

# Annex A - Statement of Work

## Facility Management for the Canadian High Arctic Research Station (CHARS)

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2017-04-25



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## 1. Project Description

### 1.1. Project Information

**Title:** Facility Management of the Canadian High Arctic Research Station (CHARS)

**Location:** Cambridge Bay, NU, Canada

**Project Number:** R.086745

**Duration:** Until March 31, 2019, with possibility of 3 options for 6 additional months each.

### 1.2. Background

Construction of the Canadian High Arctic Research Station (CHARS) campus in Cambridge Bay, NU is nearing completion and will be the home of a new organization, Polar Knowledge Canada (POLAR). Canada has a requirement for a Service Provider to provide Facility Management and other services for the CHARS Campus to provide a bridge between the end of construction and a long-term, yet-to-be-defined operational model.

The CHARS Campus will provide POLAR with a headquarters for their Departmental Corporation, an office area, various science laboratories for both POLAR and visiting scientists from around the world, field support storage and service locations, and a multipurpose public space for community members from the Hamlet of Cambridge Bay.

The Service Provider is required to plan, operate, and maintain the campus using their own forces and sub-contracts so that POLAR can focus on its mandate to deliver cutting-edge science and technology research in Canada's north, while ensuring the campus is maintained to an appropriate standard, provides a healthy and safe working environment, and is in line with Treasury Board Policies. The Service Provider will deliver a range of services as outlined in this document, while being flexible and adaptable as POLAR grows in staffing and activities and moves towards full operating capacity several years in the future. Typically the campus will see an increase in population and use over the summer field season with visiting scientists making use of the triplexes, while POLAR permanent staff will be active on the site year-round. The extent of use of the public spaces for Hamlet events is not yet known.

### 1.3. Project Authorities and Users

1. The **Service Provider** is the successful proponent/contractor responsible for delivering the work as defined in this document.
2. The **Departmental Representative** is the main point of contact for the Service Provider and may delegate authorities to other individuals as required. All work must be done to the satisfaction of the Departmental Representative.

3. The **Contracting Authority** is the person designated by that title in the Contract, or by notice to the Contractor, to act as Canada's representative to manage the Contract.
4. The **Owner** is Indigenous and Northern Affairs Canada (INAC). INAC is responsible for delivering the CHARS infrastructure on behalf of the Government of Canada.
5. The **Tenant** of the CHARS campus is the departmental corporation Polar Knowledge Canada (POLAR), which has the mandate to advance Canada's knowledge of the Arctic. It is anticipated that POLAR will be the eventual owner of CHARS. More information can be found at <https://www.canada.ca/en/polar-knowledge.html>.
6. Other **Users** of the CHARS campus include visiting scientists who have partnered with POLAR, such as academics, other government researchers, and students, and the local community.
7. The **National Service Call Center** (NSCC) is a government entity that provides tenants with a single point-of-contact to report building deficiencies. The NSCC refers identified tenant issues to the entity responsible for operation and maintenance services.
8. The **Construction Manager** is a private-sector general contractor responsible for construction of the CHARS campus in Cambridge Bay, including commissioning, building operator training, and rectification of identified warranty issues.

## 1.4. Existing Conditions

The CHARS campus is being constructed under a Construction Management service delivery model with multiple construction tender packages.

The CHARS campus is anticipated to have a maximum summer population of approximately 50 and an off-season population of approximately 30 at its future steady state. The population will be composed of POLAR researchers and support staff, and associated partner researchers using the campus facilities (e.g. academics, other government researchers). POLAR is currently staffing and ramping up their operations, so the user population is expected to start small and increase throughout the life of this contract. For year one of the contract POLAR anticipates approximately 20 staff in Cambridge Bay with increases in calendar year 2018 expected.

The CHARS campus is composed of four main buildings, three of which are currently occupied and one is currently under construction. Each building type will have distinct Operations & Maintenance requirements. Included are:

1. **Two triplexes:** two-storey buildings with three self-contained living units with four bedrooms, two bathrooms and kitchen/dining/eating area each for a total of six self-contained living units. Each triplex has an approximate gross floor area of 820 m<sup>2</sup>, with a typical maximum occupancy per triplex of 22 people (10 bunk beds and 2 queen-sized beds). These units have been available for occupancy since November 2015. Occupancy is controlled by POLAR.
2. **A Field and Maintenance Building** (FMB) with occupancy in April 2017. The FMB has an approximate gross floor area of 1,655 m<sup>2</sup>, and includes:
  - Campus plant (boiler room, emergency generator, main electrical room);

- Small engine maintenance garage;
  - Conditioned warehousing storage;
  - Unconditioned storage;
  - Marshalling space for field work;
  - Woodshop; and,
  - Maintenance and Logistics office space.
3. **A Main Research Building (MRB)** with anticipated occupancy August 2017. The MRB has an approximate gross floor area of 4,855 m<sup>2</sup>, and includes:
- Public meeting spaces;
  - General and specialized research laboratories;
  - Research support spaces such as glass wash and science store;
  - Offices;
  - Meeting and interview rooms;
  - Modest media studio; and,
  - Limited commercial revenue generating operations - a cafeteria and business incubation space (operator(s)/tenant(s) currently not identified).
4. The campus has fenced outdoor storage, storage sheds for the triplexes and bicycle storage, sea containers for additional storage, electrified parking and vehicular access facilities, and various signage.
5. Spaces within the CHARS campus dedicated for use by the Service Provider is limited to:
- 1 workspace in the Field Maintenance building, including operator workstation, and one closed office in the Field Maintenance Building once POLAR staff can move into the MRB.
  - 1 workspace at the security area of the Main Research Building, including operator workstation.
  - Sea container laydown area on the site.
  - Various Janitorial Closets
  - Further workspace locations to be negotiated upon contract award and Service Provider and POLAR operations are better identified.
6. In addition to the dedicated space, the service provider will also be able to share space such as:
- Kitchenettes and staff break rooms.
  - Bulk storage areas.
  - Other common areas.

## 1.5. Considerations, Constraints, Challenges and Opportunities

The Facility Management services start when the campus is substantially complete on (or around) August 22, 2017. As the construction of the MRB is currently not complete, the Service Provider will need to assess maintenance requirements of the MRB based upon construction documentation with final Operations and Maintenance Manuals and As-built information being provided after contract award. Prior to substantial completion (summer 2017), it is anticipated that the service provider's building maintenance staff will participate in training on the MRB and its equipment as part of the commission phase as well as mobilize tools and equipment to site, primarily on sealift 2017.

While CHARS is a large and complex facility for Nunavut, it is modest in comparison to many research facilities in southern Canada. However, as Cambridge Bay is a remote hamlet located in Nunavut, there are numerous considerations for facilities maintenance at CHARS not typical of southern Canada, including but not limited to:

1. Limited emergency medical services available within the community, with serious injuries requiring medevac to Yellowknife NT or Edmonton AB.
2. No roads leading to other communities;
3. All transportation to and from the community is by air or barge. Daily jet service for passengers and cargo is from Yellowknife, NT;
4. It is not uncommon for the daily jet service to be delayed one or several days due to inclement weather or mechanical problems;
5. Sealift runs between July and September, typically from Montreal, PQ or Hay River, NT;
6. Energy is 100% supplied by diesel fuel (heating oil and diesel-electric generators), a year's supply of which is stored in above-ground storage tanks in the community;
7. Limited accommodations;
8. Higher cost-of-living (e.g. food) than in southern Canada;
9. Harsh and cold climate;
10. Blowing snow and blizzard conditions requiring snow removal to ensure emergency response and health and safety of the campus, though the design of CHARS included modeling of the building to minimize drifting;
11. Periods of 24-sunlight and 24-darkness;
12. Local population is approximately 1600;
13. Limited heavy equipment is available in the community;
14. Limited construction material is available within the community;
15. Limited specialized certification for trades within the local community;
16. Limited on-site conditioned storage;
17. Water delivery to CHARS is by community-managed waterline;
18. Trucked fuel delivery, sewage removal, and garbage pick-up (which does not support dumpsters); and,
19. The scope for this service contract is within the Nunavut Settlement Area as defined by the Nunavut Agreement (Nunavut Land Claims Agreement, NLCA).
20. Utility contracts will be in place for oversight by the Service Provider.

21. Vehicles typically arrive via sealift. Given the timing of this contract, CANADA will provide a vehicle for the service provider's use upon proof of adequate liability insurance.
22. Existing equipment and material that CANADA has already procured to support ongoing operations and maintenance will be provided to the service provider as Government Furnished Equipment and Government Furnished Materials.

Notwithstanding the above, the community has existing skilled trade capacity and construction/contracting companies that could be leveraged to support facility management of CHARS.

A robust building management system (BMS) has been incorporated in the design of CHARS. This system monitors energy flows and equipment performance and communicates using BACnet.

