipt of plan.

1.3.3.3 The Contractor must revise the site/work specific implementation plan as appropriate and resubmit the plan to the Technical Authority within ten working days after receipt of comments.

1.3.3.4 The Technical Authority's review of the Contractor's detailed site/work specific implementation plan should not be construed as final and does not reduce the Contractor's overall responsibility for providing the personnel required in the implementation plan.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 12 of 56

- 1.3.3.5 The Technical Authority reserves the right to amend the site/work specific implementation plan at any time due to operational requirements and must sign off on all amendments to the plan, in consultation with the Contractor.

1.3.4 Site- Specific Inspection schedule

- 1.3.4.1 As part of the site/work specific implementation plan and every subsequent year after, the Contractor must submit to the Technical Authority a detailed site specific inspection schedule.

- 1) The schedule must include the additional monthly, quarterly, semi-annual and annual requirements as defined in Part 2 – Execution.

- 1.3.4.2 The Technical Authority's review of Contractor's annual detailed inspection schedule should not be construed as final and does not reduce the Contractor's overall responsibility for providing the required personnel on the scheduled inspection dates.

- 1.3.4.3 The Technical Authority reserves the right to amend the inspection schedule at any time due to operational requirements and must sign off on all amendments to the plan, in consultation with the Contractor.

- 1.3.4.4 In the event of a cancellation or rescheduling that affects the completion of the work where the Contractor has not been provided with a 2 hours cancellation notification prior to the original start time, the Contractor shall be paid a maximum of a 3 hour service call for each individual sent to site at their pre-determined hourly rates in accordance with Pricing Schedule 2, As and When Requested Work in the Contract.

1.3.5 Work Plan and Sequence of Operation for the Annual inspection

- 1.3.5.1 As part of the site/work specific implementation plan the Contractor must submit to the Technical Authority, a detailed work plan including a sequence of operation for all of the events covered under the annual inspection. This work plan must include but is not limited to;

- 1) Lockout-Tag out procedures

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 13 of 56

- 2) Site-Specific Electrical Inspection Procedures
- 3) Spill Containment Procedures
- 4) Dechlorination of Fire Protection Water Procedures
- 5) Quantities of Hazardous Waste Products during maintenance, service or repair activities.

1.3.5.2 The Technical Authority reserves the right to amend the Work Plan at any time due to operational requirements and must sign off on all amendments to the plan, in consultation with the Contractor.

1.3.6 Health and Safety

1.3.6.1 Site-Specific Health and Safety Plan

- 1) As part of the site/work specific implementation plan, the Contractor must submit to the Technical Authority their site-specific Health and Safety Plan.
- 2) The Health and Safety Plan must include:
  - a) Results of site-specific safety hazard assessment;
  - b) Results of health and safety risk or hazard analysis for site tasks and operations found in work plan.
- 3) The Technical Authority's review of Contractor's final Health and Safety plan should not be construed as approved and does not reduce the Contractor's overall responsibility for Health and Safety.

1.3.6.2 Accident Report

- 1) The Contractor must submit reports to the Technical Authority within twenty-four hours of incident and/or accident that occur during the term of the Contract.

1.3.6.3 Correction – Health and Safety Issues

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 14 of 56

- 1) The Contractor must provide the Technical Authority within two working days with written report of action taken to correct non-compliance of Health and Safety issues.

1.3.6.4 Hazardous Material (WHMIS-MSDS)

- 1) The Contractor must submit any and all Workplace Hazardous Materials Information System (WHMIS) and Material Safety Data Sheets (MSDS) for Hazardous Materials used on site to the Technical Authority five working days before such materials are brought to site.

1.3.7 Inspection Checklists

- 1.3.7.1 Sample inspection checklists are available from the Technical Authority upon request.
- 1.3.7.2 The Contractor is responsible for providing and completing the inspection checklists required by this Contract. These inspection checklists must be in conformance with the minimum requirements defined by the applicable Codes, Standards, Regulations and Requirements as per section 1.2.
- 1.3.7.3 Additional inspections, checks and tests, as identified in Part 2 – Execution, must also be recorded on the Contractor's checklists.
- 1.3.7.4 The inspection checklists must be submitted to and approved by the Technical Authority as part of the site/work specific implementation plan.
- 1.3.7.5 The inspection checklists must be used to record the work performed at each inspection and must identify the specific tasks undertaken.
- 1.3.7.6 The completed original inspection checklists must be submitted to the Technical Authority and become the property of Canada.

1.3.8 Building Life Safety Compliance Testing Manual



**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 15 of 56

- 1.3.8.1 Signature of personnel performing any of the identified checks, inspections or tests as outlined in this Statement of Work must be entered into the Building Life Safety Compliance Testing Manual.

1.3.9 Material Removal Records

- 1.3.9.1 The Contractor must submit to the Technical Authority within five working days records of all removals from site, for both materials designated for alternative disposal and general waste as defined by the Canadian Environmental Protection Act (CEPA) 1999, Hazardous Waste Regulation and other applicable provincial, municipal or territorial legislation.

1.3.10 Reports for Tests, Checks, Maintenance and Service

1.3.10.1 Monthly, Quarterly and Semi-Annual Reports

- 1) A detailed and comprehensive signed inspection report must be submitted to the Technical Authority within five working days following the completion of the monthly, quarterly, and semi-annual tests, checks, maintenance and service defined within this Statement of Work.
- 2) A detailed and comprehensive signed computerized or hard copy report of the monthly, quarterly and semi-annual test procedures carried out must be submitted to the Technical Authority within ten working days following the completion of the inspections, tests, checks, maintenance and service defined within this Statement of Work.
- 3) The report must include major and minor deficiencies noted during inspections, tests, checks, maintenance and service defined within this Statement of Work.

1.3.10.2 Annual Report

- 1) A detailed and comprehensive signed computerized or hard copy of the annual inspection report must be submitted to the Technical Authority no later than fifteen working days following the

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 16 of 56

completion of the annual inspection, tests, checks, maintenance and service.

- 2) The Annual Report must also include major and minor deficiencies noted during inspections, tests, checks, maintenance and service.

**1.4 General Requirements**

1.4.1 Purpose

- 1.4.1.1 The maintenance and service of building components, sub-systems, systems and integrated systems is of utmost importance to ensure the successful operation of the installed services and utilities.
- 1.4.1.2 The maintenance shall not be considered completed until it can be demonstrated to the Technical Authority that the work defined within this Statement of Work has been satisfactorily performed by the Contractor.

