VETERANS AFFAIRS CANADA

Ste. Anne's Hospital
305 boul. des Anciens-Combattants
Ste-Anne-de-Bellevue, Quebec
H9X 1Y9

INSPECTION AND MAINTENANCE OF FIRE ALARM SYSTEMS

Date: August 2014

Project: Inspection and Maintenance of Fire alarm systems

Ste. Anne's Hospital
305 boul. des Anciens-Combattants
Ste-Anne-de-Bellevue
Quebec H9X 1Y9

August 2014

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INSPECTION AND MAINTENANCE OF FIRE ALARM SYSTEMS

SECTION 2 API - SCOPE OF WORK

FIRE ALARM SYSTEMS (FAS)

GENERAL CONDITIONS

1. DRAWINGS

1. No drawings are included in this estimate.

2. CONDITIONS

1. All clauses of the general conditions apply to the work mentioned in this estimate and govern their execution.

2. Section 2 API of this estimate will be executed at the flat rate established in Section "A" of the Rate Table to be completed.

3. If repairs are required and approved by Ste. Anne's Hospital's technical executive or his/her representative, such repairs will be executed at the hourly rate established in Section "B" of the Rate Table to be completed.

4. The Contractor must, at all times, provide an emergency service to cover potential breakdowns and ensure required personnel arrives on site within a maximum of three (3) hours after the service call. Service calls and work orders can be approved only by Ste. Anne's Hospital's technical executive or his/her representative.

5. The Contractor must provide parts required to perform maintenance or repair work for which he/she is responsible.

6. The offer covers a period of five (5) years for preventive maintenance of equipment or system(s) listed in Section 2 API herein, based on frequency indicated.

3. HOURLY RATE WORK (REPAIR & SERVICE CALLS)

1. Repair work on an hourly rate and service calls must, in all cases, obtain prior approval from Ste. Anne's Hospital's technical executive and be confirmed with the submittal of the duly completed form called "Call-Up Against a Contract".

2. Applicable hourly rates shall be those established in Section B when work is performed on a straight-time basis and must include fringe benefits, transportation, administration fees, and profit.

3. For emergency calls only, a period of one (1) hour will be allowed for transportation to the worksite; that is one half hour to get to the site and one half hour for the return.

4. DEFECTS & ABNORMALITIES

1. All defects or abnormal conditions found in systems, machines, and equipment discovered during an inspection must be promptly reported to Ste. Anne's Hospital's technical executive or his/her representative who will then be responsible for resolving the problem. If the services of a qualified electrician are required, for the installation of wires, wiring systems or electrical wiring, for example, the technical executive of the building or his/her representative can, at his/her option, use the Contractor in this contract or another contractor to perform such work. In both cases, the Contractor must provide technical advice to Ste. Anne's Hospital's representative to assist in correcting such defects or abnormalities.

2. The Contractor is responsible for maintenance work, repairs or adjustments to equipment or systems if they are performed by his/her sub-contractor. However, work performed by another contractor selected by Ste. Anne's Hospital do not make the Contractor liable, except if the Contractor subsequently inspects equipment or systems that have been repaired or adjusted.

3. Following the repair of a part by the Contractor, the defective part must be left on site for inspection purposes and noted on the report.

5. PARTS & TOOLS

1. The Contractor is required to repair or, when necessary, replace used parts with new parts.

2. The Contractor is required to supply the instruments, tools, and all material (or parts) needed for the maintenance, repair or replacement of parts covered by the contract.

3. The Contractor should use genuine replacement parts originating from equipment manufacturers. When genuine replacement parts or materials are not available, the Contractor should use equivalent parts which must be of equal or higher quality than the original parts. Equivalent parts must be approved by Ste. Anne's Hospital's representative.

4. Ste. Anne's Hospital reserves the right to decide on the quality of replacement parts and the decision will be final without appeal.

5. All parts installed without prior approval or deemed not compliant by Ste. Anne's Hospital's representative must be replaced within eight (8) days, otherwise the Contractor will be considered in default.

6. Any change of parts must obtain prior approval by Ste. Anne's Hospital's representative.

6. LABOUR

1. The Contractor is required to provide fully qualified labour.

2. Ste. Anne's Hospital reserves the right to refuse and request replacement of any individual it deems inappropriate.

3. The Contractor is required to supervise his/her staff to ensure appropriate behaviour and dress and to restrict access to buildings where specific work is to be performed.

4. Ste. Anne's Hospital will provide the Contractor with a resource person to guide him/her, if required, during the work period.

7. WORK SCHEDULE

1. The work period and schedule must be established and aligned with the calendar previously established between the Contractor and Ste. Anne's Hospital's technical executive and/or his/her authorized representative.

8. POWER OFF

1. No machine or equipment whatsoever belonging to the owner may be deactivated (power off), unless an official notice was issued to the Contractor by Ste. Anne's Hospital's technical executive and/or his/her authorized representative.

9. SAFETY ON SITE

1. The Contractor and representatives from his/her firm are required to obey the building's safety regulations.

2. The Contractor is required to provide instructions, notices, and signage used to advise Ste. Anne's Hospital's technical executive and/or his/her authorized representative as well as building occupants regarding work in progress.

3. Material must be delivered to the area indicated by the building administrator. The Contractor's representatives are required to remove material from this area upon reception, unless authorized otherwise by Ste. Anne's Hospital's technical executive.

4. The Contractor or his/her representatives are required to sign the record of attendance in the location designated by Ste. Anne's Hospital's technical executive or his/her authorized representative. Time of arrival and departure must be indicated, as well as the reason for the visit.

10. COMMENCEMENT OF WORK

1. The Contractor is required to begin maintenance work on the system immediately after having received the contract award notice.

11. FAMILIARIZATION WITH SITE & SYSTEMS

1. Prior to submitting the proposal, the Contractor is required to get information on the systems, existing conditions on site, and working conditions in the building where work is to be performed.

2. The Department will accept no additional charge for special equipment due to lack of any information whatsoever.

3. All technical information required by the Contractor prior to submitting his/her proposal can be obtained from the contracting authority.

12. PROTECTION OF LIFE AND PROPERTY

1. The Contractor is required to take all safety measures necessary to protect people and property from any accident or damage during the execution of maintenance or repair services.

2. The Contractor is specifically and entirely responsible for accidents or damages caused to people or property resulting from his/her work on site.

3. Special care must be taken to avoid soiling, scratching, damaging, or hitting walls or finished surfaces resulting from the use of equipment, ladders, scaffolding or any other material or equipment used to perform work.

13. FIRE PROTECTION

1. Throughout all operations, the Contractor is required to comply with Fire Protection Engineering Standards of the Fire Commissioner of Canada from Human Resources and Skills Development Canada (HRSDC), Labour Program division.

2. The Contractor can obtain a copy of these standards on the Government of Canada's Web site, under Human Resources and Skills Development Canada (HRSDC) or at Complexe Guy-Favreau, 200 René-Lévesque Ouest, 4e étage, Tour Ouest, Montréal, Québec H2Z 1X4. Telephone: (514) 982-2384.

