



Service correctionnel
Canada

Correctional Service
Canada



LA SÉCURITÉ,
LA DIGNITÉ
ET LE RESPECT
POUR TOUS

SAFETY, RESPECT
AND DIGNITY
FOR ALL

ANNEX A - STANDING OFFER TECHNICAL SPECIFICATIONS

ROOFING AND SNOW REMOVAL SERVICE EQUIPMENT AND LABOUR

CSC Title and File Number:

550-2-320-3899

STANDING OFFER REVIEW BOARD

Submitted by:

TECHNICAL SERVICES

CORRECTIONAL SERVICE OF CANADA

OCTOBER 2014

Canada



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1.1 GENERAL REQUIREMENTS

1. GENERAL**1.1. DESCRIPTION OF WORK**

1.1.1. The work under this standing offer includes, but is not limited to: the supplies, qualified labour and equipment required for roof repair/replacement and roof snow removal work at the following institutions:

a) Laval Complex - 3 different sites

Federal Training Center – Site 6099
6099, Levesque Boulevard,
Laval, H7C 1P1

Federal Training Center – Site 600

600 Montée St-François
Laval, H7C 1S5

Staff College

5500 Lévesque Boulevard
Laval, H7C 1P1

b) Corcan Construction

190 Montée St-François,
Laval, H7C 1S5

c) Archambault Institution

242 Montée Gagnon
Ste-Anne des Plaines, J0N 1H0

d) Regional Reception Centre

246 Montée Gagnon,
Ste-Anne-des-Plaines, J0N 1H0

e) Ste-Anne-des-Plaines Institution

244 Montée Gagnon,
Sainte-Anne-des-Plaines, J0N 1H0

f) Joliette Institution

400 Marolais
Joliette, J6E 8V4

g) Drummond Institution

2025 Boulevard Jean de Brébeuf
Drummondville, J2B 7Z6

h) Donnacona Institution

1537, Road 138
Donnacona, G3M 1C9

i) CCC Marcel Caron

825, Kirouac
Québec, G1N 1J7

j) Cowansville institution

400 Fordyce Avenue
Cowansville, J2K 3N7

- 1.1.1. This standing offer is valid for the period specified in the Request for Proposals.
- 1.1.2. Roofs requiring replacement will be specified on plans submitted by the institution's Plant Maintenance department for each subsequent order.

1.2. WORK SCHEDULE

- 1.2.1. Pedestrian and vehicle access varies by institution. The CSC representative will prescribe working hours according to the nature of the work.

a) Laval Complex – 3 different sites

Federal Training Centre – Site 6099

- Main entrance located at 6099 Boulevard Lévesque: 07:45 to 16:30 hours
- Access by service barrier located at 205 Montée St-François: 08:30 to 11:30 and 13:00 to 15:30
- The Project Manager will confirm schedule.

Federal Training Center – Site 600

- 8:00 to 16:30 subject to written confirmation from the Project Manager.
- A 10-minute time allowance on arrival shall be considered for registration purposes.

Staff College

- 7:00 to 16:00
- Any deviation from this schedule will require written confirmation from the Project Manager. Contractors who wish to modify this schedule must take the necessary steps to obtain approval and issue the relevant notification prior to 14:00 hours on the previous day.

b) Corcan Construction

- 08:00 to 15:30 hours

c) Archambault Institution

- 08:00 to 15:30 hours

d) Regional Reception Centre

- 08:00 to 15:30 hours

e) Ste-Anne-des-Plaines Institution

- 07:30 to 16:00 hours

f) Joliette Institution

- 08:00 to 15:30 hours

g) Drummond Institution

- 08:00 to 15:30 hours

h) Donnacona Institution

- 08:00 to 15:30 hours

i) CCC Marcel Caron

- 08:00 to 16:00 hours

j) Cowansville Institution

- 08:00 to 16:00 hours

1.3. TIME FRAME OF WORK

- 1.3.1. The Contractor shall commence work within 10 working days of receiving a subsequent order or in accordance with the date specified on the order, and shall proceed with due diligence until final completion of the work.

- 1.3.2. If work cannot be performed or is interrupted due to bad weather, the Contractor shall return to the premises and perform the work once the weather clears within five days.

1.4. CODES

- 1.4.1. Perform work to the National Building Code (NBC) and any other applicable provincial or local code. Where discrepancies or contradictions exist, the more stringent requirements shall apply.
- 1.4.2. Perform work to meet all requirements:
- of contract documents;
 - of specified standards and codes and other documents referenced.

1.5. REQUIRED DOCUMENTS

At the request of the institution maintenance department representative,

- 1.5.1. Keep one copy of each of the following documents at the work site:
- Contract drawings and description of work for subsequent order, addenda, shop drawings, work site instructions, calendar of work, manufacturer's installation and application instructions
 - These specifications;
- 1.5.2. Change orders.

1.6. CALENDAR OF WORK

At the request of the institution maintenance department representative,

- 1.6.1. Within 5 working days following receipt of a subsequent order, submit a calendar of work that includes a status report on the various stages of the project and date of completion of the work, to be finished within the time frame specified by the institutional Plant Maintenance department representative.
- 1.6.2. Interim reviews of the progress of work, based on the calendar submitted, will be performed as required by the institutional Plant Maintenance department representative. Contractor shall update calendar in cooperation and in agreement with the institutional Plant Maintenance department representative.
- 1.6.3. Work to be performed from Monday to Friday, within the time period prescribed by the institutional Plant Maintenance department representative.

1.7. DATA SHEETS AND SAMPLES

At the request of the institution maintenance department representative,

- 1.7.1. Within 5 working days following receipt of a subsequent order, the Contractor shall submit all data sheets, all the samples and all the shop drawings required under each section of these Specifications for approval by the institutional Plant Maintenance department representative.

1.8. SIGNAGE

- 1.8.1. The Contractor shall provide, install and maintain temporary signage devices.

1.9. SITE VISIT

- 1.9.1. Under this standing offer, site visits are not required.
- 1.9.2. Unless otherwise specified by the institutional representative, site visits are required only in the following circumstances:

- 1.9.3. Upon the institution's first order.
- 1.9.4. Upon issuance of a special order as determined by the Contractor and institutional representative.
- 1.9.5. If a site visit is advisable in other cases under subsequent orders, the appropriate request is necessary. For security reasons inside the penitentiary, site visits will be scheduled at a specific time and date in cooperation with the contracting authority.
- 1.9.6. Existing conditions or special characteristics may not be used as justification for errors, omissions or imperfections in the work.

1.10. USE OF PREMISES

- 1.10.1. At no time shall safety precautions ever be diminished by reason of the work under this Contract. Take the necessary steps to ensure the required safety.
- 1.10.2. Perform the work with the least possible disruption to occupants while ensuring, to the extent possible, continued normal use of the premises.
- 1.10.3. Prevent undue accumulations of materials or equipment from encumbering the premises.
- 1.10.4. Ensure ongoing access to the premises by CSC staff and vehicles.
- 1.10.5. Comply with authorities on site. Within 5 working days, submit procedures that Contractor intends to follow during execution of the project for approval by the institutional Plant Maintenance department representative: work schedule, temporary traffic and security procedures, etc.
- 1.10.6. Move any vehicles that could become damaged during the work. Following damage caused to one or more vehicles or other elements on site, Contractor shall them repaired or replaced by qualified professionals to the satisfaction of the institutional Plant Maintenance Department representative.

1.11. PRESENCE OF ASBESTOS

- 1.11.1. Removing asbestos fibre that was sprayed or applied by trowel can be a health hazard. During construction, should the Contractor discover materials similar to asbestos applied in such manner, it must immediately cease operations and notify the institutional Plant Maintenance department representative as soon as possible. Work cannot be resumed without written authorization from the CSC representative.

1.12. LOCATION OF VARIOUS DEVICES AND EQUIPMENT

- 1.12.1. The location of various devices and equipment at or below grade as shown on plans or prescribed shall be considered approximate.
- 1.12.2. At the request of the institutional Plant Maintenance department representative, submit site plans showing the relative position of various items of equipment and exposed systems in the work area.

1.13. PATCHING

- 1.13.1. Patch structures damaged during performance of the work to match existing. Restore surfaces damaged by heavy machinery.

1.14. BACKFILL REMOVAL

- 1.14.1. Remove all unnecessary materials not intended for recycling or reuse. Dispose of excavation materials off-site in accordance with pollution control requirements and pay any applicable costs.

1.15. ADDITIONAL DRAWINGS

- 1.15.1. The institutional Plant Maintenance Department representative may provide Contractor with additional drawings for clarification purposes. Such additional drawings shall have the same force and effect as other contract documents.
- 1.15.2. Site measurements will be transferred onto drawings to facilitate the interpretation of area dimensions applicable to the work.

END OF SECTION 01 14 00

1. GENERAL

1.1. PURPOSE

Ensure that orders under the standing offer as well as construction project and institutional activities proceed without causing interruptions or undue obstacles and that institutional security is maintained at all times.

1.2. DEFINITIONS

1.2.1 "Contraband":

- a) intoxicants including alcohol, drugs or narcotics;
- b) weapons or parts thereof, ammunition and objects intended to kill, maim or disable altered or assembled for such purposes, when possessed without prior authorization.
- c) explosives, bombs or parts thereof;
- d) money exceeding authorized amounts.

N.B.: Refer to the Corrections and Conditional Release Regulations (DORS/92-620): \$50.00 limit in minimum-security institutions and \$25.00 limit in medium-security, maximum-security or multi-level institutions.

- e) any other item in a person's possession without prior authorization that could jeopardize the security or safety of persons or the penitentiary.

1.2.2 Tobacco and tobacco products, including but not limited to cigarettes, cigars, tobacco, chewing tobacco, cigarettes makers, matches and lighters are considered contraband.

- a) "commercial vehicle": A vehicle used to transport material, equipment or tools required for the purposes of the construction project.
- b) "CSC": Correctional Service of Canada.
- c) "Warden": Warden or superintendent of an institution, as applicable.
- d) "construction worker": An employee of the principal contractor or a sub-contractor, equipment operators, material suppliers, assessment or inspection firms or regulatory agencies.
- e) "Engineer": Project Manager of the Correctional Service of Canada.
- f) "perimeter": Area of the institution surrounded by fences or walls to block inmate movement.
- g) "Work area": Areas as specified on project plans where the Contractor is authorized to work. This may be an area outside the institutional security compound.

N.B.: A brief description of the work area shall be included below.

1.3. PRELIMINARY MEASURES

1.3.1 Prior to the commencement of work, the Contractor shall meet with the institutional head or his/her delegate to:

- a) discuss the nature and scope of project activities;
- b) establish acceptable security measures to be taken by each party under these instructions and the specific needs of the institution.

1.3.2 The Contractor shall:

- a) inform construction workers concerning security requirements.
- b) ensure that CSC security requirements are posted in conspicuous location on site at all times.
- c) cooperate with institutional staff to ensure that construction workers comply with all security requirements.

1.4. CONSTRUCTION WORKERS

1.4.1 Submit to the Warden a list of names and birth dates of all employees assigned to work at the the perimeter of the correctional institution, along with a security screening form for each employee.

