MCCP CONSOLE UPGRADE & RECONFIGURATION

AT

EDMONTON MAXIMUM SECURITY INSTITUTION

STATEMENT OF TECHNICAL REQUIREMENTS
Correctional Service Canada
Facilities Branch
Electronic Security Systems

August 10, 2018

STATEMENT OF TECHNICAL REQUIREMENTS

FOR A

MCCP CONSOLE UPGRADE & RECONFIGURATION

AT

EDMONTON MAXIMUM SECURITY INSTITUTION

AUTHORITY

This Statement of Technical Requirements is approved by the Correctional Service of Canada for the upgrade and reconfiguration of the MCCP Console at Edmonton Maximum Security Institution.

Recommended corrections, additions or deletions should be addressed to the Design Authority at the following address:

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Approved by:

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A/Director, Electronic Security Systems
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<td>API</td>
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<td>BIFMA</td>
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<td>CCDA</td>
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<td>CER</td>
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<td>CESM</td>
<td>Chief, Electronics System Maintenance</td>
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<td>COTS</td>
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<td>CSC</td>
<td>Correctional Service Canada</td>
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<td>DA</td>
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<td>DCMS</td>
<td>Door Control and Monitoring System</td>
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<td>Facility Alarm Annunciation System</td>
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<tr>
<td>FAR</td>
<td>False Alarm Rate</td>
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<td>Fence Disturbance Detection System</td>
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<td>FIU</td>
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<td>GFE</td>
<td>Government Furnished Equipment</td>
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<td>HVAC</td>
<td>Heating, Ventilation and Air Conditioning</td>
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<tr>
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<td>Internet Protocol</td>
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<td>IVRMS</td>
<td>Inmate Voice Recording and Management System</td>
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<tr>
<td>KVM</td>
<td>Keyboard Video Mouse</td>
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<tr>
<td>LCD</td>
<td>Liquid Crystal Display</td>
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<td>LTU</td>
<td>Large Transponder Unit</td>
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<td>MCCP</td>
<td>Main Communications and Control Post</td>
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<td>MDS</td>
<td>Motion Detection System</td>
<td></td>
</tr>
<tr>
<td>MPIU</td>
<td>Monitoring Post Interface Unit</td>
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<tr>
<td>MTBF</td>
<td>Mean Time Between Failure</td>
<td></td>
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<td>Offender Management System</td>
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<td>PA</td>
<td>Public Address</td>
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<td>PC</td>
<td>Personal Computer</td>
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<td>Abbreviation</td>
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<td>Pd</td>
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<td>PFV</td>
<td>Private Family Visits</td>
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<td>PIDS</td>
<td>Perimeter Intrusion Detection System</td>
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<td>PIDTS</td>
<td>Perimeter Intrusion Detection Radar Tracking System</td>
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<tr>
<td>PIU</td>
<td>Perimeter Intrusion Detection System Integration Unit</td>
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<tr>
<td>PLC</td>
<td>Programmable Logic Controller</td>
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<tr>
<td>PPA</td>
<td>Portable Personal Alarm</td>
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<tr>
<td>PPAL</td>
<td>Portable Personal Alarm Locatable</td>
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<td>PTT</td>
<td>Push to Talk</td>
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<td>PTZ</td>
<td>Pan/Tilt/Zoom</td>
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<tr>
<td>RATS</td>
<td>Regional Administrator Technical Services</td>
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<td>REPO</td>
<td>Regional Electronics Program Officer</td>
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<td>RFP</td>
<td>Request For Proposal</td>
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<td>RU</td>
<td>Rack Unit</td>
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<td>SAT</td>
<td>Site Acceptance Test</td>
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<td>SCC</td>
<td>Security Control Centre</td>
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<td>SIDS</td>
<td>Supplementary Intrusion Detection System</td>
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<td>SIO</td>
<td>Security Intelligence Officer</td>
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<td>TCP/IP</td>
<td>Transport Control Protocol/Internet Protocol</td>
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<td>TER</td>
<td>Telecommunications Equipment Room</td>
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<td>UI</td>
<td>User Interface</td>
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</tr>
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<td>USB</td>
<td>Universal Serial Bus</td>
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<td>UPS</td>
<td>Uninterruptible Power Supply</td>
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<td>V&amp;C</td>
<td>Visits and Correspondence</td>
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<td>VCR</td>
<td>Video Cassette Recorder</td>
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<td>VDU</td>
<td>Video Display Unit</td>
<td></td>
</tr>
<tr>
<td>VESA</td>
<td>Video Standards Equipment Association</td>
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<tr>
<td>VGA</td>
<td>Video Graphics Array</td>
<td></td>
</tr>
<tr>
<td>VIRS</td>
<td>Visits Intercept and Recording System</td>
<td></td>
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<td>VMS</td>
<td>Video Management System</td>
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<td>1</td>
<td>Administrative User Interface</td>
<td>Monitor and Software that supports task specific User Interaction for System Administrators, located in a secure area</td>
<td>Provides administrative personnel with the ability to map enrolled users to the functional domains that they are allowed to access and change</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Application</td>
<td>Cell Call Management, PA Management</td>
<td>Software that is used to deliver Application Support functionality for a sub-system</td>
<td>Software that provides the Operator Interface and supporting logic that allows a sub-system (Control Domain) to be managed</td>
</tr>
<tr>
<td>3</td>
<td>CCTV Monitor</td>
<td>PIDS or Range CCTV Monitor</td>
<td>Computer Monitor Hardware</td>
<td>Displays CCTV images for Operator viewing</td>
</tr>
<tr>
<td>4</td>
<td>Client</td>
<td>Rack mounted computer located in a secure area away from a Control Post or Control Desk.</td>
<td>Runs software and supports one or more Application</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Configuration Data</td>
<td>Site floor plans showing quantity of cameras, doors, cells etc. Camera locations. Number of User Interfaces required in a Post.</td>
<td>Site and System specific information typically supplied by CSC that defines how a sub-system application is to be set-up for a site, location within a site, or post.</td>
<td>The configuration data provides the information that a sub-system application requires to tailor it to meet site, location within a site, or post user requirements.</td>
</tr>
<tr>
<td>6</td>
<td>Configuration User Interface</td>
<td>Monitor and software that supports task specific user interaction, located in a secure area</td>
<td>Allows suppliers or qualified personnel to add, delete and modify application configuration</td>
<td></td>
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<tr>
<td>7</td>
<td>Contract Authority</td>
<td>Public Works and Government Services Canada (PW&amp;GSC) is responsible for all contractual matters associated with the system design and implementation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Contractor</td>
<td>The company selected as the successful bidder.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Control Console</td>
<td>MCCP Console, Living Unit Control Post Console</td>
<td>Console, typically located in a Control Post. Serves as the physical support infrastructure for Operator User Interfaces</td>
<td>Contains User Interfaces or Control Panels used by staff to execute their management responsibilities and interact with the domains over which they have control</td>
</tr>
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<td>10</td>
<td>Control Desk</td>
<td>Living Unit Control Desk</td>
<td>Desk, typically located in a Control Post or Office. Serves as the physical</td>
<td>Equipped with user interfaces used by staff to execute their management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control Desk</td>
<td>support infrastructure for Operator User Interfaces</td>
<td>responsibilities and interact with the domains over which they have control</td>
</tr>
<tr>
<td>11</td>
<td>Control Domain</td>
<td>Cell Call, Guard Tour, Public Address</td>
<td>A group of physical and virtual devices or objects, often supported by</td>
<td>Collect information, or activate capabilities in their operational domain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>specialized hardware and software, that performs a set of related functions</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Control Panel</td>
<td>PACP, Fire Alarm</td>
<td>Hardware and software device that provides an Operator Interface (I/O</td>
<td>Allows Operators to manage one or more domain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>device), located in a Control Post</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Control Post</td>
<td>Living Unit Control Post/MCCP</td>
<td>Room or area, typically located in a secure area in an institution</td>
<td>Room used by staff to execute their management responsibilities and interact with the domains over which they have control</td>
</tr>
<tr>
<td>14</td>
<td>Custom Equipment</td>
<td></td>
<td>Equipment designed and/or manufactured specifically for a specific contract.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Design Authority</td>
<td>Director, Electronic Security</td>
<td>Director, Electronic Security Systems (DES) Correctional Service of Canada</td>
<td>Provides data collection or activate functions associated with a specific</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Systems (DES) Correctional Service</td>
<td>(CSC) is responsible for all technical aspects of the system design and</td>
<td>system or sub-system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of Canada (CSC) is responsible</td>
<td>implementation.</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Edge Device</td>
<td>CCTV Camera, Managed Door, Call</td>
<td>A specialized device, typically consisting of hardware and software</td>
<td>Provides designated personnel to enroll and delete users from the Command,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Origination Device</td>
<td></td>
<td>Control and Data Acquisition System.</td>
</tr>
<tr>
<td>17</td>
<td>Enrolment User Interface</td>
<td>Monitor and software that supports</td>
<td>Monitor and software that supports task specific User Interaction, located</td>
<td>Allows designated personnel to enroll and delete users from the Command,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>task specific User Interaction,</td>
<td>in a secure area</td>
<td>Control and Data Acquisition System.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>located in a secure area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Maintenance User Interface</td>
<td>Monitor and software that supports</td>
<td>Monitor and software that supports task specific User Interaction, located</td>
<td>Provides maintenance personnel with the ability to interact with one or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>task specific User Interaction,</td>
<td>in the CER or Maintenance Service Provider Office</td>
<td>more systems to carry out their day to day tasks to troubleshoot and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>located in the CER or Maintenance</td>
<td></td>
<td>maintain systems and subsystems</td>
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<tr>
<td>19</td>
<td>Notification</td>
<td>Notification that a door is opened, or a door is closed, or a sensor is in alarm</td>
<td>A notification is a message that can be shown on a User Interface and/or logged in a database that represents a change in state or a command initiated by an operator.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Off-the Shelf</td>
<td></td>
<td>Equipment currently on the market with available field reliability data, manuals, engineering drawings and parts price list.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Operator User Interface</td>
<td>PIDS Display, Door Control and Monitoring System Display</td>
<td>Computer monitor and software that supports User Interaction (I/O device)</td>
<td>Provides an Operator with the ability to interact with one or more systems to carry out their day to day tasks at a Control Console or Control Desk</td>
</tr>
<tr>
<td>22</td>
<td>Project Officer</td>
<td></td>
<td>A CSC employee or a contracted person designated by DES to be responsible for the implementation of the project.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Reporting User Interface</td>
<td></td>
<td>Monitor and software that supports task specific user interaction, located in a secure area</td>
<td>Provides management personnel with the ability to access preconfigured reports and to create custom reports</td>
</tr>
<tr>
<td>24</td>
<td>Server</td>
<td>Network Video Recorder</td>
<td>Rack mounted computer that runs software and is located in an equipment room such as a CER or TER</td>
<td>Runs software that is used to deliver services that support command and control applications to connect to sub-systems</td>
</tr>
<tr>
<td>25</td>
<td>State</td>
<td></td>
<td>The state of a device as reported to a sub-system or system</td>
<td>This is a logical representation of the state of a device that is being monitored or managed</td>
</tr>
<tr>
<td>26</td>
<td>Sub-system</td>
<td>Cell Call, Guard Tour</td>
<td>A group of physical and virtual devices or objects, often supported by specialized hardware and software, that perform a specific set of related functions</td>
<td>Collects information, or activates capabilities in their operational domain</td>
</tr>
<tr>
<td>27</td>
<td>System</td>
<td>PIDS</td>
<td>A group of physical and virtual devices or objects, often supported by specialized hardware and software, including devices from sub-systems that perform a more general set of related functions</td>
<td>Collects information, or activates capabilities in their operational domain</td>
</tr>
</tbody>
</table>
# | Term | Example(s) | Description | Function |
<table>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>Touch Screen User Interface</td>
<td>Door Control and Monitoring System User Interface</td>
<td>Typically an LCD Monitor with touch screen technology</td>
<td>Allows an Operator to view and interact with the systems presented on the monitor</td>
</tr>
<tr>
<td>29</td>
<td>Workstation</td>
<td></td>
<td>Rack mounted computer located in a secure area away from a Control Post or Control Desk</td>
<td>Runs software that is used to deliver command and control capabilities</td>
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</tbody>
</table>
1.0 INTRODUCTION