14. SITE CLEANLINESS

1. Accumulation of debris will not be tolerated. After each work period, the Contractor will be required to remove all rubbish and waste resulting from his work. Premises should be left in a state of cleanliness satisfactory to Ste. Anne's Hospital's representative.

15. INSTRUCTIONS

1. The Contractor is required to comply with instructions or guidelines received from the technical executive of:

   Hôpital Sainte-Anne
   305, boul. des Anciens-Combattants
   Ste-Anne-de-Bellevue (Québec) H9X 1Y9

   The Contractor will forward all reports (typed) and any other communication relative to the execution of the contract to the technical executive.

16. COMMUNICATIONS

1. The Contractor is required to provide a contact sheet including the address and telephone numbers of the Contractor, his supervisor or manager where they can be reached at any time, night and day. The contact sheet should be prepared and updated as necessary by the Contractor and forwarded to Ste. Anne's Hospital's technical executive, prior to commencement of work.

17. REPORT, CERTIFICATES AND WORKSHEET

1. After each repair or service call, the Contractor is required to provide three (3) copies of a worksheet with detailed certificates of replacement parts. The worksheet should identify the task performed, parts replaced and/or repaired, as well as the number of hours each staff member worked. The Contractor should submit separate worksheets for maintenance work and repair work. In the case of emergency calls, worksheets, in addition to describing what is mentioned above, should also indicate the date and exact time of the service call, the name of the person who requested the service, Contractor's time of arrival on site and time of departure.

2. Ste. Anne's Hospital's technical executive or his/her authorized representative will keep two (2) copies signed by the Contractor. The third copy will remain with the Contractor.

3. If there is no authorized representative on site, the Contractor is required to forward to Ste. Anne's Hospital's technical executive, two (2) copies of the worksheet duly signed by the security guard on duty at the time of the service call.

18. MANUFACTURER INSTRUCTIONS

1. The Contractor is required to strictly comply with manufacturer or supplier instructions or guidelines with regard to maintenance service on systems, machines and equipment.

19. REQUEST FOR ELECTRICAL ISOLATION AND TRANSFER

1. The Contractor is required to complete the Form "Demande d'isolement et de transfert DPW-MTP2465" in all cases of electrical disruption or isolation as described hereunder in compliance with Part II, Section VIII of the Canada Labour Code.
    1. Main power supplies of the building.
    2. Electrical panels and sub-panels of power supplies.
    3. Busbars
    4. Engine control centres.
    5. Emergency power supply circuits.
    6. Fire alarm system and fire protection equipment.
    7. Mechanical protection equipment (sump pump, etc.).
    8. Alarm circuit for the building's services, including heating, ventilation, and air conditioning systems.
    9 Circuits activating more than one machine.

10. Circuits connected to one single part of equipment used in a cooling or heating system.

2. Once the Contractor has duly completed the form, it should be signed by the technical executive prior to beginning work.

20. ADDITIONS/MODIFICATIONS

1. Ste. Anne's Hospital reserves the right to move, modify or add machines and equipment attached to the latter. The Contractor will be required to ensure maintenance of such, without additional charges, as long as the added equipment does not exceed 3% of the existing equipment.

21. GENERAL SECURITY

1. GENERAL CLAUSES

1.1 By accepting the contract, the Contractor agrees to be in charge of all responsibilities generally vested in the principal Contractor and the employer in accordance with the Occupational Health and Safety Act, and to act as supervising officer.

1.2 The Contractor shall manage his activities with the result that health and safety of his staff, the public, occupants of the building or the facilities as well as environmental protection always prevail over issues related to costs or the work schedule. Moreover, the Contractor shall observe all requirements specified in this notice.

1.3 The Contractor shall, at all times, observe the provisions of the *Occupational Health and Safety Act*, the *Safety Code for the construction industry*, *Occupational Health and Safety Regulations*, and Ste. Anne's Hospital's Prevention Program Framework for Principal Contractors published in June 2011 and appendices, if applicable. The latter document is available from the technical data center at Ste. Anne's Hospital's Technical Services.

1.4 The Contractor shall execute all work in accordance with the latest edition of the *National Fire Code of Canada*, the *National Building Code of Canada*, the *Canadian Electrical Code* and any other applicable codes or standards.

1.5 The Contractor shall provide a prevention program to the technical executive which is specific to overall work likely to be achieved in the building at least ten (10) days prior to beginning work. The Contractor shall then update the prevention program if the course of work differs from the initial plan. Following the reception of the program and at any time during the course of the contract, the technical executive of the building may require that the program be modified or completed to better reflect the actual workplace. The Contractor shall make corrections required prior to beginning work.

The program must be based on risk identification and comply with information and requirements appearing on the estimate. The program shall be applied throughout the duration of the contract and meet the following requirements:

- include the company's policy on health and safety;
- include the functional organization chart for health and safety;
- identify risks inherent to each task category that will be performed during the contract as well as corresponding preventive measures based on regulatory requirements;
- identify the person in charge of applying the preventive measures;
- take into account the risks that could affect health and safety of workers, building or facility occupants, and the public;
- include emergency and first aid standards;
- include a procedure in case of an accident;
- include an inspection grid of the workplace based on risk identification contents;
- include eventual repair tasks which could be requested within the contract;
- include a written commitment on compliance with the prevention program and signed by all interveners.

1.6 In addition to the program specified in the preceding section, and for all cases where work to be performed constitutes a construction site within the meaning of the Act Respecting Occupational Health and Safety R.S.Q. c. S-2.1, the Contractor shall develop and forward to the technical executive of the building a prevention program specific to work that will be executed. Such program shall also be submitted to the *CSST* and the *Association paritaire pour la santé et la sécurité du travail*, in accordance with section 198 of said law. All requirements relative to this program are identical to those specified in the preceding section.

1.7 In all cases where work to be performed constitutes a construction site within the meaning of the Act Respecting Occupational Health and Safety R.S.Q. c. S-2.1, a Notice of Opening of a Construction Site shall be submitted to the *CSST* prior to beginning work and a copy shall be forwarded to the technical executive of the building. A copy of the notice must be clearly posted on the construction site. Upon dismantling the worksite, the Notice of Closing of a Construction Site shall be submitted to the *CSST* and a copy forwarded to the technical executive of the building.

1.8 The Contractor shall forward the following documents to the technical executive of the building:

- a copy of training certificates required for the application of this estimate and safety planning for work to be performed, for example : general health and safety on construction sites, asbestos, lock-out, first aid, etc.;

- a copy of all material safety data sheets (MSDS) for controlled products used in the workplace, and submitted at least three (3) days prior to their use in the workplace;

- medical examination certificates for the surveillance crew and all his employees, when medical examinations are required pursuant to an act, regulation, instruction, estimate or prevention program. Subsequently and as needed, the Contractor must also promptly provide medical examination certificates for new staff members arriving in the workplace;

- a signed and sealed copy provided by an engineer for all plans and compliance certificates required by the Safety Code for the construction industry (S-2.1, r.6), another act, regulation or clause in the estimate or contract. A copy of such documents must also be forwarded to the CSST and be available at all times on the worksite;

- a mechanical inspection certificate for machinery used to perform work (i.e. hydraulic platforms).