N.B.: At some institutions, less stringent requirements may apply to employees working on site for very brief periods of time.

1.4.2 Allow two (2) weeks for processing of security screening applications. No employee will be admitted to the institution without duly approved security clearance and recent photo identification, such as a provincial driver's licence. Security clearance is specific to each CSC institution.

1.4.3 The Warden may require head-shot photographs of construction workers to be posted at specified locations in the institution or entered in a data base for identification purposes. The Warden may further require that construction workers wear their photo in plain sight on their clothing while on institutional property.

N.B.: Verify relevant regulations with the institution concerned.

1.4.4 Where there are grounds to believe that a person presents a security risk, access to the institution will be denied.

1.4.5 Any employee working on the perimeter of the correctional institution will be immediately directed to leave the institution if such person:

- a) appears to be under the influence of alcohol, drugs or narcotics;
- b) behaves in an abnormal or disorderly manner;
- c) is in possession of contraband.

1.5. VEHICLES

1.5.1 Anyone who leaves a vehicle unsupervised on CSC property must close all windows and lock all doors and trunks. The vehicle owner or the employee of the company that owns the vehicle shall keep vehicles keys safely on their person.

N.B.: The institution may require that all motor vehicles and equipment be equipped with a gas tank cap locking device.

1.5.2 The Warden may limit the number and type of vehicles permitted on institutional property at any time.

1.5.3 Persons delivering materials required by the project are not obliged to obtain security clearance, but must remain in close proximity to their vehicle while they are in the institution. The Warden may require that they be escorted by institutional employees.

N.B.: At some institutions, all delivery persons are required to obtain security clearance.

1.5.4 If the Warden allows trailers to be left inside the institution's secure perimeter, the doors and windows of such trailers shall remain securely locked and closed at all times when left unoccupied. Windows must be covered in protective wire mesh.

1.6. PARKING

1.6.1 The Warden shall designate the parking areas to be used by Construction worker vehicles. Vehicles parked elsewhere could be towed.

1.7. DELIVERIES

1.7.1 All deliveries of materials, equipment or tools for project purposes shall be addressed to the Contractor in order to clearly distinguish them from deliveries intended for the institution. The Contractor shall ensure that its employees are on site to take receipt of deliveries; CSC employees will not take receipt of deliveries of materials, equipment or tools intended for the project.

1.8. TELEPHONES

1.8.1 The installation of all telephones, fax machines and computers with an Internet connection is subject to approval by the Warden

1.8.2 The Warden will ensure that telephones, fax machines and computers with an Internet connection are not installed at locations accessible to inmates. Computer access will be password-protected to prevent Internet access by unauthorized personnel.

1.8.3 Except as expressly authorized by the Warden, cell phones or cordless digital phones, including but not limited to text messaging devices, pagers, Blackberries and telephones used as two-way radios are prohibited in the institution. Even where permitted, cell phone use by inmates is prohibited.

1.8.4 The Warden may authorize limited use of two-way radios.

N.B.: In some institutions, cell phones, digital phones and two-way radios are permitted subject to restrictions. For example, they may be prohibited in areas accessible to inmates.

1.9. WORKING HOURS

1.9.1 The work week is Monday to Friday, from 07:30 to 16:00 daily.

N.B.: Working hours vary from one institution to another. Verify working hours with the institution concerned and consult the subsection on schedules in section 00 14 00.

1.9.2 Work is not permitted on weekends or statutory holidays without the Warden's express authorization, to be requested at least seven (7) days in advance

N.B.: In some institutions, a shorter time frame applies and should therefore be checked.

1.10. OVERTIME

1.10.1 All overtime work is subject to authorization by the Warden. Advance notice of forty-eight hours is also required prior to the performance of authorized overtime. If overtime is required to complete urgent work, for example, to cast concrete or ensure structural safety, the Contractor shall notify the Warden as soon as the Contractor is informed of such needs and follow the Warden's instructions. Costs arising from such overtime may be subject to a Crown claim.

N.B.: In some institutions, a shorter time frame applies and should therefore be checked.

1.10.2 When work is required outside normal hours, on weekends or on statutory holidays, and authorized by the Warden, the Warden or the Warden's delegate may assign additional security staff. The Engineer may also assign additional employees to work inspection. The costs of such assignment may be subject to a Crown claim.

1.11. TOOLS AND EQUIPMENT

1.11.1 Keep a complete list of tools and equipment used during the construction project. Submit the list for inspection when necessary.

N.B.: Obtain a list of prohibited/restricted tools and equipment from the institution. Include the following list.

1.11.2 Keep an updated list of the tools and equipment specified above for the duration of the construction project.

1.11.3 Never leave tools unattended, especially mechanical tools, powder actuated tools, cartridges, files, saw blades, carbide saws, wires, ropes, ladders or any type of hoisting device (jacks, hoists, etc.).

1.11.4 Store tools and equipment in the authorized secure locations.

1.11.5 Lock all tool boxes after use. Contractor's employees shall keep keys with them at all times. Fasten and lock scaffolding not erected; once erected, fasten scaffolding securely to the satisfaction of the institutional representative.

1.11.6 Immediately notify the Warden of any lost or missing tool or equipment.

- 1.11.7 The Warden shall ensure that security staff control the Contractor's tools and equipment against the list provided by the Contractor at the following times:
- at start and end of each construction project;
 - weekly, if the project lasts over one week

N.B.: Some institutions require that tools and equipment be removed from the work site daily (for example, in occupied areas).

- 1.11.8 Some tools/equipment, such as powder actuation devices and metal saw blades, are very strictly controlled. At the start of the work day, the Contractor shall receive a sufficient number for the day's work. Used blades/powder actuation devices will be handed over to the Warden at the end of each work day.

N.B.: Management of controlled items varies from one institution to another and appropriate checks must be made.

- 1.11.9 When propane or natural gas is used for project heating purposes, the institution will require that one of the Contractor's employees supervise the work site outside work hours.

N.B.: This issue is a concern if the work site is located near inmate living units. A fire could endanger human life. Check the institution's policy.

1.12. KEYS

- 1.12.1 The Contractor shall ask the supplier or installer of security devices to deliver keys to security devices directly to the institution, specifically, to the Security Maintenance Officer.

- 1.12.2 The Security Maintenance Officer will issue the Contractor a receipt for keys.

- 1.12.3 The Contractor will submit a copy of the receipt to the Engineer.

1.12.1 OTHER KEYS

- 1.12.1.1 During the construction project, the Contractor will use standard cylinders in standard locks;

- 1.12.1.2 The Contractor will provide its employees, and subcontractors if necessary, instructions concerning the secure storage of construction keys to locks used during the construction project.

- 1.12.1.3 Upon completion of each phase of the construction project, the CSC representative, in cooperation with the locksmith, shall:

- establish a lock installation plan;
- take receipt of keys and cylinders for institutional locks directly from the locksmith;
- remove cylinders used during construction project and install permanent cylinders in institutional locks.

- 1.12.1.4 Following the installation of permanent security locks, CSC officers assigned to escort construction workers will obtain keys from the Security Maintenance Officer to open doors as required by the Contractor. The Contractor shall inform its employees that only their escorting CSC officers are authorized to use these keys.

1.13. SECURITY DEVICES

- 1.13.1 Hand over all dismantled security devices to the Warden for destruction or storage in a safe location for later use.

1.14. PRESCRIPTION MEDICATION

- 1.14.1 Employees of the Contractor who require prescription drugs during the work day must obtain authorization from the Warden to bring a daily dose with them into the institution.

1.15. SMOKING RESTRICTIONS

- 1.15.1 Contractors and construction workers are not permitted to smoke inside correctional institutions or outdoors inside the institutional perimeter. Unauthorized tobacco products are not permitted Inside the institutional perimeter.

1.15.2 Contractors and construction workers who violate this policy will be asked to immediately stop smoking or to discard any unauthorized tobacco products. If they refuse to comply, they will be instructed to leave the institution.

1.15.3 Smoking is permitted only outside the institutional perimeter, at a location specified by the Warden.

1.16. CONTRABAND

1.16.1 Weapons, ammunition, explosives, alcohol, drugs and narcotics are prohibited on institutional property.

1.16.2 If contraband is found in the possession of a person present on the work site, the Warden shall be notified immediately.

1.16.3 The Contractor shall carefully monitor its employees and sub-contractor employees. A person who brings contraband into the institution may have his/her security clearance cancelled. For serious offences, the company in question may be banned from the institution for the duration of the project.

1.16.4 If weapons or ammunition are found in the vehicle of a contractor, subcontractor, supplier or one of their employees, the security clearance of the vehicle driver will be revoked on the spot.

1.17. SEARCHES

1.17.1 Any person or vehicle arriving on institutional property may be searched.

1.17.2 Where the Warden has reasonable grounds to believe that an employee of the Contractor is in possession of contraband or unauthorized objects, the Warden may order a search of the person in question.

1.17.3 The personal property of all employees entering the institution is subject to inspection to detect the presence of prohibited drug residue.

1.18. ACCESS TO INSTITUTION AND REMOVAL OF VEHICLES

1.18.1 Except with express authorization from the Warden, construction workers and commercial vehicles will not be admitted to the institution after normal working hours.

1.19. VEHICLE TRAFFIC

1.19.1 Vehicles may enter and leave institutional property under escort through the service barrier at the times specified in section 01 14 00.

1.19.1.1 Contractor's vehicles may not leave the institution until the inmate count has been performed.

N.B.: Hours vary from one institution to another. Make appropriate checks with the institution in question.

1.19.2 The Contractor shall notify the Warden twenty-four (24) hours in advance of the arrival of heavy equipment, such as cement trucks, cranes, etc.

1.19.3 Vehicles loaded with soil or construction debris that cannot be searched shall remain under constant surveillance by CSC employees or commissionaires reporting to the Warden.

1.19.4 Before a commercial vehicle is admitted into the institutional compound, the Contractor or the Contractor's representative shall certify that the contents of such vehicle is limited strictly to that required for execution of the construction project.

1.19.5 Access to CSC property will be denied to any vehicle whose content, in the Warden's opinion, presents a risk to institutional security.

1.19.6 The private vehicles of construction workers are not permitted inside the perimeter fence or walls of medium and maximum-security institutions without express authorization from the Warden.

N.B.: Check the institution's policy on private vehicles of employees.

- 1.19.7 Subject to prior authorization by the Warden, one vehicle may be used to drive employees to the work site in the morning and away from the work site at the end of the day. Such vehicle may not remain on the premises during the day.

N.B.: Check the institution's policy on employee transport vehicles.

- 1.19.8 With the Warden's authorization, certain equipment may be left on the work site overnight or on weekends. This equipment must be locked and batteries removed. The Warden may require that equipment be secured with chains and padlocks to another fixed object.

1.20. CONSTRUCTION WORKER MOVEMENT ON INSTITUTIONAL PROPERTY

- 1.20.1 Subject to the need to maintain adequate security, the Warden will allow the Contractor and the Contractor's employees as much freedom of action and movement as possible.

1.20.2 Notwithstanding the above paragraph, the Warden may:

- a) Prohibit access to certain areas of the institution;
- b) Require that construction workers be escorted by a CSC security officer or commissionaire in designated areas of the institution for the duration of the construction project.
- c) All construction workers must remain on site during coffee/health (new) breaks and lunch. They are not permitted to eat in the correctional officer lounge or mess hall.