1.4.2 Objective

- 1.4.2.1 The objective of this Statement of Work is to engage a Contractor to provide maintenance services on the Fire Alarm/Fire Protection/Life Safety Systems, to ensure the integrity and uninterrupted performance of the systems as indicated in Part 3 – Equipment Inventory, including but not limited to:
  - 1) Fire Alarm(s)
  - 2) Backflow Preventer(s),
  - 3) Wet Sprinkler(s),
  - 4) Dry Sprinkler(s),
  - 5) Pre-action Sprinkler(s),
  - 6) Battery Powered Emergency Lighting,
  - 7) Portable Fire Extinguisher(s),
  - 8) Suppression System(s),
    - a) Wet Chemical,
  - 9) Passive Fire Protection System(s),
    - a) Dampers,
    - b) Fusible links.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 17 of 56

- 1.4.2.2 The items listed above, which can be found in Part 3 – Equipment Inventory, must be worked on while maintaining the integrity and uninterrupted performance of the system.

1.4.3 Service Calls

- 1.4.3.1 The Contractor must provide a qualified person(s) as defined by Section 1.1 - Definitions, to respond, on site, on a twenty-four hour, seven day a week basis at no extra labour cost to Canada.
- 1.4.3.2 The Contractor must respond within 30 minutes and be on site ready to work within two hours. All work for service calls must be executed by a qualified service personnel named in the Contract and such work must proceed continuously until the system is returned to safe operating condition.
- 1.4.3.3 Request for Service calls must only be accepted from the National Service Call Centre or the Technical Authority.
- 1.4.3.4 All service calls will be at extra cost to Canada and shall be calculated based on the As and When Requested Work Pricing Schedule 2 in the Contract. Billable hours begin when the responding qualified person(s) are on site. Upon completion of the required service work, billable time ends. Canada will accept a minimum charge of one (1) hour. Canada will not accept Truck/Travel or Fuel charges.

1.4.4 Problem escalation

- 1.4.4.1 If within the first four hours of working on the equipment, the Contractor's service technician has not been able to make significant progress of repairing the equipment, they must then contact their technical support manager, service manager or engineering manager for advice on a further course of action;

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 18 of 56

1.4.4.2 If the problem is not corrected within a total of eight hours, the service technician must contact their technical support manager, service manager or engineering manager, who must arrange to have someone with more expertise (i.e. an engineer) available on site within the following twenty-four hours.

1.4.4.3 The Contractor must submit a written report within forty-eight hours to the Technical Authority providing a clear and concise rationale of events leading up to the failure of any component, sub-system, system or integrated system and how the issue was fixed.

1.4.5 Notification

1.4.5.1 An annually approved schedule is required before the start of the first test and every subsequent year thereafter.

1.4.5.2 The Technical Authority must be notified a minimum of fifteen working days prior to tentative tests to allow time to make necessary arrangements.

1.4.5.3 The Contractor must ensure that proper notification procedures are in place to avoid false alarms during service, repairs and testing of the equipment identified in Part 3 – Equipment Inventory.

1.4.5.4 The Contractor must ensure that proper notification procedures are in place to avoid any miscommunication. The list of minimum contacts includes but is not limited to: the Technical Authority, the monitoring service, the fire department and the site security.

1.4.5.5 When service or repairs are required, the Technical Authority must be notified and the Fire Alarm/Fire Protection/Life Safety Systems must be temporarily bypassed to prevent possible false alarms.

1.4.5.6 The Technical Authority and the local Fire Department must be notified, in writing, of any actions taken to disable the Fire Alarm/Fire Protection/Life Safety Systems.

1.4.6 Operational Requirements

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 19 of 56

- 1.4.6.1 The Contractor must provide required maintenance as per Contractual requirements and at the indicated frequency, inclusive of the manufacturer's recommendations to maintain the equipment at its original performance level to provide trouble-free operations.

1.4.7 Extra Work

- 1.4.7.1 The Equipment Inventory identified in Part 3 – Equipment Inventory must be inspected and maintained as described herein. All additional parts and labour required to effect repairs to this equipment will be at extra cost to Canada and will be paid in accordance with Pricing Schedule 2, As and When Requested Work in the Contract.
- 1.4.7.2 For any repairs associated with the Equipment Inventory, the Contractor must submit to the Technical Authority for review, within twenty-four hours, a comprehensive part & labour cost summary and the reason for repair(s). If the request is deemed fair and reasonable by the Technical Authority, Such repairs will be paid in accordance with Pricing Schedule 2, As and When Requested Work in the Contract. The proposed repairs must not proceed without prior consent in writing from the Technical Authority.
- 1.4.7.3 While the Contractor is on site, deficiencies discovered that can be repaired with available material from the Contractor's stock and will be paid in accordance with Pricing Schedule 2, As and When Requested Work in the Contract. The approval to proceed with this corrective work can only be authorized by the Technical Authority.
- 1.4.7.4 Components used to repair or replace existing system components must be new, compatible with the existing inventory, Canadian Underwriters Laboratories of Canada (ULC) and/or Canadian Standards Association (CSA) listed and must comply with the applicable provisions of the codes, standards, regulations and requirements identified in Section 1.2 – Required Codes, Standards, Regulations and Requirements.
- 1.4.7.5 The Contractor is to identify modifications or improvements to the equipment or system(s) that will enhance equipment serviceability, life expectancy and/or efficiency. The Contractor must submit an estimated

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 20 of 56

cost of repairs in accordance with Pricing Schedule 2, As and When Requested Work in the Contract.

1.4.8 Building Access Hours

1.4.8.1 Regular, Silent and Weekend Building Access Hours

- 1) Regular building access hours are from 06:00 AM until 06:00 PM, Monday to Friday.
- 2) Silent building access hours are from 06:00 PM until 06:00 AM, Monday to Friday.
- 3) Weekend building access hours are from 06:00 PM, Friday to 06:00 AM, Monday.