1.1 General

Correctional Service Canada (CSC) has a requirement to replace and upgrade the Main Communications and Control Post (MCCP) console at the Edmonton Maximum Security Institution (EMSI) in the Prairies Region. This Statement of Technical Requirements (STR) will cover the requirements for the work.

The purpose of the Console and ancillary items is to provide a rugged, robust workspace, designed in accordance with ergonomic principles that provide the MCCP Operator, whether sitting or standing with the following:

- access to the primary touch screen user interfaces, monitors and controls with which they interact
- visibility of the CCTV video monitors, not requiring direct Operator interaction, that will be mounted in front of the console
- a suitable desktop to support note taking, desk mounted devices such as telephone sets, microphones, joysticks, etc.
- the appropriate physical structure to support the user interfaces and CCTV video monitors in a safe, secure, flexible and adaptable manner
- the appropriate physical structure to manage and secure the power and signal cables that are used to connect the devices to the Central Equipment Room (CER)
- the appropriate physical structure to house a limited quantity of additional equipment that might, due to distance limitations, need to remain in the MCCP.

1.2 Scope of Work

CSC has a requirement to address operational, technical, and environmental limitations associated with the existing User Interfaces (UI) and supporting equipment in the MCCP at EMSI.

Over time, the core Perimeter Intrusion Detection System, Facility Alarm Annunciation System, Radio Management and Telephone sets have been upgraded by additional user interfaces, monitors and controllers as new systems have been installed at the institution. The equipment installed in the MCCP includes but is not limited to:

- Perimeter Intrusion Detection System (PIDS) UI
- Facility Alarm Annunciation System (FAAS) UI
- Radio System UI
- Closed Circuit Television (CCTV) Monitors
- Public Address System UI
- Door Control Systems UI
- Fire Alarm System UI.
- PPAL/PPA
- Public Address/Intercom Pager System UI
The existing MCCP console and the space above and surrounding the console have become cluttered and the working environment has become ergonomically challenging for operators. This could potentially result in sub-optimal operational performance under normal operating conditions and impact the ability of an operator to manage a security situation.

In addition to the equipment and user interfaces, there are a number of items of equipment, such as computers, cross-connect panels, housed in the existing MCCP console bays that need to be relocated to the CER.

This project is intended to replace and upgrade the existing MCCP Console and to relocate, upgrade, or replace select MCCP security electronics as defined in this STR at this Institution. Edmonton Maximum Security Institution is a maximum security-security facility located in Edmonton, Alberta.

1.2.1 Objective

At the completion of the project, the MCCP will be equipped with an ergonomically correct low profile console including reconfigured and upgraded user interface equipment. All security electronics not required by the MCCP operator will be located in the CER except in some instances where operational or technical issues may require devices to be mounted in or close to the console.

The design of the MCCP Console must:

- accommodate specifically the User Interfaces, Video Monitors and other auxiliary controls with which the Operator interacts in the MCCP; The intent is that all equipment except the equipment explicitly required to support a specific User Interface will be located in the CER, leaving the Console surface and any enclosed areas as free as possible from equipment that is not essential to any of the User Interfaces.
- meet current ergonomic best practice, including compliance with the relevant sections of the documents identified in ISO 11064.
- provide a sufficiently large desktop for the Operator to carry out any additional paperwork required for their operational responsibilities.
- be sufficiently flexible and extensible that it can be modified without the need to purchase custom fabricated elements.
- be designed to discourage the addition of additional interfaces, hardware and accessories that are provided on an “ad hoc” basis and that do not meet the “best practices”.
- implement a modern workspace that provides a suitable working environment for Operators that use the Console for extended periods of time.
- be sufficiently durable to resist the wear and tear associated with a “24/7, 365 days a year” operational environment.
- be designed to accommodate the touch screen Graphical User Interfaces that will typically be deployed on monitors, compatible with the physical layout described in this document, throughout CSC Institutions as part of CSC’s roadmap for the upgrade of Electronic Security Systems, eliminating the requirement for mechanical knobs, buttons, switches and LED panels.
- provide adequate mounting space for cabling and non-user interface electronic equipment.
- facilitate the fast and easy replacement of damaged components with minimal operational impact.
1.3 Requirement/Purpose

This STR supports the procurement and installation of Electronic Security Systems and equipment to be installed in CSC facilities. The STR provides prospective suppliers with sufficient information that they can define the scope of the system architecture, equipment, installation, testing, acceptance, training and handover steps required to deliver a new, upgraded, fully functioning MCCP Console.

This STR defines the general and site specific technical requirements and the scope of the work required to replace the MCCP console and associated security electronics that are reaching the end of their service life. This work must be accomplished with minimum disruption to the daily operation and security of the Edmonton Maximum Security Institution.

This STR also indicates the extent to which both general and particular CSC specifications are applicable to the implementation of this requirement. Bidders must comply with the STR and the listed specifications and standards unless specifically identified in this STR. The STR takes precedence over the subordinate documents such as a Statement of Work, a Specification or a Standard.

1.4 Description of Existing MCCP

The MCCP at the Edmonton Maximum Security Institution is currently equipped with a six (6) bay console assembled in a “bay-bay- 45°wedge-bay-bay-45°wedge-bay-bay” configuration. A 508 mm (20”) wide writing surface spans the length of the console.

All console bays are 19” EIA standard units. There is also a floor model equipment cabinet located in the MCCP. The cabinet and console bays are numbered on-site according to the numbering scheme detailed in Figure No. 1. There is a desk unit located immediately to the right of Console Bay #6 to accommodate an Information Management Services (IMS) workstation. A standalone Cabinet #7, which houses the maintenance system, is located behind the Operator along with an adjacent desk unit for a printer as shown in the south east corner of Figure #1.

A description of the existing security electronics installed in the MCCP console bays, as numbered in Figure No.1, is provided in the following sections. CSC will provide Bidders with a series of detailed and annotated photographs of the MCCP and the MCCP Console showing currently installed racks, console bays and equipment layout at the Mandatory Site Visit that will be held following the posting of this STR.

The MCCP also houses a variety of non MCCP related miscellaneous items such as a kitchenette counter and staff lockers.
The MCCP room is equipped with four (4) fluorescent lights and four (4) dimmer controlled ceiling pot lights (one in each corner of the room). There are also three (3) spotlights on a frame installed on the ceiling immediately above the console area. There are two (2) dimmer switches for lighting located on the front of the console between Console Bays #4 and #5.

Typically, any upgrades required for the MCCP HVAC will be handled by the Institution. Bidders must review any potential HVAC upgrade requirements at the Mandatory Site Visit for Bidders.

