



***Maintenance Series Handbook  
MS-1***

***Operation and Maintenance  
of Real Property***

***TL-6: August 8, 2019***

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**Maintenance Series Handbook MS-1  
Operation and Maintenance of Real Property**

**Transmittal Letter 6  
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**A. Explanation**

This handbook is a complete revision of the MS-1 Handbook, Operation and Maintenance of Real Property. Changes in building equipment maintenance philosophies, methodologies, and preventive maintenance guidelines are included. Utilize this handbook and the appropriate bulletins to determine proper building maintenance support staffing for each facility in accordance with the updated maintenance philosophies and current preventive maintenance guidelines. It will be available on the MTSC web site at <http://www.mtsc.usps.gov> in PDF.

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**D. Comments and Questions**

Suggestions for improving this handbook are solicited from all sources. To provide comments and suggestions, or to report handbook errors, use the Handbook Comment selection on the MTSC Feedback link at <http://www1.mtsc.usps.gov/>. This handbook will be updated as future needs demand.

A handwritten signature in blue ink that reads "Thomas Rabicki".

Thomas G. Rabicki  
Manager, Maintenance Planning and Support  
Headquarters Maintenance Operations

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# Operation and Maintenance of Real Property

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## SECTION 1 INTRODUCTION

### 1.1 SCOPE OF THIS HANDBOOK

This handbook applies to all United States Postal Service (USPS) maintenance capable offices and provides guidelines for the operation and maintenance of real property. This handbook prescribes policies and procedures applicable to USPS-owned and USPS-leased buildings and space including, but not limited to:

- Operation, maintenance, protection, repair, alteration, improvement, and management.
- Official relations with other federal agencies, state and local agencies, private organizations and the general public.

Definitions and methods for computing building areas are provided in [APPENDIX A](#).

### 1.2 SENIOR POSTAL OFFICIAL (SPO) RESPONSIBILITIES

The term Senior Postal Official (SPO) is used throughout this document and will be inclusive of various EAS positions such as Installation Heads, Postmasters, Station & Branch Managers and/or Supervisors.

The SPO at each location maintains and operates USPS real property at that location in accordance with this handbook. The SPO may act as Building Manager, or may designate another individual to perform these duties. The Manager, Maintenance (or equivalent title of the highest-ranking maintenance position) is normally the designee. In smaller offices, the SPO may not delegate this responsibility.

### 1.3 SAFETY

The USPS is subject to Public Law 91-596, the [Occupational Safety and Health Act of 1970](#), pursuant to the Postal Employees Safety Enhancement Act (PESEA) of 1998. As such, managers must commit to providing a safe and healthful environment in all USPS-owned and USPS-leased installations for all employees, building occupants and customers. Managers must be involved in the day-to-day safety performance within their facility and ensure the staff is aware, knowledgeable, and adheres to all procedures and regulations contained in the following handbooks and management instructions:

- [ELM, Employee and Labor Relations Manual, Chapter 8](#)
- [EL-800, Managing Contract Safety and Health Compliance](#)
- [EL-801, Supervisor's Safety Handbook](#)
- [EL-803, Maintenance Employees Guide To Safety](#)
- [EL-810-2006-3, Response to Hazardous Material Releases](#)
- [EL-850-2001-2, Emergency Evacuation and Fire Protection](#)

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- [EL-810-2001-1, Personal Protective Equipment and Respiratory Protection Programs](#)
- [EL-810-2000-2, Bloodborne Disease Exposure Control Plans](#)
- [EL-810-2000-1, Hearing Conservation Program](#)
- [EL-812, Hazardous Materials and Spill Response](#)
- [EL-890-2007-2, Asbestos Containing Building Materials Control Program](#)
- [EL-810-2008-4, Hazard Communication \(HazCom\) Program](#)
- [EL-810-2010-1, Confined Space Safety Program](#)

### **WARNING**

**Procedures within this handbook may expose employees to hazardous voltages. Before performing these types of procedures employees must don Electrical Work Plan (EWP) Personal Protective Equipment (PPE) in accordance with the current EWP MMO. Failure to comply may cause injury or death.**

### **NOTE**

These Management Instructions are current at the time of this publication.

#### **1.4 ENVIRONMENTAL COMPLIANCE**

To ensure environmental regulations compliance, the SPO must comply with all Maintenance Management Orders (MMO) and Management Instructions (MI) issued by the USPS Environmental Management Programs (EMP) Group. The [Administrative Support Manual](#), section 55, outlines the USPS commitment to Environmental Management.

The following handbooks provide specific compliance information:

- [RE-6, Facilities Environmental Guide](#)
- [AS-550-A, Paper and Paperboard Recycling Guide](#)
- [AS-550-B, Paper and Paperboard Recycling Plan](#)
- [AS-552, Pollution Prevention Guide](#)
- [AS-558, Facility Energy Management Guide](#)

Environmental regulations vary from state to state. Contact the appropriate Environmental Compliance Specialist or Headquarters Environmental Compliance and Risk Management (ECRM) for specific area regulations. Refer to [USPS Blue](#) for current Environmental Compliance information.

### **1.5 SUPPLEMENTAL INSTRUCTIONS**

The Area Vice President (AVP) may issue supplemental instructions to meet local conditions on policies and procedures prescribed in this handbook.

Supplemental instructions conflicting with this handbook must be authorized by the AVP.

Two copies of area supplements to this handbook shall be forwarded to the Manager, Maintenance Technical Support Center, PO BOX 1600, Norman, OK 73070-6704. These supplements will be reviewed for possible national implementation.

### **1.6 HANDBOOKS AND PUBLICATIONS RELATED TO BUILDING OPERATIONS**

Hyperlinks and titles of many USPS handbooks and publications containing detailed, specialized information about building operations are provided in [APPENDIX B](#).

#### **1.6.1 USPS Management Instructions (MI) and Maintenance Management Orders (MMO)**

A current listing of many MIs and MMOs pertaining to current national maintenance policies are provided in [APPENDIX C](#).

### **1.7 USPS TRAINING CATALOGS**

Contact NCED in Norman, Oklahoma for a current list of Building Maintenance-related training classes <http://nced.usps.gov/leadership.php>.

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## SECTION 2 FACILITY MANAGEMENT

### 2.1 GENERAL

#### 2.1.1 Scope

This section relates to USPS-owned and USPS-occupied leased building management. Reference [SECTION 3](#) for specific lease agreement and responsibility information.

#### 2.1.2 Other Support Manuals

The [Administrative Support Manual \(ASM\)](#) and the [Employee and Labor Relations Manual \(ELM\)](#) provide greater detail for many policies and requirements outlined in this handbook.

#### 2.1.3 SPO Responsibility

The SPO provides cost-effective management of USPS-owned and leased facilities. The SPO ensures the safety of the occupants, protects all equipment, and preserves the building's assets. The SPO also conducts an annual facility assessment using Headquarters Facilities' online assessment application and guides. The annual assessment identifies deficiencies associated with buildings, building equipment, grounds, and approaches. The Facilities Services Offices (FSOs) uses these identified deficiencies to develop the annual Repair and Alteration (R&A) project list.

In USPS-Owned Buildings, the SPO:

- Provides space and related services necessary to meet the needs of the occupying activity.
- Makes repairs, improvements, and alterations necessary to preserve the building and equipment.
- Maintains a safe, comfortable, and healthful environment.

### 2.2 LOCAL CODES AND ORDINANCES

The USPS complies with local, state, and national codes. In case of code conflict, the more stringent code shall apply. Before sovereign immunity is imposed for USPS-owned buildings, where there is a jurisdictional compliance conflict, the SPO should consult a USPS Law Department and/or Facility Service Office representative.

#### NOTE

The above does not apply to licensing requirements imposed by states and municipalities with regard to building systems work performed by qualified USPS employees.

### 2.3 MANAGEMENT DATA

#### 2.3.1 General

The data files described in this section shall be maintained at the location designated by the SPO responsible for the building.

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### 2.3.2 Regulations

The SPO maintains a file of all regulations, including codes and ordinances from USPS, local, state, or national sources affecting operation and maintenance of the facility. Maintain a file of regulations and standard operating procedures affecting day-to-day operations (e.g., storage, use, and disposal of flammable liquids and solvents, confined space, wastewater management).

### 2.3.3 Reports

The SPO maintains a list of the required reports, showing where and when they must be submitted, and a brief description (title) of the report. The SPO must also maintain a chronological list showing the actual submission date for each report and document any granted report exemption(s) in writing.

### 2.3.4 Deviations

Deviations from this handbook must be authorized in writing from the Area Manager, Maintenance Operations. The SPO must maintain a chronological listing of signed and dated deviations.

### 2.3.5 Organization Charts

The SPO maintains a set of current organization charts showing detailed staff information including the local and area relationships to the SPO. Review these charts annually and update them when changes occur.

### 2.3.6 Emergency Data

- The SPO maintains emergency information concerning, but not limited to biohazards, fire, power interruptions, water shortages, natural and man-made disasters, and/or other emergency plans and procedures in the facility's Integrated Emergency Management Plan (IEMP). Reference the National Preparedness sections on the USPS intranet (<http://blue.usps.gov/wps/portal>) for instruction on development of this plan. An IEMP is required for each Area, District, Mail Processing, and Customer Service facility.

Follow Environmental Protection Agency (EPA) requirements for controlling emergencies involving hazardous spills, asbestos, and PCBs in the emergency action plans. See [Section 7.5, ASBESTOS](#) for detailed asbestos procedures and information.

The SPO must ensure emergency evacuation procedures are established and followed as specified in EL-850 Emergency Evacuation and Fire Prevention and EL-801 Supervisors Safety Handbook.

### 2.3.7 Library

Maintain a library of all current and pertinent documentation and post the name and telephone number of the person responsible for these duties. The person responsible for maintaining the library will receive, file, and distribute copies of all bulletins and change orders to the maintenance section. Many formerly printed documents, such as Maintenance Management Orders (MMO) or Maintenance Service Bulletins (MSB), are now distributed electronically. The person responsible for maintaining the library must ensure all personnel requiring a copy of the document receive either the document or

the document internet address.

### **2.3.8 Labor Agreements**

Maintain copies of the current national and local labor agreements.

### **2.3.9 Inspection Log**

The SPO maintains a chronological inspection log, showing all inspections impacting maintenance or operation of the facility. Examples of these inspections are:

- Fire inspections
- Safety inspections
- Housekeeping inspections
- Stockroom inspections
- Building equipment or structural inspections

#### **NOTE**

In many instances, structure or façade inspections are based on local laws and not USPS guidelines; it is imperative the SPO be aware of and complies with these requirements.

### **2.3.10 Budget Files**

Track budgets using Financial Performance Report (FPR) for financial data and National Work Hour Reporting System (NWRS) for work hours. NWRS is documented in the [Functional Management Handbook F-2](#) under TACs Report Descriptions. Include capital equipment, building repair, and alteration projections and document all changes to the budget. Maintain three fiscal year files, including the previous year, current year, and projected next year.

### **2.3.11 Plans File**

Maintain a plans file with energy conservation plans and special projects plans.

The energy conservation plans include targets for reducing energy consumption, current energy consumption, and all energy-related issues.

The plans for special projects can include moving, repair and alteration, equipment overhaul or relocation, and building modification.

### **2.3.12 Environmental and Risk Management**

The SPO manages safety and environmental programs. For more detailed information about environmental policy, programs, and roles/responsibilities, refer to [Administrative Support Manual, Chapter 69, Environmental Compliance](#).

Reference the following links for information on these programs

- Safety (<http://blue.usps.gov/hr/safety/safety.htm>)

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- [Environmental Compliance](http://blue.usps.gov/sustainability/environmental.htm)  
(<http://blue.usps.gov/sustainability/environmental.htm>)

Examples of the programs are:

- Hazardous Communications (HAZCOM)
- Asbestos Containing Building Material (ACBM)
- Underground and Above Ground Storage Tanks (USTs/ASTs)
- Lead (Drinking Water and Paint)
- Air Emissions (Clean Air Act, CFCs)
- Hazardous Waste Program
- Hazardous Energy Control Program
- Mold Management
- Confined Space Program

The Headquarters ECRM and the appropriate Environmental Compliance Specialist are recommended resources for safety and environmental programs information.

### **2.3.13 Mold Management/Remediation**

The SPO must control mold intrusion. In facilities that have on-site maintenance support maintenance manager organizes, equips, and ensures training is given to appropriate maintenance employees and others to identify, prevent, and report moisture intrusion or breaches to the building envelope and interior, and/or equipment, as well as mold odor or infestation. In offices that do not have on-site maintenance support (usually a site that utilizes contractors to perform custodial duties), the SPO shall obtain training to understand and implement appropriate mold control procedures. This training may be obtained from the USPS Environmental or Safety Departments, NCED, or outside contractors.

USPS personnel will not remediate mold. Remediation of mold will be contracted to firms qualified to perform such work. Reference [AS-516-2008-1, Mold Prevention, Assessment, and Remediation](#).

## **2.4 DISPLAYING THE COLORS**

The United States flag must be displayed on a stationary flagstaff at all USPS facilities. Reference [ASM 472 U. S. Flag Display](#) procedures for displaying the flag.

Direct questions on the display or use of the flag to the Area Office. Questions by the Area officials will be directed to the Vice President for Communications.

## **2.5 ESTABLISHING WORK SCHEDULES**

Give first consideration to the operation of the facility to meet the needs of USPS operations and other tenants when establishing maintenance work schedules. Keep operational interruptions to a minimum; interruptions should only occur to meet emergency conditions. Coordinate painting, construction, repair, and space adjustments



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with occupants, unless the work is performed in an area where the work of occupants is not interrupted.

### **2.6 EMPLOYEES' ROLE IN THE MAINTENANCE PROGRAM**

Instruct all employees to report any building or equipment condition requiring maintenance or repair to their supervisor. The supervisor reviews the condition reported, and if necessary, initiates a maintenance work order request ([Form 4805](#)). The 4805 will then be forwarded to the senior maintenance official for action.

Employees must report unusual or recurring maintenance problems to their supervisor. The SPO reports these problems to the Area Maintenance Office for assistance with mitigation. If necessary, the Area Office escalates the problem to HQ for an order of magnitude assessment and resolution.

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## **SECTION 3 RELATIONS WITH LESSORS AND TENANTS**

### **3.1 GENERAL**

#### **3.1.1 Scope**

This section provides general information on the responsibilities and relationships between the USPS and its lessors and tenants. In all cases, where there is a difference, the specific requirements stated in the lease or GSA/USPS Agreement prevail over the information provided here.

#### **3.1.2 SPO's Responsibilities**

##### **3.1.2.1 Existing Leases**

The SPO maintains effective, harmonious relations with lessors and any tenants of USPS-controlled properties. The SPO maintains current copies of all leases in the SPO's area of responsibility. The SPO must be conversant with the major provisions of all leases and maintain a current listing of the names and telephone numbers of the USPS contracting officers, lessors, or tenants.

##### **3.1.2.2 Lease Negotiations**

When existing leases are re-negotiated or when new leases are being prepared, the SPO provides input to the contracting officer. This input assures the terms of the lease are in the best interest of the USPS and budget and staffing will be available to meet the terms of the lease.

### **3.2 COMMON LEASE ARRANGEMENTS**

The USPS frequently:

- Leases from private owners (lessors).
- Assigns space to General Services Administration (GSA) to house federal tenants.
- Out leases space to private tenants (lessees or subtenants).

#### **3.2.1 Information Sources**

Copies of leases and the USPS/GSA Agreement can be obtained from the Facilities Service Office (FSO). Leases are also available for viewing online. Agreements to provide space to blind vendors (Randolph-Sheppard Act) are frequently maintained by the appropriate Category Management Center (CMC).

### **3.3 THE USPS AS A TENANT**

#### **3.3.1 Owner-Maintained Leased Buildings**

##### **3.3.1.1 General**

Some lease agreements require the owner to maintain the building. Customarily these require owners to maintain the premises and all building equipment furnished in good tenantable condition.

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### 3.3.1.2 Notification

Notify the lessor promptly of any equipment malfunction or needed repairs to avoid further damage. Contact the FSO if necessary repairs are not made in a timely manner.

### 3.3.1.3 Emergency Repairs

Emergency repairs are defined in the [Administrative Support Manual \(ASM\)](#), Chapter 5, as meeting one or more of the following conditions:

- Repairs are essential for continued operation of the building.
- Repairs are essential for the safety and health of USPS employees or customers.
- Repairs are essential for the continued security of the mail.

The SPO must maintain a current copy of Form 7426, *Designation of Emergency Repair Personnel*, ([MS-110, Associate Office Postmasters Facilities Maintenance Guidelines Section 4](#), or available from the FSO) which allows the lessor to pre-select persons to do emergency repair work in the event the lessor cannot be contacted.

### 3.3.1.4 Preventive Maintenance

The USPS does not normally undertake preventive maintenance on owner-maintained leased facilities.

### 3.3.1.5 Alterations

The USPS does not normally undertake alterations to the building without notifying the owner. The SPO should work through the FSO to make alterations to the building.

### 3.3.1.6 New Facilities

When negotiated for new facilities, leases may include cleaning and grounds keeping services. Follow local and national agreements when contracting these services.

## 3.3.2 USPS-Maintained Leased Buildings

### 3.3.2.1 General

Frequently, leases require building maintenance to be provided by the USPS. Maintenance usually includes major building systems such as heating and cooling, plumbing, and electrical. USPS responsibilities normally do not include structural components or roofs.

### 3.3.2.2 Alterations

See [Paragraph 3.3.1.5](#).

### 3.3.2.3 New Facilities

See [Paragraph 3.3.1.6](#).

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### 3.4 SPACE INTERCHANGE BETWEEN USPS AND GSA

#### 3.4.1 General

If operational changes result in excess vacant space, the SPO should identify leasable space and contact FSO Realty Asset Management. Suitable space may be assigned to GSA, which, in turn acts as a tenant agency by leasing the space to other federal tenants, collecting rent from the federal tenants, and paying rent to the USPS for space leased to other agencies. FSO Realty Asset Management is responsible for assigning space to GSA. As an owner, the USPS normally provides building maintenance as described in [Paragraph 3.4.3](#).

#### 3.4.2 USPS/GSA Agreement

Occupancy of space by the USPS in GSA-controlled buildings, and by GSA and other federal agencies in USPS-controlled buildings, is governed by the *Agreement Between General Services Administration and the United States Postal Service Covering Real and Personal Property Relationships and Associated Services* (USPS/GSA Agreement).

#### 3.4.3 Standard Services

Standard services are those included in the rent and listed in the USPS/GSA Agreement for federal tenants. All requests for normal building services are made to the SPO when the building is owned by the USPS. Standard services are usually provided to the tenant on a scale sufficient to support a 9-hour workday, plus a half hour each for opening and closing, five days per week. The standard services normally are:

- Cleaning includes window washing, floor maintenance, trash removal, and restroom supplies. When possible, cleaning will be accomplished during normal business hours.
- Utilities include electricity, hot and cold water, and heat.
- Security includes protection or security consistent with USPS activities such as door keys and lock changing, except for special security locks.
- Operation, maintenance, and repair of building equipment include elevators, heating, ventilating, and air conditioning (HVAC), electrical, plumbing, and sewerage systems.
- Grounds maintenance includes approaches, sidewalks, parking areas, and roads (including snow removal).
- Other building equipment includes the furnishing and maintenance of building equipment such as public directories and bulletin boards at the main entrance and other appropriate locations, door closers, room and occupant identification, water coolers, and window shades or Venetian blinds.

Certain additional items may be specified in the lease to be furnished by the USPS, such as extended hours or specialized air-conditioning requirements, and are considered a standard service for the purpose of this section. Recovery costs for these specific items should be included in the rental rate.

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### 3.4.4 Requests for Reimbursable Services

Request reimbursement from GSA for requests for work that is not included in the standard building services agreement, or is not USPS responsibility. In locations where the USPS provides building maintenance, or it is in the best interest of the USPS to provide the service, the USPS can recover costs for non-standard services through [GSA Form 2957, Reimbursable Work Authorization](#). Arrangements for reimbursable work should be made through the FSO.

### 3.4.5 Services Not Available from USPS

The following services are strictly the responsibility of the tenant and are not available from the USPS:

- Furniture and furnishings - tenants are responsible for providing their own furniture and furnishings. GSA is responsible for furniture and furnishings for the U.S. Courts and offices of the Members of Congress. Drapes are considered furnishings even when installed in lieu of blinds and shades. Carpeting is normally considered a furnishing. An exception to this may be made if nominally priced carpet is installed in lieu of replacing other types of floor coverings.
- Flags - Federal agencies requiring flags for their offices may purchase them from the Federal Supply Service.