Should the BMS need to be accessed remotely, for example from the Service Provider's headquarters or for other vendors to remotely troubleshoot equipment, provision of an internet connection is the responsibility of the Service Provider.

The CHARS Campus has a number of systems that require adequate break in to ensure they will operate properly for their expected lifespan. All activities are to be tracked using Computerized Maintenance Management Software (CMMS) for real time viewing so that the Departmental Representative can monitor the service provider's efforts.

## **1.6. Working Hours**

Typical working hours for the MRB and FMB will be from 8:00 AM – 6:00 PM. However, as a research facility hosting short-term users, it is anticipated that after-hours use (early morning, evening, and weekend) will be a regular occurrence. This will include researchers working in laboratories and workshops, events hosted in the public spaces, and office workers. Workers and researchers working in operations zones (i.e., non-public areas) will be security-cleared as per standard Government of Canada clearance procedures. Currently it is assumed that there will be an evening public event once per week – extending hours to 8:00 PM. Typically these will be modest, consisting of approximately 50-100 people or fewer in the public space of the MRB only.

## **1.7. Existing Documentation**

The following documentation will be provided to proponents to support preparation of their bid. It will be used by the Service Provider in the execution of their work.

1. CHARS Green Clean Guideline.
2. CHARS Campus Construction Documents (engineering plans and specifications for all buildings, as-built, and record drawings for completed buildings).



3. CHARS Campus shop drawings for MRB
4. Operations and Maintenance Manual – Triplexes
5. Operations and Maintenance Manual – Field and Maintenance Building
6. Draft Operations and Maintenance Manual – Main Research Building
7. PWGSC Facility Maintenance Guidelines, 1997
8. Capital Assets Inventory list for completed buildings.
9. Government Furnished Material (GFM) and Government Furnished Equipment (GFE) list
10. Excel sheet defining all BIM components with asset information to be used for data synchronization and act as a primary data base.

The following documentation will be available upon contract award. It will be used by the Service Provider in the execution of their work.

1. As-built documentation for Main Research Building once Substantially Complete; record drawings and specs when available.
2. Navisworks Freedom model for visualization use. The model will have basic set up in regards to saved viewpoints and zones break down unless otherwise negotiated with Client.
3. BIM Facility Management model in \*.IFC format that is compatible with Agility or agreed on Computerized Maintenance Management System (CMMS) platform.
4. As-built Building Information Model (BIM) for Triplexes and FMB.
5. Standard Operating Procedures (SOP's) for O&M of the Triplexes and FMB.
6. Current CMMS information.

## **1.8. Legislation, Regulations, Codes, Standards, and Guidelines**

Adhere to the most current edition of all legislation, regulations, codes, standards, guidelines and local bylaws that arise out of direct and indirect references in documents that apply to occupied Federal buildings, including but not limited to:

1. Canada Labour Code;
2. Canada Occupational Health and Safety Regulations (COHSR);
3. Environment Canada Regulations;
4. Health Canada Standards and Guidelines;
5. Health Canada Guidelines for Indoor Air Quality and Drinking Water Quality;
6. National Joint Council (NJC) OHS Directives;
7. National Fire Code of Canada;
8. National Building Code of Canada;
9. National Plumbing Code of Canada;
10. Canada Electrical Code;
11. American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) standards;

12. Public Works and Government Services Canada, Real Property Services: Facility Maintenance Guidelines, dated August 1997;
13. CSA B51-14 Boiler Pressure Vessel and Pressure Piping Code;
14. EPC-LS for Fuel Tank;
15. Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations;
16. CSA 282-15 Guidelines for Generator Maintenance;
17. CSA B44.2-14 Maintenance requirements and intervals for elevators;
18. CSA Guideline Z204-94 Guideline for Managing Air Quality in Office Buildings, dated June 1994;
19. CSA Guideline S832 Seismic Risk Reduction of Operational and Functional Components (OFCs) of Buildings;
20. CSA Z204 Guideline for Managing Indoor Air Quality in Office Buildings;
21. CAN/CGSB 133.1– Security Officers and Security Officer Supervisors;
22. Transportation of Dangerous Goods Act;
23. Species at Risk Act;
24. Canada Water Act;
25. The Nunavut Agreement (Nunavut Land Claim Agreement);
26. Canadian Environmental Protection Act;
27. Manufacturers’ guidelines/recommendations;
28. Applicable industry standards such as Canadian Standards Association (CSA), National Fire Protection Association (NFPA) and Underwriters’ Laboratories of Canada (ULC) as examples of Codes and Standards to apply;
29. Worker Safety and Compensation Commission;
30. Applicable standards for installed equipment;
31. Polar Knowledge Canada health and safety guidelines and procedures;
32. Access to Information Act;
33. Privacy Act;
34. Federal Real Property Act;
35. Financial Administration Act;
36. Federal Halocarbon Regulations; and
37. Ozone Depleting Substances Regulations.

## **2. General Facility Management Requirements**

Ensure all of the Owner’s legal, regulatory and due diligence requirements are met. Employ industry best practices to operate and manage the campus, ensuring recommended maintenance is completed in a timely fashion, health and safety is not compromised, and all hazards are clearly identified to all users.

Coordinate day-to-day operational activities with the Tenant and Users, ensuring service plans account for POLAR’s extended hours of operation during certain times of the year or for pre-arranged 3<sup>rd</sup> party use of the facilities.

## 2.1. Health and Safety

1. The Government of Canada is committed to the principles outlined in the Territorial Labour Standards Act and Canada Labour Code Part II. Take all necessary steps and actions required to ensure that the Codes are met and that all persons are ensured a healthy and safe environment.
2. Employ and supervise an adequate number of workers to meet the terms and conditions of the Contract with regards to applicable Labour Code Standards.
3. Ensure sufficient staff on site during regular business hours possess valid standard first aid and CPR certification. Ensure that all staff are physically and mentally fit for work in an arctic environment, and are supplied with the necessary protective clothing and equipment appropriate to the type of work they are to perform, including but not limited to parkas, hard hats, and safety boots.
4. Submit a site-specific *Health and Safety Plan* to the Departmental Representative for review and acceptance that outlines the approach to ensuring a healthy and safe workplace for own forces, subcontractors, regulators and inspectors, tenants and users, and visiting members of the public.

## 2.2. Project Communications

1. Deliverables are detailed throughout this report. A consolidated list is provided in **Appendix B: List of Deliverables**.
2. All deliverables, reports, memoranda, and other documentation shall be of professional quality: well laid-out, properly dated, concise, clear, and accurate, with no spelling or grammar errors. They must be complete; no relevant information omitted. Any attempt to deliberately falsify documents could result in breach of contract.
3. Define acronyms the first time they are used in a document and in subsequent instances if it contributes to reader comprehension. Consider using a list of acronyms if the document is long or if there are many acronyms.
4. Submit to the Departmental Representative all deliverables identified in this statement of work for review and acceptance. Documentation is to be submitted in English.
5. Submission does not equate to acceptance and the Departmental Representative reserves the right to reject the submission with fair and reasonable justification. If a submission is rejected, the Service Provider must revise the deliverable based on the Departmental Representative's feedback, and re-submit within 10 business days unless otherwise formally agreed to for acceptance.
6. Work will be reviewed at various stages and the Departmental Representative reserves the right to reject unsatisfactory work at any stage. If later reviews show that earlier acceptances must be withdrawn, the Service Provider must rectify at no extra cost to Canada.
7. Acceptance by the Departmental Representative of submissions from the Service Provider simply indicates that, based on a general review, the material complies with governmental objectives and practices and meets overall project objectives. Acceptance does not relieve

- the Service Provider of professional responsibility for the work and for compliance with the contract. Respond in writing to any questions or comments submitted to the Service Provider by the Departmental Representative.
8. Schedule monthly conference call meetings with the Departmental Representative and other stakeholders as identified. The purpose of these calls is to communicate updates, identify current and emerging issues and risks, and to provide a forum for discussion between stakeholders. In addition, an annual face-to-face, two-day meeting will be held in Cambridge Bay between the Service Provider, Departmental Representative, and other stakeholders as required.
  9. Service Provider is responsible to prepare and distribute Meeting Minutes of all meetings within 5 business days of meeting.
  10. The Service Provider must not respond to any media inquiry. Direct all media requests to the Departmental Representative.
  11. Written authorization from the Departmental Representative is required before proceeding with any additional facilities management service or any work that will result in additional costs over and above what is identified in the Contract, with the exception of emergency services as defined in Section 3.6 Minor Repairs, Small Projects, and Emergency Work.