- an investigation report, within 24 hours, for any accident causing injury or for any incident revealing a hazard potential;

- a copy, within 24 hours, of any inspection report, notice of correction, or recommendation issued by federal or provincial inspectors.

1.9 The Contractor shall ensure that material, equipment, tools, and protective equipment used to perform work are maintained and in good working condition. Equipment, a tool or protective equipment that cannot be installed or used without jeopardizing the health and safety of workers or general public is deemed unfit for work. The technical executive reserves the right to prevent use of such material or tools deemed dangerous, defective or inappropriate.

1.10 The Contractor shall ensure that his workers have received proper training and information to safely perform work and that all required tools and protective equipment are available, meet standards, laws and regulations, and that they are actually used.

1.11 The Contractor shall take all necessary actions to ensure application and observance of requirements in terms of health and safety contained in contract documents, federal and provincial regulations, applicable standards, and the prevention program specific to the work, and promptly comply with any order or notice of correction issued by the *Commission de la santé et de la sécurité du travail* (*CSST*).

Regardless of the number of workers assigned to the work, the Contractor shall designate an individual who shall act as person in charge of health and safety in the workplace, and grant that person the authority required to order stop and resumption of work when deemed necessary for health and safety reasons.

1.12 Without limiting the foregoing article, the technical executive of the building may, at all times, order that work be stopped if he/she deems there is a health or safety hazard or risk for staff members assigned to the work or for the general public or the environment.

The Contractor shall take all necessary actions to ensure effective communications regarding health and safety. Upon arrival on the worksite, all workers must be informed of the specifics of the prevention program, their obligations and their rights. The Contractor must save and update a log book indicating information provided and bearing the signature of all workers who received the information.

The Contractor shall inform all workers that they have the right to refuse to perform any work which can be a hazard to their health or safety.

1.13 The Contractor shall inspect the worksite and, at the request of the technical executive of the building, provide the duly completed inspection grid of the worksite once a week or at the frequency established by the technical executive of the building, on the subsequent order form.

1.14 The Contractor shall promptly take all necessary actions to correct any deviation from laws and regulations and hazardous situations identified by a government inspector, the technical executive of the building, the PWGSC health and safety coordinator, or during periodic inspections. The Contractor shall provide the technical executive of the building with a written confirmation of all measures taken to correct deviations and hazardous situations.

1.15 The Contractor shall apply emergency and first aid standards in compliance with applicable policies and regulations and any other provision specified in the estimate.

1.16 The Contractor shall become aware of the evacuation procedure for the building and facility, and shall train and inform his staff in order for them to apply the evacuation procedure adequately.

1.17 For all cases where work to be performed constitutes a construction site within the meaning of the Act Respecting Occupational Health and Safety R.S.Q. c. S-2.1, a decision-making representative of the Contractor shall attend all meetings where health and safety on the worksite are at issue. The Contractor shall establish a worksite committee and conduct meetings in compliance with the requirements of the Safety Code for the construction industry S-2.1, r.6.

1.18 For all cases where work to be performed constitutes a construction site within the meaning of the Act Respecting Occupational Health and Safety R.S.Q. c. S-2.1, the following information and documents shall be posted in a location easily accessible by all workers:

- Notice of opening of a construction site;
- Identification of the principal contractor;
- Company's policy regarding occupational health and safety;
- Prevention program specific to the worksite;
- Emergency plan;
- Material Safety Data Sheets (MSDS) for all controlled products used at the worksite;
- Minutes of the worksite committee meetings;

- Name of worksite committee representatives;
- Name of first aid attendants;
- Intervention and correction reports issued by the CSST.

1.19 The Contractor shall define the boundaries of the worksite, control its access and set up barricades.

1.20 The Contractor shall take all necessary actions to keep the worksite clean and tidy throughout the duration of the work and ensure that the worksite is left without hazards at the end of each work day.

1.21 When a worker must work alone in an isolated area where he cannot request assistance, the Contractor must identify the risks inherent to the situation and provide the technical executive with a procedure to prevent such risks and to obtain help quickly in case of emergency.

1.22 When a source of danger not specified in the estimate occurs during the execution of the work, the Contractor shall cease all work immediately, set up temporary protective measures for workers and the public, and advise the technical executive of the building either verbally or in writing. The Contractor shall then present the required modifications for approval prior to proceeding with the prevention program in order for work to resume safely.

1.23 In case of an incident, the Contractor shall take all necessary measures, including stop-work, to ensure health and safety of workers and general public, and promptly communicate with the technical executive.

1.24 Use of sub-contractors is prohibited, except if a special authorization has been obtained from the technical executive of the building. Prior to making a decision, the technical executive will consider the capacity of the sub-contractor to meet the requirements of the contract.

1.25 The use of stud guns or other explosive actuated tools can only be used with approval of the technical executive of the building.

Notwithstanding the foregoing;

- Any individual who uses a stud gun must have a training certificate and meet all requirements in section 7 of the Safety Code for the construction industry (S-2.1, r.6).

- Any other explosive actuated tool must be used as per manufacturer recommendations and according to applicable standards and regulations.

1.26 On the worksite, the Contractor shall take into consideration the following specifics while developing the safety plan:

If the Contractor's work is likely to produce asbestos dust, he shall meet the requirements in section 3.23 of the Safety Code for the construction industry, An Act Respecting Occupational Health and Safety (R.S.Q., c. S-2.1). Furthermore, the Contractor must ensure that his staff is adequately trained and competent to perform work on or in the presence of asbestos. SAH's work procedures must be followed and the Contractor shall perform low and moderate risk as well as glove bag techniques. (See documents PT 01 and PT 14 under separate cover.) For larger work, the Contractor shall advise the technical executive of the building and, , following his written approval, call on a specialized firm to perform the work.

Roof work may be requested. The Contractor shall indicate measures to be taken to prevent falls in the prevention program.

Work may be requested near a body of water or retention pond. The Contractor shall indicate measures to be taken to prevent drowning hazards, electric shocks or electrocution in the prevention program.

Work may be requested in elevated areas of the reception, plants or other locations. The Contractor shall indicate measures to be taken for work in elevated areas in the prevention program.

Some inspections or testing may be requested in electrical rooms. The Contractor shall indicate measures he intends to take in the prevention program to ensure the protection of people in these areas.

Work may be requested in confined spaces. The Contractor shall indicate measures he intends to take in the prevention program to work in these areas and take into account the requirements of section 2.4 of the Safety Code for the construction industry, An Act Respecting Occupational Health and Safety (R.S.Q., c. c. S-2.1).

Work may be requested in laboratories. The Contractor shall ask the technical executive of the building if special procedures must be followed.

2. SPECIAL CLAUSES

2.1 Lock-out

2.1.1 The Contractor shall provide in writing and implement a lock-out procedure for any work on electrical equipment or machinery likely to be accidentally turned on. The Contractor shall complete the form requesting deactivation of the power source provided by the hospital's technical executive.

Although the following list is not exhaustive, below are a few examples of situations where this form is mandatory:

- Main power supplies of the building
- Electrical panels and sub-panels of power supplies
- Busbars (shielded)
- Engine control centres
- Emergency power supply circuits
- Fire alarm system and fire protection equipment
- Mechanical protection equipment (sump pump, etc.)
- Alarm circuit for the building's services, including all heating systems, ventilation, and air conditioning systems
- Circuits activating more than one machine
- Circuits connected to one single part of equipment used in a cooling or heating system.

