



Commonwealth of Massachusetts

Executive Office of Technology Services and Security (EOTSS)
Enterprise Risk Management Office

Physical and Environmental Security Standard

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1. PURPOSE

- 1.1. This **standard** establishes requirements to prevent damage or physical access to the Commonwealth's **information** processing facilities and **sensitive data**. This **standard** defines the following **controls** and acceptable practices:
 - Definition of physical security perimeters and required **controls**
 - **Personnel** and visitor access **controls**
 - Requirements for environmental protection equipment
 - Protection of equipment stored off-site from the Commonwealth's facilities
- 1.2. Federal statutes and regulations, and, in some cases, state law, may impose security requirements in addition to the security requirements set forth in this **standard** (for example, Publication 1075 of the Internal Revenue Service). Nothing in this **standard** will be construed or interpreted as contradicting any such federal or state requirement. This **standard** is meant to encourage adoption of its security measures as a baseline, in addition to, and not in place of, any other legally required security measures.

2. AUTHORITY

- 2.1. M.G.L. Ch. 7d provides that "Notwithstanding any general or special law, rule, regulation, executive order, policy or procedure to the contrary, all executive department agencies shall, and other state agencies may, adhere to the policies, procedures and objectives established by the executive office of technology services and security with respect to activities concerning information technology."

3. SCOPE

- 3.1. This document applies to the use of **information, information systems**, electronic and computing devices, **applications**, and network resources used to conduct business on behalf of the Commonwealth. The document applies to the Executive Branch including all executive offices, and all boards, commissions, agencies, departments, divisions, councils, and bureaus, hereinafter referred to as Commonwealth Agencies and Offices. Other Commonwealth entities that voluntarily use or participate in services provided by the Executive Office of Technology Services and Security, (EOTSS), such as mass.gov, must agree to comply with this document as a condition of use. Executive Branch Agencies and Offices are required to implement **procedures** that ensure their **personnel** comply with the requirements herein to safeguard **information**.

4. RESPONSIBILITY

- 4.1. The Enterprise Risk Management Office is responsible for the development and ongoing maintenance of this **standard**.
- 4.2. The Enterprise Risk Management Office is responsible for this **standard** and may enlist other departments to assist in the monitoring and maintenance of compliance with this **standard**.
- 4.3. Any inquiries or comments regarding this **standard** must be submitted to the Enterprise Risk Management Office by sending an email to ERM@mass.gov.
- 4.4. Additional **information** regarding this **standard** may be found at <https://www.mass.gov/cybersecurity/policies>.

5. COMPLIANCE

- 5.1. Compliance with this document is mandatory for the Executive Branch including all Commonwealth Agencies and Offices. Violations are subject to disciplinary action in accordance with applicable employment and collective bargaining agreements, up to and including the termination of their employment and/or assignment with the Commonwealth.

Exceptions to any part of this document must be requested online through ServiceNow, <https://www.mass.gov.service-now.com>. A policy **exception** may be granted only if the benefits of the **exception** outweigh the increased **risks**, as determined by the **Commonwealth CISO**, or his or her designee. Any and all **exceptions** will be for a specified time and will be narrow in scope.

6. STANDARD STATEMENTS

6.1. Facility Control and Secure Areas

Security perimeters will be defined and established to protect areas that contain **sensitive data** and critical **information** processing facilities. This will include, but may not be limited to, **data** centers and main or intermediate distribution facilities (MDF or IDF) where core infrastructure is located and where **sensitive data** is processed, stored, managed, or transported.

6.1.1. Physical security perimeters

Commonwealth Agencies and Offices must ensure that physical security for the established security perimeters are clearly defined and outfitted with perimeter protection mechanisms to reduce the **risk** of unauthorized access. The level of perimeter protection will be based on the sensitivity and criticality of the **information asset** housed and the nature of the supported business functions.