1.21. SUPERVISION AND INSPECTION

- 1.21.1 Construction activities and related movement of employees and vehicles will be monitored and inspected by CSC security staff to ensure compliance with established security standards.

- 1.21.2 CSC employees will ensure that construction workers clearly understand the need for surveillance and inspections at the start and for the duration of the construction project.

1.22. WORK STOPPAGE

- 1.22.1 The Warden may at any time order the Contractor, its employees, subcontractors or their employees not to enter the work site, or to immediately leave the institution while a security incident is in progress. The site supervisor designated by the Contractor shall note the name of the employee who forwarded the message and the time, and then execute the order as soon as possible.

The Contractor shall inform the Engineer of the situation within twenty-four hours following the work stoppage.

1.23. CONTACT WITH INMATES

- 1.23.1 No contact, conversations or giving/receiving of items is permitted with inmates without specific authorization. Any violation of this instruction could lead to the employee's removal from the work site and security clearance cancellation.

N.B.: If the project requires Corcan and inmate labour, check the institution's policy on contact with inmates.

- 1.23.2 Photographs of inmates or CSC employees are forbidden. Photographs of areas of the institution where photographs are not required for execution of this contract are also forbidden.

1.24. CONSTRUCTION PROJECT COMPLETION

- 1.24.1 Except as otherwise specified in the contract, upon completion of the construction project or, as applicable, upon handover of the premises, the Contractor shall remove all material, tools and equipment from the institution.

PART 1 GENERAL**1.1 SECTION INCLUDES**

- .1 The Contractor shall manage its activities to always give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for work.

1.2 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Canadian Standards Association (CSA).
- .3 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .4 An Act Respecting Occupational Health and Safety, RSQ. Chapter S-2.1[2002].
- .5 Safety Code for the Construction Industry, S-2.1, r.6 [2001].

1.3 DOCUMENT/SAMPLE SUBMITTALS***At the request of the institution maintenance department representative***

- .1 Submit a site-specific Health and Safety Plan to Departmental Representative and CSST in accordance with Section 1.8 at least 10 working days prior to commencement of work. Update Health and Safety Plan if initial expectations change as work progresses. Departmental Representative may, upon receipt of the Plan and at any time during the work, require amendments or additions to the Plan to better reflect work site realities. Contractor shall subsequently make the necessary changes prior to commencing the work.
- .2 Submit a copy of all inspection reports, correction notices or recommendations issued by federal and provincial inspectors to Departmental Representative within 24 hours.
- .3 Submit copies of incident and accident reports to Departmental Representative within 24 hours of any accident resulting in injury and any incident indicating a potential hazard.
- .4 Submit all WHMIS MSDS - Material Safety Data Sheets for controlled products used on-site to Departmental Representative at least three days prior to use of products on site.
- .5 Submit copies of the training certificates required to implement health and safety plan to Departmental Representative, in particular:
 - .1 General construction site health and safety training
 - .2 Safety officer certification
 - .3 Workplace first aid and cardio-respiratory resuscitation
 - .4 Work likely to generate asbestos dust
 - .5 Work in crawl spaces
 - .6 Lock-out procedures
 - .7 Individual protective clothing and equipment
 - .8 Safe forklift operation
 - .9 Hoisting platforms
 - .10 And any other training required by regulations or health and safety plan.
- .6 Medical surveillance: where prescribed by statutes, regulations, directives, specifications or safety programs, the Contractor shall:
 - .1 Submit certification of medical surveillance for site supervisory personnel and all personnel specified in subsection 1 of this section and present on site to the Departmental Representative prior to project mobilization.

- .2 Submit additional certifications of medical surveillance for any new site personnel covered by subsection 1 of this section gradually and immediately to Departmental Representative
- .7 Notice of project: File Notice of Project with the Commission de la santé et de la sécurité du travail prior to beginning work, and submit one copy to the Departmental Representative. A copy of this notice shall also be posted in a conspicuous location on site. Upon demobilization, file a project demobilization notice with the CSST and submit one copy to the Departmental Representative.
- .8 Engineer's compliance plans and certifications: The Contractor shall forward to the CSST and the Departmental Representative a copy of all plans and compliance certificates required under the Construction Project Safety Code (S-2.1, r. 6), other statutes, regulations or sections of the specifications or contract documents, signed and sealed by an Engineer. A copy of these documents shall remain on site at all times.
- .9 CSST compliance certificates: the Compliance Certificate is a document issued by the CSST confirming that the Contractor is in good standing with the CSST, i.e., has paid all amounts owing under a given contract. This document must be submitted to the Departmental Representative upon the completion of work.

1.4 HAZARD ASSESSMENT

- .1 The Contractor shall perform a safety hazard assessment for all tasks performed on site.
- .2 The Contractor shall plan and organize work to facilitate hazard reduction at source or comprehensive protection and thus limit the use of individual protective equipment to the extent possible. When individual protection against falls is required, workers shall use a safety harness in accordance with CAN/CSA-Z-259.10-M90. Safety belts shall not be used as protection against falls.
- .3 Protective equipment, tools or methods that cannot be installed or used without jeopardizing the health and safety of personnel or the public are not acceptable for the purposes of the work to be performed.
- .4 Inspect all mechanical equipment prior to on-site delivery. Before using mechanical equipment, the Contractor shall submit a compliance certificate to the Departmental Representative signed by a qualified mechanic. The Departmental Representative may order the immediate stoppage of equipment suspected to be defective or potentially hazardous at any time and require a second inspection by a specialist of the Departmental Representative's choice.

1.5 MEETINGS

- .1 A representative of the Contractor with decision-making authority shall attend all site health and safety meetings.

1.6 REGULATORY REQUIREMENTS

- .1 Comply with all statutes, regulations and standards applicable to the work.
- .2 Comply with prescribed standards and regulations to ensure the normal advancement of work at sites contaminated by hazardous or toxic materials.
- .3 Notwithstanding the date of publication of standards specified in the Safety Code for the Construction Industry, always use version in force at the time applicable.

1.7 SITE CONDITIONS/EXECUTION

- .1 On site, the Contractor shall take account of the following specific requirements:
 - .1 Correctional institution, see Section 01 35 13.

1.8 HEALTH AND SAFETY MANAGEMENT

- .1 Comply with and execute all tasks and obligations normally incumbent on the principal contractor under An Act Respecting Occupational Health and Safety (RSQ, chapter S-2.1) and the Safety Code for the Construction Industry (S-2.1, r.6).
- .2 Develop a site-specific health and safety plan following the identification of hazards and enforce plan from project mobilization to demobilization stage. The health and safety plan shall take account of information provided in Section 1.7. All persons

concerned shall receive a copy of the health and safety plan in accordance with the provisions of Section 1.2. The health and safety plan shall minimally include:

- .1 Company's health and safety policy;
- .2 Description of the work, total cost of the work, schedule and anticipated personnel curve;
- .3 Flow chart on health and safety responsibilities;
- .4 Physical and material layout of the site;
- .5 First response and first aid standards;
- .6 Site hazard identification;
- .7 Task-specific hazard identification, including preventive measures and terms and conditions of enforcement;
- .8 Training requirements;
- .9 Procedure to in the event of accidents/injuries;
- .10 A written undertaking by all parties concerned to apply the health and safety plan;
- .11 A site inspection checklist based on preventive measures.

1.9 RESPONSIBILITIES

- .1 Regardless of the size of the worksite or the number of workers present, designate one qualified person to act as supervisor and health and safety officer. Take all necessary steps to protect health and safety and property at the site and in adjacent areas that could be affected by the work.
- .2 Take all necessary precautions to ensure that the health and safety requirements specified in the contract documents, federal and provincial regulations, applicable standards and the site-specific health and safety plan are applied and enforced, and immediately comply with all correction orders or notices issued by the Commission de la santé et de la sécurité du travail.
- .3 Take all necessary measures to maintain on-site cleanliness and organization throughout the work.

1.10 COMMUNICATION AND POSTING

- .1 Take all necessary steps to effectively communicate site health and safety information. On arriving on-site, workers must be made aware of health and safety plan details, as well as their obligations and rights. The Contractor shall emphasize that employees are entitled to refuse to perform work if they believe it could jeopardize the safety, security or physical wellbeing of themselves or others at the site. A record of the information transmitted and signature of all workers who received the information shall be kept on site and updated.
- .2 The following information and documents shall be posted in a location readily accessible to all workers:
 - .1 Notice of project;
 - .2 Identification of principal contractor;
 - .3 Company's OHS policy;
 - .4 Site-specific health and safety plan;
 - .5 Emergency response plan (if required);
 - .6 Material Safety Data Sheets for all controlled products used on site;
 - .7 Minutes of site committee meetings;
 - .8 Names of site committee members (if required);
 - .9 Names of first aiders;
 - .10 CSST action and correction reports.

1.11 CONTINGENCIES

- .1 When a hazard not identified in the specifications and not identifiable during the preliminary site inspection comes to light as a result of or during execution of the work, the Contractor shall immediately stop the work, enforce temporary safety measures to protect personnel and the public and inform the Departmental Representative orally and in writing. The Contractor shall then amend the health and safety plan as necessary to allow work to safely resume.

1.12 POWDER ACTUATED DEVICES

- .1 The use of powder actuated devices is prohibited.

END OF SECTION 01 35 30

1. GENERAL**1.1. RELATED SECTIONS:**

- 1.1.1. Cleaning during execution of work
- 1.1.2. Final cleaning

1.2. PROJECT CLEANLINESS

- 1.2.1. Maintain work in tidy condition, free from accumulation of waste products and debris.
- 1.2.2. Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- 1.2.3. As required, provide on-site containers for collection of waste materials and debris.
- 1.2.4. Dispose of waste materials and debris off-site at end of each working day.
- 1.2.5. Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- 1.2.6. Clean existing roads used by Contractor's vehicles each day.

1.3. FINAL CLEANING

- 1.3.1. Sweep and clean paved areas and tidy remainder of grounds.
- 1.3.2. Clean equipment and fixtures to sanitary condition and clean or replace filters of mechanical equipment.
- 1.3.3. Clean, finish and reorganize outside spaces affected by the site set-up once the work is completed.

1.4. MEASUREMENTS FOR PAYMENT PURPOSES

- 1.4.1. No measurements are required under this section. Allocate cleaning costs among the various items included in the proposal.

END OF SECTION 01 74 11



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1.2 TECHNICAL REQUIREMENTS

PART 1 GENERAL**1.1 CONTENTS**

- .1 This section describes roof repair, replacement and snow removal.
- .2 The types of roofs in question are asphalt shingle, profiled metal, multi-layer, modified bitumen, polyvinyl chloride (PVC) and EPDM roofs.
- .3 Once on the ground, snow and ice shall be removed and disposed of by the Correctional Service of Canada, hereinafter called "CSC."
- .4 General:
 - .1 Before each contract, CSC will provide a plan of the roofs in question and the Contractor shall develop and submit in writing an operational strategy for approval by CSC.
 - .2 For snow removal work, the Contractor shall begin snow removal work within five (5) working days following receipt of a call from CSC.
 - .3 Site visit: Upon receipt of a call from CSC for a new purchase order, the Contractor shall visit the site at its expense to assess the scope of work.