### **2.3. Record-Keeping – Maintenance Management**

1. Maintain all service records in an agreed-upon Computerized Maintenance Management System (CMMS) platform such as Agility (currently in use). Provide a minimum of two licences to the Departmental Representative; they can be read-only.
2. Arrange, pay for, and manage an internet connection between CHARS and the Service Provider's Corporate Offices (if applicable), the Departmental Representative, and any specialized vendors who may need access to the network. Internet connection is to support remote monitoring and troubleshooting.
3. Track all work in as close to real-time as possible in the CMMS. Prepare and submit a monthly *Work Activity Report* to the Departmental Representative that contains an accurate account of the work performed that month. This document will be used to certify that the Service Provider has performed the work described and is a condition for the Service Provider to receive payment.
4. Include, at a minimum, the following information within the *Work Activity Report* for all identified work performed:
  - (a) Requester's name
  - (b) Date and time received
  - (c) Location on the campus
  - (d) Nature of service request/event
  - (e) Service/work required
  - (f) Classification (priority)
  - (g) Unique reference identifier/ticket number
  - (h) Sub-service provider and contact information, if applicable

- (i) Date and time the sub-service provider was contacted and engaged in work
- (j) Action(s) taken
- (k) Response time and recertification time (if applicable)
- (l) Associated costs
- (m) Outstanding work to complete
- (n) Close-out date, once work is completed.

## 2.4. Mobilization and Training

1. The contract with the Service Provider will be in-place prior to substantial completion of the MRB on August 22, 2017. The period between contract award and MRB substantial completion comprises the Mobilization and Training period. This is a period of time for the Service Provider to assess the situation in Cambridge Bay and at the CHARs campus, mobilize resources, and prepare operating plans and procedures. This period will allow the Service Provider to be ready to provide full Facility Management services, as defined in this statement of work, the day after MRB substantial completion (on or about August 22, 2017).
2. The Owner will provide enhanced 'attic stock' of consumable janitorial and building maintenance products as well as critical spare parts to minimize the requirement of the Service Provider to air-freight in items in the first year of the contract. The intent is to provide sufficient stock to last until the following year's sealift. This inventory will be provided to the Service Provider as government-furnished materials (GFM). Some tools and equipment will also be provided as government furnished equipment (GFE). A complete list will be provided in Excel compatible format after award as it is being procured and will arrive via Sealift 2017. **Appendix C: Inventory of Government-Furnished Equipment and Government-Furnished Materials** contains an indicative list.
3. Mobilize required staff and any required tools, equipment, consumables, etc., not provided as GFM or GFE.
4. Anticipated activities during the Mobilization and Training period include:
  - (a) Training activities in Cambridge Bay, provided by the Construction Manager or their sub-contractors;
  - (b) Participation in inventory handover and confirmation of inventory quantities;
  - (c) Commissioning-related training activities for the MRB operations and maintenance;
  - (d) Provision of accommodations (housing) for Service Provider staff, which is the responsibility of the Service Provider;

## 2.5. Staffing

1. Ensure that all work is performed by qualified staff in possession of valid trade certification complying with applicable Nunavut or Canada standards. Where there is no applicable industry certification, a minimum of three years of relevant work experience is required,

evidence of which is to be provided to the Departmental Representative for acceptance. Staff whose certification has lapsed or has been revoked must be replaced at the Service Provider's expense.

2. Employ staff who demonstrate reliability and competence with respect to this statement of work.
3. Ensure continuity of key personnel and maintain a dedicated, working team for the life of the project. Notify the Departmental Representative and Contract Authority of all proposed changes in personnel within a minimum of 5 business days' notice, unless unforeseeable. The Departmental Representative and Contract Authority have the authority to not allow any individual onto the campus who cannot demonstrate to be qualified, reliable and competent or who is otherwise deemed unacceptable.
4. Submit a *Labour Plan* that outlines the plan for own-forces and subcontracted labour to the Departmental Representative for review and acceptance.

## **2.6. Standard Operating Procedures**

Standard Operating Procedures (SOP's) for O&M of the Triplexes and FMB have already been developed and will be provided to the Service Provider after award for confirmation of consistency with the Canada Labour Code Part II and other applicable legislation and regulations.

1. *Standard Operating Procedures* for O&M will have to be developed for the MRB and for the site as a whole according to same criteria.
2. SOP's are to be followed to ensure:
  - (e) consistent conformance and implementation by all operational staff;
  - (f) due diligence is practiced through recorded documentation;
  - (g) protocols and procedures are established for all levels of:
    - (i) environmental stewardship;
    - (ii) asbestos management;
    - (iii) technical protocols and procedures; and
    - (iv) emergency preparedness.
3. Update the SOP's annually or as required and provide them to the Departmental Representative as a deliverable.

## **3. Specific Operations and Maintenance Requirements**

### **3.1. Building Operation and Maintenance**

1. Operate and maintain the buildings and campus grounds in accordance with all legislated requirements (including required periodic recertification), industry best-practices, manufacturers' guidelines and recommendations, warranty requirements, and common sense. Deliver a level of service that extends beyond the scope of mandated and life cycle requirements with the intended purpose to maximize the useful life of the facility's structures,

its operating systems and equipment, and to protect the value of the programs conducted in such facilities.

2. Maintain all equipment and systems cost-effectively in order to ensure economic operation, maximum life-span, and an acceptable working environment for tenants and users. This includes preventative maintenance, mandated maintenance, routine inspections and servicing, warranty review, repairs when necessary, 24/7 response to alarms and emergencies, and inspection and mitigation of hazards.
3. Record all maintenance activities in the CMMS. Maintain all required records on-site and provide to the Departmental Representative, emergency responders, and regulators and inspectors as required.
4. Plan and schedule preventative maintenance to minimize disruption of occupant operations and to minimize related costs, and provide occupants with a minimum of two weeks' advance notice of proposed shutdowns and other work that may disrupt occupant operations.
5. Provide benchmarks of the first-year operating, maintenance and repair costs, and analyze building maintenance data and recommend adjustments to operating procedures.
6. Demonstrate value for money when sub-contracting, procuring material, and in arranging for transport.
7. Submit an *Operations and Maintenance Plan* to the Departmental Representative for review and acceptance that describes the plan to meet the building and campus operations and maintenance needs outlined in Appendix B.

### **3.2. Warranty**

1. Coordinate warranty-related services at the FMB and MRB during the Contract. Monitor and track against system and equipment expiration dates. Coordinate any necessary corrections by the constructor and their sub-contractors within the applicable warranty period. Confirm and document rectification of warranty issues and deficiencies.
2. Prepare a *Warranty Issues and Deficiencies Log* of identified issues and deficiencies within the applicable warranty period and submit to the Departmental Representative as required.
3. Participation in warranty review of the FMB and MRB at dates as identified by the Departmental Representative.

### **3.3. National Service Call Centre**

The National Service Call Centre (NSCC) is a government entity that provides a single point-of-contact for building users to report property maintenance Service Requests such as HVAC, cleaning, plumbing, etc. Tenants of CHARS will report building issues to the NSCC, which dispatches to the Service Provider's staff.

1. Respond to and mitigate service requests as per Appendix A: Response Time Standards.

2. Record, in detail, work performed under this contract as identified in Section 2.3.4.

### **3.4. Grounds Upkeep and Landscaping**

Accumulation of blowing snow can be a significant problem in Cambridge Bay, requiring expensive and time-consuming snow removal. CHARS was designed to mitigate the worst impacts of snow accumulation, by orienting the buildings in such a way as to allow high winds to sweep entrances clear of snow.

1. Maintain and upkeep the grounds in good condition and provide landscaping services appropriate to the needs of the campus and in accordance with applicable environmental standards. Common outdoor space, including but not limited to:
  - (a) Civil infrastructure;
  - (b) Paths;
  - (c) Roads;
  - (d) Parking areas;
  - (e) Drainage ditches;
  - (f) Culverts;
  - (g) Fences;
  - (h) Courtyards/terraces;
  - (i) Bike racks, and;
  - (j) Exterior signage
2. Clean up any garbage, waste, ashtrays, or other litter from the grounds on a continual basis.
3. Remove snow and ice from the campus, including building entrances and exits, walls, fences, steps, ramps, roads and parking areas. Sand is typically used rather than salt for de-icing pedestrian areas and roadways. Ensure there are no hazards that could result from slips and falls or ice and snow falling off roofs onto people or vehicles.
4. Maintain outdoor mechanical and electrical systems such as underground utilities, electrified parking and lighting.
5. Protect the infrastructure from damage from grounds upkeep and landscaping services.

### **3.5. Janitorial Requirements**

The Owner has developed a Green Cleaning Guideline that will be provided to the Service Provider. Follow these guidelines when providing janitorial services.

1. Janitorial cleaning services fall under the following categories:
  - (a) Traditional office space-type cleaning, such as washrooms, office, and common areas;
  - (b) Residential-style accommodations in the triplex;
  - (c) Public spaces that could host a variety of public events;
  - (d) Outdoor areas;
  - (e) Building operations spaces such as boiler rooms;
  - (f) Commercial kitchen; and,
  - (g) Specialized laboratory spaces.