The Contractor must coordinate security installation activities with the site to avoid congestion on the part...
of the Contractor in the MCCP and ensure that all work is completed in its proper sequence.

1.5  **Network CCTV System**

The Network CCTV System consists of two (2) 50” video monitors mounted on a floor stand between Console Bays #4 and #5. The video monitors are connected to a Genetec Omnicast® client NVUS located in the CER. The 50” video monitor above Console Bays #5 and #6 is configured with a camera tree that allows the Operator to call up specific camera views or layouts for either of the two (2) 50” video monitors using a USB mouse located on the console desktop.

Each monitor is connected to the CER NVUS using a High-Grade VGA cable. The USB mouse is connected to the CER NVUS using a USB extender and hub located at the rear of Console Bay #5. An Axis keypad/joystick is also connected to the USB hub and is located in Console Bay #6. The Axis keypad/joystick is not in service.

A third 50” monitor is connected to a Genetec Omnicast client NVUS located in the CER. The monitor is mounted on a floor stand inside Console Bays #2 and is connected to two (2) speakers located on top of Console Bays #2 and #3. The monitor and speaker set-up was used as part of the C25 construction project and is not in use anymore.

1.6  **PIDS CCTV System**

Four (4) 17” PIDS CCTV video monitors are rack mounted in the MCCP Console; two (2) in Console Bay #1 and two (2) in Console Bay #2. The four (4) monitors are connected to two (2) PIDS workstations NVUS located in the CER using High-Grade VGA cables.

1.7  **PIDS/FAAS Integration Unit (PIU/FIU)**

1.7.1  **PIDS/FAAS Touch Screens**

The existing PIDS and FAAS Operator User Interface touch screens are located in Console Bays #3 and #4 respectively in Figure No.1. Their associated speakers are fastened to metal bars inside the console.

1.7.2  **Maintenance Station (Senstar 100®)**

A Senstar 100® PIDS rack mounted pull out monitor/keyboard is installed in Cabinet #7. This monitor/keyboard is used by maintenance staff to perform system PIDS/FAAS system maintenance and by CSC trainers to simulate PIDS/FAAS alarms. An Epson event printer and a Belkin KVM extender for the S100 are located on and in Cabinet #7.

1.7.3  **PIDS PA/FDS Audio Panel (Senstar®)**

A 2RU PIDS PA/FDS Audio Panel is rack mounted in Console Bay #4. A handheld PTT PIDS PA microphone is connected to the front of the panel and is clipped to the face of the console. The PIDS PA microphone is connected to the panel. The panel is in turn connected to a PIDS PA amplifier rack mounted in the CER.
The FDS Audio portion of the panel is equipped with five (5) buttons: ALL, ALL MASK, ALL SECURE, OFF, & SECTOR. Depending on which button is active, the audio from the selected FDS zone(s) will be sent to the FDS speaker located in the rear of Console Bay #7; however, the speaker is disconnected. In addition, there is an attenuator, which is used by the Operator to raise and lower the audio signal level at the FDS speaker.

1.7.4 VCR Recorder & Wiper Panel (Senstar®)
A 2RU PIDS VCR & wiper panel is rack mounted in Console Bay #3 below the PIDS touch screen. This panel is not in service.

1.8 Radio System (Motorola®)
The existing Motorola® system has a 17” touch screen rack mounted in Console Bay #5 and a mouse on the desktop to provide Operator channel controls. Two (2) independent (SELECT and UNSELECT) speakers with integral volume control are installed on the console wedges between Console Bays #2 and #3 and Console Bays #4 and #5 respectively. A supervisor headset is mounted below the work surface near Console Bay #5 and there is a foot pedal control on the floor in front of Console Bay #5.

The following Motorola® equipment/cabling are in the rear of Console Bay #5:

- One (1) VPM001 Motorola® Device/Network Switch (1 RU height x 19” width x 11” depth)
- The VGA cable is from the monitor in the MCCP to the workstation in the CER
- The USB cable is to a USB hub under the switch and to a keyboard, mouse, and switch
- The CES cable is from the VPM001 to the MCC5500 in the CER
- Cables for foot pedal, monitor speakers, and desk microphone

1.9 Telephone Cut Off Switch Panel
A 4RU telephone cut off switch panel is located in Console Bay #3 above the PIDS monitor. The switch system is used to cut communication lines to specific units in the institution. The panel was installed and is maintained by Shared Services.

1.10 Door Control Systems
The following door control equipment is for all units, except Unit 5, and is located on MCCP Console Bay #1:

- One (1) 15” ELO touch screen
- One (1) CAT5 KMV extender
- One (1) mouse located on a pullout shelf under the writing surface of Console Bay #1

The Unit 5 unit door control equipment consists of the following and is located in Cabinet #7:
• One (1) 22” touch screen monitor
• One (1) mouse
• One (1) Adder Link KVM extender

1.11 Fire Alarm System
The Fire Alarm System consists of a 15” video monitor, a PC, speakers and a keyboard/mouse combination installed on and in MCCP Console Bay #6. A Honeywell printer for the fire alarm system is located on top of Cabinet #7. A mini UPS is located on the floor inside Console Bay #6 but it is not in service.

1.12 Information Management Services (IMS)
The IMS workstation consists of a 17” IMS monitor, a PC, and keyboard/mouse located on a wooden desk next to Console Bay #6. An IMS Lexmark printer is located beside cabinet #7 on a pedestal.

1.13 Telephones
The MCCP is equipped with three (3) telephones. A general purpose telephone is located on the desk of Console Bay #2, a maintenance phone is on the desk of Console Bay #1 and there is an emergency wireless backup phone (not connected to the recording system) on top of Console Bay #5.

1.14 Public Address/Intercom Pager System
The Harding PA system consists of a 10” surface mounted tablet installed in a panel in the front of Console Bay #5 with a speaker and microphone. The Delco installed system is connected to the CER by Ethernet.

1.15 Uninterruptible Power Supply
There is a Best model UT5K18755 5KVA standalone UPS located in the corner of the CER, which is at 70% capacity. There is also a Powerware 9125 6KVA rack mounted UPS unit for the CCTV system located in the CER.

1.16 Miscellaneous Equipment
The following equipment is also installed in the MCCP:

• Console Bay #7 has a junction panel and a video mixer that are no longer required.
2.0 APPLICABLE DOCUMENTS

2.1 Technical Acceptability

CSC operational environment is unique for its diversity of locations, climate exposures and the physical restrictive construction techniques of penal institutions. Maintaining national security, the safety of staff and offenders alike is CSC’s commitment to the government and public. Electronic security systems operating in this unique environment must maintain very high standards of dependability and reliability.

CSC Facilities Branch has established Statements of Work (SOW), technical specifications and standards for electronic security systems, which are based on very specific, and restrictive operational performance criteria. Technical acceptability of these systems means that the systems equipment and components comply with the pertinent CSC SOW, specifications and standards.

2.2 Applicability

The provisions contained in the documents listed in the following paragraphs must apply to all aspects of this requirement, unless these provisions have been exempted or modified by this STR.

2.3 Applicable Standards and Specifications

Industry Standards & Codes

- Canadian Electrical Code
- International Telecommunications Union
- Electronic Components Industry Association (ECIA)
- ISO 11064 Ergonomic Design of Control Centres

CSC Standards, Scope of Work & Specifications

- ES/SOW-0101 Electronic Systems
- ES/SOW-0102 Installation of Electronic Security Systems
- ES/SOW-0110 Structured Cable Systems
- EIA-310-E Racks, Panels and Associated Equipment
- ES/SPEC-0006 Electronics Engineering Specification Conduit, Space and Power Requirements
- ES/STD-0228 Network Video User Station
- ES/STD-0227 LCD Colour Computer Monitor
- ES/STD-0300 R1 Network Time Protocol Time Server
- ES/STD-0805 Large Uninterruptible Power Supply

Additional Supporting Documents
• Design Requirements for the Main Control and Communications Post Room (MCCP) Console and Ancillary Equipment for use in Federal Correctional Institutions (Issue 9) dated August 10, 2016.
3.0 REQUIREMENTS

3.1 New MCCP Console

The Contractor must supply and install a new MCCP console in accordance with the CSC Specifications, Statements of Work, Standards and Design Requirements noted in Section 2.3 of this STR.

Figure No. 2: New MCCP Console Location

The new MCCP console must be based upon a flattened U-shaped desktop configuration with a maximum security footprint of 3266 mm (10'7") wide by 1083 mm (3'6") deep as shown in Figure No.2. The console is designed to accommodate one (1) operator in normal operations and a second operator on an emergency basis. The desktop is divided into six (6) user interface stations and has an
arrangement of video monitor displays mounted on the wall to the rear of the desktop positioned (maximum security distance of 2133 mm (7') and minimum distance of 1219 mm (4') from the Operator. A user interface station is defined as either a 22” video monitor (16:9 aspect ratio) or a desktop pod that accommodates rack mounted equipment.

The console must include electrically powered height adjustability and sit-stand functionality for the desktop to provide an efficient and functional work environment for the Operators. The system must have been designed and built for 24/7 IT and security monitoring environments.

The video monitor arrangement mounted on the wall consists of four (4) 24” video monitors arranged in a 2x2 monitor configuration flanked on each side by a 43” video monitor as shown in Figure 3. The distance from the floor to the bottom edge of the PIDS monitors must be no less than 1337 mm (52 5/8”) and the front of the console (Operator side) must be no less than 1708 mm (671/4”) from the front of the PIDS Monitors. The Contractor must ensure there are minimal gaps between the PIDS monitors and the 43” CCTV monitors.