1.4.8.2 Inspections, Maintenance, Testing and Service

1) **With Disruption and Interference**

- a) The inspections, maintenance, testing and service to the Fire Alarm/Fire Protection/Life Safety Systems which may cause disruption to the building occupants and/or systems and may interfere with the operation of any equipment within the building cannot be carried out during regular building access hours as defined in article 1.4.8.1 - Regular, Silent and Weekend Building Access Hours.
- b) Disruptive tasks include audible signals, testing of ancillary functions, or other tests and services identified by the Technical Authority.
- c) Testing with disruption and interference tasks required by this Contract must take place during **regular building access hours, unless specified in writing by the Technical Authority.**

2) **Without Disruption and Interference**

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 21 of 56

- a) The inspections, maintenance, testing and service to the Fire Alarm/Fire Protection/Life Safety Systems which does not cause disruption to the building occupants and/or systems may be carried out during **Regular building access hours** as defined in article 1.4.8.1- Regular, Silent and Weekend Access Hour.

1.4.8.3 Service

- 1) If the Contractor is required to provide Service outside of regular building access hours, they must report to the Range Control Office.

**1.5 Responsibilities**

1.5.1 Completion of the Statement of Work

- 1.5.1.1 The Contractor must have the complete operational and adjustment procedures of the manufacturer for the equipment concerned, including direct access to the manufacturer's technical support services and service bulletins.
- 1.5.1.2 There are certain tasks that shall require the cooperation and services of/and coordination with Canada's contractor for the supply and maintenance of the Fire Alarm System.
- 1.5.1.3 The Contractor must coordinate all testing, inspections, maintenance, service and repairs or retro-fits with the holder of the Proprietary Rights ( if applicable) of the Fire Alarm System, monitoring all sprinkler related equipment.
- 1.5.1.4 The cost of coordination with the holder of the Fire Alarm System contract will be at no extra cost to Canada.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 22 of 56

1.5.2 Negligence on the Part of Canada and Other Parties

1.5.2.1 The Contractor is not required, as part of his Statement of work, to make renewals or repairs necessitated by reason of the negligent operation or misuse of the equipment by Canada or other parties or by reason of any other cause beyond the Contractor's control.

1.5.2.2 The Contractor must notify the Technical Authority by phone within an hour and subsequently to follow up with a written report by fax or e-mail within 24 hours of any negligent operation or misuse of the equipment by others. The Contractor may be required to make repair or replace components necessitated by such occurrence at extra cost.

1.5.3 Documentation

1.5.3.1 It is the responsibility of the Contractor to document the tasks and activities associated with maintenance, service and repairs as identified within this Statement of Work.

1.5.3.2 The documentation as a result of the above is to be provided to the Technical Authority in accordance to the procedures identified within Section 1.3 – Submittals.

1.5.3.3 Checks, tests, maintenance and service must be documented as identified within this Statement of Work and must be demonstrated as being correct and complete to the satisfaction of the Technical Authority.

1.5.4 Health and Safety

1.5.4.1 Site Specific Health and Safety Plan: See Section 1.3 – Submittals.

1.5.4.2 It is the responsibility of the Contractor to:

- 1) Ensure the health and safety of persons on site, safety of property on site and protection of persons adjacent to site and environment to the extent that they may be affected by conduct of work;



**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 23 of 56

- 2) Comply with and enforce compliance by employees with safety requirements of the Statement of Work documents, applicable Federal, Provincial, Territorial and local statutes, regulations, ordinances, and with site-specific Health and Safety Plan;
- 3) Comply with the *Canada Labour Code Part II*, and the associated Canada Occupational Health and Safety Regulations;
- 4) Comply with the Ontario Health and Safety Act and its associated regulations
- 5) Remove from the site any person employed on the site by the Contractor that, in the opinion of the Technical Authority, is a security risk, has been conducting himself improperly or has violated the requirements of the site specific Health and Safety Plan. The Contractor must replace the removed individual with another individual with the same mandatory qualifications within twenty-four hours.

1.5.5 Work Alone Policy

- 1.5.5.1 Due to the high risk factor on Fire Alarm/Fire Protection/Life Safety Systems, no employee must work alone on the site. It is the responsibility of the Contractor to ensure that the appropriate measures are implemented for two or more employees to be on site at all times during any job function.

**1.6 Summary of Work**

1.6.1 Inclusions of the Statement of Work

1.6.1.1 Labour

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 24 of 56

- 1) The labour for all inspections, testing, cleaning, maintenance, service, and contract administration expenses must be provided by the Contractor at no extra cost to Canada.
- 2) The labour for Service calls must be provided by the Contractor as per Sub-Section 1.4.3 – Service Calls on a 7 days a week / 24 hours a day basis.

1.6.1.2 Tools, equipment and services

- 1) The Contractor must furnish all necessary Personal Protective Equipment (PPE), tools, equipment, transportation and services necessary to execute the tasks and activities required for the maintenance, service and repair of the equipment identified in Part 3 – Equipment Inventory.

1.6.1.3 Consumable Materials

- 1) The Contractor must provide all necessary consumable materials required for the maintenance and service of the equipment as identified in Part 2 - Execution. This includes but is not limited to: distilled water, de-chlorination process chemicals, pilot lights, fuses, cleaning materials and light bulbs.

1.6.2 Schedule

- 1.6.2.1 The first inspection and test must be carried out fifteen working days following the work start date as identified in this Statement of Work, with each successive test following at:
  - a) Monthly;
  - b) Quarterly;
  - c) Semi-Annually; and
  - d) Annually, as applicable, to be first quarterly.

1.6.3 Seasonal Site Schedule

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 25 of 56

1.6.3.1 The first inspection and test must be carried out as part Spring seasonal equipment start-up following the work start date as identified in this Statement of Work, with each successive test following at:

- a) Monthly;
- b) Quarterly
- c) Semi-annual
- d) Annual, first inspection

1.6.3.2 No inspections will be completed on The Seasonal Site Equipment Inventory identified in Part 3 – Equipment Inventory during the Seasonal Site equipment shut down period.

1.6.4 Hazardous Waste Management Plan

1.6.4.1 General

- 1) The Contractor must comply with the Canadian Environmental Protection Act and applicable Provincial and Territorial Codes, Standards and Requirements as per Section 1.2 - Required Codes, Standards, Regulations and Requirements, including local hazardous waste management programs.
- 2) The Contractor must conduct a hazardous waste audit to determine the hazardous waste generated during maintenance, service or repair activities over the duration of the Contract, and prepare a written hazardous waste management plan as part of the Site/Work Specific Implementation Plan under Section 1.3 - Submittals.
- 3) All maintenance personnel must be fully briefed on the hazardous waste management work plan and must be required to conform to it for all aspects of the work. The Contractor shall be responsible for the enforcement of this requirement. The Technical Authority reserves the right to require the dismissal of personnel from the site who fail to comply with the requirements of the hazardous waste management plan.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 26 of 56

1.6.4.2 Scheduling

- 1) The Contractor must coordinate the work involving hazardous waste with other activities at site to ensure timely and orderly progress of the work.