2. Provide typical janitorial services consistent with maintaining a clean, hygienic, and orderly working area for all tenants and users. Remove waste from garbage receptacles. Currently there is no recycling in the community, but there has been interest and efforts to promote this service. If it becomes available, provide multi-material recycling services. Clean exposed surfaces: floors, windows, baseboards, tabletops, front entryways, and other surfaces.
3. Categories 1. (f), and (g) above are mostly out-of-scope for Janitorial Requirements. Cleaning of specialized laboratory spaces will typically be the responsibility of tenants and users; however, light cleaning duties such as weekly mopping of floors and removal of garbage waste are in-scope for the Service Provider. The commercial kitchen will be cleaned by the operator, and as such is out-of-scope for the Service Provider except for annual cleaning of the ventilation and fire suppression systems.
4. When public spaces are used after-hours by third parties, clean-up is typically the responsibility of those users. Should specialized cleaning be required for one-time events, it shall follow the process noted in Section 4 Minor Repairs, Small Projects, and Emergency Work.
5. Submit a *Janitorial and Hoteling Plan* to the Departmental Representative for review and acceptance that describes the approach to maintaining a clean and hygienic campus for all tenants, including requirements as described in the following Section 3.6 Hoteling Requirements.

### **3.6. Hoteling Requirements**

The two triplexes have a total of six housing units with a grand total of 24 bedrooms and 42 beds. They are intended for use by researchers associated with POLAR who will be working at the campus for periods from a few days to a few months. The Service Provider will be responsible for ensuring these units are cleaned when required and stocked with typical household (non-food) consumables.

1. Clean and replenish consumables for the six housing units weekly when occupied. Replace bedding, remove garbage, clean interior of fridge, and sanitize when occupants move out, and ensure unit is ready for occupancy prior to occupants moving in if required (for example if the unit has been unoccupied for more than 1 month).
2. The scope of cleaning is typical for hotel rooms or residences, and includes:
  - (a) Sweeping and mopping floors, there are no carpets in the triplexes;
  - (b) Bathrooms including bathtubs/showers, toilets, and mirrors, countertops and sinks;
  - (c) Kitchens including countertops and sinks;
  - (d) Dusting of surfaces such as shelves, window ledges, door handles, and entryways.
  - (e) Remove garbage from the kitchen and each bathroom.
  - (f) 'Deep cleaning', such as wiping baseboards or cleaning underneath fridges and stoves, is required quarterly in order to maintain a clean and hygienic living space.
3. Do laundry on a weekly basis, including bedding, linens, pillow cases, and kitchen and bathroom towels.

4. Consumables include: toilet paper, paper towels, tissues, laundry detergent, dryer sheets, dish soap, dish detergent, liquid hand soap in kitchens and bathrooms, garbage bags, spray cleaners for occupants to do 'spot cleaning', aluminium foil, plastic food wrap, plastic food storage bags, and wax paper. It does not include any food items.
5. The Departmental Representative will provide the Service Provider an updated occupancy schedule on a monthly or as-needed basis. The churn rate is the rate at which a housing unit changes occupancy, and is estimated to be, on average, every two weeks during peak season (April-September inclusive) and every month during off-peak season (October-March inclusive). This estimated churn rate is only for the purposes of planning by the Service Provider and is subject to change. As POLAR ramps up their activities throughout the life of the contract, it is anticipated that the churn rate will increase.
6. When the triplexes are unoccupied, check each unit at an appropriate frequency to ensure all systems are functioning and that the heating system is operational as required.

### **3.7. Environmental Management and Coordination of Utilities**

Environmental management refers to minimization or elimination of environmental hazards and impacts from building O&M, and effective emergency response due to environmental hazards. This includes safe handling, storage, and disposal of potential contaminants, usage of environmentally-friendly products, reduction of impacts to surrounding air, water, and soil, reduction of energy and water use, and planning for response, mitigation, and clean-up of any environmental emergencies.

1. Manage contaminated and/or hazardous materials and substances related to building O&M and from the science program (limited). Examples include stored diesel fuel, waste oil, lubricants, cleaning supplies, batteries, and machinery grease. Advise the Departmental Representative when seeking permits and arranging for the removal or disposal of designated materials. Provide a copy of all permits.
2. Implement effective pest management controls, and comply with control methods that have been approved by territorial and local authorities. Examples of pests include birds, foxes, and hares.
3. Manage the effective delivery and coordination of utilities, where contracts with utility providers are held by the Owner. Ensure safe and effective building operation.
  - (a) Utilities include electricity, heating oil, potable water, wastewater removal, and garbage removal.
  - (b) Ensure delivery of utilities is in accordance with contracts and validate delivery slips and invoices. Compare meter readings with billing data, and record building consumption data. Maintain information on utility consumption and use it to develop a baseline model.
4. Document utility consumption in CMMS and service issues through *Utility Verification Reports*. Monitor building systems and identify any issues that are causing an increase in consumption. CHARS is equipped with a robust energy and water monitoring system tied to

the Building Management System in order to optimize campus operation. Make use of this monitoring system to aide in data collection and analysis. Regularly inspect and calibrate meters in accordance with manufacturers' recommendations.

5. Submit an *Environmental Emergency Response Plan* to the Departmental Representative for review and acceptance that explains in detail how the Service Provider will prevent, detect, mitigate, and resolve any environmental issues at the campus. Act as the first line responders to any spills in accordance with the Petroleum Storage Tank emergency response plan.
6. Submit an *Inventory of Regulated Building Systems and Components* to the Departmental Representative for review and acceptance that identifies any building systems, components, materials, etc., that have environmentally-regulated implications for safe and effective building O&M.
7. Submit an *Environmental Activities Report* to the Departmental Representative for review and acceptance that details the scope of activities performed by the Service Provider in regards to environmental management, as outlined in this section.

### **3.8. Security**

The CHARS campus has incorporated physical (keyed locks) and electronic access control (key cards) augmented by security cameras, window-break sensors, and an intercom system that tie into a security work station within the MRB. CHARS is deliberately not equipped with front entrance turnstiles common to many government buildings, in order to present an inviting atmosphere for community members and other visitors. Therefore it is important to strike a balance between open access for the public and maintaining an effective level of security appropriate to a government research facility.

1. Utilize and augment the security controls with a 24 hours a day, seven days a week on site physical presence in order to safeguard individuals, assets, and services, protect the campus from theft, vandalism, and sabotage, respond to alarms, and support or conduct investigations, while at the same time providing a welcoming presence to visitors.
2. It is envisioned that during typical working hours the security desk (front reception area) in the MRB will be staffed and will manage key and access control via electronic key cards or physical keys. After hours security will be a mixture of patrols of the campus grounds, video monitoring, and acting as a representative to ensure after-hours users leave the facility in the proper condition when complete. Due to bandwidth limitations offsite monitoring of video footage will not be accepted.
3. There are three types of zones on the campus from a security perspective.
  - (a) The public zone (also called a 'reception zone') is located in the public area of the MRB. There is no restricted access to this area: members of the public can simply walk in. This includes the reception/security desk, a cafeteria (not currently subcontracted), the Knowledge Sharing Centre, the Multi-Use Space, 'hoteling' desks in the hallway, and interview rooms.

- (b) Most of the rest of the facility is termed the operational zone. Access to this zone is controlled through key cards. To gain access to this zone requires either security clearance or an escort.
  - (c) There are several restricted zones on the campus. This includes IT/Telecom rooms and critical infrastructure rooms such as the boiler room and mechanical rooms. Access to these areas is restricted to certified individuals only; otherwise, an escort is required.
4. Maintain access controls for operational and restricted zones. Program and issue key cards and keys authorized users, including Tenants, Users, and authorized guests. The protocol for managing key cards and keys will be established with the Owner and Tenant after contract award.
  5. In the event of a security incident, such as theft or vandalism, assist the authorities (e.g. the RCMP) in conducting an investigation and subsequent prosecution if applicable. Notify the RCMP to investigate alarms during work hours or after-hours. Inform the Departmental Representative as soon as is practicable. Should a security incident occur, prepare *Incident Reports* and *Security Incident Investigation Reports* and submit to the Departmental Representative for review and acceptance that provides details of the incident follow-up actions, respectively.
  6. Service Provider employees and prime subcontractors must hold a valid PWGSC Enhanced Reliability Security Clearance. The Service Provider must arrange for and provide escort for any subcontractors and inspectors that do not hold a valid PWGSC Enhanced Reliability Security Clearance. The Service Provider's cleared employees can provide this escort.

### **3.9. Inventory Management**

1. Submit an *Inventory Management Plan* to the Departmental Representative for review and acceptance that outlines how the inventory stock of consumables and spares will be managed. This includes but is not limited to estimates of annual requirements of consumables and spare parts, storage requirements and Logistics Planning.
2. Conduct ongoing inventory management within CMMS. Ensure that inventories of janitorial and building maintenance consumables and spare parts are kept up-to-date.
3. Conduct Logistics Planning while undertaking shipping of material to site, using 3-Way Match Receiving, Sea Containerization, and full Cargo Tracking allowing for certifying and tracking of all GFE inventory.
4. Tag and track Capital assets, which are assets that cost more than \$10,000. Recommend disposal of GFE if required. When assets are disposed of, the rationale must be provided (e.g. breakage).