The following **controls**, at a minimum, will be considered when implementing and revising perimeter protections, based on business requirements:

- 6.1.1.1. **Access control:** physical barriers, proximity card readers or manned entry points must be in place to control access to internal secured areas to prevent unauthorized entry.
- 6.1.1.2. Site monitoring: physical perimeters will be monitored by manual **controls** such as security guards and real-time **controls** such as remote or live closed-circuit camera consoles.

6.1.2. General access **controls**

Commonwealth Agencies and Offices will restrict access to internally secured areas to only authorized **personnel**. The following are minimum **controls** for restricting access:

- 6.1.2.1. Badge assignment **process:** **process** for issuing badges, including granting, and revoking badges for **personnel** and visitors (if applicable) must be documented.
- 6.1.2.2. Badge system access: access to the badge administration systems must be restricted to only authorized **personnel**.

- 6.1.2.3. Authorized **personnel** identification: all Commonwealth full-time and part-time **personnel**, including full-time and part-time interns, who perform services for the Commonwealth will be issued a badge or comparable identification. All other contractors, consultants and/or vendors must provide 24 hours' notice before being on-site.
- 6.1.2.4. Controlled reception: **procedures** to securely receive deliveries for restricted areas must be documented. Deliveries for restricted areas will be monitored and recorded (e.g., delivery company name, time, parcel) for audit purposes.
- 6.1.2.5. Audit trail of access to restricted areas: the date and time of entry and departure of visitors to areas of IT **assets** processing, storing and/or transmitting **confidential information assets** will be recorded and securely maintained (e.g., **data** centers, server rooms, Department of Revenue).
- 6.1.2.6. Non-business hours restriction: facility access outside of regular office hours defined by the **agency** must be controlled. Access to public areas must be monitored, and access to secure areas must be strictly enforced using the badge and/or escort.

6.1.3. Visitor access **control**

Commonwealth Agencies and Offices must ensure that visitor access requires additional **controls** beyond the requirements for general access. The following are minimum **controls** for restricting visitor access:

- 6.1.3.1. Visitor sign-in: visitors must sign a visitor's **log** that indicates date and time in/out, organization represented (if applicable), and the identity of the Commonwealth Agency and/or Office they visited.
- 6.1.3.2. Visitor Identification: all visitors will prominently display their visitor identification (badge or alternate form of identification) at all times while in secured areas (i.e., non-public office areas).
 - 6.1.3.2.1. Visitors without a displayed badge will be escorted back to the reception area for identification and authorization of access.
 - 6.1.3.2.2. Visitor identification will be set to expire on the day that the identification is granted.
 - 6.1.3.2.3. If a physical badge is issued, visitors will be required to surrender the physical badge before leaving the facility or at the date of expiration.
 - 6.1.3.2.4. **Personnel** are not allowed to utilize visitor badges.
- 6.1.3.3. Types of identification: **personnel** identification badges will differ from badges issued to visitors.
- 6.1.3.4. Positive identification of visitor: visitors must present a government issued, photo identification prior to the issuance of a badge and gaining access to Commonwealth facilities.
- 6.1.3.5. Visitor Monitoring: within areas that host sensitive **information assets** (e.g., **data** centers), visitors without CORI on file must be monitored at all times by the Commonwealth host.

- 6.1.3.6. Visitor hosting: the Commonwealth host will assume responsibility for their visitor for the duration of the visit. Visitors will be granted access to internal secured areas only with authorization.

6.1.4. Security for public, internal and **personnel** areas

Commonwealth Agencies and Offices must ensure that all areas that provide access to the Commonwealth network implement **controls** that protect against unauthorized physical access and damage from environmental factors (e.g., fire, flood, natural or man-made disasters, power and temperature or humidity variations).