1.2 RELATED DOCUMENTS

- .1 Proposal file.
- .2 Special CSC requirements pertaining, among other things, to institutional security and procedures at correctional sites. .

1.3 REFERENCES

- .1 **Association des Maîtres Couvresseurs du Québec (AMCQ),**
 - .1 Materials and work shall comply with the relevant requirements of the "Devis Couvertures de l'Association des Maîtres Couvresseurs du Québec" manual.
 - .2 Unless otherwise specified, perform roofing work in accordance with the written instructions of the membrane material manufacturer; where discrepancies exist, AMCQ standards shall take precedence.
 - .3 Comply with all requirements of the "Guide de Prévention des Incendies" published by the AMCQ.
- .2 **Laws and regulations of Canada in force:**
 - .1 Canada Labour Code.
- .3 **American Society for Testing and Materials International (ASTM), most recent revisions.**
 - .1 ASTM C728, Standard Specification for Perlite Thermal Insulation Board.
 - .2 ASTM C1002, Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
 - .3 ASTM C1177/C1177M, Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
 - .4 ASTM C1396/C1396M, Standard Specification for Gypsum Board.
 - .5 ASTM D1863, Standard Specification for Mineral Aggregate Used on Built-Up Roofs.
 - .6 ASTM C 36, Standard Specification for Gypsum Board.
 - .7 ASTM A653/A653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .4 **Canadian General Standards Board (CGSB), latest revisions.**
 - .1 CAN/CGSB-37.4-M, Fibrated, Cutback Asphalt Lap Cement for Asphalt Roofing.
 - .2 CAN/CGSB-37.5-M, Cutback Asphalt Plastic Cement.
 - .3 CAN/CGSB-37.8-FM, Asphalt, Cutback, Filled, for Roof Coating.
 - .4 CGSB 37-GP-9Ma, Primer, Asphalt, unfilled, for Asphalt Roofing, Dampproofing and Waterproofing.
 - .5 CGSB 37-GP-15M, Application of Asphalt Primer for Asphalt Roofing, Dampproofing and Water Proofing.
 - .6 CGSB-37-GP-21M, Tar, Cutback, Fibrated, for Roof Coating.
 - .7 CAN/CGSB-37.28, Reinforced Mineral Colloid Type, Emulsified Asphalt for Roof Coatings and Waterproofing.
 - .8 CAN/CGSB-37.29-M, Rubber-Asphalt Sealing Compound.

- .9 CGSB 37-GP-52M, Roofing and Waterproofing Membrane, Sheet Applied, Elastomeric.
- .10 CGSB 37-GP-54M, Roofing and Waterproofing Membrane, Sheet Applied, Flexible, Polyvinyl Chloride.
- .11 CGSB 37-GP-55M, Application of Sheet Applied Flexible Polyvinyl chloride Roofing Membrane.
- .12 CGSB 37-GP-56M, Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing.
- .13 CAN/CGSB-51.25, Thermal Insulation, Phenolic, Faced.
- .14 CAN/CGSB-51.26, Thermal Insulation, Urethane and Isocyanurate, Boards, Faced.
- .15 CAN/CGSB-51.32-M, Sheathing, Membrane, Breather Type.
- .16 CAN/CGSB-51.33-M, Vapour Barrier Sheet, Excluding Polyethylene, for Use in Building Construction.
- .17 CAN/CGSB-51.34-M, Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
- .18 CGSB 51-GP-38M, thermal Insulation, Cellular Glass, Pipe Covering, Block or Boards.
- .19 CAN/CGSB-93.1-M, Sheet, Aluminum Alloy, Prefinished, Residential

.5 Canadian Standards Association (CSA/CSA International, last revisions.

- .1 CAN/CSA-A123.1/A123.5, Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.
- .2 CSA A123.3, Asphalt Saturated Organic Roofing Felt.
- .3 CAN/CSA A123.4, Asphalt for Use in Construction of Built-Up Roof Coverings and Waterproofing Systems.
- .4 CSA A123.16, Asphalt-Coated Glass-Base Sheets.
- .5 CSA A123.17, Asphalt Glass Felt Used for Roofing and Waterproofing.
- .6 CAN3-A123.51-M, Asphalt Shingle Application on Roof Slopes 1:3 and Steeper.
- .7 CAN3-A123.52-M, Asphalt Shingle Application on Roof Slopes 1:6 to less than 1:3.
- .8 CSA A231.1, Precast Concrete Paving Slabs.
- .9 CAN/CSA-A247, Insulating Fibreboard.
- .10 CSA A284, Mineral Aggregate Thermal Roof Insulation.
- .11 CSA B111-, Wire Nails, Spikes and Staples.
- .12 CSA O121, Douglas Fir Plywood.
- .13 CSA O151, Canadian Softwood Plywood.

.6 Underwriters Laboratories of Canada (ULC), last revisions.

- .1 CAN/ULC-S701, Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- .2 CAN/ULC-S702, Thermal Insulation, Mineral Fibre, for Buildings.
- .3 CAN/ULC-S704, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards.
- .4 CAN/ULC-S706, Standard for Wood Fibre Insulating Boards for Buildings.

.7 Factory Mutual (FM Global)

- .1 FM Approvals - Roofing Products, last revision.

.8 Health Canada - Workplace Hazardous Materials Information System (WHMIS)

- .1 Material Safety Data sheet (MSDS)

1.4 QUALITY ASSURANCE

- .1 The roofing contractor shall be officially recognized as a roofing contractor member in good standing of the Association des Maîtres Couvresseurs du Québec and shall hold a valid roofing contractor licence issued by the Régie du Bâtiment du Québec (RBQ).
- .2 During repair and replacement work, the foreman shall have at least five (5) years of experience. Other workers shall have the qualification certificates required to perform the type of roofing work in question.
- .3 For replacement work on bituminous elastomeric and PVC roofs, the roofing contractor shall be authorized by the waterproofing material manufacturer to install its materials.
- .4 For snow removal work, each team of five (5) workers shall include at least one journeyman roofer. All other workers shall be journeymen or apprentice roofers.

1.5 FIRE SAFETY AND PROTECTION OF PREMISES

- .1 Comply with all requirements of the Guide de Prévention des Incendies published by the AMCO.
- .2 For work requiring the use of open flame torches (heat-bonded modified bitumen), take the following additional precautions:
 - .1 At the end of each work day, use a heat-seeking gun to detect any smouldering ignition source. Organize the worksite to ensure that workers remain present at least one hour after the completion of welding work. At the end of each working day, an employee of the roofing contractor with relevant expertise shall perform an inspection. At the end of each day, a written report, signed and dated, shall be submitted to CSC certifying that the inspection was performed in accordance with requirements.
 - .2 Never weld directly on wood; install flame retardant strips where applicable.
 - .3 Pay very careful attention to site cleanliness and ensure that a fire hose is on hand when possible, as well as a minimum one ULC-approved fire extinguisher, class A, B or C, filled and in perfect working condition throughout installation work, within six (6) metres of each torch.
 - .4 Comply with safety instructions in sealant product data sheets.
 - .5 Do not place torches near flammable or combustible products.
 - .6 Never allow torch flame to penetrate locations where it is no longer visible or easily controlled.
- .3 Protect adjacent structures from damage, especially at material hoisting points.
- .4 Do not overload structural members.
- .5 For flat roofs, install plywood pathways on top of finished work to accommodate foot traffic and movement of materials. Secure all boards to prevent dislocation by wind.
- .6 During snow removal work, protect buildings and facilities at snow dumping site using plywood sheets mounted on a wooden frame and arranged to prevent any snow or ice removed from roof from damaging the building. Protection methods must be submitted, reviewed and approved by CSC prior to the commencement of work.

1.6 DOCUMENT/SAMPLE SUBMITTALS

- .1 Upon request by CSC, submit a single copy of the most recent data sheets for the required roofing components. Data sheets shall provide information concerning the following:
 - .1 material/equipment characteristics and physical properties
 - .2 performance criteria
 - .3 overall dimensions
 - .4 installation instructions
 - .5 constraints
 - .6 manufacturer's instructions for work requiring special handling, installation or cleaning methods.
- .2 Submit the required documents and samples to the CSC representative for approval promptly and in orderly sequence to avoid delaying the work. Failure to submit in ample time is not considered sufficient reason for extension of the contract time, and no claim for extension by reason of such default shall be allowed.
- .3 The review of submittals does not, in any way, absolve the Contractor of its responsibility to make submissions compliant with requirements in the contract documents.
- .4 Reviewed and accepted samples will become the standard of workmanship against which installed work will be verified.
- .5 Review the documents and samples before submitting them for approval. The submittals shall be stamped, signed and dated by the Contractor which, thereby, confirms that the necessary requirements have been determined and verified.
- .6 Submit the relevant reference in the roofing specifications published by the AMCO applicable to the work in question.

- .7 Do not proceed with work affected by submittal until review of all submissions is complete.
- .8 Upon request by CSC, submit a sketch of temporary protection devices required (protection in dumping areas, temporary guard rails, roof plan and dumping zones, anchoring method and emergency cable system for safety harnesses, etc.).
- .9 When ice removal work is required, submit a description of the proposed method to CSC. In general, ice removal work shall be requested expressly by CSC. Ice removal methods shall be submitted, reviewed and approved by CSC prior to the commencement of work.
- .10 Upon request by CSC, submit a copy of the material safety data sheets set out in the Workplace Hazardous Materials Information System (WHMIS). Material safety data sheets concerning the required materials shall comply with the requirements of Health Canada. Material safety data sheets shall specify the VOC content of products containing VOCs.
- .11 Upon request by CSC, submit the required samples as provided below:
- .1 Submit a single sample of each material required to perform the work specified.
 - .2 Submit samples minimum 300 mm long (300 x 300 mm for sheet materials), 2.2 kilograms for granular materials and full-size samples for asphalt shingles, slabs or other similar manufactured materials.
 - .3 Provide samples of all finishes and colours available in the standard range of finishes and colours available from manufacturer for materials such as asphalt shingles, coloured mineral granules, prefinished sheet metal, etc.
- .12 Upon request by CSC, submit the required shop drawings as provided below:
- .1 For multi-layered roofs, in elastomeric bitumen or PVC, shop drawings shall include detail drawings of flashings, control joints and tapered insulation boards where applicable. According to the work performed, specify any other details that should appear in the drawings. Drawings must indicate the layout of tapered insulation boards. Take instrument readings of actual slopes required before preparing shop drawings.
 - .2 In the case of sheet metal roofs, drawings shall indicate the layout of metal sheets and joints, the type and location of fasteners and any special shaped components, as well as sheet placement details in relation to the structure.
- .13 Quality Assurance:
- .1 Submit documentary evidence that the roofing contractor is a member in good standing of the Association des Maîtres Couvreur du Québec and proof of liability insurance.
 - .2 Submit a written statement to CSC certifying that all materials used to perform the work in question are mutually compatible and in compliance with the manufacturer's instructions..
 - .3 Submit a certificate from each manufacturer certifying that the materials used to perform the work specified meet or exceed the established requirements.
 - .4 The materials manufacturer must be CCMC approved and able to provide a certification number.