1.6.4.3 Execution of Work

- 1) The Contractor must place hazardous waste generated by the performance of the maintenance items and duties required by the Contract in the hazardous waste containers provided by Canada. The containers are to be stored, on the site in an area designated by the Technical Authority. The Contractor must do work in accordance with the hazardous waste management plan.
- 2) Hazardous waste includes but is not limited to:
  - a) Anti-freeze
  - b) Batteries
  - c) Smoke detectors
  - d) Smoke alarms
- 3) Hazardous waste materials must be handled in accordance with the appropriate Codes, Standards, Regulations and Requirements as identified within section 1.2 – Codes, Standards, Regulations and Requirements.
- 4) The Contractor must clean up work area as work progresses.
- 5) The Contractor must remove tools on completion of work, and leave work areas in clean and orderly condition.
- 6) Mechanical and electrical equipment, sub-systems and systems must be protected from damage and blockage.

1.6.4.4 Health and Safety

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 27 of 56

- 1) Unforeseen Hazard
  - a) When an unforeseen safety-related factor, hazard or condition occurs during performance of the work, the Contractor has the right to follow procedures in place for Employee's Right to Refuse Work, in accordance with Acts and regulations of the province having jurisdiction. The Contractor must immediately advise the Technical Authority verbally and in writing within twenty-four hours.
- 2) Correction of Non-Compliance by the Contractor
  - a) Immediately address Health and Safety non-compliance issues identified by authority having jurisdiction or by the Technical Authority.
  - b) Provide the Technical Authority with written report of action taken to correct non-compliance of Health and Safety issues as identified in Section 1.3 – Submittals.
  - c) The Technical Authority may stop work if non-compliance of Health and Safety regulations is not corrected.
- 3) On-site Contingency and Emergency response plan
  - a) The Contractor must comply with the standing emergency plan for the site where the work is being performed.

1.6.5 Disposal of Waste

1.6.5.1 Burying of rubbish and waste materials by the Contractor is prohibited.

1.6.5.2 Disposal of waste, volatile materials, mineral spirits, paint thinners or petroleum products into waterways, storm or sanitary sewers is prohibited as outlined in 1.2.5 – Environmental Codes, Standards, Regulations and Requirements.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 28 of 56

- 1.6.5.3 Water generated from the back-flush of the sprinkler system must be disposed in accordance with municipal, provincial and federal requirements, as per Sub-Sections 1.2.5. – Environmental Codes, Standards, Regulations and Requirements.
- 1.6.5.4 Disposal of water generated from the back-flush of the sprinkler system into waterways, storm or sanitary sewers is prohibited, unless specific approval to discharge into the sanitary sewer is provided by the municipality. Transportation of this liquid waste by a licensed hauler and disposal to an approved wastewater treatment facility may be required.
- 1.6.5.5 Fire Protection Water Dechlorination
- 1) Discharge of fire protection water, including potable water being utilized for fire protection system testing into storm sewers, must be in accordance with the following:
    - a) In the City of Ottawa, a Request to Discharge Application Form must be filled out and submitted to the Sewer Use Program of the City of Ottawa's Wastewater Services Branch at [SUP-PUE@ottawa.ca](mailto:SUP-PUE@ottawa.ca), or by fax at 613-745-9197, along with the analytical test results of a sample of the raw (without additional treatment such as de-chlorination) fire protection water from the building where the test is planned. The analytical test results will be provided to the Contractor by Canada.
    - b) The completed form and test results must be submitted at least five business days prior to the date of intended discharge of fire protection water.
  - 2) Quality Requirements
    - a) Fire protection water, including potable water being utilized for fire protection system testing, must be de-chlorinated via de-chlorination equipment, such that water released to storm sewers during the Annual tests does not exceed the following quality requirement: **0.005 milligrams per litre (mg/L) Reactive Chlorine Species (or Total Residual Chlorine).**

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 29 of 56

- 3) Measurement and De-chlorination Material
  - a) Discharged fire protection water must be tested using a colorimetric kit or meter capable of measuring Total Residual Chlorine at concentrations of 0 to 3.0 mg/L as a minimum. An acceptable Total Residual Chlorine reading for the discharge would be less than 0.005 mg/L, or 0 mg/L depending on instrument sensitivity.
  - b) The de-chlorinating agents used to de-chlorinate the fire protection water shall be free of any ingredients that are harmful or toxic to the aquatic environment.
- 4) De-chlorination Reports
  - a) The de-chlorination process must form part of the Contractor's Hazardous Waste Audit and must be included in the Site/Work Specific Implementation Plan as per Sub-Section 1.3.2.
  - b) Annual discharged fire protection water test results must be incorporated into the Annual Report as per Article 1.3.9.2.

**1.7 Work Restrictions**

1.7.1 Use of site and facilities

- 1.7.1.1 Work must be done with the least possible interference or disturbance to normal use of premises. Arrangements with Technical Authority must be made to facilitate work.
- 1.7.1.2 The Contractor must maintain security measures established by the existing facility and as approved by the Technical Authority.

1.7.2 Maintenance of existing services

- 1.7.2.1 The Contractor must provide the following in order to maintain existing building services:

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 30 of 56

- 1) Personnel, pedestrian and vehicular traffic access.
- 2) A flag person when work impedes on regular traffic flow.
- 3) Safety barricades, signage and all precautionary measures required to assure the continued use to building access and services.
- 4) Where building security is reduced by the work, temporary means of maintaining security must be provided i.e. posting a person or persons to monitor entry to the building.

1.7.3 Interruption of Building Services

- 1.7.3.1 The Contractor must notify the Technical Authority fifteen working days prior to intended interruptions of services and obtain written permission before beginning the work.

**PART 2 EXECUTION**

**2.1 General**

2.1.1 Performance

- 2.1.1.1 All work must be performed in accordance with the applicable Federal, Provincial or Territorial building, fire and electrical codes as identified in Section 1.2 – Codes, Standards, Regulations and Requirements.
- 2.1.1.2 The Contractor must execute such work in a careful and workmanlike manner.
- 2.1.1.3 Each component, sub-system, system and integrated system associated with the Fire Alarm/Fire Protection/Life Safety Systems as identified within Part 3 – Equipment Inventory, must be checked, inspected and tested as per the Section 1.2 applicable Codes, Standards, Regulations and Requirements.