The following are minimum considerations for securing offices, rooms and facilities:

- 6.1.4.1. Environment hazards: hazardous and combustible materials must be stored according to Material Safety Data Sheets (MSDS) to reduce the **risk** of exposure.
- 6.1.4.2. Shared facilities: physical and environmental **controls** will be sufficient for protecting Commonwealth's **information** in owned, rented, and leased facilities.
- 6.1.4.3. Health and safety regulation standards: relevant health and safety regulation (e.g., OSHA) standards will be considered to ensure implemented protection **controls** meet requirements.
- 6.1.4.4. Physical access to publicly accessible work area outlets: areas accessible to visitors will not have work area outlets (e.g., Ethernet port) enabled unless network access is explicitly authorized.
- 6.1.4.5. Physical access to telecommunication equipment: physical access to wireless access points, gateways, handheld devices, networking/communications hardware, and telecommunication lines will be restricted and/or monitored.

6.1.5. Security for internal secure areas

Secured areas are those used by the Commonwealth to conduct specific security or business-related functions that require the use of **confidential information**. The following requirements, at a minimum, will be considered to protect the Commonwealth's secured areas:

- 6.1.5.1. **Personnel** Authorization: access to secured areas such as **data** centers will be restricted to authorized **personnel** with a demonstrated business justification. Secured areas, where feasible, will not display any obvious signage indicating the purpose of the area.
- 6.1.5.2. **Access control** mechanisms: secured areas will be subject to additional entry **controls** such as locks, proximity card readers and biometric identification.
- 6.1.5.3. Audit trail: an audit trail of access to secure areas will be maintained and privileges will be reviewed regularly to assess validity.

6.2. Equipment and Other Media Security

Commonwealth Agencies and Offices must ensure that the Commonwealth's **information assets**, whether on-site or off-site, are protected against unauthorized physical access, damage, or loss due to physical and/or environmental causes.

6.2.1 Physical and environmental protection

All equipment owned or managed by the Commonwealth will be housed in Commonwealth facilities with a level of protection commensurate with the sensitivity and criticality of the equipment and the **information** it handles (see *IS.004 Asset Management Standard*).

6.2.1.1. Environmental Threats

The potential danger from environmental threats including weather, malicious attacks, and accidents will be considered and **controls** appropriate for **risk** mitigation will be implemented to reduce the potential for an **incident** to occur.

Environmental conditions will be monitored in appropriate areas. At a minimum, monitoring will be performed for fire/smoke in the general facility areas. Internal secure areas will be subject to additional monitoring for temperature, water, power continuity, humidity and cleanliness.

Environmental **controls** such as heating, ventilation, air conditioning, drainage, fire suppression, emergency lighting, continuous power and humidity **control** will be implemented in facilities in accordance with **risk** assessments. **Data** centers will contain elements of each environmental **control** at sufficient levels.

6.2.1.2. Backup power

Continuous power will be provided for mission-critical **information assets** through battery-operated uninterrupted power supply (UPS) protection. The use of generator backup systems should be implemented if **risk** assessments warrant higher levels of protection.

6.2.1.3. Shutdown **procedures**

Clearly defined **controls** and **procedures** to enable an orderly shutdown of computing resources in the event of a prolonged power failure will be documented and distributed to the **personnel** responsible for the shutdown **process**.

6.2.1.4. Emergency power shutoff

In the case of an emergency, emergency power off switches will be located near emergency exits in equipment rooms to facilitate rapid power down.

6.2.1.5. Alarm systems

Configuration of alarm systems will be periodically reviewed and evaluated to detect malfunctions in the supporting utilities and reconfigured as needed.

6.2.1.6. Voice services

Telecommunications equipment will be connected to support redundant connection points to the utility provider to prevent failure in case of emergency. Voice services will be adequate to meet local legal requirements for emergency communications.

6.2.2. Off-site equipment and security

Equipment (e.g., network and telecommunication devices, servers, power, and cooling equipment) may only be taken off-site for valid business reasons and with authorization from the **Information Owner**.

Individuals who take equipment offsite are responsible for the physical protection of the system and will ensure the system is secured at all times. Equipment taken off-site will be recorded when removed off-site and recorded when returned as necessary.

6.2.3. Cabling protection

Power and telecommunications cabling will be protected adequately against **risks** such as interference, **data** capture or physical damage. These cables will be easily identifiable using appropriate markers or labels to ensure handling errors are minimal.