Once the Contractor has duly completed the form, it should be signed by the person in charge of the worksite prior to beginning work.

2.1.2 Notwithstanding the preceding paragraph, in case of emergency, the Contractor shall obtain a verbal confirmation of power off from the technical executive of the building and, immediately after, present the request for electrical isolation or transfer in writing.

2.1.3 The procedure requested in 2.1.1 above shall be compliant with the principles found in the handbook called "*Le cadenassage*" published by the *Association paritaire pour la santé et la sécurité du travail – Construction* (ASP Construction) (French only).

2.1.4 All supervising staff and concerned workers shall have taken the course called "*Les techniques de cadenassage*" given by ASP Construction (514) 355-6190 or 1 800 361-6190 or an equivalent course from another organization.

2.1.5 For all tasks that must absolutely be performed with power on, the Contractor shall identify the situations in writing and plan the preventive measures to be taken, including personal protective equipment.

2.2 Working in Elevated Areas

2.2.1 The Contractor shall provide required equipment to work in elevated areas (i.e. ladders, stepladders, hydraulic platforms, scaffolding, etc.).

2.2.2 The Contractor shall ensure protective equipment is used when a worker is exposed to fall hazards when working in an area higher than 2.4 meters.

2.2.3 The Contractor shall plan and organize work in a manner that will eliminate the source of hazards or promote collective protection in order to minimize the use of personal protective equipment. Whenever personal protective equipment against falls is required, workers shall use a safety harness compliant with the CAN-CSA-Z-259.10-M90 standard. Safety belts must not be used as protective equipment against falls.

2.2.4 Equipment, tools or protective devices that cannot be installed or used without jeopardizing the health and safety of workers or the general public are deemed inadequate for work.

2.2.5 Wearing a safety harness is mandatory on all platform hoists with telescopic, articulating or rotating masts.

2.2.6 The Contractor shall define the boundaries of a danger zone in all areas where equipment for work in elevated areas is used.

2.3 Asbestos

Prior to beginning work that is likely to produce asbestos dust, the Contractor shall:

2.3.1 Provide a written procedure taking into account all items mentioned in section 3.23 of the Safety Code for the construction industry, S-2.1, r-6.

2.3.2 Provide proof that all workers concerned have received training on risks related to asbestos and on the procedure described above (ASP Construction) (s. 3.23.7).

2.3.3 Provide proof that the Contractor has available all material and equipment required for compliance with the procedure and safe execution of work.

2.4 Confined Spaces

SAH ensures the classification and assessment of all confined spaces on its property and in its control. Confined spaces are divided into three categories: 1- Low Risk, 2- Medium Risk, 3- High Risk. An assessment report is produced for each confined space. The report indicates all confined space characteristics and entrance requirements. Permits are issued and working procedures established based on this report, among others.

2.4.1 **Category 1**

All individuals involved must have basic training for all category 1 confined spaces (Low Risk). Although it is not required to implement special work practices in low risk confined areas, the Contractor shall apply methods to ensure the general health and safety of workers who need to work in these spaces.

Prior to accessing a confined space, the Contractor must inform the technical executive of the building or supervisor of the date and time planned for entrance and exit of the confined space.

Workers who have access to low risk confined spaces must indicate relevant information in the Confined Space Entry Log (Form FEL 103). Any individual entering a confined space must register each entrance and exit.

2.4.2 **Category 2 and 3**

For all category 2 and 3 confined spaces (Medium and High Risk), the following measures must be strictly applied.

2.4.2.1 The Contractor's prevention program shall include a written procedure identifying:

- Tools required to execute the work;
- Equipment installed or to be installed in the confined space and measures to be taken for its installation, use, maintenance, protection or relocation;
- Pipes and ducts entering the confined space;
- Hazards and safety measures to be taken based on work to be done;
- Contaminants that can be found in the confined space;
- Appropriate rescue methods and equipment as well as an emergency plan.

2.4.2.2 The Contractor shall complete an Entry Permit available from the hospital's prevention officer. The permit is valid for the duration of a work shift et must take into account the information contained in the assessment report as well as specific conditions relative to work being executed. However, the Contractor may use his own form if it contains all the information appearing on the form provided by the person in charge of the worksite.

2.4.2.3 The Contractor shall complete a *Hot Work Permit* when work to be executed involves welding, cutting or any other operation producing flames or sparks.

2.4.2.4 All workers having access to the confined space shall have the following training certificates:

- Safety for work in confined spaces PWGSC (ASP Construction)
- First Aid in the workplace and CPR (established organization approved by the CSST)
- Use of ventilation devices (ASP Construction)
- Use of safety harnesses (ASP Construction)
- Use and maintenance of respiratory protective equipment (ASP Construction)
- Gas-detecting devices (ASP Construction)

Whenever use of a self-contained breathing apparatus or supplied air respirator is planned, full training on the preparation, maintenance, and use of these devices (by the manufacturer, supplier or an established organization) is required.

In remote locations where there is no local rescue and emergency response unit available, the Contractor shall designate individuals capable of performing rescue operations in confined spaces. Rescue workers designated by the Contractor shall have appropriate training on the use of rescue equipment.

2.4.2.5 All workers having access to the confined space shall present a medical certificate confirming their ability to work in confined spaces. The certificate should be valid for a period of two years.

2.4.2.6 Employees who work in wastewater systems or other similar systems shall be immunized against infectious diseases, namely diphtheria and tetanus, in compliance with Health Canada's immunization program.

2.4.2.7 Although diphtheria and tetanus immunization is mandatory only for the cases previously mentioned, it is strongly recommended for all work in confined spaces.

2.4.2.8 The Contractor shall establish an emergency procedure and rescue with municipal and ambulance services. The procedure, telephone numbers, and location of the nearest phone shall be clearly posted near the worksite.

2.4.2.9 Prior to entry into the confined space and then every 15 minutes after entry, the Contractor shall perform an air quality test and check oxygen content, flammable gases, and any other toxic gases likely to be present, namely carbon monoxide and hydrogen sulfide. Readings shall be recorded in a log book, unless detection equipment has an alarm and that it is in continuous operation. Detection equipment used must be calibrated and adjusted by a trained worker according to manufacturer's instructions so that alarms comply with limits established on the permit.

2.4.2.10 The Contractor shall supply gas detectors and maintain them in good working condition. The technical executive may, at all times, request that the Contractor's instruments be checked for accuracy by a trained technician. In the event that a detector is found to be defective, work must immediately be suspended and all workers must leave the confined space. In such cases, no charges for loss of time will be accepted.

2.4.2.11 If the alarm on a detector is triggered, all workers must leave the confined space. The Contractor shall then find the source of contamination, neutralize it, ventilate the confined space to eliminate any contaminant residues, and authorize re-entry into the confined space only when oxygen and gas concentrations are back to normal.

2.4.2.12 Compressed gas cylinders and welding devices must not be taken into confined spaces. Such equipment must be left outside and should not block entry into or exit from confined spaces. All cylinders must be secured appropriately.