### **3.10. Emergency Work**

1. An emergency is defined as a situation that requires immediate action to prevent damage to the building or campus grounds. Using in-situ resources, take the necessary steps to stabilize and alleviate the situation and prevent any additional or increased damage. Inform the Departmental Representative of the situation as soon as is practicable. Emergency work does not include cost to correct the issue(s), reverse or repair any damage, and prevent the situation from reoccurring.

### **4. Minor Repairs, Small Projects, and Emergency Recovery.**

There may be occasions where minor repairs are required, small projects are requested by the Tenant or Users that go beyond the scope of this statement of work, or emergencies require additional work to recover from. Minor repair, small projects and emergency recovery is maintenance work that is limited to 40 hours inclusive of all trades in scope. Work in excess of 40 hours is considered a maintenance project, and will not be carried out by the service provider under this contract.

1. Submit pricing to the Departmental Representative for review and acceptance. If accepted, the work will be incorporated into the contract through a Task Authorization (TA).

### **5. Project Close-Out and Handover**

1. Provide Operations and Maintenance Training to identified representatives of the Departmental Representative for all building systems within the last three months of the contract based upon accepted Operations and Maintenance Manuals.
2. Provide all CMMS information to the Departmental Representative in Excel format and common industry standard(s).
3. Provide an up to date BIM record. BIM-FM IFC to meet ISO standard 16739-2015(E).
4. Account for all GFE and GFM. Provide detailed record of location and recommended inventory levels.
5. Provide a *Close-Out Proposed Inventory Management Plan* for the following sealift.
  - (d) If Contract Option periods are exercised to end date of September, then the Service Provider would purchase the next years' worth of inventory for sealift delivery.

## Appendix A: Response Time Standards

The following table outlines the different categories of service calls along with the response time service standard.

Category	Definition	Response Time	Mitigation Completion
Emergency	An emergency priority service request is a deficiency or breakdown that requires immediate attention to prevent imminent danger to tenants, the general public or the environment and which could bring about a shutdown of the facility, disruption and loss of production for the tenants. Immediate responses and measures are taken to alleviate the situation but do not necessarily have to be a permanent repair.	30 Minutes	4 hours or prior to the next day depending on time of the emergency
Urgent	An urgent priority service request is a deficiency or breakdown that requires immediate attention to reduce potential danger or discomfort to tenants, the general public or the environment or the facility.	1 hour	8 hours or prior to the next day depending on the time of the urgent request
Normal	Normal service requests are issues such as deficiencies or breakdowns that do not impair the current operations or pose any danger to tenants, the general public, the environment or the facility. These are considered essential maintenance requirements and can be handled on a routine planned and scheduled basis. All planned and seasonal maintenance requests are categorized as normal priority service requests.	4 hours	Within 5 business days
Incident Reporting	Incident Reports must be filed when there is an incident or critical incident.  <b>Incident</b> – Occurrence outside of normal facility operations and maintenance routines which warrants immediate intervention of the Service Provider or other parties.  <b>Critical Incident</b> – Any base building or grounds incident that causes disruption of essential government services or injury to a person or any event that could attract media or Ministerial level attention.	Initial Report within 24 hours of when the Service Provider first becomes aware	Incident close out: 21 calendar days  Critical Incident close out: 14 calendar days

## Appendix B: List of Deliverables

The following table provides a consolidated list of deliverables referred to in this statement of work.

Deliverable	Description	First Submission	Update Frequency
<b>Operations and Maintenance Plan (to include):</b> <ul style="list-style-type: none"> <li>- O&amp;M Plan</li> <li>- Labour Plan</li> <li>- Inventory Management Plan</li> <li>- Janitorial and Hoteling Plan</li> <li>- Environmental emergency response plan</li> <li>- Environmentally Regulated Building Systems and Components</li> </ul>	<p>Identify all work (inspection, preventative, planned, standing, overhead, and material management) for approval by the Departmental Representative. Estimate the cost of labour, materials, and contracts for each task. Create unique work order for each task once approved.</p> <p>Identify positions required to manage the facility as outlined in the Statement of Work.</p> <p>Establish stock levels of material for consumables, repetitive maintenance activities, and emergency materials. Identify procurement requirements and appropriate contractual arrangements with suppliers, and freight forwarder to ensure timely delivery of materials, maximizing sealift.</p> <p>The detailed approach to maintaining a clean and hygienic campus for all tenants and users.</p> <p>Explains in detail how to prevent, detect, mitigate, and resolve any environmental issues at the campus.</p> <p>Identify any building systems, components, materials, etc., that have environmentally-regulated implications for safe and effective building O&amp;M.</p>	<p>Provided within 1 month of contract award and on March 1, 2018 for the following fiscal year. Submit Option years, if applicable, 1 month in advance.</p>	<p>Annually or as required</p>

Work Activity Report	<p>Contains an accurate account of the work performed that month.</p> <p>Include, at a minimum, the following information within the <i>Work Activity Report</i> for all identified work performed:</p> <ul style="list-style-type: none"> <li>- Requester's name</li> <li>- Date and time received</li> <li>- Location on the campus</li> <li>- Nature of service request/event</li> <li>- Service/work required</li> <li>- Classification (priority)</li> <li>- Unique reference identifier/ticket number</li> <li>- Sub-service provider and contact information, if applicable</li> <li>- Date and time the sub-service provider was contacted and engaged in work</li> <li>- Action(s) taken</li> <li>- Response time and recertification time (if applicable)</li> <li>- Associated costs</li> <li>- Outstanding work to complete</li> <li>- Close-out date, once work is completed.</li> </ul>	The 5 <sup>th</sup> day of each month for reporting on the previous month.	Monthly
Health and Safety Plan	Outlines the approach to ensuring a healthy and safe workplace for own forces, subcontractors, regulators and inspectors, tenants and users, and visiting members of the public.	Provided within 1 month following contract award and on March 1, 2018 for the following fiscal year. Submit Option years if applicable 1 month in advance.	Annually or as required
Warranty Issues and Deficiencies log	Identified issues and deficiencies within the applicable warranty period	As required	As required
Utility Verification Reports	Document utility consumption in CMMS and service issues through <i>Utility Verification Reports</i> . Monitor building systems and identify any issues that are causing an increase in consumption.	As required	As required
Environmental Activities Report	Details the scope of activities performed in regards to environmental management.	As required	As required
Incident Report	Incident Reports must be filed when there is an incident or critical incident. Follow Appendix A. Including Spills, Halocarbon Releases and Accidents.	As required	As required



Security Incident Investigation Report	Security Incident Reports must be filed when there is an incident or critical incident. Follow Appendix A.	As required	As required
Meeting agendas and minutes	Standing monthly meeting agendas and minutes of such meetings.  Annual Face to Face meeting agenda and minutes of such meetings.	Agendas received 5 business days prior to meeting. Minutes Distributed within 5 business days following meeting.	Monthly or as required.
Standard Operating Procedures of the MRB	To ensure current practices, codes and regulations are being implemented in a consistent and logical operational sequence.	Within 3 months of MRB construction substantial completion.	Annually
Standard Operating Procedures of site as a whole	To ensure current practices, codes and regulations are being implemented in a consistent and logical operational sequence.	Within 6 months of contract award.	Annually
Close Out Proposed Inventory Management Plan	Proposed Inventory Management Plan for the following sealift.	1 month prior to contract end date	If required