1.7 INSTALLATION CONDITIONS

- .1 Shingles and membranes shall be installed only when air and surface temperatures fall within the limits prescribed by the manufacturer or when winds produce an equivalent cooling effect.
- .2 Decks shall be dry, and free of snow and ice. Use only dry materials installed only when weather conditions will not cause moisture to penetrate into the waterproofing system.

1.8 WARRANTY

- .1 For replacement work covered by this Section, the 12-month warranty period provided in the General Conditions is extended to 60 months.
- .2 For repair work covered by this section, the 12-month warranty period provided in the General Conditions shall apply to the repair work only. Repair work must not interfere with any other warranties in force.

- .3 For snow removal work, the Contractor shall immediately repair any damage caused to waterproofing systems and warranty such repairs as provided in subsection 1.8.2 above.
- .4 When requested on the tender form, provide the warranty required by AMCQ. In such cases, CSC will commission the services of an independent laboratory at its expense to ensure ongoing inspections.

PART 2 PRODUCTS**2.1 PRIOR TESTING**

- .1 The roofing contractor shall gather samples of the roofs specified in this section to determine the composition of waterproofing systems requiring replacement and/or repair.
 - .1 As needed, CSC will retain the services of a specialized laboratory to verify samples gathered and determine their thickness, weight, calibre or any other physical characteristic that cannot be determined visually.
 - .2 Gather all samples required to establish all existing conditions, including the thickness of tapered insulation boards.
 - .3 Check all slopes with instruments and notify CSC of any abnormality, such as structural breakdown, localized sagging points with poor drainage, etc.
 - .4 For separate flat roofs or simple one-time repairs, CSC may have the moisture content of the existing waterproofing system to be retained measured at its expense, by an independent laboratory using a nuclear moisture-density gauge.
- .2 In general, execute roof replacement and repair work using the same materials as existing materials unless such materials are no longer available or no longer permitted by current AMCQ standards. In such cases, use only AMCQ approved and recommended materials.
- .3 Obtain approvals of all materials before submitting a final estimate of material costs.
- .4 Materials used shall meet the minimal standards specified below.

2.2 APPLICABLE STANDARDS

- .1 Asphalt shingles
 - .1 Standard organic felt asphalt shingles:
 - .1 to CSA A123.1.
 - .2 such as Rempart shingles by BP or another acceptable alternative, to referenced standard.
 - .2 Fibre-glass asphalt shingles:
 - .1 to CSA A123.5.
 - .2 such as Dakota shingles by BP or another acceptable alternative, to referenced standard.
 - .3 Self-adhesive eaves membrane:
 - .1 high-temperature elastomeric bitumen, non-slip, minimum 1.0 mm thick.
 - .2 such as Lastobond Shield HT by Soprema or another acceptable alternative.
 - .4 Sheathing paper:
 - .1 to CAN/CGSB-51.32.
 - .2 such as Vaporex (RG040) by BP or another acceptable alternative, to referenced standard.
 - .5 Roofing felt:
 - .1 to CSA A123.3.
 - .2 such as #15 non-perforated CSA Classic (RF403) felt by BP or another acceptable alternative, to referenced standard.
 - .6 Mastic cement:
 - .1 to CAN/CGSB-37.5.
 - .2 such as Bakor 810-21 or another acceptable alternative to referenced standard.
 - .7 Sheet metal drip edge:
 - .1 steel or aluminum, gauge and finish to match existing.
 - .8 Nails:

- .1 to CSA B111.
- .2 in galvanized steel of sufficient length to penetrate minimum 19 mm into roof deck.
- .9 Staples:
 - .1 chisel point.
 - .2 in galvanized steel, 1.5 mm thick, minimum 19 mm wide, of sufficient length to penetrate minimum 20 mm into roof deck.
- .2 Multilayer roofs in elastomeric bitumen, PVC and EPDM:
 - .1 Sheathing board:
 - .1 Gypsum sheathing board:
 - .1 to ASTM C1396/C1396M.
 - .2 such as Gyplap boards by CGC or another acceptable alternative to the referenced standard.
 - .2 Glass-mat gypsum board:
 - .1 to ASTM C1177/C1177M.
 - .2 such as Dens-Deck boards by Georgia-Pacific or another acceptable alternative, to referenced standard.
 - .3 Plywood:
 - .1 to CSA O121 or CSA O151.
 - .2 "exterior cladding" type.
 - .4 Fasteners for fixing sheathing to steel support:
 - .1 Screws and washers to ASTM C1002.
 - .2 Membrane and vapour barrier materials:
 - .1 Bituminous primer:
 - .1 to CGSB 37-GP-9Ma.
 - .2 such as Bakor 910-01 or another acceptable alternative, to referenced standard.
 - .2 Organic roofing felt:
 - .1 to CAN/CSA A123.3, number 15.
 - .2 such as felt #15, perforated CSA (RF404) by BP or another acceptable alternative, to referenced standard.
 - .3 Glass-fibre felt :
 - .1 to CSA A123.17.
 - .2 such as Glass Type IV felt by Iko or another acceptable alternative, to referenced standard.
 - .4 Base sheets in glass fibre, asphalt treated and coated:
 - .1 to CSA A123.16.
 - .2 such as No 25 Glass Base sheets by Iko or another acceptable alternative, to referenced standard.
 - .5 Asphalt coated vapour barrier sheets, 2-ply:
 - .1 to CAN/CGSB-51.33 and fire retardant adhesive.
 - .2 Such as Thermaperm Plus vapour barrier and Duro-Perm adhesive by Groupe Bédard or another acceptable alternative, to referenced standard.
 - .6 Roofing asphalt:
 - .1 to CSA A123.4, type recommended by AMCQ, according to structural slope.
 - .7 Mastic cement:
 - .1 to CAN/CGSB-37.5.
 - .2 such as Bakor 810-21 or another acceptable alternative to referenced standard.

- .8 Rubber-bitumen mastic:
 - .1 to CAN/CGSB-37.29.
 - .2 such as Sopramastic by Soprema or another acceptable alternative, to referenced standard.
- .9 Elastomeric bitumen membranes:
 - .1 to CGSB 37-GP-56M, type and class to match existing membranes.
 - .2 such as membranes manufactured by Soprema or another acceptable alternative, to referenced standard.
- .10 EPDM membrane (ethylene propylene diene monomer):
 - .1 to CGSB 37-GP-52M, type and thickness to match existing membranes.
 - .2 such as membranes manufactured by Carlisle, Firestone or another acceptable alternative, to referenced standard.
- .11 Flexible PVC membrane:
 - .1 to CGSB 37-GP-54M, type and thickness to match existing membranes and UV-resistant.
 - .2 such as membranes manufactured by Sarnafil or another acceptable alternative, to referenced standard.
- .3 Insulation:
 - .1 Extruded polystyrene insulation (XPI):
 - .1 to CAN/ULC-S701.
 - .2 such as Roofmate insulation by Dow or another acceptable alternative, to referenced standard.
 - .2 Mineral fibre insulation, unfaced:
 - .1 to ASTM C726.
 - .2 such as Fibre Glass roof insulation by Johns Manville or another acceptable alternative, to referenced standard.
 - .3 Isocyanurate insulation, faced:
 - .1 to CAN/ULC-S704.
 - .2 such as ENERGY 3 roof insulation by Johns Manville or another acceptable alternative, to referenced standard.
 - .4 Expanded perlite roof insulation, with mineral aggregate:
 - .1 to ASTM C728.
 - .2 such as Fesco Board HD roof insulation by Johns Manville or another acceptable alternative, to referenced standard.
 - .5 Fibre board insulation, faced:
 - .1 to CAN/ULC-S706.
 - .2 such as Esgard natural coated boards manufactured by BP or another acceptable alternative, to referenced standard.
 - .6 Fibre-coated fibre boards:
 - .1 to CAN/ULC-S706.
 - .2 such as Esgard natural board manufactured by BP or another acceptable alternative, to referenced standard.
 - .7 Insulation deck fasteners: to Factory Mutual 4470 for corrosion and wind resistance.
- .4 Ballast for protected membrane systems:
 - .1 Stone dust and river stone: to ASTM D1863.
 - .2 Pre-cast concrete slabs: to CSA A231.1.
- .3 Batten clad galvanized steel and prefinished profiled sheet metal roofing:

- .1 Sheet metal:
 - .1 Zinc-coated sheet metal: to ASTM A653/A653M, thickness and zinc-coating to match existing sheet metal.
 - .2 Pre-finished sheet metal: colour and finish (Series 10000, Barrier or 8000) to match existing sheet metal.
 - .3 Pre-finished aluminum sheet metal: to CAN/CGSB-93.1-M, thickness and finish to match existing sheet metal.
 - .4 Mechanical fasteners: to match existing.
- .2 Other accessories: same as for shingled roofs.

2.2 SUMMARY OF APPLICABLE STANDARDS

Section #	Use	Related Standard	Recommended Product
Asphalt shingle roofs:			
2.2.1.1	Standard organic felt asphalt shingles:	CSA A123.1	such as Rempart shingles by BP or another acceptable alternative, to referenced standard.
2.2.1.2	Fibre-glass asphalt shingles:	CSA A123.5	such as Dakota shingles by BP or another acceptable alternative, to referenced standard.
2.2.1.3	Self-adhesive underlayment:		such as Lastobond Shield HT by Soprema or another acceptable alternative.
2.2.1.4	Sheathing paper:	CAN/CGSB-51.32	such as Vaporex (RG040) by BP or another acceptable alternative, to referenced standard.
2.2.1.5	Roofing felt:	CSA A123.3	such as #15 non-perforated CSA Classic (RF403) felt by BP or another acceptable alternative, to referenced standard.
2.2.1.6	Mastic cement:	CAN/CGSB-37.5	such as Bakor 810-21 or another acceptable alternative to referenced standard.
2.2.1.7	Sheet metal gutters:		steel or aluminum, calibre and finish to match existing.
2.2.1.8	Nails:	CSA B111	in galvanized steel of sufficient length to penetrate minimum 19 mm into roof deck.
2.2.1.9	Staples:		in galvanized steel, 1.5 mm thick, minimum 19 mm wide, of sufficient length to penetrate at least 20 mm into roof deck.
Multilayer roofs in elastomeric bitumen, PVC and EPDM:			
2.2.2.1.1	Gypsum sheathing board:	ASTM C1396/C1396 M	such as Gyplap boards by CGC or another acceptable alternative, to referenced standard, sized 1219 x 2438 x 16mm thick.
2.2.2.1.2	Glass-mat gypsum board:	to ASTM C1177/C1177 M	such as Dens-Deck boards by Georgia-Pacific or another acceptable alternative, to referenced standard, sized 1219 x 2438 x 16mm thick.
2.2.2.1.3	Plywood:	CSA O121 or CSA O151	"exterior cladding" type sized 1219 x 2438 x 19mm thick.
2.2.2.1.4	Fasteners for fixing sheathing to steel support:	ASTM C1002	According to existing composition of roof and nature of materials.
2.2.2.2.1	Bituminous primer :	CGSB 37-GP-9Ma	such as Bakor 910-01 or another acceptable alternative, to referenced standard
2.2.2.2.2	Organic roofing felt::	CAN/CSA A123.3	such as felt #15, perforated CSA (RF404) by BP or another acceptable alternative, to referenced standard
2.2.2.2.3	Glass-fibre felt:	CSA A123.17	such as Glass Type IV felt by Iko or another acceptable alternative, to referenced standard
2.2.2.2.4	Base sheets in glass fibre, asphalt treated and coated:	CSA A123.16	such as No 25 Glass Base sheets by Iko or another acceptable alternative, to referenced standard
2.2.2.2.5	Asphalt coated vapour barrier sheets, 2-ply:	CAN/CGSB-51.33	such as Thermaperm Plus vapour barrier and Duro-Perm adhesive by Groupe Bédard or another acceptable alternative, to referenced standard.
2.2.2.2.6	Roofing asphalt:	CSA A123.4	
2.2.2.2.7	Mastic cement:	CAN/CGSB-37.5	such as Bakor 810-21 or another acceptable alternative, to referenced standard
2.2.2.2.8	Rubber-bitumen mastic:	CAN/CGSB-37.29	such as Sopramastic de Soprema or another acceptable alternative, to referenced standard
2.2.2.2.9	Elastomeric bitumen membranes:	CGSB 37-GP-56M	such as membranes manufactured by Soprema or another acceptable alternative, to referenced standard, thickness 3mm
2.2.2.2.10	EPDM membrane (ethylene propylene diene monomer):	CGSB 37-GP-52M	such as membranes manufactured by Carlisle, Firestone or another acceptable alternative, to referenced standard,