2.4.2.13 Tools and electrical devices used to access confined spaces must be grounded and, when required, be explosion proof. All equipment must be connected to a disconnect switch in case of ground fault or to a step-down transformer. The Contractor, at his expense, shall have electrical outlets and/or breakers that he intends to use and which do not meet the criteria, modified by a qualified electrician.

2.4.2.14 The Contractor shall install a ventilation system to keep contaminant concentrations below allowable limits.

2.4.2.15 The Contractor shall set up signs to prevent any unauthorized person from entering the confined space.

2.4.2.16 When noise levels cannot be kept under 85 dB, the Contractor shall provide all workers with hearing protectors adapted to the control level required and work to be performed.

2.4.2.17 The Contractor shall ensure that all workers are wearing personal protective equipment required.

2.4.2.18 The Contractor shall designate a trained person to be a Safety Watch. The Safety Watch has the following duties:

- Know procedures for work in confined spaces.
- Maintain constant communication with the workers in the confined area. Instructions applied must be adapted to the confined space. The Contractor should select means of communication based on risks identified and other relevant factors, such as protective equipment workers should wear, noise levels in confined spaces and surrounding areas, remoteness, lighting conditions, etc.
- Know gas detection equipment and ensure good working condition throughout the duration of work.
- Know ventilation systems and ensure good working condition throughout the duration of work.
- Be very familiar with emergency procedures.
- Make sure that:
    - All workers who enter the confined space comply with the Contractor's work procedure.
    - Working conditions and environment inside confined spaces do not jeopardize the health and safety of workers.

2.4.2.19 The Safety Watch should remain continually near the entrance of the confined space and never leave his post, until all workers have left the confined space.

2.4.2.20 The Contractor shall designate a person in charge of confined space safety. This person should be on the worksite at all times.

2.4.2.21 The same person cannot be Safety Watch and in charge of confined space safety at the same time, unless the person can meet all requirements of the two functions.

2.5 Hot Work

2.5.1 Hot work includes all work involving an open flame or that could produce a spark, such as riveting, welding, cutting, grinding, brazing or heating.

2.5.2 Twenty-four (24) hours prior to beginning work, the Contractor should have received a *Hot Work Permit* from the hospital's prevention officer when work to be executed involves hot work.

2.5.3 Work shall be executed in compliance with the Fire Commissioner of Canada's FC 301 Standard for Construction Operations, June 1982. The standard can be viewed on the Web site at : http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/

2.5.4 An operational portable fire extinguisher, adequate for the fire hazard, shall be available and readily accessible, in a 5-meter radius from any flame, source of sparks or extreme heat.

2.5.5 A person shall be designated for a fire patrol, 30 minutes minimum after the end of a work shift. This person shall sign the permit and submit it to the technical executive of the building (or his representative) after the 30-minute period.

2.5.6 Storage of propane cylinders shall comply with standard CAN/CSA-B149.2-F00, Propane Storage and Handling Code, in addition to complying with specific conditions stated in this document. Cylinders must be stored outside, in a secure place, away from unauthorized handling, in a cabinet designed for that purpose, solidly maintained in a vertical position and locked at all times. The location should be away from moving vehicles, unless cylinders are protected by barriers or similar fences.

All cylinders used or stored on the worksite must be equipped with collars designed to protect the valve.

Filling cylinders is prohibited on the worksite, unless a procedure compliant with standard *CAN/CSA-B149.2* is approved and authorized by the technical executive of the building.

2.5.7 **Welding and Cutting**

Note: For welding and cutting operations, the following conditions must be met in addition to those mentioned above.

Welding and cutting work shall be performed in compliance with sections 3.13, *Compressed gas supply* and 3.14, *Welding and cutting* of the *Safety Code for the construction industry*, S-2.1, r.6.

Work shall be executed in compliance with the Fire Commissioner of Canada's FC 302 Standard for welding and cutting, May 1979. The standard can be viewed on the Web site at:
http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/302.shtml

2.5.7.1 Welding and cutting machines are extremely dangerous with regard to fire hazards. The following precautions should be taken when executing such work:

- Gas cylinders should be stored on a flameproof surface in a well-ventilated area.
- All oxygen cylinders should be stored at a minimum distance of 6 meters from flammable gas cylinders (i.e. acetylene) or from any other combustible material, such as oil or grease, unless they are separated by a wall made of flameproof material, as specified in section 3.13.4 of the *Safety Code for the construction industry*, S-2.1, r.6.
- Set up flameproof tarps when welding work is executed overhead and where there is a risk of falling sparks.
- Cylinders should be stored away from any source of heat.
- Cylinders should not be stored under stairways, near entrances, hallways or elevators.
- Acetylene should not be in contact with metals such as silver, mercury, copper, and brass alloys containing more than 65% copper to avoid any explosive reactivity hazard.

- Arc welding equipment should be checked for appropriate electric voltage and grounding.
- Lead wires of electric welding equipment must be checked for damages.
- Welding equipment should be placed on a level surface, sheltered from adverse weather.
- Move or protect combustible material located near a welding unit.
- Welding or cutting any closed recipient is prohibited.
- Protective measures should be planned when welding or cutting are executed near ducts, tanks or any other recipient containing flammable materials.
- No cutting, welding or any work using open flames should be executed on a recipient, tank, pipe or any other container that could contain flammable or explosive substances, unless:
    - Air samples were taken indicating that work can be performed without danger; or that
    - Measures were taken to ensure workers' safety.

2.6 **Scaffolding**

2.6.1 Base

- Scaffolding shall be set up on a solid base to provide stability and prevent sliding and toppling.
- The Contractor who wishes to set up a scaffold on a rooftop, eaves, canopy or attic shall submit calculations and loading to the engineer and obtain approval prior to beginning set up.

2.6.2 Assembly, wind bracing, and anchoring

- All scaffolds shall be assembled, wind braced, and anchored in compliance with manufacturer instructions and provisions of the Safety Code for the construction industry.

- In any situation where it is necessary to remove certain elements of the scaffold (i.e. cross brace), the Contractor shall submit an assembly procedure signed and sealed by an engineer certifying that the scaffold assembled in that manner will be safe for work to be executed, considering the loads that will be applied.

- For all scaffolding structures that have a span between two supports exceeding 3 meters, the Contractor shall provide an assembly plan signed and sealed by an engineer.

2.6.3 Protection against falls during assembly

- At all times during assembly, all workers working in elevated areas shall be protected against falls.

- Prior to beginning work, the Contractor shall submit a procedure to the engineer specifying protection means used, and, if applicable, anchor points for safety cables or retaining devices. The procedure shall comply with provisions in 3.9.4.5, 2.9.1, and 2.10.12 of the Safety Code for the construction industry (modified August 2, 2001).

2.6.4 Floors

- Scaffold floors shall be designed and installed in compliance with provisions of the Safety Code for the construction industry.
- If planks are used, they must be approved and stamped, in compliance with provisions 3.9.8 of the Safety Code for the construction industry (effective January 1st, 2002).
- Floors must cover the entire surface protected by guardrails.
- Notwithstanding the foregoing, scaffolds that are 4 tiers high or more (or 6 meters) shall have a full floor covering the entire surface of putlogs, every 3 meters or fraction of 3 meters. Elements of these floors must never be moved to create intermediate landings.

