



**CORRECTIONAL SERVICE CANADA
FACILITIES BRANCH
ELECTRONIC SECURITY SYSTEMS**



ES/STR - 1000
Revision 1
2016 March

**STATEMENT OF TECHNICAL REQUIREMENTS
CABLE TELEVISION DISTRIBUTION SYSTEM
FOR USE IN FEDERAL CORRECTIONAL INSTITUTIONS**

AUTHORITY

Acquisition of a cable television distribution system for the identified purposes that is not in compliance with this standard must be approved by the Design Authority.

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

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Approved by:

Director,
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TABLE OF REVISIONS

| Revision | Paragraph | Comment |
|-----------------|------------------|------------------------------|
| 0 | N/A | Original |
| 1 | All | Total rewrite and reorganize |

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TABLE OF ABBREVIATIONS

| Abbreviation | Expansion |
|--------------|--------------------------------------|
| CD | Commissioner's Directive |
| CSC | Correctional Service Canada |
| CTDS | Cable Television Distribution System |
| ESS | Electronic Security Systems |
| RFP | Request for Proposal |
| TER | Terminal Equipment Room |

1 INTRODUCTION

1.1 Overview

- .1 This specification defines the requirements of Correctional Service Canada (CSC) for a Cable Television Distribution System (CTDS) for correctional institutions.

1.2 Purpose

- .1 In accordance with CD-341 Reception and Distribution of Television Signals, CSC is responsible for the cost of signal distribution to cells.
- .2 Termination points for the signal will include regular cells and may include inmate common rooms and special staff locations such as the warden's office.
- .3 The system will take an analogue signal from the head end equipment and distribute it throughout the institution to all destinations identified in the RFP.

2 REFERENCES

2.1 Specifications, Standards, and Statements of Work

.1 Access to non-government specifications is the responsibility of the contractor.

- CD-341 Reception and Distribution of Television Signals
- CAN/CSA-C22.2 NO. 60950-1-07 Information technology equipment - Safety
- IEC EN55024 International Electrotechnical Commission Information technology equipment – Immunity characteristics – Limits and methods of measurement
- IEC EN60950-1 International Electrotechnical Commission Information technology equipment – Safety

3 PHYSICAL

3.1 Standard Components

- .1 All connections must be F-type threaded connectors.
- .2 All inter-building signal distribution must be by filled RG-11/U quad shield coax.
- .3 All intra-building signal distribution must be by RG-6/U FT-6 plenum rated coax.

3.2 Configuration

- .1 The system typically includes amplifiers, signal splitters, cables, and conduits, etc.
- .2 The RFP will define:
 - .1 The signal source location where the head end equipment of the cable/satellite service provider is installed;
 - .2 The signal termination points;
 - .3 Any existing cable distribution sub-networks that must be connected;
 - .4 TER locations;
- .3 All Terminal Equipment Room (TER) mounted equipment must be wall mounted on a painted ½" or thicker plywood board.
- .4 All cell connections must be individual "home run" cables that run back to the building's TER.
- .5 No cable splices are permissible.
- .6 All inter-building cables must be run in underground conduits.

3.3 Interference

- .1 All electronic components must be certified compliant to IEC EN 55024, Immunity characteristics.

3.4 Reliability

- .1 All components must have an MTBF of at least 50,000 hours.

3.5 Safety

- .1 All electronic components must be certified compliant to IEC 60950-1 or CAN/CSA-C22.2.

3.6 Environment

- .1 All components must operate over the following environmental conditions:
 - .1 Temperature: 0° C to +60° C;
 - .2 Humidity: 0 to 95% relative, non-condensing;

4 OPERATIONAL

4.1 Performance

- .1 A failure must be deemed to have occurred when any termination point does not receive the signal from the source system at the minimum specified level and quality.
- .2 The signal level at the termination point must be between 0 dBmV and 14 dBmV at 55MHz, 301MHz, and 499MHz.
- .3 The signal noise measured at the termination point must be a minimum of 43dB below the visual signal level of the highest channel provided.
- .4 Low frequency disturbances must not exceed 3% of the visual signal level.
- .5 RG-6/U cabling must have an attenuation of not more than 5.65 dB per 100 feet at 750 MHz.
- .6 RG-11/U cabling must have an attenuation of not more than 3.65 dB per 100 feet at 750 MHz.
- .7 The signal level at the interface to any existing cable distribution sub-networks must be between 0 dBmV and +3 dBmV of the pre-existing signal level.
- .8 Electronic copies of test results of the above criteria must be provided by the contractor for all new cabling and existing sub-network interfaces.

4.2 Configuration

- .1 All unconnected amplifier and splitter connectors must have a 75Ω terminator.
- .2 All cables to cells and inmate areas must:
 - .1 Include a drip loop immediately outside the cell wall;
 - .2 Be secured to the wall outside the cell immediately prior to the drip loop.
- .3 All cables must include at least 300mm of slack at both ends. The slack may include the drip loop.
- .4 No active or passive devices are allowed on the cable between the outside of the TER and the cell.
- .5 The cable termination points must be female/female f-type coax barrel couplers firmly affixed to faceplates in the cells and connected to the distribution cable.
- .6 All cell and inmate area termination points must be to a vandal resistant plate that is secured with security fasteners.