## 3.5 THE USPS AS LANDLORD TO NON-FEDERAL TENANTS

### 3.5.1 General

If the GSA has no need of the excess space identified by the SPO, FSO Realty Asset Management may lease the space to local government or private tenants. The FSO is responsible for any lease negotiations with local governments or private tenants.

### 3.5.2 Building Maintenance

The USPS normally retains responsibility for maintenance and operation of the building and custodial services.

### 3.5.3 Standard Services

Standard services are described in the lease.

### 3.5.4 Non-Standard Services

Non-federal tenants are responsible for their own non-standard services. Non-federal tenants leasing under an out-lease or sublease agreement are not permitted to make improvements, alterations, or repairs to occupied space unless approved by the contracting officer. All requests of this nature must be referred to the appropriate FSO. The SPO and FSO determine if the work is completed by the tenant, a contract issued by the USPS, or USPS personnel. The SPO can authorize USPS personnel to perform minor work such as providing technical advice, relocating a telephone line, or relocating an electrical outlet at no charge when in the best interest of the USPS.

## 3.6 CONDUCT IN USPS-OWNED BUILDINGS

The Postal Operations Manual (POM) on the [USPS Blue PolicyNet](#)

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<http://blue.usps.gov/cpim/manuals.htm>) website provides rules of conduct applicable to property under the charge and control of the USPS, to all tenant agencies, and to all persons in or on the property. The SPO must ensure that [Poster 7, Rules and Regulations Governing Conduct on Postal Property](#), is posted in centralized locations within the building for tenant and customer information.

Tenants must adhere to the requirements of the lease and federal, state, and local laws.

### **3.7 PARKING**

In USPS-owned buildings, the SPO determines parking arrangements and assignments, unless specified in the lease or GSA/USPS Agreement. Consider safety, security, and operational requirements of the USPS, requirements of the tenants, and local agreements with USPS unions when allocating parking.

### **3.8 SPO INSPECTIONS**

Where the USPS is the building owner, the SPO, or designee provides periodic inspection of all electrical appliances installations to guard against a possible fire hazard, and ensure good housekeeping and energy-conservation practices (Reference EL-801 Supervisors Safety Guidebook, Electrical Appliances). When the use or installation does not conform to safety, sanitary, or energy-conservation requirements, the tenant must either correct the deficiencies or remove the appliance.

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## SECTION 4 BUDGETARY COMPLIANCE

### 4.1 GENERAL

The SPO maintains the building and operations within the approved budget for the facility each fiscal year. This budgetary responsibility extends to all budget lines including but not limited to:

- Work hours
- Supplies
- Services

#### 4.1.1 Scope

The SPO tracks work hours and expense items to ensure financial goals are met. The SPO should maintain a spreadsheet or other document showing a facility's current status compared to goals. This document should be updated when new financial data is available, but not less than monthly.

#### 4.1.2 SPO Responsibility

The SPO is responsible for meeting financial goals set for the facility.

#### 4.1.3 Sources of Financial Data

There are several sources of financial data the SPO uses to track financial performance. A partial list of useful financial tracking tools available on the [USPS Intranet](#) is provided below:

- Weekly Flash report
- Various eMARS reports
- *Financial Performance Report (FPR)*
- *Enterprise Information System (WebEIS)*
- *Enterprise Data Warehouse (EDW)*
- *PUB 24 Supply Catalog*
- *PUB 41 Purchasing Manual*

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### 4.1.4 Labor Distribution Codes (LDC)

Each USPS employee category is assigned a Labor Distribution Code ([Table 4-1](#)). Work hour reports are available for all LDCs within a facility finance number. A complete listing of LDCs is available from local budget departments.

**Table 4-1. Maintenance (Function 3B) LDCs**

LDC	Employee Category
35	Maintenance Supervision
36	Mail Processing Equipment Maintenance
37	Building Equipment Maintenance
38	Custodial Services
39	Maintenance Operations Support
93	Maintenance Training, including Vehicle Services, Function 3-A

### 4.1.5 Budget Line Item Numbers

[Table 4-2](#) lists current budget line items as contained in the FPR.

**Table 4-2. Budget Line Item Numbers**

Code	Budget Line Item	Code	Budget Line Item
09	Investment/Interest Income	6C	D R Building Expense
2B	Severance Pay/Survivor Benefits	6D	MP Building Construction
2E	Unemployment Compensation	6E	MP Building Purchase
2F	Accrued Retirement Principal	6F	MP Building Expense
2H	Annual Leave Repricing	6H	Fixed Mechanization
2I	Workers Compensation Expense	6L	Automation Equipment
2J	Workers Compensation Chargeback	6N	Vehicle Purchases
2K	Retiree Health Benefits	6O	Vehicle Auxiliary Equipment
3F	Contract Job Cleaner	6P	Vehicle Freight
3G	Contract Stations	6Q	Lobby Equipment
3L	Rural Carrier Equipment Maint.	6R	Window Service Equipment
3V	Information Resource Management (IRM) Chargeback	6S	Self Service Equipment
3R	Air Transportation	14	Operations Customer Svc
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Code	Budget Line Item	Code	Budget Line Item
6A	D R Building Construction	73	Postal Equipment Repair Parts
6B	D R Building Purchase		

### 4.1.6 Material Accountability and Management

The SPO manages USPS fiscal property in a responsible manner. All properties are assets of the USPS and must be managed according to established USPS Policies and Procedures. Fiscal property includes but is not limited to:

- Office supplies
- Mail processing supplies
- Equipment spare parts
- Building system spare parts
- Mail Processing Equipment (MPE)
- Mail Transport Equipment (MTE)
- Building equipment
- Buildings and grounds

The SPO establishes and enforces sound fiscal policies for their facility and ensures they are in keeping with the policies and procedures put forth in:

- [AS-701, Material Management](#)
- [MS-63, Maintenance Operations](#)
- [Supply Management Principles and Practices](#)

Whenever possible, and when economically feasible, purchase recycled products and products containing recycled components as part of a proactive purchasing program. Paper towels and toilet tissue are two examples of recycled products commonly used in the USPS. Lastly, every effort should be made to ensure products are environmentally friendly, non-hazardous in nature, and do not generate hazardous waste.

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**SECTION 5  
GROUNDS AND APPROACHES**

**5.1 GENERAL**

**5.1.1 Scope**

This section relates to maintaining USPS-owned or USPS-leased grounds, approaches, driveways, and parking areas attractive and in an acceptable state of maintenance and repair.

**5.1.2 SPO Responsibility**

**5.1.2.1 Regular Inspection**

The SPO regularly evaluates grounds and approaches to identify needed repairs and ensure the required level of maintenance. The frequency of inspection shall be determined by qualified personnel and varies with climatic, soil, and other local conditions.

**5.1.2.2 Repair and Improvement Program**

Include needed repairs or improvements beyond the funding capability of the local office in the annual facility assessment using Headquarters Facilities' online assessment application and guides. Note the degree of urgency to ensure proper priority in the program.

**5.1.3 Local Ordinances**

The SPO must be thoroughly familiar with all local ordinances pertaining to approaches, roads, driveways, sidewalks, and parking areas. Resolve and document maintenance responsibility and repairs with local road and highway officials to preclude future conflicts concerning the scope of responsibility.

**5.1.4 Repair Responsibility**

**5.1.4.1 Locations Where USPS Is Not Responsible**

In most locations, the USPS is not responsible for the repair or replacement of public improvements such as curbing, gutters, and streets adjacent to USPS-owned property. In these locations, the expenditure of funds for this purpose is not authorized. When repair or replacement is required, notify the appropriate local government officials.

**5.1.4.2 Locations Where USPS Is Responsible**

In locations where the USPS has these responsibilities, the SPO or designee inspects these areas and reports deficiencies in the annual facility assessment, Facility Inspection Tool. If the cost is beyond the SPO's spending authority, request assistance through the normal chain of authority.

### 5.2 GROUNDS

#### 5.2.1 General

##### 5.2.1.1 Responsibilities

Maintain, preserve, and upgrade grounds as necessary. Work includes, but is not limited to:

- Lawns, shrubs, and tree planting.
- Routine watering, fertilizing, mowing, and pruning.
- Screening unsightly equipment and parking areas with trees, shrubs, hedges, or walls.

Coordinate grounds upgrading plans with other agencies, local governments, civic clubs, garden clubs, or agricultural extension agents. The SPO ensures any chemicals (pesticides, herbicides, fungicides, etc.) used are in compliance with the current pest management regulations, [\*MI AS-550-95-10, Integrated Pest Management\*](#).

##### 5.2.1.2 Landscaping Review

The SPO reviews and determines whether or not to approve any proposed landscaping that may aesthetically affect the architectural appearance of large or monumental type buildings.

#### 5.2.2 Lawn Sprinklers

Use in-ground lawn sprinklers where the area of the lawn is 12,000 square feet or more and watering is needed to maintain a well-kept appearance for customers or employees. Select landscaping and plants to reduce water consumption, using as little water as possible. All sprinkler systems should use timers and moisture sensors to improve water conservation.

#### 5.2.3 Isolated Locations

In locations where there are wide expanses of USPS-owned or leased isolated grounds not in the immediate public view, leave these areas in their natural state. Limit maintenance only to eliminating fire hazards, safety hazards, health hazards (as required by local ordinances), soil erosion, and depreciation of land values.

#### 5.2.4 Technical Assistance

Resource conservation must be taken into account. Consider the use of low maintenance methods of landscaping and water-efficient landscaping (Xeriscaping). Due to the varying climatic and soil conditions throughout the country, solicit advice from the local agricultural agent or state university. This service should be free. They may provide recommendations and services regarding the following:

- Grass seed mixtures
- Fertilizing
- Liming needs
- Filling
- Sodding
- Care of trees and shrubs
- Grass mowing and watering frequency

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- Other grounds maintenance problems
- Use of low maintenance ground covers and ornamental landscaping stone

### 5.2.5 Equipment

Where USPS Maintenance is provided, USPS-purchased grounds maintenance equipment should be of a make and size most effective for the work to be accomplished after considering the cost of equipment versus work hour savings. Operate, maintain, protect, and store all mowers, cutting tools, and related equipment in safe, efficient working order. Provide appropriate personal protective equipment for use when operating this equipment. Store flammable and combustible materials in approved tanks, safety cans, or other containers as per [MS-56, Fire Prevention and Control](#) Section 3, adhering to the OSHA [29 CFR 1910.106](#) requirements.

Where a maintenance contract is utilized, the contractor provides properly maintained equipment, and uses equipment in a safe manner.

## 5.3 APPROACHES

### 5.3.1 General

Repair and maintain driveways, maneuvering areas, sidewalks, and curbs on USPS-owned or leased property to ensure longevity. Ensure the quality and composition of repair and replacement materials, as well as application methods, conform closely to those found most effective in the local area by the highway or street department. Timely preventive maintenance such as application of a seal coat to asphalt paving prevents deterioration and eventual major repairs. Where cracks, spalling, potholes, and ruts have already occurred, repair immediately to prevent further pavement damage and eliminate a personnel safety hazard and a potential source of vehicle damage.

### 5.3.2 Sidewalk Issues

Give particular attention to sidewalk areas adjacent to USPS property or buildings. Repair or replace cracked, raised, or sunken sidewalks promptly. If the sidewalks adjacent to USPS property or buildings need repair or replacement and are the responsibility of the State or local government, every effort shall be made to obtain repair or replacement at the expense of the State or local government. If the State or local government is unable to fund the repairs or replacement, the USPS may make the repairs or reimburse the local government for repairs. The SPO must consult with the FSO for repair work on sidewalks that are not USPS responsibility.

## 5.4 SNOW REMOVAL

### 5.4.1 Snow Removal Plan

Establish a snow removal plan in areas where snow removal is necessary. It is usually advantageous to have a working agreement with local road and highway officials. In addition to practical advice, local highway officials may authorize the use of highway equipment to assist in snow removal under some conditions. The snow-removal plan shall specify priority treatment areas, such as pedestrian loading zones, walks, main entrances, approaches, maneuvering areas, and parking lots. Where economically advantageous and/or for safety considerations, utilize contract services in compliance with the [EL-912, Agreement between the United States Postal Service and the American Postal Workers Union AFL-CIO](#) (Article 32 of the National Agreement).

### 5.4.2 Preparedness

Where snow removal has been assigned to USPS employees, establish an operating plan by designating and organizing the work force, documenting required instructions, and performing employee training well in advance of the winter season. Create a Job Safety Analysis (JSA) and train employees on all procedures necessary to complete the activities. Training must cover appropriate safety personal protective equipment (PPE) requirements and safe operation of snow removal equipment, etc. Training and JSAs must be documented and retained on file.

### 5.4.3 Equipment

Repair all equipment and prepare for operation in advance of the winter season. Order environmentally compliant de-icing materials, tools, etc., in large enough quantities to last the full season, unless “just in time” ordering is available from a local vendor and is more cost effective than using the national purchasing contract for de-icing materials ([Material Logistics Bulletin \(MLB\)-CO-02-001](#)) or current MLB.

#### NOTE

All de-icing chemicals provided in the MLB must meet environmental compliance requirements.

Consult local laws, the appropriate Environmental Compliance Specialist or Headquarters ECRM for guidance on environmentally compliant de-icing materials. De-icing chemicals Safety Data Sheets (SDS) must be available.

## 5.5 SIGNS ON USPS PROPERTY

### 5.5.1 SPO Responsibility

The SPO establishes and maintains the necessary signs within their areas.

### 5.5.2 Configuration

All signs serving the same purpose must be of the same design, color, and construction. Traffic signs, such as STOP, CAUTION, or DO NOT ENTER must conform to standards set by the Manual on Uniform Traffic Control Devices as published by the Federal Highway Administration (<http://mutcd.fhwa.dot.gov>). All signs must be properly positioned to most effectively serve the purpose for which they are intended. Signs must be inspected for required maintenance during the regularly scheduled inspections of grounds.

## 5.6 STRIPING OF PARKING AREAS

Paint stripe parking areas to facilitate orderly vehicle parking and to accommodate the maximum number of vehicles. Each parking space, except for handicapped parking, should be 9' by 18'. Handicapped parking should conform to standards in [RE-4, Standards for Facility Accessibility](#). Locate handicapped spaces as close as possible to customer and employee entrances, and identify spaces for handicapped only use. Reduced size spaces 8' by 16' should be used for compact cars to improve parking area utilization. Use white or yellow traffic grade paint.



### NOTE

Most traffic paints still contain high levels of lead. However, water-based lead-free traffic paints are now available and shall be used in place of lead-based paints. A web search of “*lead-free traffic paint*” will give several source results.

### 5.7 FENCES

The Postal Inspection Service [ASM 273](#) does not permit the indiscriminate use of fences. Keep fencing properly maintained and to the minimum amount necessary to provide adequate safety hazard protection of USPS property, employees, and the public.

Reference [RE-5, Building and Site Security Requirements](#), Section 2.2 for specific fence requirements (including but not limited to construction, location, clear zone, gates, secondary fencing).

### 5.8 PARKING AREA LIGHTING

Light all parking areas in accordance with lighting guidelines established by [AS-503, Standard Design Criteria](#) and [RE-5, Building and Site Security Requirements](#), Section 2.3. Specifically, for both employee and truck parking and maneuvering areas, the minimum light requirement is 1.0 foot-candles (fc) measured at the horizontal plane at ground level. Customer parking area lighting is 1.5 fc. In both cases, increase the lighting level to 2.0 fc if utilizing an exterior security CCTV system. Refer to [RE-5](#), Section 2.3 for all other lighting requirements.

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### SECTION 6 STRUCTURES

#### 6.1 GENERAL

##### 6.1.1 Scope

This section relates to structural features of USPS buildings.

##### 6.1.2 SPO Responsibility

The SPO must be aware of the building's structural elements' condition for all buildings for which they are responsible. This is accomplished by either the SPO's or the designee's inspection.

###### 6.1.2.1 Adherence to Codes

Comply with local codes and ordinances or the national model building codes (Uniform Building Code, Standard Building Code, or the Building Officials and Code Administrators' National Building Code) as a minimum standard.

###### 6.1.2.2 Adherence to USPS Standards

Where USPS handbooks, guidelines, or other structural requirement directives differ from local or national codes, follow the more stringent standard.

#### 6.2 STRUCTURAL MAINTENANCE AND REPAIR

##### 6.2.1 Routine Maintenance

The building structure requires routine maintenance, such as painting, pointing, roofing, and weatherproofing to maintain and preserve its integrity. Determine the need for this work by inspections from local personnel or by Facilities as defined in RE-12, Repair, and Alteration Surveys (7610-03-000-9290). Accomplish repairs as appropriate by local maintenance personnel, or by contract using specifications in RE-13, Repair and Alteration of Real Property and Facilities (7610-03-000-9297). When contracting these services, ensure compliance with the [EL-912, Agreement between the United States Postal Service and American Postal Workers Union AFL-CIO \(Article 32 of the National Agreement\)](#).

##### 6.2.2 Building Inspection

Each SPO must have a building inspection conducted at least once a year in all buildings for which they are responsible. The inspection should include a roof inspection, ideally in either the spring or the fall of the year. Use Headquarters Facilities' online assessment application and guides. The purpose of this local inspection is to identify developing problems in their earliest stages so they can be corrected at a minimal cost to the USPS.

### 6.2.3 Interior Features

Include interior features such as floors, blinds, door locks, and partitions in the building inspection. Encourage all site personnel to report defective items discovered during their normal duty performance.

Preventive maintenance guides for entrance doors, power-operated doors, and other structural items requiring preventive maintenance are in the PM Guidelines. The PM Guidelines, as well as, work hour requirement guidelines for these items are in the current MMOs titled:

- Creating Detailed Local Building and Building Equipment Maintenance PM Checklists
- Creating Detailed Local Building Equipment Emergency System (EMSYS) Checklists

## 6.3 FACILITY REQUIREMENTS AND RESPONSIBILITIES

### 6.3.1 Placing of Seals, Plaques, and Memorials in USPS Buildings

The policy on dedicatory plaques and memorials is in [ASM 519.22](#) that can be accessed through <http://blue.usps.gov/cpim/ftp/manuals/asm/html/welcome.htm>.

### 6.3.2 Floor Loads

#### 6.3.2.1 Preventing Unsafe Floor Loads

The SPO prevents unsafe floor loading in any space under their control. In fulfilling this responsibility, the SPO keeps information readily available showing the maximum loading permitted on any floor in the building. A convenient and appropriate place for this information is on the assignment plan for each building. Post floor load capacity placards in each facility.

#### 6.3.2.2 Obtaining Safe Loading Figure

If the safe loading figure is not known or unavailable, obtain this information from a qualified structural engineer. In some instances, the GSA may have this information for buildings it constructed or previously operated. The SPO reviews and approves any plan for placement of large concentrated loads (safes, large machines, stacks of paper, heavy files, mail handling equipment, nutting trucks, storage areas, etc.) against the floor load information to prevent accidental floor overloading. Take advantage of the increased floor strength over a beam, close to columns, or near load-bearing walls. Consult a structural engineer if there is a question about floor loading in the layout of a space involving heavy objects before approving the arrangement.

#### 6.3.2.3 Meeting OSHA Requirements

OSHA requires the SPO place signs marked with the approved floor loading in a conspicuous place in each area to which they relate ([OSHA 1910.22\(d\)\(1\)](#)).

### 6.3.3 Ashtrays and Sand Urns

Provide ashtrays and sand urns in designated smoking areas. As all USPS facilities are smoke free, designate smoking areas outside the building envelope in a location to ensure that tobacco smoke does not enter any area in which smoking is prohibited

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including entrances, windows, ventilation systems, or other means.

### 6.3.4 Room and Occupant Identification

#### 6.3.4.1 Standardization

Equip new buildings and buildings undergoing major renovations with the types of signs prescribed by the Facilities Department. The SPO ensures this standard is met in all buildings for which they are responsible. During alteration and renovation, ensure room and occupant identification is consistent with the existing numbering system.

Incorporate new room numbers in the [MS-47](#) building inventory. Replace other types of nameplate holders currently in use with standard holders when the space undergoes renovation.

### 6.3.5 Historic Preservation

It is USPS policy to comply with the [National Historic Preservation Act and Executive Order 11593. ASM 516.12](#) which provides procedures for handling historic properties and states “any proposed modification to an owned or leased USPS facility listed or eligible for listing on the National Register of Historic Places must be submitted to the responsible service organization.” The following link is to the National Conference of State Historic Preservation Officers <http://www.ncshpo.org/>.