2.6.5 Guardrails

- Guardrails shall be installed on every level of work.
- Cross bracings shall not be considered as guardrails.

- For scaffolds that are 4 tiers high or more (or 6 meters) where full floors are requested, guardrails shall be installed on each landing at the beginning of work and remain in place until work is fully completed.

2.6.6 Means of access

- The Contractor shall ensure that means of accessing the scaffold do not jeopardize workers' safety.
- When floors of the scaffold are made of planks, ladders shall be installed so that exceeding planks do not hinder climbing and descent.
- Notwithstanding the provisions of the *Safety Code for the construction industry*, stairs shall be installed on all scaffolds that have 6 rows of uprights or more and 6 tiers or more (or 9 meters).

2.6.7 Public safety and safety of occupants

- The Contractor shall define the boundaries of the worksite and set up barricades to limit access to authorized workers only.
- The Contractor shall install covered passages, nets or other similar devices to protect the public or occupants against falling objects.

2.6.8 Use of public ways

- When it is necessary to encroach on public ways, the Contractor shall obtain, at his expense, all authorizations and permits required by the competent authority.
- The Contractor shall install, at his expense, all traffic signs, barricades, and other devices required to ensure the safety of the public and his own installations. Ladders shall be installed so that exceeding planks do not hinder climbing or descent.

Notwithstanding the provisions of the Safety Code for the construction industry, stairs shall be installed on all scaffoldings that have 6 rows of uprights or more and 6 sections or more (9 meters).

3. PREVENTION OF NOSOCOMIAL INFECTIONS

1. The Contractor shall provide labour, material, equipment and surveillance necessary to follow instructions regarding prevention of nosocomial infections during construction work and/or renovations, in compliance with the following documents:

   3.1.1 Health Canada, Construction-related Nosocomial Infections for Patients in Health Care Facilities: Decreasing the Risk of Aspergillus, Legionella and Other Infections, Volume 27S2, July 2001.

   3.1.2 Canadian Standards Association (CSA), Special requirements for Heating, Ventilation and Air conditioning (HVAC) systems in Health Care Facilities, Document Z317.2-01.

   3.1.3 Infection Control during Construction or Renovation of Healthcare Facilities, Document Z313.13-03, Canadian Standards Association (CSA).

2. Preventive measures taken by the Contractor shall consider the category found in the Matrix for construction work and groups at risk from the Health Canada Handbook.

3. Notwithstanding the foregoing, any measure which the Contractor may wish to apply to prevent nosocomial infections shall first be validated and authorized by Technical Services at Ste. Anne's Hospital.

SCOPE OF WORK

1. GENERAL CONDITIONS

1. The Contractor shall provide labour, material, tools, and equipment required to execute maintenance work established in this section for all equipment of systems described in the various modules, including all their components and inspections, as described in check lists and log books. Description of work should be followed while omitting irrelevant items.

2. The objective of the book of specifications is to maintain equipment in very good working order. The book of specifications should be considered as a minimum standard from which the Contractor should work. It does not, in any way, limit the Contractor's obligations and responsibilities.

3. All work shall be executed based on manufacturer standards and in compliance with the latest edition of the National Building Code, the National Fire Code of Canada (NFCC), and any other applicable standards (NFPA, ULC, CSA, etc.).

4. The Contractor shall coordinate the work with that of the contractor responsible for inspections and maintenance of fire protection systems (sprinklers, fire extinguishers, fire pumps, etc.) so that, as much as possible, all elements are maintained at the same time based on frequency and requirements recommended by standards and manufacturers.

2. REPORTS

1. On completion of inspections and periodical testing of each module, the Contractor shall submit a full **typed** report (2 copies) to the technical executive at Ste. Anne's Hospital and inserted into a folder along with a copy of checklists, inspections, and tests on CD, including the list of equipment certified in good working order.

SCOPE OF WORK

2. The format and information to be included in each report shall be inspired by models, if any, provided as guidance by each standard governing each module and shall be presented, prior to contract performance, to the technical executive for approval. The latter reserves the right to modify such reports or to require additional typed reports.

3. Each report shall be reviewed and signed by the technical executive at Ste. Anne's Hospital or a person designated by him.

FIRE ALARM SYSTEMS (FAS)

1. GENERAL CONDITIONS

1. Maintenance work on the system shall be performed each year of the contract at the intervals described below.

2. All testing and inspections on the fire alarm systems shall be in compliance with the latest editions of the National Fire Code of Canada (NFCC) and the CSA/ULC –S536 standard.

3. Inspection records and periodic testing shall be similar, in content and appearance, to those recommended by the CSA/ULC-S536 standard.

4. During testing, the Contractor shall permanently perform visual surveillance of the fire alarm systems. In the event of actual fire detection reported on the panel, the Contractor shall be responsible for warning security officers at Ste. Anne's Hospital and/or the fire department.

5. The Contractor shall not ring any alarm bell. Moreover, any maintenance, testing or inspection procedure that could accidentally trigger the alarm bell in the hospital is prohibited without written approval from the technical executive.

6. Check lists hereunder were compiled, in part, following requirements relative to inspections, testing, and checks contained in the CSA/ULC-S536-04 standard originating from the Underwriters' Laboratories of Canada. In the event of a discrepancy between the lists below and the standard, the latter requirements shall prevail.

7. No drawings are included in this estimate.

8. Review all abnormalities with the technical executive of the system; note and discuss changes which may be needed.

9. Check and correct, if required, the list of equipment (inventory) against their model and serial numbers.

10. Check labels on equipment identified. If missing, proceed with labelling inventory parts of the alarm system.

11. Report any discrepancy discovered and not corrected.

12. Once checks are completed, ensure systems are reactivated and that all building areas are protected.

2. PLANNING

1. The Contractor shall be responsible for advising the technical executive at Ste. Anne's Hospital, based on terms previously agreed upon, for each maintenance, that inspections, testing, checks, repairs or any other work will be made on the fire protection systems (ref.: NFCC 6.1.1.3.1 and NFPA 25 s.11-5).

3. INSPECTION RECORDS

1. The Contractor shall maintain records of all testing conducted on the fire alarm systems in which will be included the inspection records and periodical testing required by the CSA/ULC-S536 standard and keep them for reference purposes by the competent authority for the time required between two inspections, maintenances or tests, but no less than two (2) years.

2. The date at which the inspection was made as well as the initials of the worker who conducted the inspection should be indicated on the record every month.

4. DAILY INSPECTIONS

1. Check the condition of the main fault indicator and remote fault indicators.

2. Check the condition of the main power on indicator or any other similar indicator.

3. Daily inspections shall be made **by the staff at Ste. Anne's Hospital**; therefore, these inspections are not included in the Contractor's contract.

5. MONTHLY INSPECTIONS

While the fire alarm system is connected to the emergency power supply, the Contractor shall inspect and test the system, and check elements to ensure that the system is operational.