The Contractor must supply high brightness video display monitors from the same manufacturer whenever possible to assist with aesthetics and consistency for spares. The monitors must meet the following technical specifications:

43” Video Displays

Display
- Panel Technology – 60Hz E-LED
- Resolution – 1920 x 1080
- Aspect Ratio – 16:9
- Brightness – 450 cd/m²
- Contrast Ratio (Typical) – 1100:1
- Viewing Angle – 178:178
- Response Time – 12 mms

Connectivity
- Video Input DVI-D & HDMI

Power Supply
- Power – AC 100 - 240V~ (+ or – 10%), 50/60 Hz (internal only)

Features
- Non Glare Panel
- 24/7 Operation
- Video Wall Thin Bezel
- User Controls of Inputs

Green Management
- Energy Star® Certified
- ROHS Compliant
Emission Standard – EMC

Mechanical Specs
  Vesa Mount – 200 x 200

Operation
  Operating Temperature – 0°C - 40°C
  Operating Humidity – 10% - 80%

22” and 24” Video Displays

Display
  Panel Technology – 60Hz E-LED
  Resolution – 1920 x 1080
  Aspect Ratio – 16:9
  Brightness – 250 cd/m2
  Contrast Ratio (Typical) – 1000:1
  Viewing Angle – 178:178
  Response Time – 6ms

Connectivity
  Video Input (Display Port) HDMI

Power Supply
  Power – AC 100V - 240V (internal only)

Features
  Non Glare Panel
  24/7 Operation
  Video Wall Thin Bezel
  User Controls of Inputs

Green Management
  Energy Star® Certified
  ROHS Compliant

Mechanical Specs
  Vesa Mount – 100 x 100
The six (6) desktop user interface stations at Edmonton Maximum Security Institution must be configured as follows:

1) IMS Workstation (22” monitor supplied and installed by others under this project)
2) Motorola® Touch screen (22” monitor model ELO - 2201L supplied and installed under this project)
3) PIDS Touch screen (19” monitor model ELO - 1915L supplied and installed under this project)
4) FAAS Touch screen (19” monitor model ELO - 1915L supplied and installed under this project)
5) Video Management System (VMS) monitor (22” unit supplied and installed under this project)
6) Two (2) stacked Touch screen monitors (22” units supplied and installed under this project). Lower monitor for Unit 5 door control system. Upper unit is aggregator for other Units’ door control and PA systems.)

![Figure No. 3: Conceptual drawing of updated MCCP Console](image-url)
Notes:

1) The final position of each Operator-User Interface Monitor is subject to change based upon further design review and must be confirmed following the provision of the Preliminary Design Report.

2) With respect to the VMS monitor, the CCTV system must be installed and licensed with Remote Live Viewer software (RLV) and Synergy software. This will enable site operations to determine if monitor control will be managed by a single camera tree on the VMS monitor or independent camera trees that will be posted on all monitors and controlled by a single mouse.

3) The function of the “Aggregator” is to collect one or more control user interfaces that have typically been deployed using diverse new and legacy systems/technologies and develop the application and appropriate interfaces to allow the “Aggregator” to manage these disparate sub-systems.

3.2 Scope of Work - Details

In order to provide the configuration shown in Figure No. 3, the Contractor must modify the existing security sub-systems and supply any new hardware, software, cabling, installation, testing, training and documentation as detailed in Section 3 of this STR.

3.3 General Requirements

The Contractor must:

a. Carry out a review and analysis of the existing MCCP Console and its associate electronic security sub-systems, including all components not being replaced under this contract. As part of the review and analysis, the Contractor must identify any high risk elements of the proposed upgrade project.

b. Review the CSC standards and documents noted in Section 2.3 of the STR and incorporate them into the system and implementation.

c. Design, supply, assemble, and install a MCCP Console (complete with Operator chair and durable protective mat for the floor area) as noted in this STR and related documentation.

d. Supply and install new ceiling tiles for the entire room consistent with the design of the Control Post. The Contractor must supply a sample of the ceiling tile to the Design Authority and the Institution for approval and verify fit before including the specified tile in the FDR.

e. Supply and install new floor tiles for the entire room. The replacement tiles must be 24” x 24” wood core with 1/16” high pressure laminate surface. The tiles must meet or exceed 1,000 lbs per sq. inch concentrated load. All cable entry holes through the floor tiles must be equipped with a suitable grommet to prevent cable chafing. The colour of the tiles must be approved by the Design Authority and the Institution. The Contractor must ensure the floor tiles are properly measured and inspected to provide the correct fit and meet the load specifications required by CSC Facilities. Ensure proper fitting of new floor tiles on the existing sub flooring frame to make certain that there no voids/ gaps and no “sliding” of floor tiles. Ensure secure floor tile connection at the junction of CER and MCCP flooring at the door frame.

f. Clean the concrete sub floor of all dust and debris.

g. Ensure that all gaps in the ceiling tiles and floor tiles for pipes, cables, chases, etc. are properly sealed to maintain fire protection. A 4” high rubber base board must be supplied and installed to protect the area where the floor tiles abut the walls. The colour of the base board must be approved...
by the Design Authority and the Institution. Ensure acceptable installation of the rubber based board complete with a close fit at inside and outside corners to avoid voids or gaps at joints. Typically the rubber must be wrapped around the outside corners for a continuous finish and have a 45 degree angled cut at inside corners to prevent any gaps at the junction.

h. Supply and install four (4) ceiling LED lighting fixtures with a colour temperature of 4,000 Kelvin mounted directly above the console desk top that provide an illumination level of between 540 lux (50 fc) and a minimum illumination level of 325 lux (30 fc) for the console desktop. A detailed drawing regarding the location and installation of the new fixtures must be submitted as part of the PDR process for approval by the Design Authority. The fixtures must be positioned to eliminate glare and reflections in the video and desktop monitors and must be equipped with a dimmer control switch located next to the switch for the general room light fixtures and a wireless remote dimmer switch for the console that meets the requirements specified in Section 13 of ES/STD 0101.

i. Complete comprehensive pre installation functionality tests witnessed by the Design Authority or his designate of all MCCP systems and equipment prior to commencing the installation phase of the project. All results of the testing must be documented and approved by the Design Authority or his designate prior to the Contractor commencing the installation.

j. Provide a cutover plan that clearly identifies all systems that will be affected, the timing, duration and associated risks. The plan must also include any site managed activities required for removal or relocation of non MCCP equipment e.g. staff lockers. In addition, a back out plan and a description of the capabilities that will be unavailable to CSC operational personnel for the duration of the cutover must also be provided.

k. Modify, upgrade, relocate, or decommission existing security electronics as noted in this STR.

l. Appropriately label and deliver all decommissioned equipment to site CSC representative or designate.

m. Use existing copper cables wherever possible. Potential bidders must familiarize themselves with the existing cabling during the mandatory site visit. If the existing cabling is not of sufficient length, provide additional hardware/materials and copper cabling as required.

n. Where cables exceed the maximum security length specified by the equipment manufacturer; the use of KVM extenders is permitted. If KVMs are used, they must be mounted neatly and securely under the desktop that meets best installation practices.

o. Following contract award, identify cabling not associated with the current security systems. Site maintenance will inspect the cabling not being replaced by the Contractor and provide feedback to the Design Authority. The Contractor must remove all unused cabling identified by the Design Authority.

p. Identify all abandoned security equipment located in the console or cabinets throughout the MCCP. The Contractor must hand over the abandoned equipment to CSC for reallocation.

q. Identify all unused cabling associated with equipment being removed or upgraded. Cabling must be removed from the site and disposed in an environmentally friendly manner. Cable removal is limited to the confines of the MCCP and CER.

r. Identify all of the old console and cabinets designated as waste. The Contractor must remove and dispose of all old consoles and cabinets in an environmentally friendly manner.

s. Hand over all software updates, touch drivers, etc. required to support the upgrade and include the applicable documentation in the Maintenance Manual.

t. Label all User Interfaces, Monitors and CCTV Monitors and equipment in MCCP.
u. Obtain all necessary information to design, build, provide factory acceptance testing, and install any soft key touch custom interface.

v. Remove any and all abandoned security and/or fire alarm equipment/panels located on the walls of the MCCP and turn them over to CSC for disposal or reallocation.

w. Leave equipment in a position where it cannot be tampered in such a way that a security breach could occur, or it could present a hazard to the Operator.

x. Install new system elements that meet the operational and technical specifications of the original element, if not exceed them.

y. Provide a plan view of the deployment of the console showing all dimensions of all new and existing items that will be deployed above and below the desk surface.

z. Supply and install all required panels, junction boxes, connector boxes, conduit, and cabling as required to ensure all reconfigured, replacement or relocated equipment is fully functioning.

aa. Provide operator and maintenance training in accordance with CSC specifications and standards respectively to correctional staff and the Electronic Security Systems maintenance technicians that are provided by the National Maintenance Service Provider.

bb. Provide one (1) year of full warranty support of the MCCP Console Upgrade after system commissioning and acceptance in accordance to CSC specifications and standards. This support must include troubleshooting, the correction of any deficiencies and the resolution of operational or technical problems.