			thickness 1.52mm
2.2.2.2.11	Flexible PVC membrane:	CGSB 37-GP-54M	such as membranes manufactured by Sarnafil or another acceptable alternative, to referenced standard, thickness 2mm
2.2.2.3.1	Extruded polystyrene insulation (XPI):	CAN/ULC-S701	such as Roofmate insulation by Dow or another acceptable alternative, to referenced standard, thickness 100mm
2.2.2.3.2	Mineral fibre insulation, unfaced:	ASTM C726	such as Fibre Glass roof insulation by Johns Manville or another acceptable alternative, to referenced standard, thickness 100mm
2.2.2.3.3	Isocyanurate faced insulation:	CAN/ULC-S704	such as ENERGY 3 roof insulation by Johns Manville or another acceptable alternative, to referenced standard, thickness 100mm
2.2.2.3.4	Expanded perlite roof insulation, with mineral aggregate	ASTM C728	such as Fesco Board HD roof insulation by Johns Manville or another acceptable alternative, to referenced standard, thickness 25mm.
2.2.2.3.5	Fibre board insulation with faced surface:	CAN/ULC-S706	such as Esgard coated boards manufactured by BP or another acceptable alternative, to referenced standard, thickness 25mm
2.2.2.3.6	Fibre-coated fibre boards:	CAN/ULC-S706	such as Esgard natural board manufactured by BP or another acceptable alternative, to referenced standard, thickness 25 mm.
2.2.2.3.7	Insulation deck fasteners	Factory Mutual standard 4470	
2.2.2.4.1	Stone dust and river stone:	ASTM D1863	
2.2.2.4.2	Pre-cast concrete slabs:	CSA A231.1	
Batten clad galvanized steel and prefinished profiled sheet metal roofing:			
2.2.3.1.1	Zinc-coated sheet metal:	ASTM A653/A653M	to match existing sheet metal
2.2.3.1.2	Pre-finished sheet metal:	Colour and finish (series 10000, Barrier or 8000)	similar to 'CL 7040' by Vicwest (verify at site)
2.2.3.1.3	Pre-finished aluminum sheet metal:	CAN/CGSB-93.1-M	thickness and finish to match existing sheet metal
2.2.3.1.4	Mechanical fasteners:		to match existing roof system and model

PART 3 EXECUTION**3.1 GENERAL FOR ALL REPAIR AND REPLACEMENT WORK**

- .1 Execute all work in accordance with the Roofing Specifications published by the Association des Maîtres Couvreur du Québec (AMCQ).
- .2 Execute work as prescribed by the AMCQ roofing specifications applicable to the work specified.

3.2 DEMOLITION OF EXISTING WATERPROOFING SYSTEMS

- .1 For full replacement work, demolish waterproofing systems gradually as work progresses to ensure that demolished section of roof is sealed in a single day.
- .2 Demolish waterproofing systems to roof decking or structural frame except where CSC specifies otherwise after examining samples.
 - .1 For shingled roofs, remove nails or drive in broken nails flush with surface.
 - .2 As applicable, remove and replace any areas of deck damaged by mushrooms or insects in accordance with instructions issued on site by CSC.
 - .3 Remove all demolition materials off-site except reusable materials, subject to approval by CSC, such as roof gravel. Recovered materials shall not overload decking.
 - .4 Comply with the provisions of Section 1.11 Waste Management and Disposal.
- .3 Once decking is exposed, inspect the condition of structural members, parapets, control joints, roof drains, plumbing vents, ventilation ducts and other components in cooperation with CSC to determine whether the work may proceed.
 - .1 Perform all corrective action requested by CSC.
 - .2 Ensure that:
 - .1 roof deck is solid, level, even, dry, free of snow, ice and rust, and free of any dust and debris; calcium or de-icing salt shall not be used for ice and snow removal;
 - .2 curb walls and mounting assemblies are reusable;
 - .3 recovered roof drains are of appropriate height.

3.3 PROTECTIVE MEASURES

- .1 Protect adjacent walls and structures at locations where equipment and materials are to be hoisted or used.
- .2 Provide and install safety signs and barriers and maintain in good condition until the completion of work.
- .3 Immediately clean up any bitumen drops or spots.
- .4 Ensure that rainwater drains to outer edges of decking, as far away as possible from the fronts of buildings, until drains or funnels have been installed and connected.
- .5 Protect decking from any damage likely to result from traffic, among other things. Take other precautions deemed necessary by CSC.
- .6 Provide plywood walkways on top of installed materials to allow for the conveyance of persons and materials. Secure boards to prevent uplift caused by wind.
- .7 At the end of each working day or following work stoppages caused by poor weather, protect finished surfaces and materials removed from storage.
- .8 Install insulation immediately to prevent condensation from forming under vapour barrier.
- .9 When metal connectors are used, they and metal support elements must be galvanized or treated against corrosion.

3.4 ASPHALT HEATING

- .1 For roofs requiring hot asphalt, following the procedures specified below:
 - .1 Do not use direct firing materials.
 - .2 Heat asphalt in a kettle or tank truck until temperature, at the point of application, reaches the equiviscosity range, i.e., $\pm 15^{\circ}$ C of the equiviscosity temperature recommended by the asphalt manufacturer and specified on the shipping label specified in Section 1.10.5.6 above.
 - .3 When air temperatures are below freezing (0° C), use heat-retaining materials and conveyors to reduce heat loss to the extent possible.
 - .4 Asphalt shipped in tank trucks shall not be heated to a temperature higher than the maximum blowing temperature specified on the shipping label specified in section 1.10.5.6 above.
 - .5 Asphalt may be heated in asphalt kettles to temperatures higher than the maximum blowing temperature provided the material is applied within the four following hours.
 - .6 Kettles and tank trucks shall be equipped with thermometers in good working order.
- .2 Place kettles in a safe location outside building. Arrange kettles according to prevailing wind direction and the presence of building air ventilators and air treatment devices to prevent any smoke or gas from seeping into surrounding occupied buildings.
- .3 If wind direction could cause smoke and gas problems, move kettles as instructed by CSC.
- .4 Ensure that kettles are monitored constantly while in operation; kettles shall be equipped with a metal lid capable of smothering any flames in the event of a fire. Also provide appropriate extinguishers.
- .5 Clean kettles and other equipment frequently to ensure their effective operation. Regularly remove charred asphalt.

3.5 EQUIPMENT

- .1 To spread bitumen, use only glass fibre mops. Do not leave used mops lying unused on roof; store mops away from building and from all combustible materials.
- .2 Use torch types recommended by elastomeric bitumen membrane manufacturer.

3.6 ASPHALT SHINGLE ROOFS

- .1 Install eaves membrane (2.2.1.3) to AMCO standards. Cover remainder of roof surface with #15 felt, non-perforated (2.2.1.5).
- .2 Install drip (2.2.1.7) along roof edge to form a 12mm overhang and flange extending minimum 50 mm on to roof deck. Nail drip edge to decking at 400 mm oc.
- .3 Where vertical surfaces meet, lap lowest step flashing (base flashing) between singles.
- .4 Install asphalt shingles (2.2.1.1 or 2.2.1.2) on roofs with a 1:3 slope or higher, to CAN3-A123.51 and AMCO requirements.
- .5 Install asphalt shingles (2.2.1.1 or 2.2.1.2) on roofs with a slope of 1:6 slope to less than 1:3 to CAN3-A123.52 and AMCO requirements.
- .6 For occasional repairs, remove and replace defective shingles according to the method prescribed by the AMCO.

3.7 MULTILAYER ROOFS

- .1 Inspect decking, perform preparatory work and install roof according to the applicable specifications of the AMCO Roofing Specifications manual.
- .2 Unless otherwise specified by CSC, execute multi-layer roof to match existing materials and assemblies.
- .3 As applicable, mechanically fasten plasterboards (2.2.2.1.1 or 2.2.2.1.2) or plywood (2.2.2.1.3) to steel decking using screws and washers (2.2.2.1.4) sunk in decking at 400 mm oc in both directions. Install sheathing length-wise, perpendicular to deck ribs, to ensure that end joints are staggered and in full contact with ribs.