**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 31 of 56

2.1.2 Scheduling and Planning

2.1.2.1 Maintenance Implementation Strategy

- 1) The Contractor must review the maintenance implementation strategy and planning carefully with the Technical Authority. The Contractor must provide the Technical Authority with a detailed maintenance implementation strategy schedule as per Section 1.3 - Submittals.

2.1.2.2 Additional Annual Requirements Seasonal Site Inventory

- 1) Spring seasonal equipment start-up
  - a) Each component, sub-system, system and integrated system associated with the Seasonal Site Inventory must be restored as per the applicable Codes, Standards, Regulations and Requirements and must be demonstrated as being correct and complete to the satisfaction of the Technical Authority.
- 2) Fall seasonal equipment shutdown
  - a) Each component, sub-system, system and integrated system associated with the Seasonal Site Inventory must be Shut down and Stored as per the applicable Codes, Standards, Regulations and Requirements and must be demonstrated as being correct and complete to the satisfaction of the Technical Authority.

2.1.2.3 Inspections, checks and tests

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 32 of 56

Items 9 to 14 listed below are not included in the Contract and will be paid in accordance with Pricing Schedule 2, As and When Requested Work in the Contract.

- 1) Daily and weekly inspections, checks and tests to be performed by others, unless they coincide with a scheduled monthly, quarterly, semi-annual or annual inspection, check or test.
- 2) The monthly inspections, checks and tests shall include the daily and weekly inspection, check or test.
- 3) The quarterly inspections, checks and tests shall include the daily, weekly and monthly inspection, check or test.
- 4) The semi-annual inspections, checks and tests shall include the daily, weekly, monthly and quarterly inspection, check or test.
- 5) The annual inspections, checks and tests shall include the daily, weekly, monthly, quarterly and semi-annual inspection, check or test.
- 6) The two year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 7) The three year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 8) The five year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 9) The Six year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 10) The ten year inspection, test and maintenance shall be performed in conjunction with the yearly test.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 33 of 56

- 11) The twelve year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 12) The fifteen year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 13) The twenty year inspection, test and maintenance shall be performed in conjunction with the yearly test.
- 14) The fifty year inspection, test and maintenance shall be performed in conjunction with the yearly test.

2.1.3 Inspection Closeout Tasks

2.1.3.1 The Contractor must restore the systems as identified in Part 3 – Equipment Inventory to the operational state as recorded prior to the commencement of the scheduled checks, inspections and tests included in this Statement of Work.

2.1.3.2 Normal situations

- 1) At the conclusion of a test, the following shall be ensured:
  - a) Primary power indication lamp is on;
  - b) System trouble signal and indicator is off;
  - c) Control panel is locked;
  - d) AC power switch enclosure (where applicable) is locked;
  - e) All components of the system, including ancillary and auxiliary devices are reset or returned to the normal standby mode;
  - f) The appropriate Fire Department and remote monitoring station are notified that the work undertaken as part of the Contract is completed.

2.1.3.3 Abnormal situations

- 1) The Contractor shall restore the systems as identified in Part 3 – Equipment Inventory to the operational state as recorded prior to the

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 34 of 56

commencement of the scheduled checks, inspections and tests included in this Contract.

2.1.4 Personnel on site

2.1.4.1 Electrical Work

- 1) Electrical work must be performed by qualified electrician(s), as per Section 1.1 – Definitions.

2.1.4.2 Monthly required personnel

- 1) The following is the minimum number of qualified personnel as identified in Section 1.1 - Definitions, required on site during inspections, checks, and testing:
  - a) One Canadian Fire Alarm Association (CFAA) or one Electrical Contractor's Association of Ontario Certified Fire Alarm Electrician (CFAE) must be present for Fire Alarm related work.
  - b) One certified Sprinkler and Fire Protection Installer must be present for sprinklers and standpipe related work.
  - c) Other qualified persons or services relevant to the monthly testing and work identified within this Statement of Work as outlined in Section 1.1. - Definitions.

2.1.4.3 Quarterly inspection required personnel

- 1) Personnel required under the monthly inspections are required at the quarterly inspection.

2.1.4.4 Semi-Annual inspection required personnel

- 1) Personnel required under the monthly inspections are required at the semi-annual inspection.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 35 of 56

- 2) One qualified Kitchen Suppression Systems Technician must be present for Kitchen Suppression Systems inspection, checks and tests and other related work.
- 3) Other qualified persons or services relevant to the semi-annual testing and work identified within this Statement of Work as outlined in Section 1.1. - Definitions.

2.1.4.5 Annual inspection required personnel

- 1) Personnel required under the monthly inspections are required at the annual inspection.
- 2) In addition to the personnel required under the monthly inspections, the following required personnel must be present:
  - a) One qualified Backflow Technician must be present for backflow inspections, checks and tests and other related work.
  - b) One qualified Kitchen Suppression Systems Technician must be present for Kitchen Suppression Systems inspection, checks and tests and other related work.
  - c) One qualified Portable Fire Extinguisher Technician must be present for portable fire extinguisher inspection, checks and tests and other related work.
  - d) Other qualified persons or services relevant to the annual testing and work identified within this Statement of Work as outlined in Section 1.1. - Definitions.

2.1.4.6 Two year, Three year, Five year, Six year, Ten year, Twelve year, Fifteen year, Twenty year , and Fifty year inspection personnel.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 36 of 56

- 1) Personnel required under the annual inspections are required at the Two year, Three year, Five year, Six year, Ten year, Twenty year, and Fifty year inspections.

2.1.4.7 Additional requirements

- 1) The checks, inspections, tests, maintenance and service must include but must not be limited to the additional requirements listed in the following sections and must involve all of the verification and test procedures recommended by the Manufacturer.

**2.2 Fire Alarm Systems – with or without Emergency Voice Communication Capabilities**

2.2.1 Performance

- 2.2.1.1 Each component, sub-system, system and integrated system associated with the Fire Alarm, Fire Protection and Life Safety Systems as identified within Part 2 – Execution, must be checked, inspected and tested as per the applicable Codes, Standards, Regulations and Requirements in Section 1.2 - Codes, Standards, Regulations and Requirements.