## **Appendix C: Inventory of Government-Furnished Equipment and Government-Furnished Materials**

**CHARS - Janitorial Supplies**

PRODUCT DESCRIPTION - CLEANING SUPPLIES	MODEL No.	Case or Unit / Bottles	Cost	Shipped Aug 2016	Annual Cost 2016	Annual Quantity 2017	Annual Cost 2017					Total
26 X 36 COMPOSTABLE .8 MIL GARBAGE BAGS 200/CS	SS- SBC2636	Case	\$79.66	6	\$477.94	2.4	\$191.17					
17 X 17 COMPOSTABLE GARBAGE BAGS 500/CS	SS- SBC1717	Case	\$71.94	6	\$431.64	1.2	\$86.33					
BLUE RECYCLING BAGS LRG		Case	\$25.50	6	\$153.00	3	\$76.50					
WASHROOM CLEANER CONCENTRATE 4LTR X 4 f CS	GLB-100- 4S4	Unit / Bottles	\$35.00	12	\$420.05	24	\$840.10					
TOILET CLEANING GEL 1LTR X 12 f CS	GLB-101- 1S12	Unit / Bottles	\$2.92	48	\$139.97	24	\$69.98					
PORCELAIN CLEANER 1LTR X 12 f CS	GLB-102- 1S12	Unit / Bottles	\$3.06	48	\$146.88	24	\$73.44					
ALL PURPOSE CLEANER DEGREASER CONCENTRATE	GLDE-300- 4S4	Unit / Bottles	\$28.82	12	\$345.89	12	\$345.89					
GENERAL PURPOSE CLEANER CONCENTRATE 4L X 4 fCS	GLDI-H20 2-4S4	Unit / Bottles	\$39.90	12	\$478.80	12	\$478.80					
NEUTRAL DETERGENT CONCENTRATE 4LTR X 4 f CS	GLF-401- 4S4	Unit / Bottles	\$16.69	12	\$200.30	12	\$200.30					
FLOOR FINISH f LOW FREQUENCY MAINTENANCE	GLF-411- 4S4	Unit / Bottles	\$42.30	12	\$507.62	0	\$0.00					
ULTRA-CONCENTRATED FLOOR STRIPPER 4LTR X 4 f CS	GLF-404- 4S4	Unit / Bottles	\$32.47	12	\$389.66	0	\$0.00					
BLIZZARD BUSTER CALCIUM NEUTRALIZER CONCENTRATE	GLR-700- 4S4	Unit / Bottles	\$25.78	4	\$103.10	3	\$77.33					
PVA MICRO WIPER 15X14 BLU @5	143590	Units	\$3.04	20	\$60.72	24	\$72.86					
PVA MICRO WIPER 15X14 RED @5	143591	Units	\$3.04	20	\$60.72	24	\$72.86					
PVA MICRO WIPER 15X14 YLW @5	143592	Units	\$3.04	20	\$60.72	24	\$72.86					
PVA MICRO WIPER 15X14 GRN @5	143593	Units	\$3.04	20	\$60.72	24	\$72.86					
WIPER MICROFIBRE BLUE 16 X 16 SOLD BY EACH 12/PK	SS-1616BL	Units	\$0.96	48	\$46.08	24	\$23.04					
WIPER MICROFIBRE GREEN 16 X 16 SOLD BY EACH 12/PK	SS- 1616GR	Units	\$0.96	48	\$46.08	24	\$23.04					
WIPER MICROFIBRE RED 16 X 16 SOLD BY EACH 12/PK	SS- 1616PK	Units	\$0.96	48	\$46.08	24	\$23.04					
WIPER MICROFIBRE YELLOW 16 X 16 SOLD BY EACH 12/PK	SS- 1616YE	Units	\$0.96	48	\$46.08	24	\$23.04					

DU-N1014 YELLOW TREATED DUST CLOTH 500/CS 50/PK	SS-20206	Units	\$9.08	6	\$54.50	48	\$436.03				
MI527 61IN TELESCOPIC LAMBSWOOL DUSTER going to	SS-30380	Units	\$9.36	12	\$112.32	6	\$56.16				
TORPEDO DRAIN CLEANER & OPENER 909ML 12/CS	SS-142820600	Units / Bottles	\$7.42	12	\$88.99	3	\$22.25				
15I-700PFL LARGE POWDER FREE BLUE NITRILE GLOVES use	SS-385/L	Units	\$6.67	6	\$40.03	6	\$40.03				
15I-700PFM MEDIUM POWDER FREE BLUE NITRILE GLOVES use	SS-375/M	Units	\$6.67	6	\$40.03	6	\$40.03				
GLOVE NITR POWDER FREE LGE BLK @10X100	962L	Units	\$12.86	10	\$128.64	6	\$77.18				
GLOVE NITR POWDER FREE MED BLK @10X100	962M	Units	\$12.86	10	\$128.64	6	\$77.18				
GLOVE NITR POWDER FREE XLG BLK @10X100	962XL	Units	\$10.14	10	\$101.40	6	\$60.84				
MOP HEAD 24 OZ. SYNTHETIC NB WHITE 10/CS	111-24BLA	Units	\$4.79	100	\$478.80	48	\$229.82				
TOILET BOWL BRUSH W/ HOLDER WHT @24	MI203	Units	\$3.24	12	\$38.88	24	\$77.76				
DM524N 24IN HI-STATIC BLUE DUST MOP HEAD 10/CS	SS-MDUSTM	Units	\$16.49	12	\$197.86	6	\$98.93				
DM536N 36IN HI-STATIC DUST MOP HEAD BLUE 10/CS	SS-MDUSTM	Units	\$21.55	12	\$258.62	6	\$129.31				
CB103 TOY LOBBY CORN BROOM 12/BUNDLE	SS-CB103	Units	\$4.33	12	\$51.98	6	\$25.99				
20IN WHITE POLISHING PAD 5/CS	SS-20WH	Units	\$5.81	15	\$87.12	3	\$17.42				
20IN RED BUFFING PAD 5/CS	SS-20RD	Units	\$5.81	20	\$116.16	6	\$34.85				
Nitro Liquid Drain Opener Washroom 1 L	SS-142820600	Units	\$4.80	1	\$4.80	3	\$14.40				
G8 Wallmount 8 Product Dispenser	GLD- G8S	Units	\$445.82	2	\$891.65	0	\$0.00				
Spec 15 - Vacuum Bag - pack 10	147158500	Units	\$23.09	2	\$46.19	1	\$23.09				
Cannister Vacuum Bag - pack 10	1408618000	Units	\$43.96	2	\$87.91	1	\$43.95				
Adgility Backpack - Bag - pack 10	141098510	Units	\$31.26	2	\$62.52	1	\$31.26				
Dust Bag 10 pk Advolution	54195A	Units	\$7.62	2	\$15.24	1	\$7.62				
Sany Carpet Extraction Cleaner 4L @ 4 units	GLF 412 4S4	Units	\$9.84	12	\$118.08	3	\$29.52				
Windshield Cleaner Glass 4L @ 4	VAW W00426	Units	\$5.66	12	\$67.97	3	\$16.99				

Sany Cleaner Glass 4 L @ 4	GLW 200 4S4	Units	\$17.24	4	\$68.98	3	\$51.73						
Sany + Spary Bottle General Purpose Disinfectant 32oz	H202 300/ 401	Units	\$0.00	12	\$0.00	6	\$0.00						
Sany + Spary Bottle All Purpose Degreaser 32 oz	H202 300/ 401	Units	\$0.00	12	\$0.00	6	\$0.00						
Sany + Spary Bottle Neutral Detergent Floor 32 oz	H202 300/ 401	Units	\$0.00	12	\$0.00	6	\$0.00						
Sany + Spary Bottle Washroom 32 oz	H202 300/ 401	Units	\$0.00	12	\$0.00	6	\$0.00						
Sany + Spary Bottle Glass Cleaner 32 oz	H202 300/ 401	Units	\$0.00	12	\$0.00	6	\$0.00						
MSDS Wall Chart	H202 300/ 401	Units	\$0.00	2	\$0.00	0	\$0.00						
MS DS Binder	H202 300/ 401	Units	\$0.00	2	\$0.00	0	\$0.00						
			<b>\$1146.41</b>		<b>\$7509.36</b>		<b>\$4465.78</b>						
Total													

PRODUCT DESCRIPTION - WASHROOM CONSUMABLES	MODEL No.	Case or Unit / Bottles	GDI Cost	Annual Qty - Shipped Aug 2016	Annual Cost 2016	Annual Quantity 2017	Annual Cost 2017					Total	
PUREX 2-PLY TOILET TISSUE 506SHEETX60PKG/CS	SS- 05705	Cases	\$33.92	84	\$2,849.62	84	\$2,849.62						
WHITE SWAN MULTIFOLD WHITE TOWEL 4000/CS	SS -01920	Cases	\$24.85	60	\$1,491.12	60	\$1,491.12						
WHITE SWAN FACIAL TISSUE 100SHEETX36PKG/CS	SS-8300	Cases	\$30.10	24	\$722.30	24	\$722.30						
24 x 22 REGULAR CLEAR GARBAGE BAGS 500/CS	LD2422UC	Cases	\$19.87	36	\$715.39	36	\$715.39						
35 x 47 STRONG CLEAR PREMIUM GARBAGE BAGS	LD3547SC	Cases	\$21.83	48	\$1,047.74	48	\$1,047.74						
42 x 48 STRONG CLEAR GARBAGE BAGS 100/CS	LD4248SC	Cases	\$19.72	48	\$946.37	48	\$946.37						
HAND SOAP LOTION 4LTR X 4 f CS	GLH-600- 4S4	Units / Bottles	\$8.41	72	\$605.66	72	\$605.66						
			<b>\$158.70</b>		<b>\$8,378.20</b>		<b>\$8,378.20</b>						
Total													
Total - Procurement for 2017													