1. In a rotational order, activate a triggering device or manual alarm to check the following elements.

2. Confirmed operation of an alert warning and alarm signal in at least one area, or according to the requirements of the building's fire safety plan.

3. Main annunciator to ensure devices tested are operational.

4. Operation of common audible and visual fault warnings.

5. Emergency power batteries.

6. Clean and lubricate terminals.

7. Ensure terminal clamps are secure.

8. Check electrolyte level and density as per manufacturer specifications.

9. If required, test the emergency phone to ensure proper bidirectional communication and proper indication at the control room or responder.

10. If required, test phonic search of people in a given area.

11. Monthly inspections shall be made **by the staff at Ste. Anne's Hospital**; therefore, these inspections are not included in the Contractor's contract.

6. ANNUAL INSPECTIONS

While the fire alarm system is connected to the emergency power supply, the Contractor shall inspect and test the following elements to ensure that the system is operational. In the event of a discrepancy between the list below and the standard, the requirements of the latter will prevail.

1. A manual fire alarm box, selected according to a rotational order, shall be activated to check the operation of the system, including alert and alarm systems, according to the requirements of the building's fire safety plan. The Contractor shall provide the technical executive with a written plan of the rotational inspection program proposed for approval.

2. Check area annunciator to ensure devices tested provide proper indications.

3. Confirm operation of common audible and visible fault warning.

4. **Control Panel**

   a. Visually and physically check cables, connections, plugs, lights, and other components to ensure proper assembly and mechanical or electrical connections.

   b. Clean all panel components with a dry cloth.

   c. Check emergency batteries to ensure:
   1. terminals are clean and lubricated;
   2. connectors are properly adjusted.

   d. Check indicator lights and their brightness. Replace defective lights.

e. Check if a clear and legible legend provides adequate identification of zones.

f. Activate all controls to check proper operation.

g. On control panel, simulate a ground fault, short circuit, and open circuit in each detection and signal zone to ensure adequate supervision of internal and external circuits.

h. Check that power circuits are appropriate, properly identified, and meet system needs. Make sure adequate fuses or breakers are used and that they are not likely to be accidentally disconnected or prone to other forms of disruption.

i. Check accumulators and test bells annually.

i. Check batteries for damages, check operation of recharge system and make sure batteries are protected against overload. Test batteries by operating system with emergency batteries for a minimum of 24 hours in monitoring mode, followed by a test establishing that required full load current is supplied.

ii. Following testing and prior to restoring normal power supply, the Contractor shall indicate terminal voltage in a typed report as well as the audibility and intelligibility of signals and phonic messages. As soon as the Contractor deactivates the bell module (OFF), for any inspection whatsoever, it shall be mandatory to follow instructions in section 1.4 of this module.

j. Check transmission of alarm signals to the fire department or designated control centre, if applicable.

k. Check proper grounding of equipment.

l. Check indicator circuit for critical function and loss of main power supply.

m. Check tamper-proof function, if used, and identification vs existing system.

n. Check all entry/exit tests and their identification vs existing system.

o. Compile a complete list of equipment used, including model and serial numbers of all equipment used on the premises.

p. Check that equipment operates on proper voltage and that fuses have proper gauge.

q. Check equipment's power supply level.

r. Submit a complete typed report of voltages and current obtained.

s. Check overload protection circuit on accumulators.

t. Check that batteries used are gel or acid type, same voltage and same capacity.

u. Submit a typed report of any discrepancy discovered.

5. **Annunciator Panel**

   a. Check indicator lights and their brightness. Replace defective lights.

   b. Check if a clear and legible legend provides adequate identification of zones.

   c. Activate all controls to check proper operation.

   d. Activate each trigger circuit and check that indicator lights up and corresponds to proper zone.

   e. Test emergency power circuit for proper operation of equipment.

   f. Check that a manual station lights up indicator and corresponds to proper zone.

   g. Check operation of common audible and visual fault warnings.

   h. Check emergency batteries to ensure:
      i. terminals are clean and lubricated;
      ii. connectors are properly adjusted.

6. **Manual Stations**

   a. A fire alarm, selected according to a rotational inspection program, shall be tested for system operation, including alert warnings and alarm signals.

   b. A manual fire alarm box equipped with a glass window that needs to be broken, or a similar replaceable part, must be tested with glass or other part in place.

   c. Remove dust inside and outside boxes.

7. **Heat Detectors**

a. All detectors shall be inspected and tested for proper operation, as per manufacturer recommendations.

b. The Contractor shall take note of detectors that are painted or damaged and include them in the typed report, and recommend replacement if required.

c. All "reset-type" heat detectors shall be inspected and tested by triggering the detector with a heat source producing no open flame.

d. All non "reset-type" heat detectors shall be inspected and tested. Check trigger circuit continuity of detectors using a by-pass resistor of equal value as that of the operating detector.

8. **Smoke Detectors**

a. Using a dry cloth, clean the base, locking ring, indicator light, and grid.

b. Disassemble detector and clean the sensing post and radioactive chamber as per manufacturer recommendations (water is not acceptable).

c. Perform a sensitivity reading and adjust the ionization head for efficiency appropriate to the area where the detector is installed. Note the sensitivity measures on the device's record.

d. Check and replace alarm light on the base.

9. Duct-Type Smoke Detectors

a Using a dry cloth, clean the base, locking ring, indicator light, and grid.

b. Clean all smoke sampling tubes.

c. Disassemble detector and clean the sensing post and radioactive chamber as per manufacturer recommendations (water is not acceptable).

d. Perform a sensitivity reading and adjust the ionization head for appropriate efficiency. Note the sensitivity measures on the device's record.

e. Check and replace alarm light on the base.

10. **Other Types of Automatic Detectors**

a. Proceed with inspection and calibration, if applicable, as per manufacturer recommendations. Test detectors according to the CAN/ULC-S536 standard.

11. **Alarm Signals**

Audible Signals

a. Check operation of all fire warning horns or bells by first triggering an advance warning followed by a general alarm.

b. Check that installation and assembly do not hinder performance of signals.

Visual Signals

a. Check operation of all visual signals and replace indicator lights, if required. Ensure there is no obstruction of signal.

12. **Ancillary Equipment**

a. Trigger an alarm by simulating a mechanical operation at the connection point of an ancillary device, such as a flow switch, a valve monitored by a protection current from fire protection systems or any other signal originating from another ancillary device.

13. **Ancillary Functions**

a. Inspect all ancillary functions of the system, such as ventilation system stop, automatic closing of fire doors and fire dampers or smoke stops, operation of smoke control systems, stairway pressurization, elevator recall systems, etc.

b. Make sure no defective ancillary function hinders the normal operation of the fire alarm system.

14. **Electric Locks**

a. Actuate the control auxiliary relays to open doors equipped with electric locks (safety) to ensure all doors can be unlocked.

b. Check that every door equipped with an electric lock is properly unlocked.

c. Inspect and ensure that every door equipped with an electric lock is properly unlocked during and after ringing of fire-alarm bells.

d. When testing, the door should be opened from the exterior side of the electric lock to avoid detection by any automatic opening device or motion detector. The Contractor shall ensure that the electric lock is still deactivated once fire-alarm bells have ceased ringing.

e. Ensure the electric lock on each door is reactivated.

f. The Contractor shall report in writing, to the building's technical executive, any discrepancy that does not satisfy the National Building Code's provisions, as described in section 16.1, 16.2, 16.3, and 16.4 in this section.