2.2.2 Additional requirements

2.2.2.1 Monthly requirements

- 1) Battery and battery charging system
  - a) The operating parameters of the battery test of the system must include:
    - i) Rated voltage of battery must be measured before start of the test, during, and also at the conclusion of the test. Indicated readings must indicate full nameplate voltage prior to the test and the indicated voltage at conclusion of the test must not fall below 85% of rated battery voltage, record the results on the report;

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 37 of 56

- ii) At no time during this test must the system be left unattended, if the system is not monitored.

2.2.2.2 Annual requirements

- 1) Control Unit or Transponder and Display and Control Center (DCC)
  - a) The Control Unit(s) or Transponder(s) and DCC(s) must be inspected, tested, and verified to ensure that all audio amplifiers and associated supervisory circuits have their output wattages measured and recorded to ensure they are operating within the manufacturer's specifications for that system.
- 2) Circuits Using Fire Alarm System Power
  - a) The tests must be conducted to determine that the field devices at the electrically furthest point from the power source in every circuit receives rated operating power as per rated electrical characteristics in accordance with the manufacturer's specification.

**2.3 Water Base Fire Protection System**

2.3.1 Performance

- 2.3.1.1 Each component, sub-system, system and integrated system associated with the Fire Alarm, Fire Protection and Life Safety Systems as identified within Part 2 – Execution, must be checked, inspected and tested as per the applicable Codes, Standards, Regulations and Requirements in Section 1.2.

2.3.2 Additional requirements

2.3.2.1 Annual requirements

- 1) Five year inspections will take place in first year of the contract at no extra cost to Canada.

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 38 of 56

2) Dry and Pre-Action Sprinkler Systems

- a) Full trip testing of the Dry and Pre-Action Sprinkler Systems must be performed annually.

2.3.2.2 Fire Protection System water discharge

- 1) Dechlorination of Fire Protection Water
- 2) Potable water being utilized for fire protection system testing must be discharged via dechlorination equipment prior to discharge to storm sewers, in accordance with Article 1.6.4 - Disposal of Waste

**2.4 Kitchen Wet Chemical Suppressions System**

2.4.1 Performance

- 2.4.1.1 Each component, sub-system, system and integrated system associated with the Fire Alarm, Fire Protection and Life Safety Systems as identified within Part 2 – Execution, must be checked, inspected and tested as per the applicable Codes, Standards, Regulations and Requirements in Section 1.2.

**2.5 Battery Powered Emergency Lighting**

2.5.1 Performance

- 2.5.1.1 Each component, sub-system, system and integrated system associated with the Fire Alarm, Fire Protection and Life Safety Systems as identified within Part 2 – Execution, must be checked, inspected and tested as per the applicable Codes, Standards, Regulations and Requirements in Section 1.2.

2.5.2 Additional requirements

- 2.5.2.1 Annual requirement



**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 39 of 56

- 1) Emergency lighting units and exit lights are to be disconnected from normal AC-power and tested for a period of time as defined in the relevant Codes, Standards, Regulations and Requirements identified in Section 1.2.
- 2) The Contractor must ensure the following:
  - a) Verify battery voltage prior to disconnection of 120 volt AC.
  - b) Verify battery voltage when 120 volt AC is disconnected and ensure changeover to VDC (as applicable).
  - c) Verify proper changeover from normal to battery power and ensure that all heads are operating and aligned as to provide adequate light in intended area.
  - d) Verify battery terminal voltage at the end of the test before restoring normal power. Record the results in the report.
  - e) Verify that 120 volts AC is restored to unit and changeover to VDC has occurred.
  - f) If it is discovered that the battery voltage drops to below 85% of its rated capacity, the Contractor is to notify the Technical Authority immediately in writing.

## **2.6 PORTABLE FIRE EXTINGUISHERS**

### **2.6.1 Performance**

- 2.6.1.1 Each component, sub-system, system and integrated system associated with the Fire Alarm, Fire Protection and Life Safety Systems as identified within Part 2 – Execution, must be checked, inspected and tested as per the applicable Codes, Standards, Regulations and Requirements in Section 1.2.

### **2.6.2 Additional requirements**

- 2.6.2.1 Annual requirement

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 40 of 56

- 1) The Five , Six , and Twelve year inspection, test and maintenance will be at extra cost to Canada and will be paid in accordance with Pricing Schedule 2, As and When Requested Work in the Contract.

**PART 3 EQUIPMENT INVENTORY**

**3.1 General**

3.1.1 Inventory

- 3.1.1.1 The following is a list of the minimum number of components included in this Statement of Work. Please note inventory is deemed as accurate as possible.

**3.2 Main Department of Defence Complex**

3.2.1 Gas Hut

Battery Powered Emergency Light	1
---------------------------------	---

3.2.2 Building Air 1– Seasonal Site

Battery Powered Emergency Light	1
Manufacturer	Stanpro
Model No	SLEXSSP630112N09T
Heads	6
Voltage	12V

3.2.3 Building No. 11 Shirley

Battery Powered Emergency Light	1
---------------------------------	---

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 41 of 56

Portable Fire Extinguishers	3
-----------------------------	---

3.2.4 Building No. 15 Shirley – Lift Station

3.2.4.1 Emergency Lights

Battery Powered Emergency Light	2
Manufacturer	Lumicell
Model No.	RG125144
Batteries	2 X 6V
Heads	4
Portable Fire Extinguishers	2

3.2.5 Building No. 21 Shirley

Portable Fire Extinguishers	3
-----------------------------	---

3.2.6 Building No. 23 Shirley

Portable Fire Extinguishers	3
-----------------------------	---

3.2.6.1 Battery Powered Emergency Lights

Battery Powered Emergency Lights	12
Manufacturer	Lumacell
Model No	RG12S1-44
Serial No	F9
Voltage	120V
Amperage	.31

3.2.7 Building No. 25 Shirley

Portable Fire Extinguishers	2
-----------------------------	---

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 42 of 56

3.2.8 Building No. 29 Shirley

Portable Fire Extinguishers	1
-----------------------------	---

3.2.9 Building No. 31 Shirley – PWC Office

3.2.9.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms with Multi Head Loops	6
Portable Fire Extinguishers	2

3.2.9.2 Battery Powered Emergency Lights

1) Emergency Light No. 1

Location	Main
Manufacturer	Emergi-Lite
Voltage	110V

2) Emergency Light No. 2

Location	Entrance
Model No	RG36-LMC

3) Emergency Light No. 3

Location	Back Exit
Manufacturer	Unit Equipment
Model No	RG36-LMC
Voltage	120 V
Amperage	.3 A