3.4 Network CCTV System

The Contractor must:

a. Decommission the three (3) existing 50" video monitors and all related equipment such as VGA cables, client workstations and mounting hardware.

b. Supply and install two (2) 43" video monitors to the rear of the console and one (1) 22" video monitor for the VMS on the desktop. All three (3) monitors must be located as illustrated in Figure No. 3. These monitors must be mounted in accordance with the Design Requirements for the Main Control and Communications Post (MCCP) Console and Ancillary Equipment for use in Federal Correctional Institutions as referenced in 2.3. The new monitors must comply with the technical specifications listed in Section 3.1 of this STR.

c. Supply and install three (3) 2 RU client workstations in the CER. The new workstations must provide the two (2) 43" monitors and the one (1) 22" monitor with single independent video streams. The new workstations must be connected, as illustrated in Figure No. 4, to their respective monitors using high quality HDMI cables. KVM extenders should be avoided but will be accepted based on the criteria listed in Section 3.3 of this STR.

d. Implement the Genetec Omnicast® Remote Live Viewer (RLV) software application and supply and install Synergy software or an approved functional equivalent as illustrated in Figure No. 4. Configure the VMS as the control point for the camera tree and for call-ups on all three (3) workstations.

e. Supply and install a desktop mouse for control of the CER VMS workstation.

f. Program selectable camera/monitor layouts associated with the Genetec Omnicast® VMS to replace the fields of view and tile layouts that were available on the video monitors that were removed.

g. Configure and constrain network monitors to present either 1, 2, 4 or 6 tiles and configure presets as required.
3.5 PIDS CCTV System

The Contractor must:

a. Decommission the four (4) existing 15" PIDS CCTV video monitors and all related equipment such as VGA cables, client workstations and mounting hardware.

b. Supply and install four (4) 24" video monitors arranged in a 2x2 monitor configuration mounted above and behind the MCCP console as shown in Figure No. 3. These monitors must be mounted in accordance with the Design Requirements for the Main Control and Communications Post (MCCP) Console and Ancillary Equipment for use in Federal Correctional Institutions as referenced in 2.3. The new monitors must comply with the technical specifications listed in Section 3.1 of this STR.

c. Supply, license and install two (2) 2RU client workstations in the CER such that a maximum of two (2) monitors are connected to one NVUS workstation. One (1) NVUS workstation must manage two (2) 22" monitors (PIDS 1 and PIDS 2). The second NVUS workstation must manage the remaining two (2) 22" monitors (PIDS 3 and PIDS 4). The new workstations must be connected to their respective monitors, as illustrated in Figure No. 4, using high quality HDMI cables. KVM extenders should be avoided but will be accepted based on the criteria listed in Section 3.3 of this STR.

![Figure No. 4: MCCP PIDS/Network CCTV Configuration](image-url)
3.6  PIDS/FAAS Integration Unit (PIU/FIU)

3.6.1  PIDS/FAAS Touch Screens

The Contractor must:

a. Decommission the existing PIDS and FAAS touch screens and all associated cabling.
b. Supply two (2) new S100 compatible 19" capacitive touchscreens on articulating VESA mounts. The new touch screens must be able to support serial and USB touch protocols. EloAccutouch®, EloSmartSet®, and EloIntelliTouch® are the serial touch screen protocols supported by Senstar 100®.
c. Install the two (2) new touch screens at the locations detailed in Figure No. 3.
d. Supply and install two (2) new speakers for PIDS and FAAS annunciation.
e. Align the two (2) new PIDS and FAAS touch screens using the existing Senstar 100 maintenance workstation.

3.6.2  Maintenance User Interface (Senstar 100®)

The Contractor must:

a. Decommission all of the equipment in Cabinet #7 and all equipment related to the existing S100 maintenance user interface.
b. Specify and provide a detailed drawing as part of the PDR process for approval by the Design Authority regarding the location and installation of the new fold out maintenance user interface cabinet in the MCCP. The drawing must include dimensions, conduit location and AC outlets.
c. Supply the cabinet and any additional material or equipment required for its installation.
d. Ensure the new maintenance workstation is installed and secured in accordance with the approved location and mounting instructions.
e. Supply and install new cabling from the wall mount fold out desktop to the S100 in the CER. Provide sufficient slack for the maintenance workstation to be located on a wall anywhere in the MCCP.
f. Supply and install a 22" desktop maintenance monitor and keyboard for deployment and use by CSC trainers as required.
g. Install one (1) AC receptacle in the cabinet for the monitor.
h. Install the workstation after the console has been installed.
i. Dispose of Cabinet #7 and the existing maintenance workstation and cabling in an environmentally friendly manner.
j. Supply a shelf and relocate the S100 printer to the CER.

3.6.3  PIDS PA/FDS Audio Panel (Senstar®)

The Contractor must:

a. Manage and coordinate with CSC the implementation of a S100 FDS audio soft PIDS perimeter map solution as detailed in a quote to be provided by a company approved by Senstar for S100 configuration management.
b. Ensure that S100 configuration management changes are completed in concert with the overall project schedule.
c. Complete any ancillary work activities required that are not included in the S100 configuration.
management company’s quote.
d. Specify and provide a detailed drawing for approval to the Design Authority on where the S100 configuration management company will install a replacement FDS audio attenuator, FDS audio speaker, and PIDS PA microphone, equipped with an 8’ long cord, on the console.
e. Ensure the S100 configuration management company supplies and securely installs a replacement FDS audio attenuator, FDS audio speaker, and PIDS PA microphone in accordance with the approved location and mounting instructions.
f. Ensure the S100 configuration management company creates and installs the PIDS map soft interface per the approved design.
g. Specify and provide in the Operator Manual how an Operator will control and manage the PIDS map soft interface for the FDS audio.
h. Decommission the existing 2RU PIDS PA/FDS Audio Panel and all associated electronics and wiring.

Note: PWGSC will include the cost of the S100 configuration management company’s quote into the contract awarded for the Upgrade and Reconfiguration of EMSI MCCP.

3.6.4 Senstar® VCR Recorder & Wiper Panel (Senstar®)
The Contractor must:

a. Decommission the existing Senstar® VCR/Wiper Control Panel and any associated interconnect cabling.

3.7 Radio System (Motorola®)
The Contractor must:

a. Upgrade the existing Motorola® touch screen monitor to a 22” unit and install it at the location detailed in 3.1. Supply and install any new equipment required to ensure the monitor and touch interface functions properly.
b. Ensure the new touch screen monitor complies with the technical specifications listed in section 3.1 of this STR.
c. Ensure the new touch screen monitor is mounted in accordance with the Design Requirements for the Main Control and Communications Post (MCCP) Console and Ancillary Equipment for use in Federal Correctional Institutions as referenced in 2.3.
d. Specify and provide a detailed drawing for approval by the Design Authority of the existing Motorola® Device/Console Switch to be located under the console.
e. Install the Motorola® Device/Console Switch in accordance with the approved drawing.
f. Specify and provide a detailed drawing for approval by the Design Authority of a mounting module to accommodate the existing speakers to be attached to the support post behind the Motorola® touch screen.
g. Supply the mounting module and install the speakers in accordance with the approved drawing and manufacturer’s instructions.
h. Specify and provide a detailed drawing for approval by the Design Authority of how and where the
goose neck microphone and foot pedal will be located. Install these devices in accordance with the approved drawing and manufacturer’s instructions.

i. Supply and install a desk mounted Connex 172124 N jack to Jack Bulkhead Adapter adjacent to the Motorola® Radio System location that can be used to connect a hand held Motorola® radio antenna socket to an external antenna in the event of a power failure or Motorola® Radio System touch screen failure.

**Note 1:** In accordance with Motorola® specifications, cables from the console switch to ancillary equipment such as the speakers, microphone and foot pedal cannot be lengthened.

### 3.8 Telephone System

The Contractor must:

a. Relocate the three (3) existing telephones to the new console desktop. If the existing cables are of insufficient length, a controlled splice must be created per section 4.3 of this STR.

### 3.9 Door Control Systems

The Contractor must:

a. Manage and coordinate with CSC the relocation of both door control systems, as detailed in a quote to be provided by Delco, to ensure that the work is completed in concert with the overall project schedule.

b. Supply and install a monitor mount on the far right of the console to enable two (2) 22” monitors to be stacked one above the other.

c. Supply and install two (2) 22” monitors in the #6 position on the stacked monitor mount that comply with the technical specifications listed in section 3.1 of this STR.

#### 3.9.1 Door Control System for Units Other Than Unit 5

Delco must:

a. Decommission the existing 15” ELO touch screen and all associated equipment and cabling connecting the system to the MCCP from the CER.

b. Supply and install all required equipment and cabling from an existing CPU located in the CER to the lower monitor in position #6 of the console.

c. Program the door control system on the CPU to ensure full functionality.

d. Complete all testing, acceptance, training and handover steps to deliver a fully functioning door control system.
3.9.2 Unit 5 Door Control System

Delco must:

a. Decommission the existing 22” touch screen monitor and all associated equipment and cabling connecting the systems to the MCCP from the CER.
b. Supply and install all required equipment and cabling from an existing CPU located in the CER to the upper monitor in position #6 of the console.
c. Program the door control system on the CPU to ensure full functionality.
d. Complete all testing, acceptance, training and handover steps to deliver a fully functioning door control system.

Note: PWGSC will include the Delco cost of the door control systems relocation work into the contract awarded for the Upgrade and Reconfiguration of the Edmonton Maximum Security Institution MCCP.