### 6.3.6 Artwork

Coordinate procurement, alteration, repair, or disposal of artwork with the Federal Preservation Officer, USPS Headquarters, Facilities  
([http://blue.usps.gov/retail/design/text\\_only\\_site/historical/introduction.html](http://blue.usps.gov/retail/design/text_only_site/historical/introduction.html)).

Refer to [RE-1, U.S. Postal Service Facilities Guide to Real Property Acquisitions and Related Services](#), Section 333.2 for the proper care and maintenance of artwork in USPS-owned buildings and the current MMO regarding the inspection of artwork in USPS facilities.

## 6.4 IDENTIFICATION OF USPS BUILDINGS

### 6.4.1 General

Clearly identify all USPS installations to ensure customer recognition of the facility. Refer to [ASM 519.2](#) for policy and guidance on building identification. Also, refer to USPS guidelines for exterior signage  
<http://blue.usps.gov/corporate/trademark/gg/signage.pdf>.

### 6.4.2 Removal of Building Designation

Remove all signs designating the building name or federal ownership, including "U.S. Property -- No Trespassing" signs prior to the disposal of USPS-owned property. This is done just prior to transfer of title.

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### SECTION 7 CLEANING PROGRAM

#### 7.1 GENERAL

##### 7.1.1 Scope

This section relates to establishing and maintaining a cleaning program.

##### 7.1.2 SPO's Responsibility

The SPO ensures a clean and safe housekeeping environment in all USPS buildings.

##### 7.1.3 Cleaning Standards and Methods

USPS cleaning standards and methods are specified in:

- [MS-47, Facility Cleaning](#)
- [Chief Operating Officer's Policy Letter on High Bay Cleaning](#)

Select cleaning products that minimize the impact on the environment, are safe to use, and are effective for the cleaning task. All products used require an SDS. The cleaning products should avoid using any products containing chemicals the USPS has targeted for elimination. Obtain a list of these chemicals from the appropriate Environmental Compliance Specialist or Headquarters ECRM.

In addition, dispose of cleaning materials in accordance with the manufacturer's recommendations. Paper products should be environmentally friendly and have recycled paper content. These and other "Green" products are in GSA's Recycled Products Catalog. The national custodial products contract lists all products. Purchase all products through eBuy. Examples of the products available are: solvents, work and utility gloves, deicing materials, cleaning supplies and chemicals, paper towels and tissue, custodial light equipment, deodorizers and disinfectants, floor mats, mops and brooms, and shop towels.

#### 7.2 SERVICES PERFORMED BY CONTRACT

The employment of an outside contractor to perform buildings services must be consistent with [ASM 535.26](#), plus Article 32 documented in [EL-912](#) and the Memorandum of Understanding concerning "[Contracting for Custodial Services](#)" both of which are in the National Agreement between the USPS and American Postal Workers Union AFL-CIO. Contracting procedures for outsourced cleaning services under local agreements are covered in the [Local Cleaning Services Buying Agreement Guidelines](#).

File an SDS for all contractor-used materials in the facility's SDS book and ensure they are readily available when needed or requested.

Additionally, route service contracts in excess of \$2,500 to the appropriate Category Management Center.

Follow provisions in the [EL-800, Managing Contract for Safety & Health Compliance, Appendix G, Cleaning Services Contract Administration Guide](#).

### 7.3 SPECIAL CLEANING PROBLEMS

#### 7.3.1 Disposal of Waste, Scrap, and Refuse Material

##### 7.3.1.1 Comprehensive Waste Reduction and Recycling Programs

The SPO formulates and implements waste reduction and recycling plans to capture and recycle all recyclable wastes. Refer to [RE-6, Facilities Environmental Guide when formulating plans for these activities](#). The appropriate Environmental Compliance Specialist or Headquarters ECRM can provide assistance with setting up recycling activities.

##### 7.3.1.2 SPO Responsibility

Disposal of waste, scrap, and refuse material is normally the responsibility of the SPO. The responsibility for disposal of refuse in leased buildings depends upon the lease agreement. Refuse disposal from the operation of concession facilities is the responsibility of the concessionaire. However, the USPS removes trash generated by vending stands operated under the provisions of the Randolph-Sheppard Act. (Refer to [EL-602, Food Service Operations, Chapter 1-13 Responsibilities](#)). Dispose of hazardous materials (e.g., PCB-containing ballasts, some fluorescent tubes, etc.) in compliance with all federal and local regulations. Establish a separate waste stream for the hazardous materials to reduce the amount of hazardous waste and its removal cost by eliminating co-mingled non-hazardous waste.

##### 7.3.1.3 Salable Waste and Scrap

Sell scrap according to instructions contained in [AS-701, Material Management](#), Part 64, Recycling and Disposal. However, the USPS may request GSA disposal of salable waste, scrap, or personal property. If GSA agrees to this request, they will dispose of such property without charge to the USPS. GSA will dispose of such property by sale or transfer for fair market value. The proceeds of such disposal are remitted to the USPS.

##### 7.3.1.4 Refuse Removal

In USPS-operated buildings, refuse (trash or garbage) removal will normally be accomplished by contract. Where unusual operating requirements or local conditions suggest this be handled by USPS employees, make a thorough economic analysis before any other steps are taken. That analysis must include the cost of equipment, personnel, permitting/dumping fees, and increased liability.

##### 7.3.1.5 Incinerators

Incinerators are not used in USPS buildings.

#### 7.3.2 Bird Control

Although the general public tends to be very fond of them, birds can be serious pests when they roost and nest on buildings. Bird control is a difficult and highly specialized subject best obtained through a specialized contract. Similarly, there are several important precautions to consider when cleaning bird excrement not typically covered by standard custodial training. Consult an entomologist or a certified pest controller with experience in bird control problems for additional information.



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The program must address three primary requirements. They are:

- Maximal effectiveness
- Minimal structural damage
- Attention to public relations

All efforts in bird control shall be in accordance with the provisions set forth in [AS-550-95-10, Integrated Pest Management](#).

### **7.3.3 Cleaning in Concession Space**

[EL-602, Food Service Operations](#) details special cleaning requirements and responsibility for concession space housekeeping.

### **7.3.4 Use of Walk-Off Mats**

Use walk-off floor mats at major public entrances to trap dirt carried in from the street and prevent its distribution throughout the building. Provide two sets of mats to permit removal and proper cleaning. Clean the mats daily as a part of the lobby and entrance cleaning assignment. Remove light soil by vacuuming. During inclement weather, when the mats are soiled, remove and clean by scrubbing or hosing, and permit them to drip dry. Mats are also available from commercial companies that supply clean mats on a scheduled basis. Route requests for this service through eBuy utilizing the national contracts issued by the Category Management Center.

### **7.3.5 Cleaning Supplies and Equipment**

#### **7.3.5.1 General**

Purchase competitively priced quality products when ordering cleaning supplies. Each product must be shipped with an SDS.

#### **7.3.5.2 Defective Supplies and Equipment**

Contact the wholesaler at the address shown on the catalog or vendor information in eMARS when defective or unsatisfactory supplies or equipment are received from a vendor, GSA, or DLA. If the supplies received are from the area supply center, notify the center. If the received supplies are via national custodial supply contract, in addition to the vendor, notify the appropriate Category Management Center (CMC).

Provide the required information below:

- A statement of why the merchandise is unsatisfactory
- MILSTRIP/FEDSTRIP agency requisition number
- National stock number
- Merchandise description
- Quantity received
- Quantity on hand
- Quantity defective
- Contract number

- Name of contractor
- Purchase order number
- Manufacturer's lot or batch number
- Date material was received
- Location of material
- Supply point from which shipment was made
- Name and telephone number of person to contact who is familiar with the problem

For GSA products, a GSA inspector should follow up to determine if the merchandise meets specifications. If the merchandise does not, the inspector should take corrective action.

### **7.3.5.3 Specification Requirements**

If the merchandise meets the purchase specification requirements but does not provide satisfactory performance, or if the follow-up action by GSA is inadequate, notify MTSC, 600 West Rock Creek Road, Norman, OK 73069, to initiate corrective action.

## **7.4 CLEANING EQUIPMENT**

### **7.4.1 General**

Mechanize cleaning activities to the maximum extent economically feasible.

### **7.4.2 Maintenance**

#### **7.4.2.1 Part of a Regular Maintenance Program**

Adequately maintain power equipment used in the cleaning program, both for preservation of the equipment and to assure that it is available for use when needed. Include power cleaning equipment in the maintenance management program as described in [MS-63, Maintenance Operations](#), and the appropriate staffing MMO. Powered cleaning equipment from various manufacturers is covered by national contracts. These are the only ones authorized for use in USPS facilities.

#### **7.4.2.2 Periodic Maintenance Activities**

Since power equipment is usually purchased locally, there is little standardization and national maintenance documentation developed for the equipment. Manufacturer's literature contains recommended periodic maintenance practices, repair methods, and parts lists to support the equipment. Use the PM guidelines in the current Building Equipment MMO titled "Guidelines for Creating Detailed Local Building and Building Equipment Maintenance PM Checklists" to develop an effective PM checklist. In addition, in some cases it is possible to utilize the guidelines of a different manufacturer for similar pieces of equipment along with the current MMO.

If an equipment problem persists, and all methods of resolution with the OEM or the OEM's representative fail to correct the problem, contact the appropriate CMC and the Area Maintenance Office to alert other offices to that particular piece of equipment's shortcomings.

### 7.4.2.3 Typical Maintenance Guidelines

Preventive Maintenance Guidelines for select equipment are in the current MMOs titled:

- Creating Detailed Local Building and Building Equipment Maintenance PM Checklists
- Creating Detailed Local Building Equipment Emergency System (EMSYS) Checklists

## 7.5 ASBESTOS

### 7.5.1 General

Asbestos is a mineral commonly used in building materials prior to 1980. Because airborne asbestos fibers pose potential health risks, OSHA mandates training and work procedures for custodians in contact with Asbestos Containing Building Materials (ACBM). Local maintenance plans and procedures must recognize the need to prevent friable asbestos building materials from being disturbed. The facility asbestos survey provides information on where asbestos containing building material (ACBM) is located. Training in asbestos issues is available through NCED. Contact the appropriate Environmental Compliance Specialist or Headquarters ECRM for details and scheduling procedures.

OSHA General Industry Standards and the provisions listed in [EL-800](#), Appendix G covers custodial Class IV asbestos cleaning duties in the USPS. Most custodial work in buildings containing asbestos must comply with [29 CFR 1910.1001 \(k\)](#). Also, [AS-556, Asbestos Management Guide](#), Chapters 3 and 9 contains additional information on asbestos as it relates to cleaning. For facilities that do not contain asbestos, Chapter 7-5 does not apply.

### 7.5.2 Building Surveys

All USPS occupied buildings were surveyed for asbestos. The asbestos-related custodial requirements for a specific facility are determined by the results of the asbestos survey. Contact the appropriate Environmental Compliance Specialist or Headquarters ECRM for the survey results and the Asbestos Operation and Maintenance Plan for a specific facility.

### 7.5.3 Training

Custodians in buildings containing asbestos must complete an Asbestos Awareness training course. Contract cleaners must also receive this training.

NCED currently offers this 2-hour training: *Asbestos Awareness (10021777)* – basic and refresher.

When completing the course, ensure course completion records are entered in the current Human Resources web based training application.

### 7.5.4 Floor Care

Many facilities have asphalt plank, or vinyl asbestos tile (VAT) containing asbestos. Take the following steps to maintain asbestos-containing flooring safely:

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1. Wet strip the floor with a 175-rpm scrubber or buffer with a low-abrasion scrubbing pad. Use a commercial stripper product. Remove the liquid from the floor before it dries. In most states, the liquid can be disposed of down a sanitary sewer. Check local laws to confirm.
2. Apply two to four coats of floor sealer to the flooring. Ensure the stripper, sealer, and wax come from the same company. Follow the manufacturer's instructions.
3. Apply two to four finish coats over the sealer. Follow manufacturer's recommendations.
4. Use a spray-on wax product and a low-speed buffer to maintain the floor. When refinishing becomes necessary, use a stripper to remove the wax finish only and leave the sealer intact.
5. Low-speed stripping and buffing operations may take a little more time, but they will produce excellent results with minimal health and liability risks.

## SECTION 8 ELEVATORS, ESCALATORS, AND DUMBWAITERS

### 8.1 GENERAL

#### 8.1.1 Scope

This section relates to elevators, escalators, and dumbwaiters policy issues.

#### 8.1.2 SPO Responsibility

The SPO ensures the safety and effectiveness of elevators, escalators, and dumbwaiters in the USPS environment.

#### 8.1.3 Elevator Maintenance Standards and Methods

USPS elevator maintenance standards require all elevators be maintained in accordance with the provisions of the current edition of [American Society of Mechanical Engineers \(ASME\) A17.1](#) and the recommendations of the equipment manufacturer.

All operation, maintenance, repair, testing, and inspection of elevators, dumbwaiters, and escalators must conform to the applicable sections of the Safety Code for Elevators and Escalators, [ASME A17.1](#). Apply state and local regulations or codes in harmony with this code.

### 8.2 OPERATIONAL REQUIREMENTS

#### 8.2.1 Hours of Service for Elevators and Escalators

Automatic elevators equipped with automatic shutdown during light traffic shall not be manually shut down at night or over the weekend unless a specific operating problem exists. Schedule automatic cars without this shutdown feature, manually operated cars, and escalators to provide service 30 minutes prior to the beginning of normal building hours, 30 minutes past normal quitting time for the occupants, and otherwise as required under special circumstances.

#### 8.2.2 Typical Service Requirements for Elevators

Generally, the service in a building with a bank of three or more elevators is adequate if the average waiting time at the terminal floor is not more than 20 seconds and if the longest waiting time at any floor does not exceed 60 seconds for more than 1% of the passenger trips. The service in three or four-story buildings, with approximately 100,000 gross square feet or less, will usually be somewhat slower than that specified above since the cost of the installation usually precludes the installation of more than a single car or a two-car bank. See [RE-4, Standards for Facility Accessibility](#).

#### 8.2.3 Qualifications of Elevator Operators

Where manually operated elevators are in use or in those facilities where Operations determines it is advantageous to operate automatic elevators in "attendant" mode, the SPO assures sufficient training for all operators to provide safe and efficient transportation of passengers (or freight).

### 8.2.4 Vertical Transportation Equipment in Leased Space

The lease designates responsibility for elevator and escalator operation and maintenance in leased buildings. When the USPS accepts responsibility for operation and maintenance of this equipment, all provisions of [AS-530-2004-9](#) or most current document shall apply.

### 8.2.5 Signs

The SPO furnishes all signs used to designate service, identify cars and landings, and to instruct the public or building occupants regarding operation of elevators and escalators, as described below:

- Elevators identification - Install an identification sign on the wall at each bank of elevators near the elevator entrance at each landing. This sign shows the number of the car as designated on the construction drawings and the elevator function, i.e., passenger only, freight only, or passengers and freight.
- Escalators and dumbwaiters identification - Identify each escalator and dumbwaiter by letter or number at each floor with a posted sign similar to signage used to identify elevators.
- Out-of-Service Notice - Use this sign to identify non-operating elevators. The signs must be neatly made and bear the words "This elevator is being serviced. Please use another elevator." Place signs at each lobby served by the elevator.
- Floor landing identification - Identify the floor number of each elevator and escalator landing by placing the floor designation so it is visible from the point of egress.
- Emergency instructions - Conspicuously place procedures to be followed in case of emergency in each elevator car. The lettering should be phosphorescent in case of lighting failure. [Figure 8-1](#) provides an example.
- Carrying passengers on freight elevators - Each freight elevator meeting the conditions stated in [Paragraph 8.2.11](#) must not be accessible to the general public.
- Using elevators during emergencies - Conspicuously post a sign advising not to use elevators for evacuation during fire or other emergencies.
- In addition to capacity and data plates, post a sign in every freight elevator specifying the type of loading for which the elevator is designed and installed. Reference [ASME A17.1](#) for specific sign wording. The classes of loading are:
  - Class A: General Freight Loading - where the load is distributed, the weight of any single piece of freight or of any single hand truck and its load is not more than 1/4 the rated load of the elevator, and the load is handled on and off the car platform manually or by means of hand trucks.
  - Class B: Motor Vehicle Loading - where the elevator is used solely to carry trucks or passenger automobiles up to the rated capacity of the elevator.
  - Class C1: Industrial Truck Loading - where truck is carried by the elevator.

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- Class C2: Industrial Truck Loading - where truck is not usually carried by the elevator but used only for loading and unloading.
- Class C3: Other Loading with Heavy Concentrations - where truck is not usually used.

These loadings apply where the weight of the concentrated load including a powered industrial or hand truck, if used, is more than 1/4 the rated load and where the carried load does not exceed the rated load.

### 8.2.6 Locking of Elevator Spaces

Keep elevator machine rooms and pit entrances locked at all times. Only qualified mechanics, inspectors, or persons in their company are permitted in these spaces. Doors to these spaces must be self-closing and self-locking.

All keys used to access and operate elevator, escalator, moving walk, dumbwaiter, and material lift equipment (hereafter called elevator equipment) shall conform to the requirements of the current edition of [ASME A17.1](#), Part 8, Section 8.1. It states in part that keys used to access or operate elevators, escalators, moving walks, dumbwaiters and material lifts shall be unique to those devices and not operate any other devices or locks in the building. If the elevator equipment is grouped, then all devices within that group can be operated with the same key. Elevator equipment in another group shall have a different key.

Keep keys in a secure location, readily available to elevator personnel with access to all assigned groups, but not accessible to the general public.

Elevator keys, regardless of the group they control, shall not be part of a master key program.

There are four (4) elevator equipment/spaces access categories:

- Restricted
- Authorized Personnel
- Emergency Operations
- Other

#### 8.2.6.1 Restricted

Restricted access is limited to elevator personnel. This includes the following spaces/locks:

- Pit access doors
- Hoistway access doors
- Emergency access doors (also granted to emergency personnel during emergencies)
- Hoistway access and access enabling switches
- In-car inspection operation transfer and stop switches

- Screw machine controllers remotely located from hoistway, machine rooms or machinery spaces
- Screw machine access panels
- Special purpose personnel elevator access to hoistways for emergencies and inspections
- Power and hand dumbwaiters lacking automatic transfer devices access switches
- Electric material lifts with automatic transfer devices and car mounted operating devices

### 8.2.6.2 Authorized Personnel

Authorized personnel are those people authorized to operate or access elevator equipment. This includes the following spaces and/or switches:

- Machine room access door
- Access doors or openings used to clean the cars and hoistway enclosure
- Car light control switch
- Rooftop elevator key switch
- Escalator and moving walk start switch
- Side access doors to the interiors of escalators and moving walks

### 8.2.6.3 Emergency Operations

This covers access to the operation of equipment by firefighters, police, and other emergency personnel. This includes emergency and/or standby power access selector switches, Phase I emergency recall switch, and Phase II emergency in-car operation switch.

### 8.2.6.4 Other

The Other category pertains to elevators in private residences and is not applicable to USPS operations.

### 8.2.7 Elevator Data Card

Complete Form 4813, Elevator Data Card (PSN 7530-02-000-9338) ([Figure 8-2](#)) for each elevator and keep the completed form in the maintenance office. Update this card each time a repair or alteration is done on the elevator.

#### 8.2.7.1 Machine Rooms

In addition to the elevator data card, provide a data plate indicating the edition of the Code in effect at the time of installation or alteration. Replace damaged or missing data plates.



### 8.2.7.2 Fire Extinguishers

Provide all electrical machinery and control spaces, walk-in machinery and escalator control spaces with Class ABC fire extinguishers and place them in a location convenient to the exit door.

**EMERGENCY PROCEDURES**

**IN CASE OF ELEVATOR EMERGENCY**

**DIAL "100" (OPERATOR)**

THIS WILL CONNECT YOU TO USPS SWITCHBOARD  
A MECHANIC WILL BE DISPATCHED IMMEDIATELY

**WHEN CALLING FOR ASSISTANCE: - GIVE THE FOLLOWING INFORMATION**

BUILDING NAME : L'ENFANT PLAZA WEST  
ELEVATOR NUMBER : 7  
ELEVATOR TELEPHONE NUMBER : (ON TELEPHONE DIAL)  
**NATURE OF TROUBLE - MEDICAL ASSISTANCE NEEDED**

**HANG UP AND AWAIT INSTRUCTIONS-HELP IS ON THE WAY**

Figure 8-1. Typical Emergency Instructions



### 8.2.7.3 Elevator Machine Room Temperature

Provide each machine room with ventilation, as required by [ASME A17.1](#). Special consideration may be necessary in machine rooms housing electronic elevator control equipment. Those rooms may require air-conditioning equipment in place of simple ventilation, depending on the operating requirements of the controllers involved.