- .4 As applicable, laminate asphalt-coated vapour barrier (2.2.2.2.5) using a solvent-based adhesive according to the manufacturer's instructions.
- .5 As applicable, prime the decking with a bituminous primer (2.2.2.2.1) and fabricate vapour barrier by embedding two (2) layers of felt (2.2.2.2.2) in hot bitumen (2.2.2.2.6) to AMCQ standards.
- .6 On wooden decking, firmly fasten felt base sheet (2.2.2.2.2) using roofing nails set at 150 mm oc along joints, and at 300 mm oc on sheets. Embed two layers of felt in hot bitumen as specified above.
- .7 When insulation (2.2.3) is required, fasten to vapour barrier using adhesive recommended by the insulation manufacturer, hot asphalt or mechanical fasteners, to AMCQ standards. Arrange boards lengthwise in staggered, parallel rows along the slope; ensure solid interconnection of boards. At end of a row, trim boards to required length.
- .8 When tapered insulation is required, install board under or on thermal insulation and cement or fasten in the same manner as thermal insulation. Offset joints between layers. Install tapered insulation boards as shown in approved shop drawings.
- .9 As applicable, install liner or sheathing boards (2.2.2.3.4, .5 or .6) on insulation and cement or mechanically fasten in place to AMCQ standards. Offset boards in parallel rows.
- .10 Membrane installation
 - .1 Beginning at lowest point, work perpendicular to slope line; embed roofing felt plies (2.2.2.2.2) in hot asphalt (2.2.2.2.6), on top of insulation or liner boards.
 - .2 Work to AMCQ standards for the type of membrane required (4 ply or 2 + 3 plies).
- .11 At the end of each working day, seal edges of unfinished membrane. Remove sealing device before resuming work.
- .12 Pour an even layer of hot asphalt (2.2.2.2.6) at a rate of 3 kg/m²; while asphalt is still hot, spread layer of protective gravel at a rate of 20 kg/m².
- .13 When double pouring is required, sweep gravel from surface, pour hot asphalt at a rate of 3 kg/m² and spread gravel on top.
- .14 Apply hot bitumen to surfaces where furring strips are to be installed and positive contact of strips by hand. Trim furring strips to alter angle of back and base to fit tightly to wall and roof for wall-roof angles greater or less than 90 degrees.
- .15 Create bituminous flashings using 4 plies of felt strips alternating with cotton strips, laminated together and against wall with asphalt. For exterior walls, raise flashing-membrane against interior face and ridge of parapet to exterior face. For interior walls, execute base flashing to match original. Nails must not be installed within 200 mm above top of cant strip.
- .16 Ensure that entire surface is free of wrinkles, bulges or warping. Apply bitumen and install gravel only after felt and membrane flashings have been installed.
- .17 For protected membrane systems, install membrane directly on decking without vapour barrier. Fabricate membrane as specified above and to AMCQ standards. Once asphalt has cooled, install insulation boards independently while offsetting joints. Apply non-adhesive webbing above insulation. Overlap edges minimum 300 mm. Trim webbing around drains, vents and other roof extrusions, and provide sufficient allowance to extend below metal flashings.
- .18 Spread stone ballast (2.2.2.4.1) as soon as possible after installing insulation at a minimum rate of 75 kg/m² or to AMCQ standards. Apply ballast in even layers across entire surface.
- .19 For occasional repairs, cut out existing layers of felt and fit repair layers to ensure continuous seal.

3.8 MODIFIED BITUMEN ROOFING

- .1 Inspect decking, execute preparatory work and install roofing in accordance with the applicable specifications of the AMCQ Roofing Specifications manual.

- .2 Unless otherwise specified by CSC, fabricate modified bitumen roofing (2.2.2.9) using materials and assemblies to match existing.
- .3 As applicable, mechanically fasten plasterboards to steel decking using screws driven into surface of decking ribs at 400 mm oc in both directions. Set sheathing lengthwise, perpendicular to decking ribs, to ensure that end joints are offset and in full contact with ribs.
- .4 As applicable, fabricate vapour barrier to match existing. Vapour barrier may be a modified bitumen membrane or two plies of felt cemented to asphalt. Follow AMCQ standards. Modified bitumen membranes may be self-adhesive or applied using hot asphalt or cement. Apply primer to base surfaces at all times.
- .5 As applicable, install slope insulation, thermal insulation and membrane decking boards to match existing work. Comply with AMCQ requirements. Membrane decking boards may have a factory-laminated base membrane.
- .6 For decking boards without a laminated base membrane, install base layer according to AMCQ standards. When base layer is installed using hot asphalt, provide retaining bars around edges in accordance with AMCQ requirements.
- .7 When base layer is welded, unroll and torch weld to decking, taking care to avoid causing membrane, membrane reinforcements or decking to burn. Overlap membrane sheets minimum 75 mm and 150 mm at sides and ends respectively. Base coat to be free of bulges, folds and warping.
- .8 Install copper drains in base layer to AMCQ requirements. Prime drain flange and reinforce with membrane at edges.
- .9 Apply finish coat to AMCQ standards and as follows. Begin at the lowest point, working perpendicular to slope; unroll finish layer membrane and re-roll at both ends. Fasten finish membrane to base layer using torch weld, asphalt or adhesive, to match original waterproofing system, to AMCQ requirements. Overlap membrane sheets minimum 75 mm and 150 mm at sides and ends respectively. Offset finish layer joints minimum 300 mm in relation to base layer. Finish layer to be free of bulges, folds or warping.
- .10 Fabricate membrane flashings using a self-adhesive base layer installed to AMCQ requirements. Complete installation of membrane flashing strips on base layer before installing finish layer. Use membrane strips 1 m wide. Comply with AMCQ sheathing and lapping requirements. Work to be free of sags, bulges, warping and folds.
- .11 Install flashings around vents and other flashings around roof extrusions and seal to membrane in accordance with AMCQ requirements.
- .12 Where a protected membrane is required, install membrane directly on decking without vapour barrier using same method as existing work and to AMCQ requirements. On completed membrane, install insulation boards independently in parallel rows, offsetting end joints. Apply webbing on insulation independently, with edges overlapping minimum 300 mm. Trim webbing around drains, vents, ducts and other roof extrusions, and provide sufficient allowance to extend below metal flashings.
- .13 Install stone or pre-cast concrete slab ballast as described for multilayer roofs.
- .14 If pathways are required, fabricate from one layer of additional finish membrane, different in colour than the primary membrane, and weld to finish membrane in accordance with AMCQ standards.
- .15 For occasional repairs, remove gravel from existing finish membrane to 600 mm around repairs. Sub-layer to be torch-welded to the gravel-free membrane and to cover 300 mm around edges. Remove gravel from membrane as specified by manufacturer's instructions, AMCQ standards and avoid charring reinforcements.

3.9 PVC ROOFS

- .1 Inspect decking, execute preparatory work and install roof according to the applicable specifications of the AMCQ Roofing Specifications manual.

- .2 Unless otherwise specified by CSC, execute PVC roofing (2.2.2.2.11) to match existing materials and assemblies.
- .3 As applicable, mechanically fasten plasterboards to steel decking using screws installed in deck ribs at 400 mm oc in both directions. Install sheathing lengthwise, perpendicular to deck ribs, ensuring that end joints are staggered and in full contact with ribs.
- .4 Install vapour barriers, tapered insulation boards, thermal insulation and membrane decking panels as required to match existing assembly. Comply with AMCQ requirements and above specifications for multi-layer and modified bitumen roofing.
- .5 Install PVC membrane and fasten by full adhesion, mechanical fasteners or independently, as well as flashings, to the specifications of CGSB 37-GP-55M, membrane manufacturer's written instructions and AMCQ requirements.
- .6 Install PVC membrane flashings in accordance with the manufacturer's written instructions. Install drain pans, vent pipe sleeves and flashings for other extrusions, and seal to membrane as shown in detail drawings and in accordance with manufacturer's recommendations and AMCQ requirements.
- .7 Where a protected membrane is required, install PVC membrane directly on decking without vapour barrier using same method as existing work and to AMCQ requirements. On completed membrane, install insulation independently in parallel rows, offsetting end joints.
- .8 Apply webbing to insulation independently; edges must overlap minimum 300 mm. Trim webbing around drains, vents/ducts and other roof extrusions, and provide sufficient allowance to extend below metal flashings.
- .9 Install stone or pre-cast concrete slab ballast as described for multilayer roofs.
- .10 For occasional repairs, cut out damaged sections and replace with new membrane to overlap all edges of existing membrane minimum 150 mm. Clean existing membrane and affix patches as recommended by membrane manufacturer.

3.10 EPDM ROOFS

- .1 Inspect decking, execute preparatory work and install roof according to the applicable specifications of the AMCQ Roofing Specifications manual.
- .2 Unless otherwise specified by CSC, execute EPDM roofing (2.2.2.2.10) to match existing materials and assemblies.
- .3 As applicable, mechanically fasten plasterboards to steel decking using screws fastened to decking ribs at 400 mm oc in both directions. Install covering lengthwise, perpendicular to the decking ribs, ensuring that end joints are staggered and in full contact with frame.
- .4 Install vapour barriers, tapered insulation boards, thermal insulation and membrane decking panels as required to match existing assembly. Comply with AMCQ requirements and above specifications for multi-layer and modified bitumen roofing.
- .5 Affix EPDM membrane by full adhesion, mechanical fasteners or independently with stone ballast, and flashings, to membrane manufacturer's written instructions and AMCQ requirements.
- .6 Set membrane sheets and allow to rest for 1/2 hour prior to affixing them with adhesive or mechanical fasteners. If the original system was fastened using edge retaining bars, follow same installation method. Install EPDM membrane flashings according to manufacturer's written instructions.
- .7 Install drain pans, vent pipe sleeves and flashings on other extrusions, and seal to membrane as shown in detail drawings and in accordance with manufacturer's recommendations and AMCQ requirements.
- .8 Where a protected membrane is required, install EPDM membrane directly to decking without vapour barrier using same method as existing work and to AMCQ requirements. On completed membrane, install insulation independently in parallel rows, offsetting end joints. Apply webbing to insulation independently; edges must overlap minimum 300 mm. Trim webbing around drains, vents, ducts and other roof extrusions, and provide sufficient allowance to extend below metal flashings.
- .9 Install stone ballast as described for multilayer roofs.

- .10 For occasional repairs cut out damaged sections and replace with new membrane, overlapping all edges of existing membrane minimum 150 mm. Clean existing membrane and affix patches as recommended by membrane manufacturer.

3.11 BATTEN CLAD ROOFING IN GALVANIZED STEEL

- .1 Inspect decking, execute preparatory work and install roof according to the applicable specifications of the AMCQ Roofing Specifications manual.
- .2 Unless otherwise specified by CSC, execute batten roofing in galvanized steel (2.2.3.1.1) to match existing materials and assemblies.
- .3 Fabrication :
- .1 Fabricate sections maximum 2400 in length.
 - .2 Provide required expansion clearance at joints.
 - .3 Execute fold 12 mm wide at bottom edge of exposed face.
 - .4 Assemble tabs and seal joints.
 - .5 Fabricate components square, level and with precision to the dimensions specified, free of any deformity or other flaw likely to alter their appearance or performance.
- .4 Conceal fasteners, except as approved otherwise by CSC prior to installation.
- .5 Provide installation layer (2.2.1.5) under sheet metal. Fasten firmly and lap joints minimum 100 mm.
- .6 Position interlocking board (2.2.1.4) on bituminous felt installation layer to prevent any adherence between board or sheet metal and felt. Fasten with minimal number of fasteners and lap joints minimum 50 mm in direction of runoff. If a self-adhesive membrane is required, apply in place of installation layer and interlocking boards; install membrane in accordance with membrane manufacturer's standards.
- .7 Install roofing sheet metal using fastening tabs spaced 300 mm oc. Fasten each tab with two fasteners, and fold back tab cover over fasteners.
- .8 Offset or align cross joints of adjoining sheets to match existing roof.
- .9 Install flashings for roof extrusions of material with characteristics identical to roofing sheets, and ensure water-tightness of extrusions.
- .10 Position joints in direction of runoff and seal.
- .11 Execute batten clad roof in galvanized sheet steel to match existing roof. Maintain spacing between battens and sheet length to match original assembly.
- .1 Edges of sheets shall be raised to extend 12 mm beyond wooden battens. Execute 12 mm flap at right angles to battens.
 - .2 To execute cross joints, fold 20 mm flap toward reverse side at bottom of each sheet and 50 mm flap toward right side at top of sheets. Trim flaps at cross joints in each corner, 25 mm from battens, to form tabs.
 - .3 Stable 20 mm flap executed at bottom of each sheet to 50 mm flap executed at top of previous sheet installed.
 - .4 Install metal roofing sheets beginning at eaves.
 - .5 Install joint covers on wood battens, staple edges of joint covers to edge of adjacent metal sheets and hammer joints on sides of furring strip.
 - .6 Cover end of furring strips at section folded and stapled to joint cover extension and to vertical tabs of metal sheets.
 - .7 At intersection of roof slope and edge cleats or ridgeboards, lift edge of roofing sheets against battens and complete with 12-mm strip on top of battens.
 - .8 Install joint covers on cleat and ridgeboard battens.
 - .9 Fabricate valleys using sheets maximum 3 m long. Lap joints 150 mm in direction of runoff.
 - .10 Extend valley sheets minimum 150 mm under roofing sheets.
 - .11 In line with valleys, execute double fold in valley sheets and roof sheets.