3.10 Fire Alarm System

The Contractor must:

a. Manage and coordinate with CSC and an approved fire system contractor for the fire alarm system at Edmonton Maximum Security Institution to move the existing fire alarm system equipment from the MCCP console to a CSC approved stand-alone desk against the MCCP wall behind the Operator.
b. Manage and coordinate with the CSC Institution maintenance department the fire alarm system relocation as quoted by the approved fire system contractor to ensure that the work is completed in concert with the overall project schedule.
c. Supply and install a new desk unit that is compatible in design with the new MCCP console. The new desk must be no more than 1010 mm (40”) wide by 1047 mm (41”) deep and must accommodate the fire system computer, display, mouse, keyboard and a printer. A typical configuration minus the printer is illustrated in Figure No. 5.
d. Ensure all testing, acceptance, training and handover steps are properly completed to deliver a fully functioning fire alarm system.
e. Complete any ancillary work activities required but not included in the fire system contractor quote for the system relocation.

Note: PWGSC will include the cost of the fire alarm system relocation work into the contract awarded for the Upgrade and Reconfiguration of the Edmonton Maximum Security Institution MCCP.
3.11 Information Management Services (IMS)

The existing administrative monitor and computer are supplied and maintained by IMS. CSC will arrange to have the existing monitor upgraded to a 22" monitor that meets or exceeds the technical specifications listed in Section 3.1 of this STR fastened to the Contractor supplied and installed monitor mount hardware located in the #1 position of the console as detailed in 3.1 a) and as shown in Figure No. 3. CSC will also be responsible for installing the IMS computer in the location provided in the new console and completing all of the connections required for theIMS workstation to operate as designed.

The Contractor must:

a. Specify and provide a detailed drawing for approval by the Design Authority on how and where the IMS computer will be mounted under the console.
b. Coordinate with IMS the physical move of the computer to the console location and the required connections to the new 22" monitor.
c. Coordinate this work with CSC to ensure that the IMS computer relocation is completed in concert with the overall project schedule.

Note: The existing IMS laser printer must remain in its current location.
3.12 Public Address System

The Contractor must:

a. Manage and coordinate with CSC and Delco the installation of a soft key reconfiguration of the PA system as quoted by Delco that must be installed on the aggregator that displays the Unit 5 door control system at Edmonton Maximum Security Institution.
b. Specify and provide in the Operator Manual on how an Officer will control, manage and use the new PA soft interface.
c. Ensure that Delco creates and installs the new PA map soft interface in accordance with the approved design.
d. Manage and coordinate the Delco work to ensure that the following work is completed in concert with the overall project schedule. The Delco scope of work will include:
   • decommissioning the surface mounted tablet and associated equipment
   • installing all required connectivity and PA software updates to support a Win7 or newer operating system
   • programming of the new PA map soft interface in accordance with the approved design.
   • completing all testing, acceptance, training and handover steps to deliver a fully functioning PA/Intercom system

Note: PWGSC will include the cost of the Delco work into the contract awarded for the Upgrade and Reconfiguration of the Edmonton Maximum Security Institution MCCP.

3.13 Telephone Cut Off Switch Panel

The Contractor must:

a. Manage and coordinate with CSC the implementation of a turnkey soft key solution on the Aggregator for the telephone cut off switch system, which must provide all of the existing functions and notifications available on the current 4RU mechanical switch interface as detailed in a quote to be provided by Delco.
b. Ensure that all Delco work is completed in concert with the overall project schedule.
c. Complete any ancillary work activities required that are not included in the Delco quote.
d. Ensure Delco creates and installs the Aggregator soft interface per the approved design.
e. Decommission all existing equipment and hand over to Canada.
f. Complete all testing, acceptance, training and handover steps to deliver a fully functioning soft key telephone cut off switch system.

Note: PWGSC will include the cost of the Delco quote into the contract awarded for the Upgrade and Reconfiguration of the Edmonton Maximum Security Institution MCCP.

3.14 Lighting – Dimmer Switches

The Contractor must:
a. Relocate the lighting dimmer switches to one of the walls in the MCCP. The exact location will be determined by the site.

3.15 MCCP Operator Chair

The Contractor must supply and install a new MCCP Operator chair that meets or exceeds the following criteria:

a. Durability: Intensive Use Rated (24/7/365)
b. Warranty: Five (5) years on all components including parts and labour.
c. Construction:
   - Standard Seat Dimensions: >20” (508 mm) Width x >19” (483 mm) Depth.
   - Seat: Dual density moulded polyurethane foam with 8-ply hardwood.
   - Base: Five (5) point base with durable heavy duty castors.
   - Backrest Dimensions: >19” (483 mm) Width X >24.5” (622 mm) Height.
   - Weight Capacity: >350lbs (158.8kg).
   - Fabric: Abrasion resistant
   - Fabric Colour: Black or Charcoal
   - Equipped with arms
d. Adjustability:
   - Backrest: Fully upholstered backrest system with a minimum 5” (127 mm) range of vertical adjustment.
   - Headrest: Mechanical vertical control
   - Lumbar: Adjustable (air) support
   - Seat Height: Adjustable to between 17.5” (445 mm) to 22.5” (572 mm).
   - Back/Seat Angle: Heavy duty, 3-lever independent back/seat angle control.

e. The Contractor must supply and install a smooth 100% vinyl mat to protect the floor from the Operator’s chair. The mat must be at least 1/8” thick and cut from a 10’ x 10’ piece to fit the floor area that the Operator’s chair would normally come into contact with.

f. The Contractor must include a second chair that meets or exceeds the prescribed criteria in the spares list.

3.16 CER Space & UPS

The Contractor must:

a. Reconfigure equipment identified by others in the CER racks to provide required space for replacing one of the existing racks with a dedicated UPS rack that is in accordance with ES/STD-0805 Large Uninterruptible Power Supply.
b. Remove the existing two (2) UPS units and supply and install the replacement UPS in a self-contained rack.
c. Provide detailed drawings of the UPS and electrical infrastructure reconfiguration within the PDR.
d. Specify installation replacement process in the PDR to ensure an effective transition and minimal UPS downtime.
e. Ensure the UPS reports separate bypass, low battery and system fault alarms to the FAAS using dry
contacts or other.
f. Ensure the Maintenance workstation and all other new items of equipment installed are connected to the UPS system.

3.17 S100 Configuration Update

The Contractor must:

a. Remove all obsolete maps and soft controls from the existing S100 PIDS and FAAS displays. CSC will provide Bidders with a detailed list of the items to be removed at the Mandatory Site Visit that will be held following the posting of this project.

3.18 Network Time Synchronization

The Contractor must:

a. Upgrade the S100 PIDS and FAAS servers with appropriate software and hardware upgrades to ensure that they can be network enabled, where needed and that they support the Starcom over IP protocol.

b. Supply three (3) NIC cards that are compatible with and can be installed in the Senstar S100 servers.

c. Supply, install and configure one (1) Network Master Reference Clock/Time Server and all associated connectivity complete with mounting hardware and any supporting software in accordance with ST0300R1

d. Supply, install and configure one (1) industrial grade rack mountable computer that must serve as the Port Expander and provide network isolation between the additional security networks to be connected to the Time Server. The Computer must occupy no more than two (2) RUs and be supplied complete with operating system and equipped with three (3) four (4) port internally mounted NIC cards.

e. Supply and install one (1) rack mountable Network Switch, Avaya 8 Port, Layer 2 ERS 3500 or equivalent, complete with mounting hardware and any supporting software. This switch must serve to connect the PIDS and the FAAS servers to the Port Expander.

f. Ensure that all of the Security, Operational and Communications systems managed from the MCCP and supported through an appearance in the CER have access to a common data and time signal derived from a GPS satellite. The systems include, but are not limited to:

- Perimeter Intrusion Detection System (PIDS)
- Facility Alarm Annunciation System (FAAS)
- Video Management System
- Personal Portable Alarm System (PPA)
- Radio System
- Operational Voice Logger

CSC will confirm the final list of systems at the Mandatory Site Visit for Bidders that will be held following the posting of this STR.
4.0 ADDITIONAL REQUIREMENTS

4.1 Communications

The Contractor must adhere to the following communications requirements:

a. Communications between the Contractor, the Institution Representative and the Maintenance Technician(s) is of the utmost importance during interruptions to existing systems to ensure that additional and/or alternative security procedures must be engaged during the interruption of individual systems.

b. The Contractor must work in liaison with the Institutional Representative and the Maintenance Technician(s) during interruptions to existing systems. The on-site Electronics Maintenance Contractor responsible for the maintenance of all security systems with the institution is currently “the ADGA Group”. If the service provider changes during the course of these projects this information will be provided to the applicable contractor.

c. Prior to commencement of each work period, the Contractor must advise the institutional Representative and Maintenance Technician(s) of the work that will be performed during that period.

d. During normal work hours the Institutional Representative and Maintenance Technician(s) must be kept regularly informed of the progress being made and must be notified prior to any required disruption in system availability. After normal work hours the Contractor requires direction from the Institutional Representative and Maintenance Technician(s) prior to disrupting system availability. The Contractor must provide appropriate contact information that can provide immediate response to the site in the event of a system failure that resulted from Contractor transition work.

e. As a minimum, the parties must meet at the beginning and end of the working day.

f. The Contractor must brief institution staff prior to leaving the work site for the day. The briefing must be given to the Correctional Manager in charge of the day to day operation of the Institution (or their designate) and must include, as a minimum:
   • Work performed that day
   • Operation status of the system, including any limitations in functionality or peculiarities
   • Contact name and number in the event of a system failure
   • Emergency contact numbers of installation technicians

g. The Contractor must address all requests for change or deviation from this STR with the Design Authority before any on site discussions, to ensure all changes are consistent with National Policy and Technical Standards, and to ensure the Design Authority maintains a complete awareness of the project expectations and time-line.