7. LIST OF EQUIPMENT

EDITH TEMPLE WING AND TOWER		
QUANTITY	**MODEL**	**DESCRIPTION**
Detection Panels		
2	MXLV-R	Fire alarm and voice communication panels (remote)
26	RCC-1	Remote alphanumeric annunciators
7	EA-31/32	TRI-60 zones interfaces for fire alarm panels in exterior buildings
5	MMB-3	Fire alarm panels
Ancillary Equipment		
1	----------	60-column printer
3	ETX650LV	UPS grade 9, 650 va / 455 w
4	UPS9125	UPS grade 9, 2000 va
7	MLE-KIT	MLE-6 enclosure and door package
21	MDG-1	Door ventilation inserts
Manual Fire Alarm		
65	MSI-30BC	Manual stations
60	MSI-2	Addressable 2-step manual stations
2	MSI-51BD	Non-addressable manual stations (exterior building)
1	MS-53C	Manual stations
QUANTITY	MODEL	DESCRIPTION
Ancillary Equipment (continued)		
1	4521-20	Manual station
1	MS-53	Manual station
Non-resettable Heat Detectors		
2	CDT-135FMP	Non-resettable heat detectors
1	CDT-135MP	Non-resettable, moisture-proof heat detector

EDITH TEMPLE WING AND TOWER		
4	CF-135MP	Non-resettable, moisture-proof heat detectors
1	CDT-135EXP	Non-resettable, moisture-proof heat detector
Resettable Heat Detectors		
19	ID-60T	Addressable heat detectors
Smoke Detectors		
180	ID-60P	Addressable smoke detectors (pyrotronic)
38	ILP-1	Addressable smoke detectors (photoelectric)
14	FP-11	Addressable smoke detectors (ionization)
65	FP-11C	Addressable smoke detectors (ionization)
578	ILP-1C	Addressable smoke detectors (photoelectric)
Duct Smoke Detectors		
16	ID-601B	Detectors for ADX-31
15	FP-11G	Addressable duct smoke detectors
EDITH TEMPLE WING AND TOWER		
QUANTITY	MODEL	DESCRIPTION
Sprinkler Flow Switch		
53	FLOW	
Sprinkler Monitoring Device		
66	VALVES	
Sprinkler Pressure Switch		
1	PRESSURE	
Bell		
1	SFM24-10A	Bell for restricted spaces
Horn / Siren / Chime		
1	HORN	
Visual Alarm		

6	SV-51R	
5	STROBE	Strobes
6	300E	Strobes
Isolation Module in Case of Fault		
2	LIM-1	
Ancillary Devices		
326	RELAYS	
14	TRI-60	Interfaces with one (1) contact zone
67	TRI-60D	Interfaces with two (2) contact zones
148	TRI-60R	Interfaces with one (1) contact zone and one (1) addressable fire alarm relay
8	TRI-SC	Interfaces
5	TRI-S	Interfaces
6	TRI-R	Interfaces
74	TRI-RC	Interfaces
10	TRI-DC	Interfaces
119	FDL	
88	VSM	
2	ICP-25	Interfaces
2	TRI-D	Interfaces
3	RPR-1	Interfaces
69	CONTACTS	
Emergency Telephones		
119	FT-301 U	Emergency telephones
Speakers		
43	CVT-157	Speakers / Horns
10	ET-1010	Speakers
594	AS-4071	4" speakers with VE-15 flush-mounted casings
142	AS-4115	4" speakers with VSE-45W surface casings

PAVILLON DU SOUVENIR		
QUANTITY	MODEL	DESCRIPTION
Manual Fire Alarm		
26	MSI-30BC	Manual stations
2	MS-53	Manual stations
Smoke Detector		
279	FP-11C	Addressable smoke detectors (ionization)
Duct Smoke Detector		
8	FP-11G	Addressable duct smoke detectors
Sprinkler Flow Switch		
3	FLOW	
Sprinkler Monitoring Device		
5	VALVES	
Sprinkler Pressure Switch		
1	PRESSURE	
Visual Alarm		
6	200E	Strobes
Speakers		
96	AS-4071	4" speakers with VE-15 flush-mounted casings
Isolation Module in Case of Fault		
1	LIM-1	
Emergency Telephone		
1	FT-301	Emergency telephone
Ancillary Devices		
47	RELAYS	
3	TRI-60D	Interfaces
48	CONTACT	
1	TRI-SC	Interface
6	FDL	

27	TRI-RC	Interfaces
2	TRI-60	Interfaces
1	TRI-S	Interface
6	TRI-DC	Interfaces

#9 THERMAL CHAMBER & LAUNDRY ROOM

QUANTITY	MODEL	DESCRIPTION
Manual Fire Alarm		
11	4251-20	Manual fire alarms
1	MS-51	Manual fire alarm
Non-resettable Heat Detector		
51	CF-200	Dual circuit heat detectors
Resettable Heat Detector		
30	CR-135	Moisture-proof heat detectors
1	6263	Heat detector
1	CDT-200R	Rate compensation and set temperature heat detector

Smoke Detector

3	SMOKE	
Duct Smoke Detector		
3	4262-4	Smoke detectors (ionization)
1	CA-4	Smoke detector (ionization)
Bell		
13	4090-6AWG	Fire bells
Horn / Siren / Chime		
1	4050	Siren
Ancillary Devices		
13	RELAYS	
2	CONTACT	

STOCK ROOM

QUANTITY	MODEL	DESCRIPTION

Manual Fire Alarm		
8	4251-20	Manual fire alarms
Non-resettable Heat Detector		
2	CF-200	Dual circuit heat detectors
Resettable Heat Detector		
40	CR-135	Moisture-proof heat detectors
Smoke Detector		
4	DI-1A	Smoke detectors (ionization)
Bell		
6	4090-6AWG	Fire bells
Ancillary Device		
9	RELAYS	
EDITH TEMPLE WING		
QUANTITY	MODEL	DESCRIPTION
Manual Fire Alarm		
7	N-MPS-SC	Addressable fire alarms
Resettable Heat Detector		
3	CR-135	Dual circuit heat detectors
Self-contained Smoke Detectors		
10	1400-A	Smoke detectors (ionization)
3	C2WB-A	Smoke detectors (photoelectric)
Horn - Strobe		
4	MHWZ-A	Horns for restricted spaces
8	SWA-B	Horns
6	P4RA-B	Horns with built-in light
Ancillary Device		
9	FDL	
Day-care Centre		
QUANTITY	MODEL	DESCRIPTION
Manual Fire Alarm		
6	270SPOF	Manual stations
1	4251-20	Manual station

Smoke Detector		
4	245A	Thermal fire detectors
1	CDT-135	Thermal fire detector
1	PE-11C	Fire detector (photoelectric)
1	DI-3C	Fire detector (photoelectric)
Duct Smoke Detector		
11	6249C	Smoke detectors (ionization)
Bell		
3	4390-6AWG	Bells
Ancillary Devices		
1	RELAY	