### 8.2.7.4 Machine Room Hoist

Provide machine rooms for two or more elevators with an overhead trolley hoist, which terminates over the trap door to facilitate servicing heavy items of equipment.

### 8.2.7.5 Machinery Lighting

Light machinery rooms and machinery space to not less than 19 foot-candles at the floor. Light elevator pits to not less than 10 foot-candles.

### 8.2.8 Communications

Include communications devices (telephone, 2-way radio, or intercom) capable of alerting someone a problem exists and assistance is needed in each elevator machine room and each car. Modern elevator telephones are normally equipped with auto-dialers that call the appropriate number. If, however, the car is not so equipped then include telephone numbers in the emergency instructions posted as required by [Paragraph 8.2.5](#). All elevator communications devices shall meet the requirements of [ASME A17.1](#).

### 8.2.9 Auxiliary Emergency Stop Switches

Install two auxiliary emergency stop switches for every elevator; one on top of the car, and the other on the wall in the elevator pit in accordance with [ASME A17.1](#). These switches provide emergency protection for a mechanic if the car moves when they are working on top of the car or in the pit.

### 8.2.10 Elevator and Hoistway Door Emergency Keys

Make keys available only to personnel in the assigned security level required for access, operation, inspection, maintenance, repair, and emergency access in accordance with the current edition of [ASME A17.1](#), Section 8.1.

#### 8.2.10.1 Hoistway Door Unlocking Devices and Access Keys

During normal operation, the elevator hoistway doors are unlocked by a mechanism that is activated by the elevator car as it reaches each floor. Keys for manually unlocking hoistway doors are provided for some elevators to permit maintenance access to the hoistway when the elevator car is not at the floor. Use the emergency doors in the car of an elevator only to permit departure of passengers from the car when exit through the conventional door is impossible. Keys for the hoistway doors and emergency doors serve only special purposes and have no function in the normal operation of the elevator. Serious consequences could result from improper or careless handling of these special-use keys. The manager safeguards and limits special use keys strictly for their intended purpose. Prominently label the keys by attaching Form 4707, Out of Order tag (PSN 7530-02-000-9301) as shown in [Figure 8-3](#).

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<p>PS Form 4707 August 1991</p> <p style="text-align: center;">U.S. Postal Service Out of Order (Defective or Inoperative Equipment)</p> <hr/> <p>Description of Defect</p> <hr/> <p>Handling Instructions</p> <hr/> <p>Employee</p> <hr/> <p>This equipment must be disconnected or properly locked out if connected to a power source.</p> <hr/> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Type of Machine or equipment</td> <td>Number</td> </tr> <tr> <td>Office</td> <td>Date</td> </tr> </table> <hr/> <p>Employee</p> <hr/> <p>Turn this stub in to your supervisor. Affix tag to defective or inoperative article.</p>	Type of Machine or equipment	Number	Office	Date	<p>PS Form 4707 August 1991 (Reverse)</p> <p style="text-align: center; font-size: 2em;">DO NOT USE REMOVE FROM SERVICE IMMEDIATELY</p> <hr style="border-top: 1px dashed black;"/> <p>TYPE OF EQUIPMENT _____</p> <hr/> <p>LOCATION: _____</p> <hr/>
Type of Machine or equipment	Number				
Office	Date				

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**Figure 8-3. Out of Order Tag (PS Form 4707)**

Keep the keys in a "break glass" receptacle mounted in the security office, building manager's office, or SPO's office. Qualified employees responsible for elevator maintenance may be issued a set of these keys for elevator servicing usage. No other locations for these keys are permitted. Under no circumstances shall the keys be removed from their prescribed place, or used without the knowledge and consent of the building manager or an authorized representative.

### 8.2.10.2 Emergency Operation Keys

Safeguarded the key(s) in the same manner where elevators are equipped with emergency service operations in accordance with [ASME A17.1](#), Rule 2.27.3.

### 8.2.10.3 Parking Device Keys

Depending on the year of installation, if an elevator door is closed and locked when the car is at the landing and is not operable from the landing by a door-open button or a floor button, it may be equipped with a parking device that allows opening the door when the car is within the landing zone. Keys to such devices may be issued to custodians or other persons that have a need since they will unlock the door only when the car is in the landing zone.

### 8.2.10.4 Emergency Lighting Units for Elevator Cars

Install an emergency lighting unit in each car (including freight). It serves to calm fears in the event of a blown fuse or a more serious power failure, and it provides illumination for the control panel and the telephone.

### 8.2.11 Carrying Passengers on Freight Elevators

Freight elevators, not accessible to the general public, may carry employees subject to the following conditions:

- a. The rated load of the elevator is not less than that required for a passenger elevator of equivalent inside net platform area as required by [ASME A17.1](#), Rule 2.16.4.
- b. Hoistway entrances and car doors or gates conform to the requirements of the following rules of [ASME A17.1](#):
  - Hoistway entrances conform to [2.11.2.1](#) and [2.12.1.1](#), or have power-operated doors conforming to [2.11.2.2\(e\)](#).
  - Hoistway doors and/or car doors conform to [2.12.5](#) and vertically sliding doors conform to [2.16.4.9](#).
  - Elevator safely lowers, stops, and holds the car with an additional load up to 25% in excess of the rated load as per [2.16.8](#).

Place the following sign, or one conveying the same message, in those elevators meeting the requirements in a. and b. above: "PASSENGERS ARE PERMITTED TO RIDE THIS ELEVATOR"

Place the following sign, or one conveying the same message, in elevators not meeting the requirements in a. and b. above: "THIS IS NOT A PASSENGER ELEVATOR: NO PERSONS OTHER THAN THE OPERATOR AND FREIGHT HANDLERS ARE PERMITTED TO RIDE ON THIS ELEVATOR".

Granting permission to use freight elevators not previously certified to carry employees, to transport employees is considered a major alteration and must meet the requirements of [ASME A17.1](#), Rule 8.7.2.16.3.

### 8.2.12 Use of Elevators During Emergency

Elevators must not be used during a fire, earthquake, or other emergency, because of the high risk of elevator failure, stoppage, or power failure. These events could trap persons in elevators, resulting in death or serious injury. Do not include use of elevators for evacuation of handicapped personnel or for other purposes in emergency

contingency plans. Automatic elevators equipped with emergency control as defined in [ASME A17.1](#), Rule 2.27.3 are operable by fire department only. Building maintenance personnel maintain the keys so they will be readily accessible to fire department personnel but not available to the public. In virtually all municipalities, the fire department has their own keys for putting the cars into “Firefighter Service.” However, the SPO must have the keys under appropriate security as per the current edition of [ASME A17.1](#) Section 8.1, Security.

Instruct elevator operators in the following procedures:

- Fire emergency - Return nonstop to main floor (lobby) or other approved level and lock the elevator out of service.
- Earthquake or bomb scare - Stop at nearest landing and lock elevator out of service.

### 8.3 MAINTENANCE AND REPAIR

#### 8.3.1 Maintenance

Maintain and service vertical transportation equipment according to this handbook and [MS-21, Elevator Maintenance](#). Use preventive maintenance guides listed in the current MMO titled “[Creating Detailed Local Building and Building Equipment Maintenance Preventive \(PM\) Checklists](#)” and the manufacturer’s instructions to develop maintenance checklists. Instruct all maintenance supervisors and qualified mechanics in the following:

- The Safety Code for Elevators, [ASME A17.1](#), the National Fire Protection Association (NFPA) Code including [NFPA 70](#) (National Electric Code), and fire resistance rating portions of NFPA governing all elevator maintenance, repairs, and alterations. All qualified mechanics must be fully aware of these codes, understand the parts applicable to elevators, and understand their responsibility for their personal safety, the safety of fellow employees, and the safety of the public using elevators they service.
- Do not manipulate or temporarily alter elevator mechanisms or controls to expedite repairs. Professional engineers must approve all alterations, both mechanical and electrical, and certify them for [ASME A17.1](#) compliance. The controller’s manufacturer must approve any controller alteration. If the original equipment manufacturer (OEM) cannot approve it, then approval must be granted by the USPS ASME QEI-1 (Standard for the Qualification of Elevator Inspectors).
- For test and inspection purposes, it may be necessary to bypass or circumvent a protective device. In such cases, take the elevator equipment out of service during the test and restore those devices to their normal configuration at test completion and prior to its return to service.
- All elevator repairs/modifications involving cutting, welding using electric arcs or oxy-fuel, gas flames, chipping or grinding present a high potential for fire and explosion and must be done in accordance with the provisions of Chapter 5 of [MS-56, Fire Prevention and Control](#).

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### NOTE

The code prohibits any welding repair of parts subject to tension, torsion or bending on which the support of the elevator car depends.

- Take an elevator out of service immediately for any reported malfunction or if an elevator operates in a manner that causes doubt about its safety or reliability. Perform the following steps before troubleshooting the malfunction:
- Determine no one is on the elevator, and shut it down.
- Post "OUT OF SERVICE" signs in front of hoistway door at each level.
- Determine the source of the malfunction, make proper repairs and corrections, and thoroughly test the elevator prior to returning it to service.
- Place signs in front of the hoistway door at each level, advising that the elevator is out of service prior to performing any work ([Paragraph 8.2.5](#)). Use signs supported by a chain suspended from each side of the hoistway door, attached to the door facing with magnets. Do not attach magnetic signs directly to the hoistway door since they may not be visible when the door is open.
- Provide qualified mechanics with the proper tools and equipment for servicing elevators. Use only high-quality meters to test elevator circuits. Never use test lamps since the lamps will often draw sufficient current to operate relays.
- Only qualified mechanics, inspectors, or persons in their company are allowed to enter elevator machine rooms or pits. In no instance should anyone other than a qualified mechanic familiar with the equipment enter a machine room to try to get a stalled elevator started.

For purposes of this handbook OSHA 1910.399 defines "qualified" as:

**"Qualified person"** - One familiar with the construction and operation of the equipment and the hazards involved.

### NOTE

Whether an employee is considered a "qualified person" depends on various circumstances in the workplace. It is possible and, in fact, likely for an individual to be "qualified" with regard to certain equipment in the workplace, but "unqualified" as to other equipment. See [OSHA 1910.332\(b\)\(3\)](#) for training requirements specifically applicable to qualified persons.

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### NOTE

An employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties.

The full listing of OSHA definitions can be found in [OSHA 1910.332](#).

For those offices not utilizing the services of a professional elevator service contractor, the following shall be considered the minimum requirements:

- Establish a written maintenance program conforming to the current elevator code requirements and make it available to all personnel engaged in the elevator equipment maintenance.
- Do not limit the program to examinations, maintenance, cleaning, lubrication, adjustments, and tests of the equipment. Base the amount of maintenance required and the frequency of routes on equipment age, condition, usage, environmental considerations, equipment quality, design, and maintenance techniques and equipment improvements such as Predictive Maintenance (PdM).
- Include in the maintenance records a description of the tasks performed and the dates performed; dates of inspections, tests, adjustments, repairs and replacements; a description of all trouble or repetitive calls to elevator personnel and the action taken.
- Results of the code-required testing of the firefighters service operation.

Make all records required by the four items above available to all elevator personnel.

### **8.3.2 Lubrication**

Use lubricants conforming (grade and type) to the manufacturer's recommendation. Alternative lubricants may be used but their specifications and performance must equal or exceed those originally prescribed. Do not allow excess lubricant to accumulate on the various surfaces to which they are applied. Inspect and drain overflow-containers on a regular basis. Do not store any lubricant or oil on the elevator car-top or in the elevator pit under any circumstances.

### **8.3.3 Schematics, Controllers, and Wiring**

Provide current wiring diagrams showing all electrical protective devices, critical operating circuits and any necessary "pen and ink" changes due to modification in the machine room. Store these diagrams in protective cases so they are useable when needed.

Do not use temporary wiring, insulators, or blocks in the armatures or poles of magnetically activated switches, contactors, or relays on any piece of equipment in service.



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If, during maintenance, repair, or testing jumpers are necessary, remove them prior to returning the equipment to service. Store jumpers away from the equipment to prevent their use in lieu of an actual repair. Do not use jumpers on equipment in service.

Maintain all controls, operating circuits, and the devices they affect in accordance with the applicable Code requirements.

### **8.3.4 Painting**

Take care when painting any surface of elevator equipment to ensure the operation of the equipment is not hampered or disabled. Thoroughly test any painted operating component after painting to ensure it functions as intended.

### **8.3.5 Mileage Indicators**

Mileage indicators are no longer required on elevators. Where installed, use indicators to aid in determining maintenance and inspection requirements.

### **8.3.6 Maintenance of Electric Elevators**

All electric elevator maintenance shall be in accordance with [ASME A17.1](#).

#### **NOTE**

The USPS utilizes the services of a professional elevator maintenance/installation company for such tasks as re-roping, overhaul, upgrading controllers, and virtually anything else that falls outside the realm of normal maintenance.

### **8.3.7 Hoistway and Pit Cleaning**

Keep hoistways and pits clean and do not use for storing anything but landing-blocks and pipe stands. If storing landing-blocks and/or pipe stands in the pit, they must not interfere with the elevator's operation and present no hazard whatsoever to anyone working in the pit.

Do not allow standing water and oil to accumulate on the pit floor. If water and/or oil continues to accumulate after cleaning, find and correct the source. Check hoistways and pits on a regular basis to ensure no articles of mail are located in them.

Turn over any mail found, regardless of type, to Operations for further handling.

### **8.3.8 Machine Rooms and Spaces**

As with pits and hoistways, maintain machine rooms, and machinery spaces in a neat, orderly fashion with their access doors closed and locked. Keep these areas free of water, dirt, trash, grease, and oil. With the exception of articles necessary for the operation and maintenance of the elevator, do not store anything in machine rooms and machine spaces. However, do not store flammable liquids having a flashpoint of less than 110°F (44°C) in the rooms or spaces even if necessary to maintain the machines.

### 8.3.9 Car-Top Cleaning

Keep the tops of elevator cars (car-tops) in a neat and orderly fashion. Do not allow accumulation of grease, oil, water, trash, rubbish, or dirt. Turn over any mail found on the tops of cars to Operations.

### 8.3.10 Door Systems

Maintain doors, both car and landing, including gate, electrical, and mechanical components as specified by the manufacturer to ensure safe, proper, and continued operation. These components include but are not limited to:

- Hoistway door: interlocks, mechanical locks, electrical contacts, unlocking devices, and escutcheons
- Car door: electric contacts or car door interlocks (if required)
- Door reopening devices
- Vision panels or grilles (if required)
- Hangers, tracks, door rollers, up-thrusts door safety retainers (if required)
- Astragals and resilient members, door space guards and sight guards (if required)
- Sills and bottom guides, fastenings including their condition and engagement
- Clutches, engaging vanes, retiring cams and engaging rollers
- Interconnecting means
- Door closers and restrictors (if required)

#### 8.3.10.1 Door Closing Force

Door closing force of power operated, horizontally sliding doors, whether automatic or by momentary switch contact, shall be in accordance with [ASME A17.1](#).

#### 8.3.10.2 Stopping Accuracy

Maintain the stopping accuracy of the elevator to avoid a tripping hazard or loading difficulty to either the passengers or mail equipment handlers when the car stops at a landing.

#### 8.3.10.3 Miscellaneous

Maintain hoistway access switches, emergency signaling devices, lighting, communications systems, ventilation systems, and ascending car over-speed and unintended movement devices to ensure their continued operation.

### 8.3.11 Maintenance of Hydraulic Elevators

Maintenance of hydraulic elevators shall conform to the applicable provisions of [ASME A17.1](#).

### 8.3.12 Escalator Start-up

Personnel authorized to start an escalator shall thoroughly check it prior to putting the unit into use. This thorough check shall include but not be limited to the following:

1. Ensure no personnel are on the escalator and run the unit AWAY from the landing.
2. Verify the correct operation of the start switch and stop buttons (and alarm if the unit is so equipped).
3. Examine the steps for missing components, comb plates for broken or missing teeth, skirt panels (kick plates) and balustrades for damage.
4. Ensure the handrails operate at essentially the same speed as the steps, are free from damage or pinch points, and have handrail entry guards in place.
5. Verify all steps are properly positioned and remain properly positioned throughout the length of the machine.
6. Verify secure placement of ceiling intersection guards (which eliminate pinch points), anti-slide devices, deck barricades, and caution signs.
7. Check for uniform lighting on the step treads that does not contrast with surrounding areas.
8. Verify the safety zone is clear of obstacles and the floor areas adjacent to it are free from any foreign matter and slipping/tripping hazards.
9. Check for any unusual noise or vibration.

If any of the above checks/verifications is unsatisfactory, place the escalator out of service, barricade the landing area, and notify the SMO. Perform this check daily for escalators operating 24 hours per day.

### 8.3.13 Contract Maintenance and Repair

#### 8.3.13.1 Contract or In-House Policy Guidelines

Decisions of whether to perform elevator maintenance with in-house personnel or by contract must be on a case-by-case basis. Consider various factors, including economics, the ability to hire and retain qualified personnel, and the capability of in-house personnel ([ASM 535.252](#)).

#### 8.3.13.2 Elevator Maintenance and Repair Contracts

Elevator maintenance contracts are handled according to the provisions of the most current [Material Logistics Bulletin](#) including the current edition of [ASME A17.1](#), Section 8.6, Maintenance Repair and Replacement. The building manager must have a thorough knowledge of the contract requirements necessary to exercise good contract surveillance. Include "Contracting Officer Representative" training for administration of an elevator contract.

#### 8.3.13.3 Special Contracts

Request MTSC assistance in revising specifications where unusual conditions warrant departure from the standard contract.

### 8.3.13.4 Monitoring Contractor Performance

The awarding of a contract for elevator maintenance does not relieve the USPS of the responsibility for safe, efficient elevator service. In fact, USPS incurs the additional responsibility of assuring that contractors perform the work for which they are paid. Therefore, establish an inspection schedule and contractors' work review at each location. Accomplish this surveillance in any or all of the following manners:

- Monitor equipment outages.
- Review the written Maintenance Control Program and the Preventive Maintenance records provided by the contractor on a monthly basis and deduct for any PM not performed.
- COR or designee performs a monthly inspection to ensure all maintenance, inspections, and tests required by the written Maintenance Control Program and [ASME A17.1](#), Section 8.6 are being performed.

### 8.3.14 Repairs

Repair parts, replacement parts, and assemblies shall be made using, at minimum, parts and assemblies of equivalent material, strength, and design.

The repair program includes major repairs or replacements. Schedule repairs not of an emergency nature for a time that will not affect building service

### 8.3.15 Workmanship

Ensure drilling, cutting, welding, or torqueing does not damage or weaken any component or assembly. As stated elsewhere in this chapter, the Code prohibits any welding repair of parts subject to tension, torsion or bending on which the support of the elevator car depends.

### 8.3.16 Alterations

#### 8.3.16.1 Alteration Requirements

When performing any alteration, ensure the installation conforms to the Code at the time of installation and the Code requirements for the alteration.

The alteration shall not diminish the level of safety below that which existed prior to the alteration.

A licensed professional engineer shall verify the alteration for welding, repair, cutting, or splicing of members, which support the car, counterweight, or escalator.

Temporary wiring is permitted during alterations, but for cars in normal operation, never render electrical protective devices inoperative or ineffective.

Upon completion of alterations, perform inspections and tests as required by the Code.

## 8.4 INSPECTIONS AND TESTS

### 8.4.1 General

Test and inspect elevators, dumbwaiters, and escalators in accordance with Management Instruction [AS-530-2004-9](#).

### 8.4.2 Scheduling Inspections and Tests

Prepare a schedule of regular inspections a year in advance with a plan for performance of the inspection by a qualified inspector. The SPO is primarily responsible for scheduling inspections for all elevators under their control before current certificates expire.

### 8.4.3 Inspector Qualifications

Inspections are made by elevator inspectors, elevator engineers, or by mechanical, electrical, or safety engineers who meet the standard set in [ASME QE1-1-2007, Standard for Qualification of Elevator Inspectors](#). The suggested sources of elevator inspectors are listed below:

- GSA or other federal agencies with qualified elevator inspectors who regularly perform inspections of their own elevators.
- Municipal or State code enforcing authority performing elevator inspections in privately owned facilities. When arranging for these inspections, it must be clearly understood by the municipal and/or state representative the USPS as an independent establishment of the U.S. government is not subject to State or local regulation or licensing of its elevators. The inspection is performed as a service and does not obligate the USPS to comply with local licensing or code requirements beyond the national standard.
- Qualified elevator service companies.