h. Provide detailed report of work on a daily basis by email to the Design Authority's designated representatives, for activities completed during on-site installation. The report must be submitted and received by the main site contact the next morning prior to commencement of work for the day. The Report must be received and approved by the main site contact or the Contractor will not be allowed to work and must be responsible for the work delay.

i. The Contractor must chair a Progress Meeting by conference call at least once per month within 10 working days from the end of the previous month for the term of the contract, provide the Meeting Agenda one week ahead of the meeting, and provide minutes of the meeting detailing progress compared to the approved project schedule and any action items identified.

j. Canada will not be responsible for the costs of any work carried out that has not been authorized, in
writing, by the DA or their representative.

k. The Contractor must include in the Preliminary Design Report (PDR) detailed drawings/cut sheets of reconfigured, replacement, or relocated equipment.

l. The Contractor must complete a Site Assessment Test within one month after contract award, submit the PDR within one month after the site assessment, and the Final Design Report (FDR) within one month after the PDR Review Meeting.

m. The Contractor must set-up and chair a checklist review meeting to ensure all deliverables are in place prior to arranging the start-up meeting. The attendees for the checklist review meeting must include but are not limited to; the CSC DA, CSC regional representative and Extravision.

4.2 Cable Labels & Label Installation

The Contractor must adhere to the following cable label requirements and CSC specifications and standards:

a. The labels must be bold face laser quality, black print on white background.

b. The labels must be self-adhesive, one piece, label and clear cover wrapped around cable.

c. The wording on the labels must be approved by the Design Authority prior to manufacture.

d. The Contractor must install labels on each end of the cable.

e. The Contractor must install labels not less than 150mm from termination end of cable.

f. All labels must be clearly visible and readable after final termination of cables without having to move or rotate cables.

g. All cables added, relocated, moved, and/or replaced by the Contractor must be labelled as prescribed and included in the new set of as-builds to be submitted by the Contractor.

4.3 Equipment Installation

The Contractor must adhere to the following equipment installation requirements and CSC specifications and standards:

a. Install all existing equipment in/on the new console or in security equipment cabinets located in the CER as indicated by the Design Authority in the STR.

b. Install all MCCP/CER cabling beneath the computer flooring and fasten it using Velcro type tie-wraps.

c. The entire length of any existing cable that is contained entirely within the MCCP/CER to connect any new or relocated equipment must be replaced with new cable and connectors that meet or exceed CSC specifications and standards.

d. The jackets of all new or replaced Ethernet or network security cabling must be light green.

e. Except as noted in item c) above, if any existing cable that is connected to equipment in other areas of the institution from equipment in the CER/MCCP is of insufficient length to connect to the new or relocated equipment location, it may be spliced.

f. Splices must be made by using soldered connections and heat shrink.

g. Splices to existing cable must be kept to an absolute minimum and must be identified by the Contractor in the Preliminary Design Report for review.

h. Extending UTP cables between the MCCP and CER using a union will not be accepted.

i. Provide one 20A non-UPS circuit with a 20A breaker in the new console for maintenance usage.

j. To ensure efficient use of CER real estate, the Contractor may be required to move existing
equipment in the CER racks to accommodate new or relocated MCCP equipment. The Contractor must provide for such a requirement in their proposal.

### 4.4 Project Review Meetings

The Contractor must adhere to the following project review requirements which are above and beyond those identified in document ES/SOW-0101.

a. Upon contract award the Contractor must meet with CSC and/or their designated representative to discuss the scope of work and develop a full understanding of the parameters of the project.

b. On a regular basis the Contractor must meet with CSC and its representatives to discuss security requirements, shut downs, cutover strategies, temporary measures, and other similar requirements.

c. The Contractor must meet with CSC and/or their representatives prior to making any Genetec Omnicast® or Senstar 100® configuration changes to ensure that said changes are agreeable to the Design Authority.

d. The Contractor must demonstrate to the Design Authority or his designate, any proposed software changes to existing systems at their premises or off site prior to implementing them on site.

### 4.5 Cutover Planning

The Contractor must adhere to the following cutover planning requirements:

a. Ensure that at no time will the institution be without a 100% functional Fence Detection System (FDS), Radio System, Motion Detection System (MDS), or PPAL/PPA.

b. No disruptions will be allowed without receiving written permission from the Design Authority at least 48 hours in advance.

c. Provide for the possibility that, while all necessary preparations may be conducted during regular working hours, the final cutovers for any sub-system(s) might need to be completed between 23:00 and 06:00.

d. Ensure that the existing sub-systems remain fully operational until the migration from the old console to the new console commences.

e. Coordinate with CSC/ADGA the provision for an alternative radio console for the MCCP operator to use during the cutover process.

f. Consider the CSC guidelines provided below as a suggested methodology for the MCCP console cutover. However, CSC is willing to consider other cutover plans.

- Pre-install any required junction (splice) boxes.
- Pre-install and terminate any new or replacement cables.
- Conduct a pre-cutover test of the existing sub-system(s).
- Verify two (2) way radio transmissions are functional on all institutional base channels in all areas of the institution.
- Supply and install a temporary workstation table in the MCCP and temporarily relocate the remaining existing MCCP electronics to the temporary location. The supplied workstation table must be heavy duty, sturdy, and capable of supporting (as a minimum), twice the load of the equipment placed upon it.
• Assemble and install the new MCCP console at the designated location.
• Assemble and install any and all new monitors and monitor mounts.
• Route pre-installed cables (low voltage and power) from beneath the computer flooring to the MCCP console.
• Relocate the MCCP security electronics from the temporary workstation table to the new console.
g. Perform a pre-installation verification that consists of a full functionality check on all components associated with the various MCCP sub-systems prior to commencing with any cutover related tasks and submit the results to the Design Authority. Sub-system cutovers must not commence until the Design Authority has provided authorization to proceed.
h. Perform a full functionality Contractor Acceptance Test Plan (ATP) check on all components associated with the various MCCP sub-systems upon completing the cutover process and prior to commencing with the Final ATP).
i. Submit the completed Contractor ATP to the Design Authority for review prior to the completion of a Final ATP at which time the Design Authority may ask the Contractor to perform a sample of the tests carried out in the Contractor ATP, or, depending on system performance, all of the tests may be repeated. See Section 4.7 for ATP requirements.)

4.6 Institution Operations
The Contractor must adhere to the following on site operational requirements:

a. The Contractor must take every precaution to minimize any disturbance to institutional operations.
b. The Contractor and his staff must cooperate fully with operational staff and conform to all security requirements.
c. As the existing MCCP is in operation 24/7/365 special attention must be paid to ensure that any upgrades, relocations, or cutovers have limited impact on the operation of the existing systems and that when cutovers are required, the cutover time is kept to a minimum.
d. The Contractor must ensure that the number and duration of interruptions to existing systems are kept to an absolute minimum.
e. The Contractor must ensure that all cabling and cabinet preparations required for the relocation of existing equipment is completed prior to the interruption of any sub-system.
f. All down time must be coordinated with the Assistant Warden Operations on site or his/her designate.
g. The Contractor must submit to the Design Authority, for review and approval, a detailed schedule indicating when an interruption to each system is to occur and the duration of the interruption. The schedule must be submitted and approved before installation commences.
h. The Contractor must submit to the Design Authority, for review and approval, a detailed description of the proposed procedures to be followed for each interruption.
i. The Contractor’s staff must be prepared to work during evenings, nights and/or weekends to reduce the amount of down time and to meet operational requirements. If the Institution does not approve the request it will not be deemed as a delay in the delivery of the contract.
j. Interruptions to the following systems must be done individually. During interruption of one system all other systems must be fully operational.
• Two-way Radio System.
• Facility Alarm Annunciation System (FAAS).
• Perimeter Intrusion Detection System (PIDS).
• Fence Detection System (FDS).
• Perimeter Motion Detection System (MDS).
• PIDS CCTV System.
• Non-PIDS CCTV System.
• Public Address (PA) System.
• Door Control Systems.
• Uninterruptible Power Supply System.
• PPAL/PPA.

The timing and scheduling of these interruptions is subject to review and approval of the Institutional management and may be subject to change to accommodate site specific operational requirements. Some of these systems will be interrupted during regular working hours while the others may need to be interrupted between the hours of 23:00 and 05:00. The Contractor must include the approved schedule for interrupting these systems in the cutover plan. The Contractor must maintain a written log of the system interruptions completed in the cutover plan and include the log in the appropriate monthly report submitted to the Design Authority.