6.2.4. Maintenance of **information assets**

Equipment maintenance **controls**, at a minimum, will include the following:

6.2.4.1. **Equipment** will be serviced in accordance with the manufacturer's/supplier's recommendations and tested periodically.

6.2.4.2. Prior to the disposal or reuse of **equipment**, all **data** will be removed or securely overwritten to ensure that any **confidential data** and licensed **software** is removed (see *Information Disposal in IS.004 Asset Management Standard*).

6.2.5. Upon termination of **personnel** and/or expiration of external business relationships, all organizationally owned **equipment** must be returned within ten (10) business days.

6.2.6. Workspace security: Food and water will not be stored in or around secure areas hosting mission-critical systems (e.g., **data** centers).

7. CONTROL MAPPING

Section	NIST SP800-53 R4 (1)	CIS 20 v6	NIST CSF
6.1 Facility Control and Secure Areas	CP Family	-	-
	PE-1	-	ID.GV-1
	PE-2	-	PR.AC-2
	PE-9	-	ID.BE-4
	PE-10	-	PR.IP-5
	PE-11	-	ID.BE-4
	PE-13	-	PR.IP-5
	PE-15	-	PR.IP-5
	AT-2	CSC 17	PR.AT-1
	AT-3	CSC 5	PR.AT-2
	PL-4	-	-
	PS-6	CSC 13	PR.DS-5
	PE-1	-	ID.GV-1
	PE-2	-	PR.AC-2
	PE-3	-	PR.AC-2
	PE-4	-	PR.AC-2
	PE-6	-	PR.AC-2
	PE-8	-	-
	PE-9	-	ID.BE-4
	PE-11	-	ID.BE-4
PE-12	-	PR.IP-5	
PE-14	-	PR.IP-5	
PE-16	CSC 1	PR.DS-3	
PE-18	-	PR.IP-5	
6.2 Equipment and Other Media Security	MA Family	-	-
	MP-5	CSC 8	PR.PT-2
	MP-6	CSC 1	PR.DS-3
	PE-1	-	ID.GV-1
	PE-3	-	PR.AC-2
	PE-6	-	PR.AC-2
	PE-16	CSC 1	PR.DS-3
	PE-19	CSC 13	PR.DS-5
	PE-20	CSC 19	DE.CM-2
	CM-9	CSC 3	PR.IP-1
	PS Family		

8. RELATED DOCUMENTS

Document	Effective date

9. DOCUMENT CHANGE CONTROL

Version No.	Revised by	Effective date	Description of changes
0.90	Jim Cusson	10/01/2017	Corrections and formatting.
0.92	John Merto	01/02/2018	Corrections, Formatting
0.95	Sean Vinck	5/7/2018	Corrections and Formatting
0.96	Andrew Rudder	5/31/2018	Corrections and Formatting
0.98	Anthony O'Neill	05/31/2018	Corrections and Formatting
1.0	Dennis McDermitt	06/01/2018	Pre-Publication Review
1.0	Andrew Rudder	10/4/2018	Approved for Publication by: John Merto
1.1	Megan Perkins	7/15/2020	Annual Review; Minor corrections and formatting
1.2	Sean M. Hughes	11/04/2021	Annual Review
1.3	Sean M. Hughes	08/29/2022	Annual Review
1.4	Thomas E. McDermott	11/30/2023	Corrections, formatting, updating and Annual Review
1.5	Anthony O'Neill	11/30/2023	Final Review

The owner of this document is the **Commonwealth CISO** (or his or her designee). It is the responsibility of the **document owner** to maintain, update and communicate the content of this document. Questions regarding this document must be submitted to the **document owner** by sending an email to ERM@mass.gov.

9.1 Annual Review

This *Physical and Environmental Security Standard* should be reviewed and updated by the **document owner** on an annual basis or when significant **policy** or **procedure** changes necessitate an amendment.