The term "Inspector" refers to any one of these qualified persons. The mechanic in charge of maintaining the equipment or some other responsible representative of the USPS should accompany the inspector.

Where elevators are maintained by contract, the maintenance contractor is not eligible to perform inspections. However, the maintenance contractor must perform the required tests in the presence of the inspector.

The Area Manager, Maintenance Operations may make exception to this rule at small remote locations where excessive expense would otherwise be incurred. Such instances require specific approval on a case-by-case basis and a different person (other than the one assigned responsibility) in the employment of the contractor is allowed to perform the inspections and required to complete the appropriate USPS checklist.

A copy of the completed checklist is furnished to the Area Manager, Maintenance Operations.

### 8.4.4 Inspection Frequency

#### 8.4.4.1 Elevators, Escalators, and Moving Walks

Inspect all passenger elevators, freight elevators, escalators, moving walks, and dumbwaiters as outlined in the current Management Instruction.

#### 8.4.4.2 Periodic Tests

Perform periodic tests concurrently with inspections in accordance with [ASME A17.1](#).

### 8.4.5 Special Inspections

Special inspections must be made by a Qualified Elevator Inspector (QEI):

- Immediately following a major repair or alteration, whether by contractor or by USPS employees.
- Immediately after an accident or fire resulting in injury to persons or damage to equipment.

### 8.4.6 Elevator Inspectors

#### 8.4.6.1 USPS Elevator Inspectors

USPS elevator inspectors must complete their inspections in accordance with the provisions specified by the FSO.

#### 8.4.6.2 Contract Inspectors

When inspections are contracted with private firms (i.e. architecture or engineering firm, maintenance contractors, and insurance companies), make completion of appropriate checklist(s) part of the contract. The USPS database (Facility Inspection Tool) identifies each elevator. Its inspection schedule and location is available to the building elevator contractors through the Facility Inspection Tool.

#### 8.4.6.3 Local, State Government, or Other Federal Agency Inspectors

When local, state government or other federal agencies' inspectors perform inspections, they must complete the appropriate checklist. If they refuse, compare a copy of the checklist used to the appropriate USPS checklist to assure the inspection meets National [ASME A17.1](#) and USPS standards.

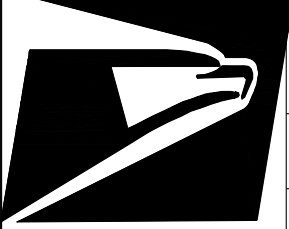
#### 8.4.6.4 Retention of Records

For each inspection, the USPS qualified contract inspector retains a copy of the complete checklist and furnishes one copy to the local office along with the certificate and inspection report. The local office retains the completed checklist for 5 years. In this fashion, the elevator inspector will have the result from the previous 5-year full load test.

### 8.4.7 Certificate of Inspection

If an elevator, escalator, or dumbwaiter meets the safety requirements and there are no serious maintenance deficiencies, the inspector promptly prepares USPS Form 279-A (PSN 7530-03-000-3705), Certificate of Inspection ([Figure 8-4](#)). The USPS person responsible for maintaining the equipment countersigns the certificate and displays it to show the equipment passed inspection. The certificate has additional spaces to be filled in when the equipment is re-inspected. When all the spaces are filled in, the inspector issues a new certificate. If the certificate becomes soiled or unsightly before all the spaces are used, replace it. Display elevator certificates in the car to show the equipment has passed inspection. Post escalator certificates on or near the machine.

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CERTIFICATE OF ELEVATOR/ESCALATOR INSPECTION					
	UNIT		Location (Address, City, State and ZIP Code)		
	Maintenance Office		Year Built	Max. No. of Passengers	Local ID
	Manufacture		Safety Class	Capacity (Pounds)	Rated Speed
TYPE OF SERVICE	PASSENGER <input type="checkbox"/>	FREIGHT <input type="checkbox"/>	DUMB WAITER <input type="checkbox"/>	ESCALATOR <input type="checkbox"/>	
TYPE OF INSPECTION	PERIODICAL <input type="checkbox"/>	ANNUAL <input type="checkbox"/>	THREE YEAR <input type="checkbox"/>	FIVE YEAR <input type="checkbox"/>	
Date of Inspection	Date of Expiration	Mechanic (Signature and Printed Name)		Elevator Inspector (Signature and Printed Name)	
COMMENTS					
PS FORM 279WFSO, January 2000					

**Figure 8-4. Certificate of Inspection (USPS Form 279)**

### 8.4.8 Unsafe Equipment

If the equipment fails to meet the requirements, the inspector withdraws the certificate. If the inspector finds a condition that might cause an accident or serious mechanical failure, he/she withdraws the certificate and notifies the SPO, or other responsible official that the equipment is unsafe and must not be used. The SPO notifies other parties specified in the current Management Instruction.

## 8.5 SPECIAL REQUIREMENTS AND PROCEDURES

### 8.5.1 Releasing Passengers from Stalled Elevators

The release of passengers from a stalled elevator is very hazardous if the proper precautions are not taken. The procedure for releasing passengers from stalled elevators shall be a part of the facility's IEMP (Integrated Emergency Management Plan) and shall be available to authorized elevator and emergency personnel.

Specifically, the SPO ensures personnel and equipment availability to assist anyone trapped in an elevator. The plan includes the appropriate portable lighting equipment, hoists, and/or ladders as required by the situation.

Only qualified elevator mechanics or persons specifically trained in the emergency procedures for elevators as specified in the current [ASME A17.1](#) release trapped passengers. Provide a copy of the procedures and all necessary training to authorized personnel assigned to assist in evacuating passengers from a stalled elevator to ensure they understand and comply with the procedures. Keep a record of authorized trained personnel on the premises where the elevator is located and available to the authority having jurisdiction.

If maintenance employees specifically trained in releasing passengers from stalled

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elevators and elevator contract personnel cannot be brought on site in a reasonable amount of time (1 hour) then the facility's IEMP directs the contacting of the local municipal agency (usually the Fire Department) to handle such a call.

Refer to [APPENDIX D](#) and [APPENDIX E](#) for additional requirements.



## SECTION 9 ELECTRICAL SYSTEMS

### 9.1 GENERAL

#### 9.1.1 Scope

This section pertains to USPS electrical systems maintenance responsibilities. Refer to [APPENDIX F](#) for additional information.

#### 9.1.2 SPO's Responsibility

The SPO is responsible for safely, efficiently, and effectively maintained building electrical systems to ensure the safety of the building and its occupants. Install and modify electrical systems in compliance with National Electrical Code, Local Code and Ordinances, and USPS Standards. If there is a conflict in the codes, the more stringent code shall apply.

#### 9.1.3 Electrical Systems Maintenance Standards and Methods

Reference [MS-28, Maintenance of Electrical Switchgear](#) for USPS electrical systems maintenance standards and methods.

### 9.2 BUILDING SERVICE

#### 9.2.1 Utility Company Contacts

The SPO maintains a liaison with the electric utility company. This liaison is essential to utility conservation and the management functions set forth in this handbook.

#### 9.2.2 Electrical Energy Costs

Electrical energy costs for a specific building depend primarily on the level of lighting, the use of air conditioning, the type of building occupancy, and the building hours of use. [AS-558, Facility Energy Management Guide](#) outlines procedures to conduct energy audits and identify potential areas for savings.

### 9.3 MAINTENANCE AND REPAIR REQUIREMENTS

#### 9.3.1 Maintenance

Maintenance and servicing of electrical systems and equipment shall be in accordance with [MS-28, Maintenance of Electrical Switchgear](#). Review the "Standard Work Practices - Electrical Equipment" in [APPENDIX F](#) of this manual with all personnel performing maintenance on electrical equipment. Also, performing proper maintenance, while at relatively infrequent intervals, is essential to the safety of the building and its occupants. If performed by contract, incorporate these maintenance guides, instructions, and checkpoints in the contract specification.

### **9.3.2 Code Requirements**

Use the National Electrical Code as the minimum safety requirement for any USPS or contract personnel electrical modifications. Unless specifically grandfathered in (exempt from current regulations because of the installation or manufacture date), the SPO is responsible for correcting any existing Code violations.

### **9.3.3 Contract Work**

Refer all requests for contract electrical repairs/modifications to the Area Facilities Single Source Provider (FSSP). The Facilities Service Office has contracts with appropriate electrical contractors and professional engineering firms (should they be needed) to ensure work done is in accordance with the provisions of the NEC or Local Electric Codes, whichever is more stringent.

### **9.3.4 Work on Systems and Equipment**

Perform all work on electrical systems and equipment in strict accordance with the provisions listed in the current Management Instruction and the current MMO addressing the Electrical Work Program (EWP).

### **9.3.5 Locking of Electrical Spaces**

Partition off and lock all switchgear rooms, substations, transformer vaults, and switchboard locations having electrical equipment greater than 600 Volts. Unlock breaker panels of 600 Volts or less including distribution panels, lighting panels, general purpose or receptacle panels and panels supplying mail processing equipment.

### **9.3.6 Electrical Wire Closets**

Store no material or equipment in these closets. Replace all panel, wire trough, trench, and junction box covers immediately upon work completion. Cleanliness of these spaces is the responsibility of the properly trained building personnel.

### **9.3.7 Ground/Bonding Practices**

Properly and adequately bond all noncurrent-carrying metal parts of the electrical system, including conduits, pull and junction boxes, switches, panel boards, switchboards, lighting fixtures, motors, generators, controllers, switchgear, and transformers in accordance with the National Electrical Code.

The purpose of grounding equipment on electrical apparatus or equipment is to minimize the possibility of shock hazard by restricting the voltage on noncurrent-carrying parts of electrical equipment in the event of a fault.

### **9.3.8 Identification of Cables and Equipment**

Permanently mark switches and circuit breakers for quick and easy identification of circuits or equipment supplied through them. Mark all lead covered cables, regardless of voltage, with nonferrous metal tags stamped with the feeder or circuit number. Place these tags on all cables in manholes, junction boxes, and other exposed points where they enter and leave cable shafts and cable rooms. Type panel board directories, place them in all branch circuit panel board cabinets, and ensure they identify the room and type of equipment. Keep these directories current.

### 9.3.9 High-Voltage Duct Identification

Mark all underground high-voltage ducts within the building with an orange strip applied to the floor surface. Stencil the words "Danger--High Voltage" at 10-foot intervals. Use black lettering at least 2 inches in height. Paint orange and mark with the words "Danger--High Voltage" as described above on all high-voltage ducts encased in concrete running in attics, basements, or vertical shafts.

### 9.3.10 Piping in Electrical Rooms

No water, steam, vent, or drainpipes are permitted in any transformer vault, switchgear, or switchboard room. Enclose any such piping currently existing within these rooms that is prohibitive in cost to remove with a suitable watertight sheath to carry any liquid outside of the room or vault.

### 9.3.11 Insulation Mats and Gloves

Refer to the current Management Instruction and current MMO covering Electrical Work Program (EWP).

### 9.3.12 Portable Metal Ladders

Do not use portable metal ladders where there is a possibility of the ladder becoming energized from electrical circuits, equipment, or apparatus, or where the metal ladder may become an accidental ground for the worker on the ladder.

### 9.3.13 Wiring Diagrams and Schematics

The building records should contain as-built diagrams and schematics. Check the drawing's accuracy with knowledgeable electrical equipment personnel. If the drawings are not on file and copies cannot be obtained, new drawings will have to be made. If an electrical equipment survey is made by service contract, make contract provisions for drafting new or revised drawings. The drawings will have sufficient identification of parts and control relationships to allow troubleshooting in case of breakdown or for planning preventive maintenance procedures and sequences. Accompany any subsequent electrical modification of the building or building equipment by suitable drawing revisions. The scope of a new electrical contract shall include an update of electrical drawings and new calculations with the additional load included as defined in [MS-28, Maintenance of Electrical Switchgear](#).

## 9.4 HIGH-TENSION SYSTEMS AND EQUIPMENT

### 9.4.1 Responsibility

In most locations, the local power company maintains and services the primary electrical service to buildings operated by USPS. Where USPS has the responsibility, bring in the utility or a local electrical contractor to correct the problem.

#### NOTE

USPS personnel do not work on electrical circuits over 600 volts.

### **9.4.2 Instructions and Procedures**

Post validated instructions on clearing and restoring high-voltage units, (i.e. operating transfer switches) together with one-line schematics in each switchgear room and vault. Provide black line drawings on white backgrounds that are protected to prevent damage or normal degradation. Perform switching, when necessary, in accordance with the provision of the current Management Instruction and MMO covering Electrical Work Practices (EWP). Unqualified personnel are not permitted to work on or operate high-voltage equipment. Limit admittance to spaces housing this equipment to qualified personnel only. Mount the telephone number of the utility company dispatcher, visible to the telephone, in all switchgear rooms and transformer vaults. Use an approved USPS locking device when locking the service in a de-energized position.

### **9.4.3 Transformers and Transformer Vaults**

Surround liquid-cooled transformers installed inside buildings by a concrete curb not over 8 inches in height and of such size that it will contain all liquid in the transformer.

### **9.4.4 Branch Circuit Panel Boards**

Panel boards, when installed or replaced in a building, shall be of the automatic circuit breaker type and shall be in accordance with the NEC.

### **9.4.5 No Fuse-Type Branch Circuit Panel Boards (Edison-Type Screw-in Fuses)**

Do not install this type of branch circuit panel board in USPS-owned or USPS-operated buildings. Fuse-type branch circuit panels are susceptible to over fusing, creating a fire hazard. Most fuse or switch and fuse-type panels have a low interrupting current capacity.

### **9.4.6 Branch Circuits**

Do not install branch circuits rated less than 20 A for general use. Branch lighting circuits of 120 V must generally be designed for 1,400 W of connected load. Connected lighting load on 277 V lighting circuits should not exceed 3,200 W. Generally, only connect a maximum of eight duplex receptacles to one circuit. In all cases, the connected load of any circuit shall not exceed 80% of the rating of the over-current protective device.

### **9.4.7 Convenience Outlets**

The USPS furnishes convenience outlets needed for normal office activity in space it provides, and also when required because of moves ordered by the USPS.

For open office areas, there shall be one outlet per 12 linear feet of perimeter wall plus one quadruplex outlet per employee. For private offices, there shall be one outlet per 12 linear feet of wall with a minimum of one outlet per wall. Two of these outlets (at expected desk location) shall be quadruplex.

Install receptacles in accordance with all National Electrical Code requirements and mount them approximately 12 inches above the floor when installed on walls or partitions.

### **9.4.8 Power and Convenience Outlets for Maintenance Use**

Provide wire closets, mechanical equipment rooms, electrical equipment rooms, transformer rooms, switchgear rooms, elevator hoistways and pits, conveyor and escalator landings, satellite shops, and outside custodial storage areas with power outlets.

### **9.4.9 Power Cable Testing**

Periodic high-voltage testing of power cables is not required. In the event of switchboard or switchgear failure and subsequent testing and repair, test power cables as part of the restoration. Maintain cables clean and dry, and protected from mechanical damage.

#### **9.4.9.1 Conditions for Performing High-Voltage Testing**

The following situations may require performing one-time high-voltage testing:

- There is suspected fault, leakage, or deterioration.
- There has been mechanical damage to the cable.
- A new cable is installed or is being returned to service after a long period of non-use.

#### **9.4.9.2 Acceptable Method for High-Voltage Testing**

Use only non-destructive testing such as the DC step-voltage insulation-testing method when high-voltage testing is necessary. Contract this testing to nationally recognized testing companies having the experience, equipment, and expertise to properly perform the test. Improper testing can result in damage to the cables.

### **9.4.10 Equipment Ground**

Check the electrical ground to which equipment is attached for low resistance with respect to the building ground system. Maximum resistance, measured with a wheatstone bridge or other low-resistance measuring device should not exceed 5 ohms and preferably should be less than 2 ohms. In all cases concerning USPS automation equipment (both P&DC and Customer Services), consider the site prep requirements for that piece of equipment as the minimum requirement.

### **9.4.11 Thermographic Survey**

Many electrical testing contractors offer thermographic surveying of electrical buss and switching systems. Infrared cameras view the equipment and show hot spots. These hot spots identify poor connections and overloaded equipment. This reliable, quick method should be used. Use the RAYTEC temperature probe, or similar unit, supplied by MTSC to all P&DC maintenance departments, for the initial thermographic scan. Refer to the current Management Instruction and MMO for access limitations.

### 9.5 OPERATING EQUIPMENT AND SYSTEMS

#### 9.5.1 Fire Alarm Systems

Installed fire alarm systems alert occupants and responsible persons to a potentially dangerous fire and permit evacuation of the building. Fire alarm systems are of two varieties:

- The manual system, which allows a person discovering a fire to set off the alarm.
- The automatic system, which detects a fire and sounds the alarm.

Where the fire alarm box does not signal a fire department or a continuously manned control center, post a sign adjacent to the box to instruct the person sounding the alarm to notify the fire department. In localities requiring a special sign by code or local ordinance, it shall be posted in accordance with those local ordinances. If the office does not have qualified personnel, contract preventive maintenance and regular work on the alarm system to firms specializing in this kind of work. In offices having sufficient work to engage at least a major portion of one employee's time, train one or more employees for it. Journeyman electrician skills should be sufficient to keep the fire alarm system in proper working order. All parts of the system must be kept serviceable. In most cases, companies providing parts for the alarm systems also provide maintenance service as well. In many instances, parts priority will be given to their service contract customers over those who do not have such contracts in place. Consideration of this priority should be a factor in determining whether or not a service contract is appropriate.

Inform all key personnel if a fire alarm system must be taken out of service for any reason and maintain appropriate fire-watches. Display an Out of Order tag whenever any station is inoperative. Place this tag at both the inoperative station (pull-box, smoke detector, heat detector) and at the main console as well. Tag all pull stations if the main console is inoperative to advise all personnel the entire alarm system is out of service.

#### 9.5.2 Security Systems

Requirements for building security systems are delineated in [RE-5, Building and Site Security Requirements](#).

### 9.6 LIGHTING

#### 9.6.1 General

The [AS-503, Standard Design Criteria](#), specifies the type of light source, lighting installation, light fixtures, installation criteria, and lighting levels currently used by the USPS. Include lighting projects for space not meeting the criteria in the repair and alteration program. Design and install any lighting installation by maintenance personnel in accordance with the above standards. Install lighting equipment to meet the criteria; however, also follow all current energy conservation instructions.

#### 9.6.2 Lighting Use

Turn off lights when all room occupants leave. Occupants turn off all room lights at the end of the workday. Custodians, security, and other personnel turn lights on and off at night only in the immediate space in which they are working.

### 9.6.3 Fluorescent Lamps

Many indoor lighting systems use fluorescent lamps that contain mercury in the fluorescent powder. For this reason, as well as the hazard of broken glass, and the tendency of children to regard fluorescent lamps as desirable playthings, dispose of all fluorescent lamps following current environmental requirements. Contact the Area Environmental Compliance Specialists or Headquarters ECRM for these requirements.

### 9.6.4 Incandescent Lamps

Limit use of incandescent lamps, as this is the least efficient light source. In spaces where visual acuity is critical, use appropriately rated incandescent lamps for those areas. Retrofit lighting in stairways and elevator hoistways to a more efficient system.

### 9.6.5 Group Replacement

Follow the group replacement and lighting maintenance procedures in [MS-49, Energy Conservation and Maintenance Contingency Planning](#). The maintenance staffing application includes a work hour allowance to cover the time required to accomplish this task.

### 9.6.6 Stairway, Corridor, Night, and Exit Lighting

Do not connect any other type of lighting or power load circuits to emergency lighting panels except receptacles used for portable emergency lighting units as described in [Paragraph 9.6.7](#). Plainly identify these receptacles as being on emergency circuits.

### 9.6.7 Emergency Lighting Units

Install an emergency lighting unit which turns on automatically when normal building power fails in each transformer room, switchgear room, control center, important machine room, stairwell, elevator, and other special areas designated by the SPO, Maintenance Manager, or Safety Manager. Control these emergency lights by the same panel boards that supply the power to that area. They cannot be group controlled from separate emergency service feeders or emergency power generators. These units must conform to the current federal specification and be on yearly federal supply contracts.

### 9.6.8 Ballasts for Fluorescent Fixtures

All ballasts in new fluorescent fixtures shall be full electronic ballasts employing energy efficient circuitry. Do not use magnetic ballasts.