4.7 Testing and Acceptance Procedures

The Contractor must adhere to the following on site testing requirements:

a. The Contractor must provide a detailed editable version of the pre-installation verification to the Design Authority, or his designated representative, by mail or email, for approval at least two (2) weeks prior to the start of any installation requirements.

b. The pre-installation verification must detail tests and procedures to be undertaken by the Contractor and witnessed by the Design Authority and/or designated representative to demonstrate that each system was fully functional and operational prior to commencing any installation activities.

c. The Design Authority must review the pre-installation verification and may request revisions or additional tests to ensure all required testing is performed prior to accepting the work as completed.

d. The pre-installation verification must be provided by the Contractor to the Design Authority in an itemized format indicating each test to be performed and the method in which it is to be performed.

e. The Contractor must complete one hundred percent of the tests included in the pre-installation verification approved by the Design Authority.

f. The Contractor must complete the pre-installation verification and the results must be submitted to the Design Authority or his designate within 24 hours after the test was completed.

g. The Contractor, upon completing the MCCP upgrade installation, must complete one hundred percent of the tests included in a Contractor pre ATP to demonstrate that each system is fully functional and operational in accordance with the Final Design Report. The test results must be fully documented, signed by the Contractor, and submitted to the Design Authority or his designate within 24 hours after the Contractor pre ATP was completed.

h. Within 24 hours after the Contractor pre ATP is completed, the Contractor must provide a detailed editable version of the Final ATP to the Design Authority, or his designated representative, by mail or email, for approval. The Final ATP must detail tests and procedures to be undertaken by the Contractor and witnessed by the Design Authority and/or designated representative to demonstrate
that each system is fully functional and operational.

i. The Contractor must provide a fully completed and signed copy of the Final ATP to the Design Authority, or his designated representative, by mail or email, within two weeks of completing the Final ATP.

j. In the case where subcontractors have been used, the Contractor must provide written confirmation that the work of their subcontractor has been inspected and verified. This verification must be sent to the Design Authority or his designated representative, by mail or email, at least two days prior to the start of the Final ATP.

k. Testing may be witnessed by the Design Authority, a designated representative or a third party contractor.

l. If an unacceptable level of failed tests is encountered during the Final ATP, the testing must be halted until the Contractor has corrected the failures.

m. If a minor deficiency that does not affect the operational effectiveness of the equipment installation is encountered during the Final ATP, the testing may continue. If a major deficiency is found during the testing that does affect the operational effectiveness of the installed equipment or system; the testing must cease until the deficiency has been corrected.

n. The Final ATP must be conducted during normal working hours, 08:00 to 16:00, Monday to Friday. Testing at other times will only be done in an emergency situation or when stipulated by the Design Authority.

o. The Design Authority or designated representative must sign-off on the Final ATP upon the successful conclusion of the testing. Any minor deficiencies identified during the testing must be indicated on the Final ATP form. This signature indicates the Conditional Acceptance of the system.

p. The installed systems will be subjected to operational testing for a period of two (2) weeks following the Conditional Acceptance of the system. CSC will formally accept the system from the Contractor at the end of this two (2) week period, but only if all deficiencies have been corrected.

q. Any deficiencies noted by CSC during this two (2) week operational testing period will be communicated to the Contractor, who must then correct the deficiencies. The two (2) week operational testing period will begin again after all deficiencies have been cleared.

r. Equipment warranty period will start on the date the system is formally accepted.

4.8 Mounting

The Contractor must adhere to all CSC and manufacturers applicable standards and/or specifications referenced in 2.3 when installing equipment in the MCCP and CER.
5.0 SUPPORT AND TRAINING

5.1 Support

The Contractor must meet the following support requirements:

a. CSA/CUL Certification:
   I. Given the sensitive nature of all electronic components and the need for high reliability and safety, it is a requirement that all material and equipment be CSA/CUL certified.
   II. Evidence of compliance must include certified test reports and definitive shop drawings.

b. The Contractor is responsible for all work performed by a Contractor-provided subcontractor.

c. System Support:
   I. The Contractor must provide full support of the system through completion and acceptance by CSC and for one full year after acceptance (warranty period).

d. This support must include applicable system upgrades (as they become available), troubleshooting, the correction of any system bugs or deficiencies, and the resolution of any operating problems.

5.2 Operator Training

In accordance with ES-SOW/0101 the Contractor must prepare and present two (2) two (2) hour operator training courses to the trainers responsible for training MCCP staff. The training course must be provided at the site to two (2) groups of five (5) operator-trainers in English. The course must provide a general functional overview of the operation of all subsystems relocated to the new console with a detailed focus on the specific changes implemented as a result of the MCCP console reconfiguration, which includes the following:

a. Operation of the VMS desktop monitor (with camera tree and preconfigured layouts) to call up camera views/layouts on the two (2) large video monitors,
b. Deployment of the Senstar 100® Training Station,
c. Operation of the soft keys on the PIDS touch screen that provide the Operator with the ability to select FDS audio,
d. Operation of the touch screen displays for the two (2) Door Control Systems

e. Operation of the PA System touch screen display on the Aggregator,
f. Operation of the soft keys on the Aggregator touch screen that provide the Operator with the ability to select telephone cut off switches,
g. Console and chair raising and lowering operations.

The course must be presented on site after a successful Contractor ATP of the system. Training sign-in sheets and a hard and soft copy of the training material must be included in the final documentation package, clearly identifying the name, date, institution, printed name of attendees, signature of attendees, and attendees' comments on training.

In addition, the Contractor must provide short informal Operator training sessions as systems are cutover and at shift change to ensure on duty operational staff is informed of any reconfiguration changes to
MCCP operations. As part of the informal training sessions the Contractor must provide a written description documenting the before and after system status and configuration for the changes implemented to MCCP operations after a system cutover. The total number of informal sessions provided by the Contractor must coincide with the Contractor’s proposed cutover schedule.

5.3 Maintenance Training

In accordance with ES/SOW-0101 the Contractor must prepare and present a four (4) hour training course to individuals responsible for maintenance of the equipment. The training course must be provided to one group of five (5) technicians in English. The course must provide a general functional overview of the maintenance and operation of all subsystems relocated to the new console with a detailed focus on the specific changes implemented as a result of the MCCP console reconfiguration, which includes the following:

a. Detailed review of any and all implemented operational changes (refer to Section 5.2 of this STR),
b. Procedures for making console adjustments to the console actuators and monitor mounting hardware,
c. Location, functions, and interconnect details of any and all deployed MCCP junction boxes,
d. Detailed review of the Door Control Systems and PA System touch screen displays and deployed configurable I/O hardware,
e. Operation of the soft keys on the PIDS touch screen that provide the Operator with the ability to select FDS audio,
f. Operation of the soft keys on the Aggregator touch screen that provide the Operator with the ability to select telephone cut off switches,
g. Review of the implemented S100 programming modifications,
h. Console and chair raising and lowering operations,
i. Thorough review of the updated as-built documentation provided by the Contractor.

The course must be presented on site two (2) weeks after a successful Contractor ATP of the system. The course syllabus must be presented to the CESM for approval at least two (2) weeks prior to training commencement. Training sign-in sheets and a hard and soft copy of the training material must be included in the final documentation package and must clearly identify the name, date institution, printed name of attendees, signature of attendees, and attendees’ comments on training.
6.0 DOCUMENTATION

6.1 Operator Manuals

In accordance with specification ES/SOW-0101, the Contractor must provide an Operator Manual that includes an overview of the functionality of all security systems that were cutover to the new MCCP console as well as a detailed description of any operational changes implemented as a result of the MCCP console reconfiguration. The provided Operator Manual must refer the reader to the original Operator Manuals for specific information related to the operation of any security systems that existed prior to the MCCP console reconfiguration. The Contractor must provide ten (10) hard copies and one (1) soft copy of the updated documentation in English. The Contractor must provide one (1) soft copy of the updated documentation in English to each of the National Design Authority, Regional CESM and RTEO, and the National Maintenance Service Provider Headquarters (Attn: Project Manager, CSC National Maintenance Program).

The Operator Manual updated documentation must include a drawing of the new console with each user interface clearly identified by name, purpose, and function. Any and all new operational features that have been introduced to the MCCP console must be clearly detailed using suitable text and screenshots.

6.2 Maintenance Manuals

The Contractor must provide Maintenance Manuals, in accordance with specification ES/SOW-0101, that includes an overview of the functionality of all security systems that were cutover to the new MCCP console as well as a detailed description of the equipment and maintenance changes implemented as a result of the MCCP console reconfiguration. The provided Maintenance Manual must refer the reader to the original subsystem Maintenance Manuals for specific information related to the maintenance of any security subsystem electronics that existed prior to the MCCP console reconfiguration.

The Contractor must provide all copies of the Maintenance Manual updated documentation in English. The Contractor must provide one (1) hard copy of the Maintenance Manual updated documentation to the site and four (4) soft copies of the Maintenance Manual updated documentation on CD or DVD as follows: one (1) soft copy to the National Design Authority, one (1) soft copy to the Regional delegated Design Authority, one (1) soft copy to the CSC project Engineer, if defined, and one (1) soft copy to the National Maintenance Service Provider Headquarters (Attn: Project Manager, CSC National Maintenance Program).

The Maintenance Manual updated documentation must include the duly completed and approved copies of the ATP and copies of ATP results.

The Maintenance Manual updated documentation must contain a Contractor generated maintenance handover report which includes details of the equipment, dates of warranties, Contractor contact information and other project information.
6.3 As-Built Drawings

The drawings provided to the Bidders are for guidance and assistance in understanding the existing sub systems. The Contractor must submit a new complete set of as-builts based on the reconfigured, replacement or relocated equipment in the MCCP.

The Contractor must provide copies in AutoCAD 2013 format of the new as-built drawings of the site installation and in accordance with specification ES/SOW-0101. The Contractor must provide one (1) hard copy and one (1) soft copy of the as-built drawings to the site, one (1) hard copy to the CESM, one (1) hard copy to the RTEO and one (1) hard copy to the National Maintenance Service Provider Headquarters (Attn: Project Manager, CSC National Maintenance Program)."

The as-builts must form part of the requisite Maintenance Manual updated documentation detailed in Section 6.2 of this STR.