**Project: Canadian High Arctic Research Station****Hand Tools on-site (2016)**

<b>Line Item</b>	<b>Tool Name</b>	<b>Quantity</b>
1	40Pc Shockwave[TM] Phillips/Square/Hex/Slotted Driver Bit Set	1
2	8Pc 3/8"Drive SAE Rock River[REG] 6Pt Deep Impact Socket Set	1
3	4Pc #0, #1, #2, #3 Square Alloy Steel Cushion Grip Round Dual Material Screwdriver Se	1
4	6Pc T10, T15, T20, T25, T27, T30 6-Lobe Torx[REG] SVCM Steel Professional 6-Lobe Round Rock River[TM] Screwdriver Set	1
5	CRESCENT 170 Piece Closed Mechanics' Tool Set	1
6	Fluke Multimeter and Clampmeter Set	1
7	8pc Rock River[REG] Pliers / Adjustable Wrench Set	1
8	6" Cast Metal Faucet Handle Puller	1
9	10" - 17" OAL 1-1/4" Capacity Steel Telescoping Basin Wrench	1
10	10" OAL 1-1/2" Capacity Aluminum Pipe Wrench	1
11	7pc 3/16" to 1/2" x 3"L Rock River[REG] Hollow Shaft Nut Driver Set	1
12	12" Rock River[REG] Cusion Grip Adjustable Wrench	1
13	3pc Rock River[REG] Long Nose, Diagonal, & Groove Joint Pliers Set	2
14	20V DeWalt[REG] 1/2" Cordless Drill/ Driver Kit	1
15	1/8" - 1-3/8" RIDGID Single Stroke Tube Cutter	1
16	1/8" - 1-3/8" OD Capacity Constant Swing Pipe Cutter	1
17	12" Thundering Pro Quick-Change Hacksaw With Dual Grips	1
18	3-Watt 120LM LED Rock River[REG] Head Lamp	3
19	1"W x 25'L inch/mm Power Tape w/Neon Yellow Case w/Slide Lock	2
20	30 Pocket Rubber Bottom Extreme Backpack Tool Organizer	2
21	3M #6200H Med Half Facepiece Resp Reusable NIOSH Aprvd	2
22	#6001 Organic Vapor Cartridges (Priced Per Pair)	2
23	454 CENTURION Splash Clear Lens Eyewear	10
24	24" OAL 3" Capacity Aluminum Drop Forged Pipe Wrench	1
25	12" OAL 8" Capacity Aluminum Strap Wrench	1
26	1/8" - 1-1/4" ProFitter[REG] Hand Operated Tube Cutter	1

27	24" Magnetic Hd Level	1
28	2Pc 20V MAX (3.0Ah) Cordless Lithium-Ion Hammerdrill/Recip Saw Combo Kit	1
29	9 Piece Insulated Screwdriver Kit	1
30	Rock River[REG] 13-Piece Journeyman's Hole Saw Kit	1
31	Megger Insulation Tester	1
32	2AA LED 50 Lumen Black/Gray Rock River[REG] Aluminum Penlight	
33	3C LED 500 Lumen Black/Gray Rock River[REG] Aluminum Flashlight	
34	AA Cell Size 1.5V Rock River[REG] Alkaline Battery	
35	AAA Cell Size 1.5V Rock River[REG] Alkaline Battery	
36	16oz Forged Steel Head Fiberglass Handle Smooth Face Claw Hamme	2
37	FLIR IR400 -4[DEG]F - 630[DEG]F 8:1 D-t-S Ratio Temperature Gun Infrared Thermometer	1
38	3/4" x 60' Economy Grade Vinyl TEMFLEX[TM] 1700 Electrical Tape	10
39	48mm x 50m Silver Talon[TM] P600 Utility Duct Tape	12
40	1000W (500W x 2) Power Phase[REG] Heavy Duty Dual Head Tri-pod Base Halogen Job-Site Work Light	1
41	PCA[REG]3 265 Kit with (O2), (CO), (NO), (NO2) and Stack Temperature Measuremen	1
42	Black Frame/Clear Lens Nemesis* CSA Safety Glasses	12
43	260' Milwaukee[REG] Laser Distance Meter with 1/16" Accuracy	1
44	L Series 312 Black Body Guard[REG] TPR Grip Mechanic Glove Pair	3
45	M Series 312 Black Body Guard[REG] TPR Grip Mechanic Glove Pair	1
46	LCD 11-in-1 Environmental Meter w/UV Light Measurements	1

**Project: Canadian High Arctic Research Station****Hand Tools to be procured (2017)****Vendor - Fastenal**

<b>Line Item</b>	<b>Tool Name</b>	<b>Quantity</b>
1	40Pc Shockwave[TM] Phillips/Square/Hex/Slotted Driver Bit Set	2
2	8Pc 3/8"Drive SAE Rock River[REG] 6Pt Deep Impact Socket Set	2
3	4Pc #0, #1, #2, #3 Square Alloy Steel Cushion Grip Round Dual Material Screwdriver Se	2
4	6Pc T10, T15, T20, T25, T27, T30 6-Lobe Torx[REG] SVCM Steel Professional 6-Lobe Round Rock River[TM] Screwdriver Set	2
5	CRESCENT 170 Piece Closed Mechanics' Tool Set	2
6	8pc Rock River[REG] Pliers / Adjustable Wrench Set	2
7	6" Cast Metal Faucet Handle Puller	2
8	10" - 17" OAL 1-1/4" Capacity Steel Telescoping Basin Wrench	2
9	10" OAL 1-1/2" Capacity Aluminum Pipe Wrench	2
10	7pc 3/16" to 1/2" x 3"L Rock River[REG] Hollow Shaft Nut Driver Set	2
11	12" Rock River[REG] Cushion Grip Adjustable Wrench	2
12	3pc Rock River[REG] Long Nose, Diagonal, & Groove Joint Pliers Set	4
13	20V DeWalt[REG] 1/2" Cordless Drill/ Driver Kit	2
14	1/8" - 1-3/8" RIDGID Single Stroke Tube Cutter	2
15	1/8" - 1-3/8" OD Capacity Constant Swing Pipe Cutter	2
16	12" Thundering Pro Quick-Change Hacksaw With Dual Grips	2
17	3-Watt 120LM LED Rock River[REG] Head Lamp	6



18	1"W x 25'L inch/mm Power Tape w/Neon Yellow Case w/Slide Lock	4
19	30 Pocket Rubber Bottom Extreme Backpack Tool Organizer	4
20	3M #6200H Med Half Facepiece Resp Reusable NIOSH Aprvd	4
21	#6001 Organic Vapor Cartridges (Priced Per Pair)	4
22	24" OAL 3" Capacity Aluminum Drop Forged Pipe Wrench	4
23	12" OAL 8" Capacity Aluminum Strap Wrench	2
24	1/8" - 1-1/4" ProFitter[REG] Hand Operated Tube Cutter	2
25	24" Magnetic Hd Level	2
26	2Pc 20V MAX (3.0Ah) Cordless Lithium-Ion Hammerdrill/Recip Saw Combo Kit	2
27	9 Piece Insulated Screwdriver Kit	2
28	Rock River[REG] 13-Piece Journeyman's Hole Saw Kit	2
29	2AA LED 50 Lumen Black/Gray Rock River[REG] Aluminum Penlight	6
30	3C LED 500 Lumen Black/Gray Rock River[REG] Aluminum Flashlight	6
31	AA Cell Size 1.5V Rock River[REG] Alkaline Battery	48
32	AAA Cell Size 1.5V Rock River[REG] Alkaline Battery	48
33	16oz Forged Steel Head Fiberglass Handle Smooth Face Claw Hamme	4
34	FLIR IR400 -4[DEG]F - 630[DEG]F 8:1 D-t-S Ratio Temperature Gun Infrared Thermometer	2
35	3/4" x 60' Economy Grade Vinyl TEMFLEX[TM] 1700 Electrical Tape	20
36	48mm x 50m Silver Talon[TM] P600 Utility Duct Tape	24
37	PCA[REG]3 265 Kit with (O2), (CO), (NO), (NO2) and Stack Temperature Measuremen	1
38	L Series 312 Black Body Guard[REG] TPR Grip Mechanic Glove Pair	6

39	M Series 312 Black Body Guard[REG] TPR Grip Mechanic Glove Pair	2
40	LCD 11-in-1 Environmental Meter w/UV Light Measurements	2

**Project: Canadian High Arctic Research Station****Special Tools List To be Procured - 2017**

Line Item	Tools	Quantity	Comments
1	Honda generator 2000W	1	
2	Portable fire extinguishers 10lb ABC	2	
3	Air Compressor 9 gallon 9 hp	1	
4	Hand held turbo torch	2	
5	Ridgid Sea Snake	1	
6	Thermal Imager	1	
7	Ridgid Power V drain cleaner	1	
8	torque wrench	1	
9	Metric box and wrench set	2	
10	standard box and wrench set	2	
11	AC/DC welder	1	
12	Digital thermometer	2	
13	LED worklight on stand	1	
14	1/2 " drive socket set	1	
15	5 foot step fibreglass stepladder	3	
16	4 1/2 " angle grinder	1	
17	sawsall blades	1 assorted kit	
18	air balancing test kit	1	
19	cordless shopvac	1	
20	3-line laser level	1	
21	Hilti SDS hammer drill	1	
22	Hilti carbide bits for above	all sizes up to 1 " by 6 " long	
23	GFCI outlet circuit tester	2	