## 9.7 ELECTRIC POWER REDUCTION CONTINGENCY PLAN

### 9.7.1 Introduction

Every maintenance manager, in conjunction with Operations, develops a power reduction contingency plan to cope with those days, usually during the summer, when the heat and humidity are such that the local utility is implementing a 10-15% (and sometimes higher) voltage reduction. This can have an adverse effect on both building and automation related equipment. Devise a voltage reduction plan with items such as changing the HVAC set-points, reducing the number of mail processing machines operating to the minimum required to meet the operating plan, turning off office lighting, etc. Most employees and tenants go along with these reductions as long as they are

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advised why such steps are being taken and that reductions are temporary in nature.

### **9.7.2 Shut Downs**

Identify the electrical-mechanical or lighting equipment that can be shut down, or whose electrical requirements can be materially reduced. This equipment includes building and mail handling equipment under operational control of the USPS or tenants.

### **9.7.3 Occupant Cooperation**

Advise the head of each tenant organization, or appropriate local contact person of the need for such a plan, and solicit full cooperation. It is most important that each tenant identify:

- Equipment that can be shut down.
- Equipment that can have its electrical load materially reduced.
- Specific locations and the number of light fixtures that can be turned off.

### **9.7.4 Summation of Electrical Load Reduction**

Prepare a summary of the equipment referenced above, showing the approximate kilowatt rating for each item of equipment, and the total of all equipment. This way the total electrical load reduction can be approximated. Clearly indicate and follow the priority or sequential order of equipment shutdown when activating the plan.

### **9.7.5 Utility Company Contact**

The Maintenance Manager must contact the utility company serving the building under his/her control and inform them of the arrangements to reduce the electrical loads should such reduction become necessary. Confirm in writing any approved Area Office agreements and all procedures resulting from these arrangements. Do not reduce electrical loads unless requested by an authorized representative of the local utility company.

### **9.7.6 Control Point**

Each field office establishes a control point for coordinating any requests for reduction of electrical power. Generally, this control point will be in the Maintenance Manager's office. However, the Area Office may designate a central control point for metropolitan or other areas where there are several USPS facilities. This would be contained in the Area's Continuity of Operations Plan (COOP). The control point ensures the orderly flow of requests for electrical power reduction and efficient execution of the established plan for such reduction.

### **9.7.7 Power Reduction**

Upon receipt of request for electrical power reduction, the SPO, or other designated central control point, initiates the planned course of action and reduces electrical loads accordingly. Advise the head of each tenant organization, or local agency contact person, of the reduction start time, the expected duration, and the items of building or tenant equipment being shut down or materially reduced.



### **9.7.8 Restoration of Service**

Initiate a systematic restoration of power upon receipt of information that normal power will be restored. To prevent sudden surges that could cause undesired or harmful tripping of circuit breakers, each item of equipment should be returned to normal service in a controlled manner as previously determined by the SPO or control point.

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**SECTION 10**  
**HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)**  
**SYSTEMS**

**10.1 GENERAL**

**10.1.1 Scope**

This section pertains to USPS maintenance responsibilities for heating, ventilating, and air-conditioning systems.

**10.1.2 SPO Responsibility**

The SPO is responsible for safely, efficiently, and effectively maintaining heating, ventilating, and air-conditioning systems to ensure the safety and well-being of the building and its occupants. Install and maintain these systems in compliance with National code, local code and ordinances, and USPS Standards.

**10.1.2.1 Operation**

The operation of heating, ventilating, and air-conditioning equipment must comply with MS-24, Heating, Cooling, and Ventilating. Also, follow the energy-conservation procedures specified in AS-558, Facility Energy Management Guide.

**10.1.2.2 Maintenance**

Reference the current MMO titled “Guidelines for Creating Detailed Local Building and Building Equipment Maintenance PM Checklists” for heating, ventilating, and air-conditioning equipment preventive maintenance guides. Use these guides, checklists, and the manufacturer's instructions to develop a specific preventive maintenance checklist for each item of equipment.

**10.1.2.3 Hours of Operation**

Generally, turn off the heating and air-conditioning equipment serving office areas when the occupants leave and turn on the equipment in time for the building to be comfortable when the occupants arrive. In USPS work rooms or other areas occupied beyond normal hours, heating and air-conditioning are provided only for occupied areas. Prepare a written procedure for each building specifying the hours of operation for the heating and air-conditioning equipment, depending on the outside temperature and the ability of the equipment to bring the building within the acceptable condition for occupancy.

**10.1.2.4 Adherence to Codes**

All maintenance, repair, testing, and inspection of boilers and pressure vessels must conform to the applicable sections of the [ASME Boiler and Pressure Vessel Code](#). Plumbing must conform to the provisions of the National Plumbing Code.

**10.1.2.5 Room Temperatures**

The USPS follows current energy conservation guidelines including those pertaining to heating and cooling buildings. These guidelines state that comfort can be achieved with energy conservation if humidity levels are controlled. For energy conservation

guidelines, reference [AS-558 Facility Energy Management Guide, Chapter 6, Conservation Planning and Savings](#). The currently recommended settings are heating, 65°F and air-conditioning, 78°F.

### 10.1.2.6 Zone and Room Controls

Thermostats are the final instruments in the control system to select room or zone temperatures. Adjust or change thermostats only after checking air handler operation. If the air-conditioning apparatus is not functioning properly, changes made to the zone or room controls will not be satisfactory. When a complaint is received from an occupant, first check the unit feeding that area thoroughly. Do not make changes to the zone or room controls until all conditions are satisfactory at the air handler.

#### NOTE

With current technology, most checks of this sort can be made from the operator's console of the Building Management System (BMS).

### 10.1.2.7 Hazardous Energy Control (Lockout (LO))

The current Energy Control Program (ECP) MMO outlines specific safety lockout requirements. These documents (MMOs) are dynamic rather than static in nature and are periodically updated. Go to the MTSC website for the most current listing of [Maintenance Bulletins](#).

The page specifically pertaining to energy control procedures is [http://www1.mtsc.usps.gov/apps/mtsc/#Bull&ecp\\_index&0](http://www1.mtsc.usps.gov/apps/mtsc/#Bull&ecp_index&0).

These MMOs cover most nationally deployed mail-processing systems. The SPO is responsible for developing and maintaining a lockout program that fulfills those requirements. Access the Safety Tool Kit on [USPS Blue](#) for information concerning the development and requirements of a lockout program. The Safety Toolkit is an online, interactive management tool for safety personnel who use the toolkit to record and track facility inspections, Program Evaluation Guides, and OSHA citations. To use the Safety Toolkit, set up an account with a password (available only to safety personnel) by following the instructions given on the [Safety Toolkit Website](#). The lockout program requirements for both small and large facilities are located at <http://safetytoolkit.usps.gov:12/loto.aspx>.

### 10.1.2.8 Appearance of Machinery Space

Keeping machinery spaces clean and orderly is important; however, the use of work hours to maintain a highly polished, or showcase appearance, is discouraged. Each operator is responsible for cleaning an assigned space and leaving it in a presentable condition. Keep the machinery spaces, particularly the floor, and the equipment in each space sealed or painted. Do not store anything in machinery spaces without the knowledge and consent of the SPO, and even then, limit storage in machinery spaces to items used in building operation. Properly secure and store operating supplies such as lubricants, light bulbs, rags, cleaners, and other maintenance supplies in approved containers, in accordance with all fire and safety requirements.

### 10.1.2.9 Smoke and Air Pollution Control

Comply with federal, state, and local air pollution and smoke abatement regulations in all cases. In cases where there is a conflict of codes, the more stringent code shall apply.

### 10.1.2.10 Conservation of Heating and Cooling

Proper operating procedures must provide adequate environmental conditions with maximum economy. Criteria and techniques for utility conservation are found in [MS-24](#) and in [AS-558, Facility Energy Management Guide](#).

### 10.1.2.11 Building Management Systems

Maintain central Building Management Systems for lighting, air conditioning and heating systems in working order, and fully utilize them in building operations to reduce utility costs and provide comfort and safety.

## 10.2 AIR-CONDITIONING

According to the US EPA, HVAC systems must be properly maintained to promote indoor air quality. If this is not done, ventilation systems can become a source of contamination or become clogged and reduce or eliminate airflow. Humidification and dehumidification systems must be kept clean to prevent the growth of harmful bacteria and fungi. Failure to properly treat the water in cooling towers to prevent growth of organisms, such as [Legionella](#), may introduce such organisms into the HVAC supply ducts, and cause serious health problems. Accumulations of water anywhere in the system may foster harmful biological growth that can be distributed throughout the building.”

In addition to the above, should mold be discovered in any portion of the HVAC system, SPOs and Maintenance Managers are reminded of the provisions listed in [Paragraph 2.3.13](#) of this handbook.

### 10.2.1 Refrigeration Operating Records

Maintain operating logs to assist in energy conservation and troubleshooting on all refrigeration machines over 100-ton capacity. [MS-24](#) contains instructions for maintaining these logs. Virtually all current Building Management Systems have utility programs to record the information specified in logs required by the [MS-24](#). If these automated capabilities exist in a facility, then there is no need to manually record entries.

### 10.2.2 When Cooling is Needed

When a considerable difference between the wet-bulb temperature of the outside air and the temperature required for comfort inside a building exists, the need to provide cooling is obvious and no special guidance is required. However, there are days when the sense of comfort offered by the outside air is deceiving, and the following criteria should be used. If a building is equipped to take in outside air, circulate the outside air through the building, and exhaust it, because refrigeration is not required when the wet-bulb temperature of the outside air is at or below the designated dew point temperature of the building apparatus. For example, if a building's air-conditioning equipment is

designed to operate at a dew point of 54°F, refrigeration is not required if the wet-bulb temperature of the outside air is below 54°F. When the wet-bulb temperature is above the designed dew point temperature, refrigeration may be required. Whenever practical, use outside air for cooling; however, not all buildings have facilities to thoroughly ventilate a space. Thus, the decision for or against the use of cooling must be made with judgment based on the conditions within the space, the time required for cooling to take effect, and the time of day.

### 10.3 HEATING

#### 10.3.1 Degree Days for Heating

Trending the degree days helps to illustrate the difference between the different climate conditions existing from one year to another. Information on degree days can usually be obtained by contacting the National Weather Service. This is found on the [U.S. Department of Commerce](#) website.

A degree day is a unit based on temperature difference and time used in estimating fuel consumption and specifying nominal heating load for a building in winter. For every day the mean temperature is less than 65°F, there exists as many degree days as there are degrees Fahrenheit difference between the mean temperature for that day and 65°F. The number of annual degree-days for the heating season will be the sum of the degree-days for all days during the heating season. In the example above, the mean temperature is 55°F, 10°F less than 65°F; therefore, that day had 10-degree days. If the mean temperature is above 65°F, the degree days are zero.

#### 10.3.2 When Heating is Needed

It will generally be necessary to supply heat to a building when the mean temperature for the day is expected to be below 65°F. For our purposes, the mean temperature is the average of the high and low temperature expected in a 24-hour period. For example, if the high expected is 70°F and the low expected is 40°F, the mean temperature is calculated to be 55°F, and heating may be required. There is a considerable amount of heat generated by both lighting and mail processing equipment. As a result, there will be times when outside temperatures are below what normally may be considered a “heating required” day, but supplying heat to the mail processing workroom floor is not necessary. The SPO should establish guidelines for his/her particular facility and take advantage of the ambient heat.

#### 10.3.3 Steam and Condensate Meters

All buildings utilizing steam purchased from local utilities for heating and/or cooling systems usually have steam or condensate meters to determine the actual steam used for space heating and cooling. The local utility will provide a steam meter for facilities purchasing steam for usage/billing purposes. Maintain the plant in optimum condition (no steam leaks) to avoid excessive utility charges.

#### 10.3.4 Boiler Firing Instructions

Most boilers are now fully automatic and will come on as long as the firing controls are powered. This may require activation via an “on/off” switch.

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In the event the facility has not undergone upgrades to the heating plant and the boilers are still fired manually, then conspicuously post the boiler firing instructions, including operating sequence, in the boiler room along with the name or names of persons qualified to troubleshoot boiler malfunctions. Only qualified employees/contractors are authorized to correct malfunctions, and they must follow established troubleshooting routines. In no instance shall other employees attempt to manipulate the controls to fire the boiler.

Boiler firing controls are designed to be fail-safe, and manipulation of the controls circumventing the fail-safe features in order to operate the unit is strictly prohibited.

### **10.4 VENTILATION**

#### **10.4.1 Requirements for Mechanical Supply Ventilation**

Provide the following spaces with mechanical supply ventilation (using filtered air), if the space is not air-conditioned:

- Offices having an open window area equal to less than 5% of the floor area.
- Auditoriums, courtrooms, cafeterias, conference rooms, post office workrooms, private dining rooms, transformer and switchboard rooms with at least 300 KVA of transformer capacity,
- Elevator machine rooms and escalator machine spaces.

All new construction must comply with the Facilities Department Design Guidelines.

#### **10.4.2 Requirements for Mechanical Exhaust Ventilation**

Provide mechanical exhaust ventilation in the following spaces: kitchens, toilets, locker rooms, inside garages, refrigeration machine rooms, battery-charging rooms, vehicle charging rooms, and lookout galleries.

#### **10.4.3 Ventilation Air Quantities**

Follow ventilation standards included in state and local codes.

#### **10.4.4 Portable Electric Fans**

The SPO decides if localized fans are allowed. Reference the Chief Operating Officer's memo (COO-02-28-2002-1) concerning the use of personal cooling fans. Current USPS policy states: "Personnel cooling fans can be used in delivery units, manual distribution operations, docks, trailers, and elevated keying areas (BMC). They can also be used in other areas where there is a potential for heat-related illness, or in non-mail processing areas such as administrative offices. Additionally, local management will consider the use of fans in facilities that are not air-conditioned, or during temporary failures of air conditioning systems. These fans should be positioned to cool the employees and avoid blowing on the mail as much as practical."

### 10.5 WATER TREATMENT

#### 10.5.1 General

Establish a water-treatment program for all circulating systems requiring make-up water. When basic tests, treatment, and chemical control limits have been established, benefits will result in the form of reduced maintenance costs, uninterrupted performance, and longer equipment life. This type of chemical treatment, application, testing, and method of control will vary with the location, water conditions, and equipment in service.

#### 10.5.2 New Installations

##### 10.5.2.1 Water-Treatment Equipment Requirements

Make water-treatment equipment part of the construction or alteration contract whenever possible, and require a complete raw water analysis and internal and/or external treatment of the equipment based upon the recommendations of a qualified water-treatment engineer or chemist. Initiate the water-treatment program, whether or not this has been done, as described below.

##### 10.5.2.2 Flushing the System

When installing a new circulating system, it is customary for the contractor to flush the system to remove dirt, loosened rust, and construction debris. It may be necessary to acid clean the system or perform a boil-out to remove mill scale, oil, grease, or rust from the equipment. Initially, employ high dosages of chemicals to form a protecting film against the attack on metal or wood surfaces.

#### 10.5.3 Methods of Treating Water

Water-treatment methods may take any of the following forms. All chemicals used must meet local code requirements. As always, maintain SDS for any and all chemicals used. Local situations and economics determine the method selected. All three methods listed below should be seriously considered before making a final decision for the individual location. If using Methods B or C, an independent laboratory should monitor them annually. Refer to [MS-24](#) for additional technical guidance on water treatment.

#### NOTE

All treated wastewater (i.e. cooling tower bleed-off) must comply with the guidelines set forth in [RE-6, Facilities Environmental Guide](#).

#### NOTE

Issue an eBuy request for all water-treatment contract requests.



### 10.5.3.1 Method A

Method A contracts the complete water-treatment service. Confine requests for such services to water-treatment companies currently engaged in the water-treatment field and employing chemists or engineers of recognized competence. This method, while possibly more costly, is usually the most comprehensive and avoids USPS employees handling chemicals, wearing Personal Protective Equipment (PPE), maintaining a respirator program, and risking possible injury. Method A is preferred above either Method B or C.

### 10.5.3.2 Method B

Method B contracts testing and analysis services and supplies of treatment chemicals. This type of contract usually includes the initial water testing and analysis, establishes chemical limits to be maintained, and the type of basic chemicals to be employed. The contractor supplies the treatment; instructs the operators on testing, feeding, and limits; and makes periodic checks to ensure proper system maintenance.

### 10.5.3.3 Method C

Method C contracts testing and analysis only. In this contract, the contractor does an initial one-time testing and analysis of the water, establishes the chemical limits to be maintained, and the type of basic chemicals to be employed. USPS employees perform routine water treatment, analysis, and certain types of tests.

## 10.6 INSPECTION AND TEST OF BOILERS AND PRESSURE VESSELS

### 10.6.1 Definition of Boilers and Pressure Vessels

#### 10.6.1.1 Boiler

A boiler is a closed vessel that generates heat by using either electrical energy or fossil fuel combustion to produce hot water or steam.

- High-pressure boiler (power boiler) - A boiler operating at temperatures above 250°F which generates steam or vapor at pressures higher than 15 pounds per square inch gauge (psig) or water at pressures above 160 psig.
- Low-pressure boiler - A boiler operating at temperatures below 250°F that generates steam or vapor at pressures below 15 psig or water at pressures below 160 psig.

#### 10.6.1.2 Pressure Vessel

A pressure vessel is a closed container that utilizes pressure from an external source such as an air compressor or by the application of heat from an indirect source.

#### 10.6.1.3 Domestic Water Heater

A domestic water heater provides hot water for use in rest rooms, cafeterias, etc. These heaters are usually less than 120 gallons in capacity operate at less than 160°F and the water pressure is equal to the domestic water supply pressure to the building.

### 10.6.2 Inspection and Test Requirements

The safety inspection of heating boilers and unfired pressure vessels shall be in accordance with the provisions of Management Instruction [AS-530-2004-9](#) or the most current document.

#### 10.6.2.1 Construction Inspection

All boilers and pressure vessels in USPS facilities must be constructed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code and bear the ASME code stamp. The provisions of this handbook apply only to such boilers and pressure vessels. Replace any boilers and unfired pressure vessels that do not bear an ASME stamp.

#### 10.6.2.2 Inspection Certificate

- a. Complete Form 279-A, *Certificate of Pressure Vessel Inspection* (PSN 7530-03-000-3705) in triplicate and distribute as follows:
  - 1) Post one copy conspicuously under glass near the unit.
  - 2) Forward one copy to the Area Office.
  - 3) Keep the original on file in the facility.
- b. Other certificates - When the inspection is performed by a State or municipal inspector, their certificate may be used in lieu of Form 279A.
- c. Scope of inspection - Except as noted elsewhere in this part, the inspection must include the following:
  - 1) An external inspection including testing of safety and control devices.
  - 2) An internal inspection as required by a USPS qualified boiler inspector.
  - 3) A hydrostatic test after repairs have been made affecting the strength of the unit.
  - 4) A test when inspector notes defects and deems testing necessary to assure continued safe operation.
  - 5) The inspector completes the appropriate USPS inspection checklist listed below. The same inspection source and procedures specified for elevators in [SECTION 8](#) apply.
    - a. [Form 4082, External Checklist Cast-Iron Boiler](#)
    - b. [Form 4085, Internal Inspection Checklist Fire Tube Boiler](#)
- d. Code Requirements - Conduct tests and inspections in accordance with:
  - 1) [ASME Boiler and Pressure Vessel Code](#), Sections IV, VI, VIII
  - 2) [American National Standards Incorporated/National Board \(ANSI/NB\)-23, National Board Inspection Code for Boiler and Pressure Vessel Inspectors](#)
  - 3) [National Fire Prevention Association \(NFPA\)-70, National Electric Code](#)

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- 5) [ASME Safety Code CSD-1, Controls and Safety Devices For Automatically Fired Boilers](#)
  - 6) [NFPA-54, National Fuel Gas Code](#)
  - 7) [NFPA-31, Standard for the Installation of Oil-Burning Equipment](#)
- e. Air and Water Pollution Abatement - Inspect and operate each boiler such that it meets local air and water pollution abatement standards and complies with [Clean Air Act, ASM Chapter 69](#).

### 10.6.3 Frequency of Inspection

The latest boiler and unfired pressure vessel inspection criteria will be found in the Facility Inspection Tool database, within the Facility Inspection Tool software application, and in the most recent Management Instruction (MI).

### 10.6.4 Exceptions

The following pressure vessels are exempt from this requirement:

- a. Pressure vessels used for transportation and storage of compressed gases when constructed in compliance with specifications of the U.S. Department of Transportation (DOT) and when charged with gas, marked, maintained, and periodically requalified for use, as required by appropriate DOT regulations.
- b. Vessels with nominal water-containing capacity of 120 gallons or less for containing water under pressure, including those containing air, the compression of which serves only as a cushion or air lift pumping system.
- c. Refrigeration receivers.