3.2.10 Building No. 33 Shirley

Fire Alarm Control Panel	Edwards
Model	EST-1- 2 Z1
Manual Pull Stations	5

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 43 of 56

Heat Detectors	6
Bells	3

3.2.11 Building No. 33 Shirley

Portable Fire Extinguishers	3
Battery Powered Emergency Lights with Multi Head Loop	7

3.2.12 Building No. 35 Shirley Mess Hall

Portable Fire Extinguishers	15
Battery Powered Emergency Lights	9

3.2.13 Building No. 45 Shirley DCRA House

Portable Fire Extinguishers	4
Battery Powered Emergency Light	1

3.2.14 Building No. 1 Lee Enfield Range Control

Portable Fire Extinguishers	18
Battery Powered Emergency Lights	8

3.2.15 Building No. 3 Lee Enfield Machine Shop

Portable Fire Extinguishers	6
Battery Powered Emergency Lights	3

3.2.16 Building No. 7 Besley Gym

Fire Extinguishers	3
Battery Powered Emergency Lights	1

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 44 of 56

3.2.17 Building No. 9 Besley

Portable Fire Extinguishers	5
Battery Powered Emergency Light	1

3.2.18 Building No. 1 Webley

Stand Alone Smoke Alarms

Stand Alone Smoke Alarms	8
Portable Fire Extinguishers	3

3.2.19 Building No. 5 Webley

3.2.19.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms	8
Battery Powered Emergency Lights	2
Manufacturer	Edwards 625
Model No	120COM 72-0
Heads	4
Voltage	12V
Portable Fire Extinguishers	5

3.2.20 Building No. 7 Webley

3.2.20.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms	7
Battery Powered Emergency Lights	1
Manufacturer	Emergi-Lite
Portable Fire Extinguishers	2

3.2.21 Building No. 8 Webley Barracks

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 45 of 56

3.2.21.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms – Multi Head loops	25
Portable Fire Extinguishers	3

3.2.21.2 Battery Powered Emergency Lights

Battery Powered Emergency Lights	1
Manufacturer	Lumacell
Model No	RG72
Phase	60Hz
Amperage	.05A

3.2.22 Building No. 9 Webley Barracks

3.2.22.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms – Multi Head loops	25
Portable Fire Extinguishers	3

3.2.22.2 Battery Powered Emergency Lights

Battery Powered Emergency Lights	1
Manufacturer	Lumacell
Model No	RG12LD150
Serial No	L6
Voltage	120V
Amperage	36

3.2.23 Building No. 10 Webley Barracks

3.2.23.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms – Multi Head loops	25
---	----

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 46 of 56

Portable Fire Extinguishers	3
-----------------------------	---

3.2.23.2 Battery Powered Emergency Lights

Battery Powered Emergency Lights	1
Manufacturer	Lumicell
Model No	RG36
Serial No	B7
Secondary Voltage	Yes
Amperage	.05

3.2.24 Building No. 11 Webley Barracks

3.2.24.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms – Multi Head loops	25
Portable Fire Extinguishers	3
Battery Powered Emergency Lights	1

3.2.24.2 Battery Powered Emergency Lights

Battery Powered Emergency Lights	1
Manufacturer	Emergi-Lite
Voltage	120V

3.2.25 Building No. 4 Snider – New Mess Hall –Kitchen System

3.2.25.1 Kitchen Suppression System

Kitchen Fire Suppression Wet Chemical Range Guard RG-4GS	1
Kitchen Fire Suppression Wet Chemical Range Guard RG-6GS	2

3.2.25.2 Water Base Fire Protection System



**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 47 of 56

Backflow Preventers	1
Jockey Pump	1
Sprinkler Flow Switches	2
Sprinkler Supervisory Devices	7
Sprinkler Pressure Switches	2
Glycol Systems	3

Portable Fire Extinguishers	22
Emergency Light Battery Units	10

3.2.26 Building No. 2 Bren Gun Barracks

Fire Alarm Control Panel	Edwards
Model	Fireshield EST-1-2Z1
Smoke Detectors	2
Manual Pull Stations	2
Bells	2

3.2.27 Building No. 2 Bren Gun Barracks

Portable Fire Extinguishers	1
-----------------------------	---

3.2.28 Building No. 4 Bren Gun Barracks

Fire Alarm Control Panel	Edwards
Model	Fireshield EST-1-2Z1
Smoke Detectors	2
Manual Pull Stations	2
Bells	2

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 48 of 56

3.2.29 Building No. 4 Bren Gun Barracks

Portable Fire Extinguishers	2
-----------------------------	---

3.2.30 Building No. 6 Bren Gun Barracks

Fire Alarm Control Panel	Edwards
Model	Firesield EST-1-2Z1
Smoke Detectors	2
Manual Pull Stations	2
Bells	2

3.2.31 Building No. 6 Bren Gun Barracks

Portable Fire Extinguishers	2
-----------------------------	---

3.2.32 Building Alpha Troop Shelter Shirley Blvd

Portable Fire Extinguishers	3
-----------------------------	---

3.2.33 Building Bravo Troop Shelter Shirley Blvd

Portable Fire Extinguishers	3
-----------------------------	---

3.2.34 Building Charlie Troop Shelter Shirley Blvd

Portable Fire Extinguishers	3
-----------------------------	---

3.2.35 Building Delta Troop Shelter Shirley Blvd

Portable Fire Extinguishers	3
Battery Powered Emergency Light units	2

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 49 of 56

3.2.36 Building 4 Lewis Gun

Portable Fire Extinguishers	2
Battery Powered Emergency Light units	2

3.2.37 Building 6 Lewis Gun

Portable Fire Extinguishers	2
Battery Powered Emergency Light units	2

3.2.38 Building 15/17 Shirley - Ammo Compound

Portable Fire Extinguishers	3
Battery Powered Emergency Light units	1
Remote heads	8

**3.3 Cadet Area Complex**

3.3.1 Building No. 18 Brouillette – Cadet Camp Seasonal Site

Battery Powered Emergency Lights	1
Portable Fire Extinguishers	3

3.3.2 Building No. 21 Brouillette – Cadet Camp- Seasonal Site

Portable Fire Extinguishers	2
-----------------------------	---

3.3.2.1 Battery Powered Emergency Lights

Emergency Lights	1
Manufacturer	Lumacell
Model No	RG126360/BD/LD/TP
Voltage	120V
Amperage	.36