- .12 If eaves are not equipped with gutters, staple sheets to edge strip. Extend edge strip by 100 mm width under roofing sheets, and fasten with nails spaced 100 mm oc, 25 mm from top edge. If eaves are equipped with gutters, fasten roof sheets to gutters without tension.
- .13 Execute other details to match existing details in accordance with AMCO requirements.

- .12 In general, metal must be factory press-cut. All cuts performed on site shall be executed using shears; grinders and abrasive blades are prohibited.
- .13 For occasional repairs, dismantle structures carefully and replace defective components.
- .14 Clean work and premises thoroughly to CSC's satisfaction. Do not leave scrap metal on roofs.

3.12 PROFILED METAL ROOFS

- .1 Inspect decking, execute preparatory work and install roof according to the profiled metal roof manufacturer's written instructions.
- .2 Unless otherwise specified by CSC, execute profiled metal roofs to match existing materials and assemblies (2.2.3.1.2 or .3).
- .3 Fasten furring strips securely to decking. As applicable, install insulation boards between strips and secure with ties or fasten to match existing fasteners.
- .4 Fabricate patches (corner mouldings, starter flashings, etc.) as needed to match existing work.
- .5 Install profiled sheet metal and accessories as shown in approved shop drawings; install fasteners uniformly, in proper alignment and as shown in approved shop drawings.
- .6 Install closers, drip edge, flashings and other accessories using concealed fasteners. Use exposed fasteners matching surface only at locations approved by CSC. Cover ends and seal to ensure water-tightness.
- .7 For occasional repairs, remove existing anchors, replace profiled sheet metal and other defective components as required and reinstall with new anchors identical to existing anchors.
- .8 In general, metal must be factory press-cut. All cuts performed on site shall be executed using shears; grinders and abrasive blades are prohibited.
- .9 Clean work and premises thoroughly to CSC's satisfaction. Do not leave metal scraps on roofs.

3.13 INTRA-WALL FLASHINGS

- .1 When intra-wall flashing replacement is required in exterior, metal-clad walls, the roofing contractor shall dismantle coverings, metal lath and furring and existing insulation, install new intra-wall flashings and close opening, replacing all damaged components deemed unusable by CSC.
- .2 For all other types of exterior wall, CSC will hire a specialized contractor to open wall and close wall once roofing contractor has installed in intra-wall flashings.
- .3 Coordinate work and cooperate with specialized contractor.

3.14 SITE QUALITY CONTROL

- .1 CSC reserves the right to have work inspected by a testing laboratory of its choice at CSC's expense.

3.15 CLEAN-UP

- .1 Clean soiled surfaces and spatters caused by work under this section to the satisfaction of CSC; also repair any damage. Remove bitumen marks from finished surfaces.
- .2 Repair or replace finished surfaces altered or otherwise damaged by work under this Section.
- .3 Remove excess material, debris and equipment from the site.

3.16 SNOW AND ICE REMOVAL

- .1 In general, perform snow and ice removal work as provided below. Ice removal is required only at the specific request of CSC at the recommendation of a qualified structural engineer. In general, ice is to be left in place. If ice removal is required, use method approved by CSC under subsection 1.7.5.
- .2 Install all temporary protective devices required in accordance with prescriptions. Delineate areas using marking flags and barricades according to sketches approved by CSC.
- .3 Leave a layer of snow approximately 100 mm thick to avoid damaging waterproofing materials.
- .4 Clear drains, vents, attic vents, equipment, curb walls and base of raised walls. Create X-shaped troughs to allow water to flow to drains.
- .5 Do not use picks or axes; avoid excessive heat (open flame) that could damage roof. Use wooden or plastic tools. De-icing salt is not permitted.
- .6 For asphalt shingle roofs, work from top to bottom.
- .7 For snow and ice removal from sloped roofs, an elevating platform is preferable. For sloped roofs on small buildings, perform snow removal work using long-handle rakes from the ground rather than climbing on roof. If workers are required to climb on the roof, safety harnesses must be worn and securely anchored. Harnesses must be securely fastened to an anchor using a rope 16 mm minimum in diameter equipped with a rope grab. The length of the rope shall not permit workers to exceed the edge of the roof.
- .8 For flat roofs, transport snow using sled shovels and remove to dumping zone. Do not dump snow or ice on lower roof tops. If necessary, reach agreement with CSC concerning the appropriate operating method, and submit the proposed method in writing.
- .9 Comply with all safety instructions issued.

END OF SECTION 07 01 45



Service correctionnel
Canada

Correctional Service
Canada

ANNEX



**INSTITUTIONAL ACCESS
CPIC CLEARANCE REQUEST**

**ACCÈS À UN ÉTABLISSEMENT
DEMANDE DE VÉRIFICATION DU DOSSIER AU CIPC**

PLEASE PRINT INFORMATION CLEARLY - VEUILLEZ ÉCRIRE EN LETTRES MOULÉES

Institution – Établissement	Request received / Demande reçue le <input type="text" value="Date (YYYY/MM/DD) – (AAAA/MM/DD)"/>	PUT AWAY ON FILE / CLASSER AU DOSSIER ➔ 3170-12
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A. PERSONAL INFORMATION – RENSEIGNEMENTS PERSONNELS

Surname / Nom de famille	Full name (no nicknames or initials) / Nom au complet (pas de surnoms ou d'initiales)	Maiden name (if applicable) / Nom de jeune fille (s'il y a lieu)
Date of birth (YYYY/MM/DD) / Date de naissance (AAAA/MM/JJ)	Place of birth – Lieu de naissance / City/Town – Ville ou municipalité	Province/State – Province ou état / Country – Pays

B. PHYSICAL DESCRIPTION – DESCRIPTION PHYSIQUE

<input type="checkbox"/> Male / Homme	<input type="checkbox"/> Female / Femme	Height – Grandeur	Weight – Poids	Eye color – Couleur des yeux	Hair color – Couleur des cheveux
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C. ADDRESS – ADRESSE

Street – Rue	City/Town – Ville ou municipalité	Province	Postal Code - Code postal	Telephone number – Numéro de téléphone Home – Domicile / Work – Bureau
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Representing (name of company/organization) – Représente (nom de la compagnie ou de l'organisation)

D. GENERAL INFORMATION – RENSEIGNEMENTS GÉNÉRAUX

1. Have you ever been convicted of a criminal offence for which you have not been granted a pardon, or an offence for which you have been granted a pardon and such a pardon has been revoked? Avez-vous déjà été reconnu coupable d'une infraction criminelle pour laquelle on ne vous a pas octroyé un pardon ou d'une infraction pour laquelle on vous a octroyé un pardon qui a été révoqué?	<input type="checkbox"/> Yes / Oui	<input type="checkbox"/> No / Non
2. Do you personally know of any person incarcerated in a correctional facility? Connaissez-vous personnellement une personne qui est incarcérée dans un établissement correctionnel?	<input type="checkbox"/> Yes / Oui	<input type="checkbox"/> No / Non
3. Do you have any reason to believe coming into contact with this person could pose a risk to your or their personal safety? Avez-vous des raisons de croire que le fait d'entrer en contact avec cette personne pourrait présenter un risque pour votre sécurité personnelle ou la sienne ?	<input type="checkbox"/> Yes / Oui	<input type="checkbox"/> No / Non
4. Are you related/associated to an inmate or on an inmate's visiting list? Êtes-vous apparenté ou associé à un détenu ou inscrit sur la liste des visiteurs d'un détenu?	<input type="checkbox"/> Yes / Oui	<input type="checkbox"/> No / Non

If you have answered YES to any of the above, please explain below. – Si vous avez répondu OUI à une des questions ci-dessus, veuillez fournir une explication ci-après.

➔

E. SIGNATURE (When sections A to E are filled out completely, please return the completed form to the institution for approval.)
(Une fois que les sections A à E ont été remplies, veuillez retourner le formulaire dûment rempli à l'établissement aux fins d'approbation.)

In making this application, I hereby give the Correctional Service of Canada my consent to use the information provided on this form to conduct such inquiries with police authorities as may be necessary to ascertain my suitability. Finally, I acknowledge that the Correctional Service of Canada has no responsibility for any harm that may come to me in the course of my activities, except where such harm is a direct result of negligence on the part of an employee(s) of the Service.
NOTE: Access may be denied for submitting false information. Passes may be issued for those receiving clearance and approval.

En soumettant la présente demande, j'autorise le Service correctionnel du Canada à se servir des renseignements fournis dans le formulaire afin de mener, auprès des services de police, toute enquête jugée nécessaire pour vérifier mon admissibilité. Par ailleurs, je conviens que le Service correctionnel du Canada ne peut être tenu responsable d'un préjudice subi dans le cadre de mes activités sauf si ce préjudice est directement attribuable à la négligence d'un ou de plusieurs employés du Service.
NOTA : Tout demandeur qui fournit de faux renseignements peut se voir refuser l'accès à l'établissement. Un laissez-passez peut être émis aux demandeurs dont la demande d'accès est approuvée.

Applicant's signature – Signature du demandeur	Date (YYYY/MM/DD) - (AAAA/MM/JJ)
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F. FOR OFFICE USE ONLY – RÉSERVÉ AU SCC
Reason for clearance – Motif justifiant la demande d'accès

Offre à commande individuelle régionale | Couvreur et Déneigement | (Inscrire Établ.)

Department making the request (please print) / Unité qui soumet la demande (en lettres moulées s.v.p.)	Signature of Division Head / Signature du chef de la division	Date (YYYY/MM/DD) - (AAAA/MM/JJ)
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<input type="checkbox"/> No criminal record / Aucun casier	<input type="checkbox"/> A possible criminal record #: / Numéro du casier judiciaire	Last entry: / Dernière entrée :
<input type="checkbox"/> An outstanding warrant/charge held by: / Auteur du mandat non exécuté/accusation en instance :		

SIGNATURES

The individual has been advised. – Le demandeur a été informé de la décision.

<input type="checkbox"/> Approved / Approuvée	<input type="checkbox"/> Not approved / Non approuvée	<input type="checkbox"/> Yes / Oui	<input type="checkbox"/> No / Non	By: / Par :	
Security Intelligence Officer / Agent de renseignements de sécurité	Date (YY/MM/DD) (AA/MM/JJ)	Institutional Head / Directeur de l'établissement	Date (YY/MM/DD) (AA/MM/JJ)	Visit Review Board / Comité des visites	Date (YY/MM/DD) (AA/MM/JJ)