### 10.6.5 Inspection Scheduling

The USPS database (Facility Inspection Tool) identifies each boiler. Its inspection schedule and location is available to the boiler contract inspectors within the Facility Inspection Tool. Facility Inspection Tool is managed by the USPS Facilities Organization and is accessible.

### 10.6.6 Inspectors

Inspectors certified by the National Association of Elevator and Safety Authorities (NAESA) or by State, Municipal, or other Federal inspectors with equivalent qualifications perform the inspections.

### 10.6.7 Source of Inspectors

Reference the current MI for suggested pressure vessel inspector sources when qualified USPS employees are not available.

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## SECTION 11 PLUMBING AND SEWERAGE SYSTEMS

### 11.1 GENERAL

#### 11.1.1 Scope

This section pertains to USPS maintenance responsibilities for plumbing and sewerage systems.

#### 11.1.2 SPO Responsibility

The SPO is responsible for plumbing and sewerage systems to ensure the safety and well-being of the building and its occupants. These systems must be installed and maintained to be in compliance with local codes, national codes, environmental regulations, and USPS standards.

#### 11.1.3 Maintenance Standards and Methods

- Maintain and service plumbing systems and equipment according to the preventive maintenance guidelines found in the current MMO titled "Creating Detailed Local Building and Building Equipment Maintenance PM Checklists."

### 11.2 PIPING SYSTEMS

#### 11.2.1 Code Requirements

All piping in USPS buildings must conform to the provisions of the state and local plumbing codes, and in the case of gas piping and equipment, to the standards established by the American Gas Association and the National Fire Protection Association (NFPA). As is always the case of a conflict in code requirements, the more stringent code shall apply.

#### 11.2.2 Piping Identification

Code and identify all piping in USPS-owned buildings as specified by [ASME A13.1](#). Place colored bands at each joint, turn, or every 50 feet of open straight run. Clearly identify valves by a sign permanently mounted or hung near the valve. This sign must be visible from the floor.

Stencil designations and tag designations specified must also be used. Facilities in compliance with previous standards identifying the contents of piping need not change their present coding.

#### 11.2.3 Piping Layouts

##### 11.2.3.1 General

Keep a layout in the facility of the various piping systems in a building and furnish copies to the Manager of Maintenance Operations on each tour, or the Supervisor normally handling Building Systems. Generally, designers furnish layouts of this type when new buildings are being built. In older buildings, the layouts may have become misplaced or out of date. If drawings are not available, consult the Facilities Service Office to determine the required action. At minimum, if the drawings are not available the local office should attempt to recreate schematic one-line drawings with appropriate

symbols. These drawings should show the relative location of the valves controlling service to the principal subdivisions within the building (such as a wing, floor, or section). If out-of-date drawings still accurately reflect unchanged piping layouts, they must be updated, but may be used until the new layouts are available.

### 11.2.3.2 Dead-Legs

Dead-legs are defined as those pipe runs that are simply capped at the end and do not permit the draining of water in them. In hot water systems temperatures in dead-legs can fall, due to stagnation, into the range that may promote the growth of various bacteria, Legionella among them. Accordingly, in those facilities having dead-legs, take steps to eliminate them such as:

- installing return lines
- installing drain valves to permit frequent flushing
- installing heat tracing to maintain a temperature above 122°F

#### NOTE

Fire suppression systems (deluge and sprinklers) are not included in this item.

### 11.2.4 Piping Leaks

Leaks cost money. Additionally, they may result in safety or environmental hazards which, if fines are levied, cost additional monies. Water leaks cause serious waste and, in many cases, damage. A 1/8-inch diameter opening allows a loss of approximately 130,000 gallons (17,378 cu. Ft.) of water per month and a ¼-inch diameter opening can account for a loss of as much as 515,000 gallons ( 68,845 cu. Ft.) per month. At current water rates, that equates to a significant amount of money virtually going down the drain. Leaking valves, faucets, pump seals, packing glands, and toilets can waste significant quantities of water. Leaks in air piping waste energy and can be noisy. They can also release contaminants such as atomized oil into the environment or, in the case of internal leaks in the compressors, into the air distribution systems. Leaks of this nature often have a negative effect on automated mail processing equipment. Leaks from gas or oil piping systems can be safety and environmental hazards. Give proper attention to piping to assure avoidable losses do not occur.

### 11.2.5 Cross Connections

#### 11.2.5.1 General

A cross connection is a direct or indirect connection permitting waste, sewage, chemicals, or undrinkable water to flow into a potable water supply. Eliminate all instances of cross connections in any facility.

Refer to [RE-6, Facilities Environmental Guide](#) for in-depth information concerning cross-connections, USPS policy, and all applicable laws and regulations.

#### 11.2.5.2 Direct Connections

Direct connections consist of continuous connections leading non-potable water into drinking water. A common example is the makeup water connection to a boiler. Usually

backflow prevention devices (BFPD) are installed to prevent chemically treated boiler water from entering the potable water system if pressure in the potable system is lost. Check these BFPDs annually for proper operation. Most local codes require BFPDs annual testing at the water service entrance of the building by a person certified to test BFPDs.

### 11.2.5.3 Indirect Connections

Indirect connections consist of gaps or air spaces into which non-potable liquids can be sucked or blown. A common example is a hose attached to a faucet in a custodial closet and allowed to dangle below the top of the slop sink. If the hose was used to dilute cleaning chemicals and the water pressure interrupted, chemicals can be drawn into the potable water system. A similar condition can exist with garden hoses. Do not attach hoses to the faucet without using a BFPD on the faucet. These inexpensive BFPDs are available locally at hardware and home center stores.

### 11.2.6 Vacuum Breakers

Do not install any faucet or submerged orifice fixture without equipping it with a vacuum breaker. The vacuum breaker, when mounted in the water supply line, maintains a safeguard on the possibility of cross connection by preventing back siphonage. One type contains a movable flap-type valve that closes if there is a pressure reduction on the inlet and prevents the siphoning of water into the supply piping. Install a vacuum breaker on all general fixtures requiring a submerged flushing device under the flood rim of the fixture.

### 11.2.7 Valves

During repairs or renovations, install valves (if not already installed) on cold water, hot water, and hot-water-return circulating mains, to permit a building sectional shut off without disturbing the services to other parts of the building (When replacing valves use globe valves in lieu of gate valves). Install a shutoff valve close to the main on each branch connection off the main. Similarly, install valves on the supply to each restroom or fixture where the riser supplies more than one restroom, and on the connection to each hydrant, lawn faucet, etc. Operate all valves at full open and close at least once a year to prevent "frozen" valves.

### 11.2.8 Drain Traps

The water in the traps of floor drains, shower drains, etc., used infrequently may evaporate and allow the entrance of sewer gas. Replace the water occasionally to avoid this condition. This condition can be especially prevalent in older "historic" facilities where shower facilities were commonly installed and no longer used.

### 11.2.9 Sprinkler System Types

Reference [MS-56, Fire Prevention and Control](#) for more details.

#### 11.2.9.1 Wet-Pipe Sprinkler System

The wet-pipe sprinkler system is the simplest and most effective for the general control of usual fires. The system connects to an adequate water supply and the piping fills with water. The system incorporates a water-flow device or an alarm valve to sound water-

flow and fire alarms.

### **11.2.9.2 Standard Dry-Pipe System**

The standard dry-pipe system is a modified form of the wet-pipe system, with a dry-pipe valve replacing the water-flow device or alarm valve, and air pressure substituted for water in the piping. The air pressure keeps the dry-pipe valve in the closed position and prevents water from flowing into the piping where it might freeze. When a sprinkler head opens, the air pressure releases, permitting the dry-pipe valve to operate, and allows water to flow to the sprinkler heads. Install “drum-drips,” if not already in place, to permit the collection and elimination of small amounts of water entering the dry pipe system. Install the drum-drip at the system’s low point (or points in the case of multi-leg systems) with a valve above and below the drum. In normal operation, open the upper valve and close the lower valve. This allows water to enter the drum but maintains system integrity. During preventive maintenance, close the upper valve and open the lower valve. This allows water to drain out of the system onto the floor or into a receptacle. Once drained, close the lower valve and re-open the upper valve. This maintains system integrity and uninterrupted system operation.

### **11.2.9.3 Deluge Sprinkler System**

A deluge sprinkler system is a special type of automatic dry-pipe system, having open or unsealed heads in the piping arrangement with automatic and auxiliary manual controls. Install this type of system only in areas where flash fires are likely to occur.

### **11.2.9.4 Pre-action Systems**

Pre-action systems design and installation are similar to deluge systems, but use standard sealed type heads. Heat actuated controls operate riser valves permit water availability at the sprinkler head before there is sufficient heat at the head to cause fusion.

## **11.3 FIXTURES AND EQUIPMENT**

### **11.3.1 Drinking Fountains**

Evaluate before repairing a unit, particularly one that is more than 10-years old, to determine whether it would be more economical to dispose of the unit and purchase a new one. Typically, economic repair limits are 50% of the cost to replace the unit. If practical, use wall-hung fountains when replacing old units or when adding new drinking fountains. Comply with handicap requirements as stated in [RE-4, Standards for Facility Accessibility](#). Perform lead content inspections in accordance with current lead in drinking water MMO.

### **11.3.2 Toilet Partitions**

For ease of floor cleaning, install ceiling hung partitions where the ceiling construction lends itself to this type of installation, or when modernizing restrooms.

### **11.3.3 Soap Dispensers**

For economy and ease of maintenance, replace central-feed soap dispensers with individual units using liquid soap when modernizing restrooms. Install units requiring a special type of soap only if they prove to be more economical.



### **11.3.4 Paper Towel Dispensers**

Paper towel dispensers will use common-size towels. Provide large waste receptacles for used paper towels. Do not use cloth roll towels. Several manufacturers install and maintain state of the art dispensing systems provided their consumables are used. SPOs should investigate this and, when economically advantageous, utilize these services. The supply and installation of these systems are typically at no cost to the USPS.

### **11.3.5 Electric Hand Dryers**

Because of high-energy use, do not use electric hand dryers except where special circumstances warrant their use and with SPO approval.

### **11.3.6 Toilet Paper Holders**

Provide jumbo roll toilet paper holders in all restrooms in USPS-owned or USPS-operated buildings. Install new jumbo roll toilet paper holders when necessary, or in toilets requiring more than daily service.

### **11.3.7 Miscellaneous**

Provide receptacles utilizing disposable plastic inserts for sanitary napkins/pads in each women's water closet enclosure. These units may be wall mounted.

## **11.4 OPERATIONAL REQUIREMENTS**

### **11.4.1 Water Consumption**

Water consumption varies greatly in USPS buildings. In small buildings, the daily consumption averages approximately 25 gallons per employee. In large buildings with 2,000 - 3,000 employees, the average is 15 to 20 gallons per employee. Newer buildings, and those with renovated/modernized toilet facilities, equipped with reduced flow toilet fixtures use approximately 2/3 less.

### **11.4.2 Water Supply**

Provide two or more services from separate mains, if possible, in buildings over 50,000 gross square feet. Meter each service connection and record monthly usage. If purchasing water, record the monthly consumption.

### **11.4.3 Water Pressures Required**

The minimum water pressure required for plumbing fixtures on the top floor of a building is 15 psi. The minimum operating water pressure required at the highest fire hose valve is 25 psi with 35 gpm flowing.

### **11.4.4 Temperature of Domestic Hot Water**

For general use in office buildings, the temperature of hot water at the tap should be no more than 105°F in accordance with safety requirements.

### **11.4.5 Water Treatment**

Treatment of domestic water supplies may or may not be necessary depending on the local water conditions. Perform a test analysis to determine these conditions. Treat hardness exceeding 100 parts per million. The amount of treatment, tests, and

equipment required depends upon the use, the amount of water required, and the temperature maintained in the hot-water supply systems. Generally, water supplied by municipal water systems for domestic uses will not require additional treatment.

### **11.4.6 Protection Against Freezing**

In locations subject to freezing weather, valve off and drain hose bibs, water fountains, etc. exposed to the freezing conditions before the onset of winter weather.

**SECTION 12  
MISCELLANEOUS BUILDING EQUIPMENT**

**12.1 POWER-OPERATED DOORS**

The building manager provides for the maintenance and repair of power-operated doors installed in USPS-operated buildings. Follow the maintenance guides provided by the door manufacturer. In the event there are no original equipment manufacturer (OEM) guides available, use the maintenance guides provided in the current MMO titled "Creating Detailed Local Building and Building Equipment Maintenance PM Checklists" to develop an appropriate PM guide for the facility.

**12.2 BUILDING MAINTENANCE EQUIPMENT**

**12.2.1 General**

There are various types and kinds of equipment, such as lawnmowers, power sweepers, and buffers essential to the economic operation and maintenance of buildings. The methods and procedures identified in this and other maintenance handbooks indicate the need for equipment to improve operations and save labor-related costs. The building manager evaluates the need for, and adequacy of, building maintenance equipment, and when required, provides justification for new and/or additional equipment.

**12.2.2 Operation**

Employees must receive on the job training in the operation of building maintenance equipment they will be using. Formalize equipment specific training and record actual training hours for both the employee and the trainer. Record this in the employee's file. The employee operating the equipment cleans it and performs minor maintenance associated with its operation, reporting needed repairs and safety hazards to the supervisor.

**12.2.3 Maintenance**

Preventive maintenance guides for the most common building maintenance equipment are included in the current MMO titled "Creating Detailed Local Building and Building Equipment Maintenance PM Checklists." Prepare PM checklists from these guides and from the manufacturers' instructions for each type of equipment. Proper maintenance of equipment is important to prevent loss of time due to equipment failure. However, the cost of preventive maintenance should not be excessive in relation to the replacement cost of the equipment. It would be better to perform minimum maintenance and replace the mower when it fails and the cost of repair exceeds the economic repair limit (ERL).

A general rule-of-thumb is the ERL for this type of equipment should not exceed 60% of the cost of a replacement unit.

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### SECTION 13 MAINTENANCE APPRAISAL

#### 13.1 GENERAL

##### 13.1.1 Background

An effective operation and maintenance program requires appraisal/evaluation on a systematic basis. Systematic appraisals enhance program performance, increase coordination among the various field activities, and ensure USPS policy is carried out service-wide.

##### 13.1.2 Policy

It is USPS policy to provide a uniform level of service in all USPS-operated buildings, and ensure all leased space is operated and maintained in accordance with the leases.

##### 13.1.3 Objectives

The objectives of a maintenance appraisal are:

- Uniformity - To provide for uniform and adequate appraisals on a planned basis.
- Compliance - To appraise the local building operation and condition to determine if directives are being followed, and implemented according to, Headquarters Maintenance Operations through the Area Office.
- Action - To initiate corrective action at the level where problems may exist.
- Training - To provide a basis for determining training needs.
- Assistance - To assist SPOs in effectively maintaining clean, comfortable, and safe buildings and surroundings through the appraisal process.

##### 13.1.4 SPO Appraisal Function

The SPO or his/her designee is directly involved in the appraisal of maintenance operations at USPS facilities more than anyone else. Below are listed examples of maintenance appraisals:

- Building operation and maintenance - the SPO is responsible for all the things that make up the day-to-day operation and maintenance of the building and any associated stations and branches.
- Housekeeping - the SPO is responsible for the cleanliness of buildings, and maintenance appraisals ensure an adequate level of cleanliness.
- Concessions - the SPO appraises and corrects all building deficiencies involved in concessions space, and periodically checks for obvious health and contract violations as specified in [EL-602](#). The SPO takes corrective action in conjunction with the Procurement Services Office handling the concessionaire's contract.
- Repair – the SPO conducts maintenance appraisals identifying repairs needed to keep the facility in good condition and prevent avoidable deterioration. The SPO notes any necessary repairs identified, on the Facility Maintenance Appraisal

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form so the next Area Maintenance representative will have an idea of the prior appraisal conditions.

- Protection - the SPO and staff take all reasonable measures to safeguard people and property from injury, loss, or damage due to fire, accident, theft, natural disaster, or attack. Appraisals of this function allow for hazard discovery and correction. Incorporate these measures into the facility's Integrated Emergency Management Plan (IEMP).
- Construction and alteration - the SPO is directly responsible for the appraisal of any construction and alteration done by the in-house staff. The SPO may also be designated as the Contracting Officer's Representative (COR) by the Facilities Department (FSO) for work performed by outside contractors. In this capacity, the SPO becomes the on-site eyes of the Contracting Officer and pays particular attention to the contractor's activities to ensure all work performed is in accordance with the terms of the contract. Before being designated COR, the SPO must successfully complete the appropriate COR Training course.
- New Facilities - prior to acceptance, the SPO assists in the inspection and evaluation of new facilities. Reference *AS-501, Postal Facility Activation*, and *AS-502, Activation of Non-Mail Processing Postal Facilities* for specific new facility activating guidelines. This function is an Area Office responsibility ([ASM 512.4](#) and [518.7](#)).
  - Despite this being listed as an Area responsibility, there are several committees set up well in advance of activation. The Maintenance Manager leads the Maintenance Committee and ensures all maintenance-related items such as test equipment, appropriate spares, transfer of stock, training, etc., are properly addressed.
- Mechanical Equipment - periodic inspection of all mechanical equipment by competent personnel is advisable and necessary. The SPO coordinates these equipment inspections. The SPO should have the expertise necessary to conduct these inspections and evaluate the equipment.
- Safety - the SPO and maintenance supervisors use [EL-801, Supervisor's Safety Handbook](#), to conduct safety and fire prevention inspections.
- USPS "Blue" page lists [USPS Safety and Health](#) inspections requirements and checklists.
- Space Inspection - SPOs may perform specified space inspections related to safety, space assignment, or utilization. However, this function will normally come under In-Plant Support.
- OSHA Inspections - It is the policy of the USPS to maintain safe and healthful working conditions and to cooperate fully with OSHA Inspectors. Actions to be taken by the SPO are described in detail in [ELM 825](#).

### NOTE

- For additional material concerning the subject matter found in [ELM 825](#), refer to [EL-802, Executive's and Manager's Safety Compliance Guide](#).

### 13.1.5 Maintenance Appraisal Techniques

#### 13.1.5.1 Total Maintenance Appraisal

A total, or 100%, appraisal is ideal, but is typically impractical because the scope of inspection is too large. The type and scope of appraisal shall dictate its depth.

#### 13.1.5.2 Partial Appraisal

As the name implies, conduct partial appraisals on a branch or part of the Maintenance Department or on a section within that particular branch. An example is performing an appraisal of the air conditioning systems while leaving the rest of the department unexamined.

#### 13.1.5.3 Sampling

Sampling is the selection/examination of a number of randomly selected samples and ascribing the results to the remaining sample base. For example, in a large HVAC system with 100 valves, it is statistically viable and financially advantageous to inspect only 10 – 20 randomly selected valves and assume the uninspected valves will have similar failure rates.

### 13.2 AREA OFFICE INVOLVEMENT

#### 13.2.1 General

Area Office maintenance representatives or their designees conduct the on-site building operations and maintenance appraisal at field locations. The Area Office schedules inspections at sufficient frequency to assure operation and maintenance standards are maintained.

#### 13.2.2 Personnel

Maintenance appraisal team members may also be selected from other organizations when appropriate. Select team members on the basis of a broad knowledge of the major functional areas. This selection can be made from personnel geographically located near the office selected for appraisal.

#### 13.2.3 Scheduling

The Area Office evaluates the need for maintenance appraisal and schedules them as necessary.

#### 13.2.4 Advance Preparation

Unless conditions warrant immediate evaluation, the Area Office representative should notify the SPO at least two (2) weeks prior to the scheduled maintenance appraisal. At this time, the Area Office representative provides the names of the persons doing the appraisal to the SPO.

The SPO ensures the appropriate designee, managers, and/or supervisory personnel are on duty during the appraisal period.

### 13.2.5 Conducting Appraisals and Preparing Reports

#### 13.2.5.1 Maintenance Appraisal Procedure

Use Form 4905 ([Figure 13-1](#) through [Figure 13-4](#)), Building Operation and Maintenance Evaluation for Area Office maintenance appraisals. All reports in connection with these maintenance appraisals shall be written. File copies of the forms and reports at the Area Office and at the appraised office.