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 50 of 56

3.3.3 New Cadet Air Pistol Range – Dome

Battery Powered Emergency Lights	6
Portable Fire Extinguishers	9

3.3.4 Tents No. G 1 and G 2 – Brouillette and Vickers Gun -seasonal

Fire Alarm Control Panel	Edwards
Model	Fireshield
Manual Pull Stations	4
Horns	4
Smoke Detectors	4

3.3.5 Building No. 5 Brouillette – Seasonal Site

Battery Powered Emergency Lights	1
Portable Fire Extinguishers	3

3.3.6 Building No. 9 Brouillette – Ablution Module 1 – Seasonal Site

Battery Powered Emergency Lights	6
Portable Fire Extinguishers	3

3.3.7 Building No. 10 Brouillette – Seasonal Site

Battery Powered Emergency Lights	1
Portable Fire Extinguishers	3

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 51 of 56

Building No. 10 Brouillette

Emergency Lights	1
Manufacturer	Emergi-Lite
Voltage	120V

3.3.8 Building No. 11 Brouillette – Seasonal Site

Portable Fire Extinguisher	1
Battery Powered Emergency Lights	1

Building No. 11 Brouillette

Emergency Lights	1
Manufacturer	Lumacell
Model No	RG12LD200
Serial No	10122
Voltage	115V
Secondary Voltage	Yes
Amperage	.54

3.3.9 Building No. 15 Brouillette – Seasonal Site

Battery Powered Emergency Lights	6
Portable Fire Extinguishers	3

3.3.10 Building No. 17 Brouillette – Seasonal Site

Battery Powered Emergency Lights	1
Portable Fire Extinguishers	3

Building No. 17 Brouillette

Emergency Lights	1
------------------	---

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 52 of 56

Manufacturer	Edwards
Cat. No.	24EDW720C2-9WT
Heads	16
Voltage	24V

3.3.11 Building No. 1 Lewis Gun

3.3.11.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms	7
Battery Powered Emergency Lights	1
Portable Fire Extinguishers	4

3.3.12 Building No. 1 Vickers Gun – Seasonal Site

3.3.12.1 Stand Alone Smoke Alarms

Stand Alone Smoke Alarms	7
Battery Powered Emergency Lights	1
Manufacturer	Beomelli Canada
Model No	NV1272 2SR9W
Heads	20
Voltage	20V
Portable Fire Extinguishers	1

3.3.13 Building No. 7 Vickers Gun

3.3.13.1 Water Based Fire Protection

Sprinkler Supervisory Devices	2
Sprinkler Flow Switch	1
Backflow preventer	1
Sprinkler Piping and Assemblies	1
Portable Fire Extinguishers	7

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 53 of 56

3.3.14 Cadet Permanent Tent Complex- Seasonal site

3.3.14.1 Stand Alone Smoke Alarms

Stand Alone Battery Powered Smoke Alarms	108
Battery Powered Emergency Lights	3 (2 out of 3 have lights)
Manufacturer	Stanpro
Model No	SLA08/0382
Heads	4
Voltage	6V
Portable Fire Extinguishers	140

3.3.15 Building Cadet Mess – Seasonal Site

Battery Powered Emergency Lights	5
----------------------------------	---

3.3.16 Building Cadet Bar – Seasonal Site

Battery Powered Emergency Lights	2
----------------------------------	---

3.3.17 Storage Tents – Seasonal Site

3.3.17.1 Storage Tent No. 1

Fire Alarm control Panel	Edwards
Model	Fireshield
Manual Pull Stations	2
Smoke Detectors	2
Horns	2

3.3.17.1 Storage Tent No. 1

Portable Fire Extinguishers	2
-----------------------------	---

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 54 of 56

3.3.17.2 Storage Tent No. 2

Fire Alarm Control Panel	Mircom
Model	Mircom 101A
Manual Pull Stations	2
Smoke Detectors	2
Horns	2

3.3.17.1 Storage Tent No. 2

Battery Powered Emergency Lights	3
----------------------------------	---

3.3.17.2 Storage Tent No. 3

Fire Alarm Control Panel	Mircom
Model	Mircom 101A
Manual Pull Stations	2
Smoke Detectors	2
Horns	2

3.3.17.3 Storage Tent No. 3

Battery Powered Emergency Lights	2
----------------------------------	---

**3.4 RCMP Complex**

3.4.1 Building No. 1 Shirley – CQB

Battery Powered Emergency Lights – Multi head	4
Portable Fire Extinguishers	10

3.4.1.1 Base Building Water Based Fire Protection

Jockey Pump Loss of Power	1
---------------------------	---



**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 55 of 56

Main Sprinkler Valve	1
Wet Sprinkler Riser Valve	1
Wet Sprinkler Riser Flow Switch	1

3.4.1.2 Pre-action Sprinkler System

Flow Switch	1
Low Pressure Device	1
Main Valve Supervisory Switch	1
Supervised Test Alarm Valve	1

3.4.2 Building No. 3 Shirley – Indoor Range

Fire Alarm Control Panel	Siemens
Model	TXL-1008K
Manual Pull Stations	7
Heat Detectors	2
Explosion Proof Heat Detector	1
Horns	15
Strobes	10
Input Circuits Sprinkler	6

3.4.3 Building No. 3 Shirley – Water Based Fire Protection

Sprinkler Flow Switches	2
Sprinkler Pressure Switch	1
Sprinkler Tamper Switches	3
Sprinkler Piping and Assemblies	1
Portable Fire Extinguishers	9
Battery Powered Emergency Lights	5

3.4.4 Building No. 5 Shirley – New Administration Building - NTTC

3.4.4.1 Water Based Fire Protection

Sprinkler Flow Switch	1
-----------------------	---

**DND Connaught Rifle Ranges  
Shirley's Bay Complex  
Carling Avenue  
Ottawa, Ontario, K1A 0S5**

13/05/2014

Page 56 of 56

Sprinkler Low Pressure Switch	1
Sprinkler Tamper Switches	3
Backflow Preventer	1
Sprinkler Piping and Assemblies	1
Fire Extinguishers	12

3.4.4.2 Battery Powered Emergency Lights

Battery Powered Emergency Lights	1
Manufacturer	Aimlite
Model No	EBST-24720
Serial No	209169
Voltage	120V
Phase	1