24	non-contact voltage tester	2	
25	P.A.T. tester	1	
26	Ridgid aluminum pipe wrench	14 " - 1, 18 " - 1	
27	Ridgid Toilet auger	2	
28	Basin and Urinal auger	1	
29	Back support	4	
30	Cherry picker Genie	1	Negotiate equipment on-site
31	Ridgid Tripod chainvise	1	
32	Husky folding 1600 lb. Worktable	1	
33	Liberty Model 331 transfer pumps	2	
34	Lead free solder and flux	2	
35	Accessories for air compressor / tire fill / blower	kit	
36	Ear plugs / Ear muffs	4	
37	Cordless Dewalt skill saw	1	
38	Ridgid 535 Threader C/W 2 die blocks and dies 1/2 " through 2 "	1	
39	Cordless Dewalt portabandsaw with extra blades	1	
40	Hollow punch kit 1/8 " to 1 3/16 " Mayhew tools	1	
41	Face shield	2	
42	3 shelf tool cart	2	
43	Flat bed equipment cart	2	
44	Engine hoist	1	
45	Roof/Puddle pump	2	
46	2 " sludge pump C/W 2x 25 feet camlock style hose and connectors	1	
47	50 feet heavy duty garden hose	4	
48	Gel knee pads	4 pairs	

49	Sae and metric tap and die set	1 of each	
50	Pry bar set	1	
51	Ridgid tube cutters - mini, #10,#15, #20	2 of each	
52	Ridgid tube cutter - #154	1	
53	Mikita 9031 belt sander x 1 "	1	
54	Vise grips - assorted styles	2 sets	
55	Portable 110 volt micro heaters	4	
56	Safety Harnesses - Miller model 650	2 med	
57	6 foot double lanyard	1 for each above	
58	Hydraulic Jacks	2 short, 2 reg	
59	48 " level	1	
60	Cold chisel set	1	
61	Ridgid V head pipe stand	3	
62	Flammable gas sniffer	1	
63	Personal size air quality monitor	2	
64	50 foot extension cord	4	
65	1/2 inch air impact	1	
66	3/8 inch air impact	1	
67	air chisel	1	
68	50 foot soft air line	2	
69	Pallet Jacks	2	

**Project: Canadian High Arctic Research Station**

**O&M - FMB Additional Spares**

Line Item	Div.	Item	Model	Description	Manufacturer	Quantity
1	22 10 10	Gaskets	DWP - Model JP20S-CI	DWP - Gaskets	Grundfos	2
2	22 30 05	Gaskets	Vitocell-H 300 EHA Series (160-450 L Capacity)	DHW - Gaskets	Grundfos	4
3	22 30 05	Sensors	Vitocell-H 300 EHA Series (160-450 L Capacity)	DHW - Temp. Sensors	Grundfos	2
4	26 28 13	Fuses	Ordering Info - LLSRK ID100TKID	10 AMP 600 AC / 250 DC CC Dual-Element Time-Delay Fuse	Littelfuse	10
5	26 28 13	Fuses	Ordering Info - 0JLS100.X	JLS 100 AMP 600 AC Class J Fast-Acting Power Fuse	Littelfuse	10
6	26 28 13	Fuses	Ordering Info - 0JTD100TX	JTD-ID 100 AMP 600 AC / 300 DC Class J Time-Delay Power Fuse	Littelfuse	10
7	23 72 00	Filters	MERV 8 Filter	1 - 12x12x2 Filter	Tempeff North America (HRU-1)	24
8	23 72 00	Filters	MERV 8 Filter	1 - 12x12x2 Filter	Tempeff North America (HRU-2)	24
9	23 72 00	Filters	MERV 8 Filter	1 - 12x12x2 Filter	Tempeff North America (HRU-3)	24
10	23 72 00	Filters	MERV 14 Efficiency	H 508mm, W 610mm, D 102mm (x6)	Varicel II MH Cartridge (Filter)	72
11	23 72 00	Filters	MERV 14 Efficiency	H 305mm, W 610mm, D 102mm (x3)	Varicel II MH Cartridge (Filter)	36
12	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 610mm, D 51mm (x1)	Panel Filter for EX-02	36
13	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 508mm, D 51mm (x1)	Panel Filter for EX-02	36
14	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 610mm, D 51mm (x3)	Panel Filter for EX-03	12
15	23 72 00	Filters	MERV 8 Efficiency	H 305mm, W 610mm, D 51mm (x3)	Panel Filter for EX-03	12
16	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 610mm, D 51mm (x1)	Panel Filter for EX-03	12
17	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 508mm, D 51mm (x1)	Pleated Filter for EX-01	12
18	23 72 00	Filters	MERV 8 Filter	H 610mm, W 508mm, D 51mm (x1)	Tempeff North America (HRU-1)	24
19	22 31 16	Domestic Water Softeners	Model EWS SD2MQC300	Water Softening Salt		20
20	26 50 00	Lighting	Model 2038B, Light Source (LED.4.40), 120V, Mounting (REC), Structure Finish (CHR), Diffuser Finish (WH), Baffle Finish (WH)	Spec Type: D13	Eureka	2
21	27 50 00	Lighting	Cat. No. APX13-25WHP-4000K-120-FL-WHT	Spec Type: D7	Prolux Lighting	4
22	26 50 00	Lighting	L31(Order Driver)	80	Cooper Electric	4
23	26 50 00	Lighting	L32 (Order Driver)	4	Cooper Electric	1
24	26 50 00	Lighting	L15-8 (Order Ballast)	11	TPL Electric	1
25	26 50 00	Lighting	L35 (Order Ballast)	25	Rutenberg Electric	2
26	23 52 00	Burner Parts	Riello RLs70 #2 oil	Boiler Burner Parts	Riello	11

**Total**

**Project: Canadian High Arctic Research Station**

**O&M - MRB Additional Spares**

Line Item	Div.	Item	Model	Description	Manufacturer	Quantity
1	23 21 23	Liquid : Glycol	Magna3 65-120F 60hz Pump	Liquid : Glycol	Grundfos (Jago)	1
2	21 13 14	Fire Extinguisher	Model 1-2225	ABC 10lbs Extinguishers	First Strike USA (Jago)	2
3	22 30 05	Gaskets	Vitocell-H 300 EHA Series (160-450 L Capacity)	DHW - Gaskets	Grundfos	4
4	22 30 05	Sensors	Vitocell-H 300 EHA Series (160-450 L Capacity)	DHW - Temp. Sensors	Grundfos	2
5	23 05 19	Tank Bladder		Expansion Tank	Trenice (Jago)	2
6	23 72 00	Filters	MERV 8 Filter	1 - 12x12x2 Filter	Tempeff North America (HRU-1)	24
7	23 72 00	Filters	MERV 8 Filter	1 - 12x12x2 Filter	Tempeff North America (HRU-2)	24
8	23 72 00	Filters	MERV 8 Filter	1 - 12x12x2 Filter	Tempeff North America (HRU-3)	24
9	23 72 00	Filters	MERV 14 Efficiency	H 508mm, W 610mm, D 102mm (x6)	Varicel II MH Cartridge (Filter)	72
10	23 72 00	Filters	MERV 14 Efficiency	H 305mm, W 610mm, D 102mm (x3)	Varicel II MH Cartridge (Filter)	36
11	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 610mm, D 51mm (x1)	Panel Filter for EX-02	36
12	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 508mm, D 51mm (x1)	Panel Filter for EX-02	36
13	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 610mm, D 51mm (x3)	Panel Filter for EX-03	12
14	23 72 00	Filters	MERV 8 Efficiency	H 305mm, W 610mm, D 51mm (x3)	Panel Filter for EX-03	12
15	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 610mm, D 51mm (x1)	Panel Filter for EX-03	12
16	23 72 00	Filters	MERV 8 Efficiency	H 610mm, W 508mm, D 51mm (x1)	Pleated Filter for EX-01	12
17	23 72 00	Filters	MERV 8 Filter	H 610mm, W 508mm, D 51mm (x1)	Tempeff North America (HRU-1)	24
18	26 28 13	Fuses	Ordering Info - LLSRK_ID100T	10 AMP 600 AC / 250 DC CC Dual-Element Time-Delay Fuse	Littelfuse	10
19	26 28 13	Fuses	Ordering Info - 0JLS100.X	JLS 100 AMP 600 AC Class J Fast-Acting Power Fuse	Littelfuse	10
20	26 28 13	Fuses	Ordering Info - 0JTD100TXID	JTD-ID 100 AMP 600 AC / 300 DC Class J Time-Delay Power Fuse	Littelfuse	10

**Total**