1. Conduct a general discussion with the SPO and/or designee.
2. Conduct a detailed review of the building operation following a checklist. This checklist can be expanded to meet particular needs or for program emphasis. Complete the checklist in order to rate the operation and summarize the appraisal results.
3. While conducting the review, compare actual practice with established procedure.
  - a. Note deviations, discuss with operating personnel, and include them in the report.
  - b. Provide adequate time for field personnel to discuss their problem areas.
  - c. Prepare findings and recommendation documentation. If time does not permit preparation of this documentation, the items themselves shall be reviewed and the report shall be sent to the SPO within 7 days of the exit conference.
  - d. Identify the specific employee training requirements needed by employees at this facility. The appraiser may conduct specific training sessions as required during maintenance appraisals.
4. Exit meeting with SPO and/or designee.
  - a. Discuss actions to be taken.
  - b. Establish target dates for completion.
  - c. If after thorough discussion, there are unresolved issues that cannot be agreed upon, include supporting and opposing views with the appraisal report.
  - d. The Area Office makes the final recommendations for action items.



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U. S. Postal Service <b>BUILDING OPERATION AND MAINTENANCE EVALUATION</b>				See instructions on last page before completing this form	
AREA		BUILDING		LOCATION	
DATE	LAST REPORT	LAST RATING		BUILDING SIZE(Gross Square Feet)	
	THIS REPORT	THIS RATING		ANNUAL OPERATING COST	
ITEM	CATEGORY			RATINGS *	EVALUATORS <small>(First Initial and Last Name)</small>
A. CLEANING		Daily Work	Component Work		
	HALLWAYS				
	STAIRS				
	LOBBIES				
	ELEVATORS				
	OFFICES				
	WORKROOMS				
	RESTROOMS				
	EXTERIOR AREA				
	WORK ASSIGNMENTS/ ROUTES				
	CUSTODIAL SUPPLIES				
	CUSTODIAL EQUIPMENT				
	STAFFING ALLOCATION				
	TOTALS				
AVERAGE					
B. MAINTENANCE	Completed maintenance & condition of building & equipment				
	Operation and maintenance scheduling and records				
C. UTILITY CONSERVATION	Records and analysis				
	Operating Practices				
D. SAFETY	Accident Prevention				
	Fire Safety				
E. MISCELLANEOUS	Concession, Flag Display, Contracts				
	Rules and Regulations, Supplies, etc.				
F. AGENCY RELATIONS					
<b>TOTAL</b> (Items A through F) <input style="width: 100px;" type="text"/>					PERCENT RATING
REMARKS					
COMPLETED BY:	PRINTED NAME			SIGNATURE	

PS Form

\* Form Rating Instructions on Page 4

Aug., 1976 **4905**

Revised Feb, 2007

**Figure 13-1. Building Operation and Maintenance Evaluation (Form 4905, Sheet 1)**

## Operation and Maintenance of Real Property

CHECKLIST								
CLEANING			MAINTENANCE					
			Yes	No				
			Yes	No	Yes	No		
1	Are all custodial workhour estimating forms properly prepared and current?				24	Are all building maintenance workhour estimating forms properly prepared and current? <i>(See appropriate WHEP MMO)</i>		
2	Is the custodial training program organized and effectively carried out?				25	Are the maintenance route sheets (PM Work Order Cards), checklists, and work orders complete and properly prepared?		
3	Do the custodial route sheets (PM Work Order Cards), checklists, and work orders support the authorized workhours?				26	Is the maintenance operation workhour allowance supported by the workload documents? <i>(See appropriate WHEP MMO)</i>		
4	Are the work assignments prepared to agree with the productive rate for each type of cleaning?				27	Have elevator data cards (PS Forms 4813) been prepared for each elevator?		
5	Is cleaning scheduled for a minimum amount of inconvenience to the building occupants?				28	Is preventive maintenance properly performed? <i>(Inspect equipment on which preventive maintenance has recently been completed.)</i>		
6	Does the cleaning equipment fit the facility need?				29	Is preventive maintenance properly scheduled and completed?		
7	Is cleaning equipment of good appearance?				30	Are logs properly maintained on central chillers, boilers, and water treatment?		
8	Is cleaning equipment well maintained?				31	Are only official Postal equipment logs being used?		
9	Are custodial supplies and equipment stored properly and in an orderly manner?				32	Are required inspections being performed on elevators (Form 279) and pressure vessels (Form 279A)? Are inspection certificates current and available?		
10	Are the selected cleaning products effective and used in compliance with safety and environmental guidelines?				33	Is preventive maintenance work which requires highly specialized equipment and personnel contracted according to ASM 535 and Article 32 of the <i>National Agreement</i> ? <i>(Electrical protective devices, elevator controls, etc.)</i>		
11	Is contract cleaning used in accordance with ASM 535 and Article 32 of the <i>National Agreement</i> ?				34	Is water treatment adequate?		
12	Is this facility a candidate for contract cleaning?				35	For existing contracts, is the COR properly trained and aware of his/her responsibility and the actions to take ensuring terms of the contract are followed?		
13	Are janitor closets well maintained?				36	Do maintenance employees have proper tools and equipment for safe, efficient operations and repairs?		
14	Are trash rooms well maintained?				37	Are building equipment operating or preventive maintenance route sheets (PM Work Order Cards) accurate? <i>(Accompany a mechanic on at least one operating or preventive maintenance route)</i>		
15	Are locker rooms well maintained?				38	Is a building management system maintained and being used to achieve maximum comfort and energy efficiency?		
16	Is there evidence that custodians are reporting needed mechanical and structural repairs?				39	Do supplies for building and equipment maintenance adequately meet the needs of the facility and are they in compliance with appropriate safety and environmental policies?		
17	Is component cleaning accomplished as scheduled?				40	Is there a standard operating procedure for hazardous waste management?		
18	Are floors well maintained?				41	Are the training needs of the building maintenance staff being met?		
19	Are high cleaning areas well maintained?				42	Are environmental procedures being followed?		
20	Are outside area well maintained?				<b>UTILITY CONSERVATION</b>			
21	Are rooms clean and well maintained?				43	Have procedures for recording, analyzing, and controlling energy use been implemented?		
22	Are windows clean and well maintained?				44	Has the best available utility rate schedule been verified within the last year?		
23	Is a recycling program in place?							

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Revised Feb., 2007

**Figure 13-2. Building Operation and Maintenance Evaluation (Form 4905, Sheet 2)**

## Operation And Maintenance Of Real Property

CHECKLIST					
SAFETY-ACCIDENT PREVENTION			AGENCY RELATIONS		
	Yes	No		Yes	No
45			65		
Are shops, storage areas, corridors, public space, etc., clean and free from hazards?			Are all tenant agencies advised of their contact for services?		
46			66		
Are machine guards, personal equipment, etc., provided, used, and properly maintained?			Does the senior postal official/designee make frequent contacts with agency heads to promote agency relations?		
47			67		
Is all portable and shop powered, electrical equipment properly grounded?			Have operating employees been properly trained in agency and public relations?		
48			68		
Is the lockout program and its required documentation in place?			Do all categories of employees demonstrate a good public relation "service" attitude?		
49			69		
Are hand tools well maintained?			Does the senior postal official/designee understand lessor tenant relations and the agreement between USPS and GSA?		
50			70		
Are ladders, platforms, etc., in safe condition?			Are services which are beyond the responsibility of the Postal Service furnished to tenant agencies properly documented and charged?		
51			71		
Are hand rails provided on stairs, steps, etc.?			Is there an agency contact identified for each occupant agency on file?		
52					
Have unsatisfactory conditions detected on previous safety inspections been properly corrected?					
MISCELLANEOUS			OTHER ITEMS		
53			72		
Are vending areas clean?					
54			73		
Do concessionaires have adequate trash and garbage storage facilities?					
55			74		
Does the senior postal official/designee understand their responsibility in administering contracts?					
56			75		
Are license and contract documents for concessions available?					
57			76		
Are keys properly controlled?					
58			77		
Are rules and regulations governing conduct on Postal property properly posted? ( <i>Poster 7</i> )					
59			78		
Does the senior postal official/designee understand their duties, responsibilities, and the chain of command?					
60			79		
Do locally designed electronic forms (used in lieu of authorized forms) contain the same information?					
61			80		
Are defective supplies and materials reported to the vendor for credit/replacement?					
62			81		
Is the senior postal official/designee familiar with local ordinances, codes, etc., that may affect the operation?					
63			82		
Is the flag properly displayed?					
64			83		
Are the building plans current?					

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**Figure 13-3. Building Operation and Maintenance Evaluation (Form 4905, Sheet 3)**

## Operation and Maintenance of Real Property

<b>INSTRUCTIONS</b>	
1. Use the appropriate checklist and rate each category according to the following scales:	
Rating Scale for Categories A, C, D, E, F	Rating Scale for Category B
<p>10 Every phase is considered outstanding.</p> <p>8 Every phase of the operation is completely satisfactory.</p> <p>6 Minimum standards are being maintained. Action required to increase quality of performance.</p> <p>4 The standard for each operation is being met intermittently.</p> <p>2 The operation is considerably below standard and immediate action is necessary to increase the quality of performance.</p> <p>0 The operation is completely inadequate.</p>	<p>10 Needs no special attention other than routine maintenance at scheduled intervals.</p> <p>8 While equipment is operating satisfactorily, completion rate for senior routes needs further attention.</p> <p>6 Needs special attention above routine maintenance generally requiring treatment with expendable items such as belts, packing, covers, surfacing, painting, etc.</p> <p>4 Needs special attention to eliminate future safety hazards or to avoid excessive wear or damage to machinery which, if neglected, would result in expensive repairs.</p> <p>2 Needs repair or replacement of component parts to function properly.</p> <p>0 Needs special attention to correct equipment not functioning, or to eliminate serious hazards.</p>
2. Include the name of each person who participates in the evaluation.	4. Where all categories are not evaluated, the percent rating should be determined by dividing the actual by the possible. A rating of ten (10) is possible for Categories "E" and "F" and a rating of twenty (20) is possible for Categories "A", "B", "C", and "D".
3. Under Category "A" Cleaning, evaluate each sub-category for both area and component cleaning. Average these to obtain the rating for cleaning. A total rating of 20 is possible for cleaning.	5. Any individual rating of four (4) or less shall be fully explained with recommendation for corrective action on attached sheets.

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**Figure 13-4. Building Operation and Maintenance Evaluation (Form 4905, Sheet 4)**

## Operation And Maintenance Of Real Property

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### 13.2.5.1.1 Follow-up

The SPO initiates action to correct noted deficiencies in the maintenance appraisal reports (especially safety items; see [ELM 824](#) for safety policy), ensures recommended action implementation, and provides follow-up reports.

### 13.2.5.1.2 Submission of Reports

Each office retains a copy of the forms and reports of maintenance appraisals performed throughout the previous year. Upon request, submit these reports to the Maintenance Technical Support Center.

## 13.3 INSPECTION OF USPS FACILITIES BY LOCAL GOVERNMENTS

### 13.3.1 Application

#### 13.3.1.1 Immunity

See [Paragraph 2.2](#) for information concerning local, state, and federal immunity policy. The term immunity means to be immune (or free) from fines or other retribution.

#### 13.3.1.2 Local or State Government Inspections

Local or state government inspectors may be solicited to conduct equipment inspections such as pressure vessels, elevators, and food preparation facilities as long as they have the specialized qualifications needed. However, conditions beyond those required by USPS publications shall not be imposed as a result of these inspections.

#### 13.3.1.3 Leased Facility Inspection

In leased facilities, access shall be allowed to insurance inspectors when the visit has been prearranged by the lessor.

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**SECTION 14  
CONCESSIONS**

**14.1 GENERAL**

All Food Service Operations shall be in accordance with [EL-602](#), dated Nov 1994.

[EL-602, Food Service Operations](#), prescribes uniform USPS procedures for managing food services operations. Because minimal time and effort is expended by USPS personnel to manage food operations, this service is contracted to professional in-plant food management firms and concessionaires whenever the size of the facility permits.

Agreements to provide space to blind vendors (Randolph-Sheppard Act) are frequently maintained by the appropriate Category Management Center (CMC).

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### SECTION 15 PROTECTION

#### 15.1 GENERAL

##### 15.1.1 Scope

The building protection program addresses accident prevention, fire prevention, physical protection, and those Homeland Security activities relating to personnel and facility protection.

##### 15.1.2 Responsibility

###### 15.1.2.1 Supervisory

The SPO and his/her supervisors are responsible for taking all reasonable actions to prevent accidents to the USPS employees under their supervision. This responsibility extends to any occupants or visitors on the premises. They are also responsible for the prevention of damage by fire or accidents to USPS property. In carrying out this responsibility, managers and supervisors participate in all phases of accident, fire prevention, and civil defense programs as required. The line supervisor is the most important link in the chain of organization necessary to the success of these protection programs. Supervisors must know all employees, train them thoroughly to do their jobs correctly, and keep them alert on the job.

###### 15.1.2.2 Safety Program

The Safety Program identified in [ELM, Section 8](#) is an integral part of the SPO's protection program. [EL-801, Supervisor's Safety Handbook](#) identifies the supervisor's responsibility, the reporting requirements, and safe work practices.

###### 15.1.2.3 Environmental Compliance Program

The Environmental Compliance Program is a very important part of providing tenants and employees a safe and healthful working environment. Incorporate all Environmental MMOs and MIs into the Building Environmental Plans as applicable. A complete listing can be found on [USPS Blue](#) page.

For further assistance and requirements, contact the appropriate Environmental Compliance Specialist or Headquarters ECRM.

###### 15.1.2.4 Personal

The protection of mail, funds, and property is the responsibility of every USPS employee. Encourage all managers and supervisors to instill this sense of responsibility in each employee.

##### 15.1.3 Occupational Safety and Health Act (OSHA)

The SPO follows the safety requirements of OSHA in building operations and uses the appropriate USPS Safety Inspection Checklist when conducting safety inspections.

##### 15.1.4 Environmental Protection Agency Regulations (EPA)

Follow the environmental requirements of the EPA, including State and local regulatory

## Operation and Maintenance of Real Property

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agencies, in all building operations. Adhere to appropriate USPS Environmental MMOs, MIs, and Handbooks. For guidance and assistance with these issues, contact the Headquarters Office of Sustainability. More information is available on the USPS Blue page.

NCED can provide training courses and publications.

### 15.1.5 Responsibility for Maintenance of SDS Documentation

The SPO is responsible for maintaining an accurate and complete SDS book(s). The SDSs should be in binders in two groups:

- Active Items. Those items currently in use in the facility.
- Inactive Items. Those items no longer in use. The SDS must be maintained in the facility for a period of 30 years.

## 15.2 CONDUCT ON USPS PROPERTY

### 15.2.1 Authority

Under authority of law, the USPS has adopted rules and regulations governing conduct on USPS property ([Poster 7](#)).

These rules and regulations apply to all real property under the charge and control of the USPS, to all tenant agencies, and to all persons entering or on such property.

### 15.2.2 Posting

[Poster 7](#) displays these rules and regulations and must be posted conspicuously at each public entrance.

### 15.2.3 Enforcement

The enforcement of these rules and regulations is essential to the protection of USPS property. See [ASM 27](#).

## 15.3 INVESTIGATIVE SERVICES

### 15.3.1 General

The Postal Inspection Service provides investigative services for offenses on USPS property. Additionally, the Office of the Inspector General prevents, detects and reports fraud, waste, and program abuse, and promotes efficiency in the operations of the USPS. The OIG has "oversight" responsibility for all activities of the Postal Inspection Service.

### 15.3.2 Other Authorities

The Inspection Service maintains and conducts all necessary liaisons with other investigative, intelligence, federal, and local law enforcement bodies concerning offenses and investigative matters. They have the sole responsibility for referring criminal cases involving or affecting the USPS to the Department of Justice.

### 15.3.3 Reporting

[ASM 221](#) contains information on the reporting of USPS losses and offenses.

### 15.3.4 Tenant Agencies

Tenant agencies must report losses or offenses to the USPS SPO through the agency contact. The following action is then taken:

- The SPO, when appropriate, verifies the extent of the loss or offense and reports the matter to the local postal inspector. In criminal cases such as burglary, assault, and robbery, also notifies local law enforcement officers.
- The Postal Inspection Service investigates or coordinates the investigation with the tenant agency's investigating body.

## 15.4 FIRE PROTECTION EQUIPMENT

### 15.4.1 Portable Fire Extinguishers

#### 15.4.1.1 Fire Extinguisher Standards

The USPS must conform to the requirements covering portable fire extinguishers in the National Fire Protection Association Standard No. 10, Portable Fire Extinguishers, and as modified by [ELM, Section 856.2](#) and [MS-56, Fire Prevention and Control](#), Section 462.

#### 15.4.1.2 Selection of Extinguishers

Order fire extinguishers from Federal Supply Schedule FSS Group 42, Part 1 - Fire Equipment and Supplies, unless local purchase results in reduced cost of extinguishers certified by the Underwriters' Laboratory.

#### NOTE

HALON extinguishers have been deemed an Ozone Depleter. Replace them with an appropriate type extinguisher when they have reached the end of their useful life or are discharged.

#### 15.4.1.3 Maintenance

Reference [MS-56, Fire Prevention and Control, Chapter 4, Portable Fire Extinguishers](#) for specific guidance on fire extinguisher maintenance and requirements.

### 15.4.2 Standpipes and Hoses

Most fire departments will not use class II fire hoses installed in buildings, as they are often poorly maintained and their condition cannot be determined until the hose is charged. The fire department prefers hoses not be installed so fire department equipment can be more readily installed. Where hoses are installed on standpipes, remove the linen or cotton hose on them when deteriorated and do not replace them. In those special cases where 1 ½ inch hose is required, the hose must be polyester fiber, single-jacketed, rubber-lined fire hose available through Federal Supply Schedule 4210.

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Regardless of whether or not the hoses are installed, check the size of the threaded connection on the standpipes with the local fire department. If there is a mismatch in the threaded connection, USPS shall provide adapters. Coordinate the installation of fire hoses with the local fire department. Regardless of whether or not the hoses are maintained, all offices must have an appropriate spanner wrench at each hose connection.

### 15.4.3 Sprinkler Systems

See [Paragraph 11.2.9](#) and [MS-56, Fire Prevention and Control](#), for information on sprinkler systems.

## 15.5 FIRE DEPARTMENT NOTIFICATION

### 15.5.1 General

The SPO instructs employees on their responsibility to operate the fire alarm box and call the fire department upon detecting a fire. In no case may employees be directed or otherwise encouraged to withhold the sounding of an alarm or delay the alarm without checking with a supervisor.

### 15.5.2 In Case of Fire

In any case of fire, notify the fire department immediately. It is established USPS practice to connect the building fire alarm system directly to the fire department or to a commercial or Government-operated control center that will automatically relay the fire alarm to the fire department. Pulling a fire alarm box, in buildings connected to the fire department or a control center, automatically transmits a signal to the fire department. This automatic signal is followed up by a telephone call to the fire department giving them the exact location of the fire. In those buildings where the building fire alarm system is not connected to the fire department or a control center, telephone the local fire department to inform them of the location of the fire. Reference [ELM, Section 850](#) for further instructions and requirements. USPS personnel are never to attempt to fight a fire beyond its incipient stage.

### 15.5.3 In Special Situations

Other situations that must be reported to the fire department include:

- Smoke detection. Upon detecting an odor of smoke or any other indication of fire (including such information received by telephone from a building occupant), employees must immediately notify the fire department. If, after calling the fire department, conditions indicate there may not be an actual fire, the SPO or designee may investigate before sounding the facility's fire alarm.
- Discovery of an extinguished fire. Upon discovering evidence of an extinguished fire (including such information received by telephone from a building occupant), the employee immediately notifies the fire department. After calling the fire department, the employee must investigate the situation, take all necessary action to ensure the fire has been extinguished, and sound the building fire alarm if necessary. Generally, the fire department dispatches a professional firefighter to assist in making this determination.

### 15.6 FIRE ALARM IDENTIFICATION

Building fire alarm systems not connected to the fire department or control center must be identified by posting a sign adjacent to each local fire alarm box. The sign states the alarm does not summon the fire department and a telephone call must be placed to the local fire department. Reference [Figure 15-1](#), Fire Alarm Identification Sign for sign format. These signs must be uniform size, 5 by 7 inches, and easy to read.

**FIRE OR EMERGENCY**

This building alarm DOES NOT summon the Fire Department. Pull the building alarm station to evacuate building and proceed at once to CALL FIRE DEPARTMENT by telephone-

Telephone No. 444-4444

This building is U.S. Post Office 1900 F Street

GIVE ACCURATE, COMPLETE INFORMATION

**Figure 15-1. Fire Alarm Identification Sign**

### 15.7 FIRE DRILLS

When conducting annual fire drills as required by [ELM, Section 853.2](#), the SPO coordinates them with the local fire department and the building tenants. The tenants must:

- Participate in the drill.
- Appoint floor and corridor wardens to direct their employees to the stairs.
- Ensure all of their space is evacuated.

### 15.8 EMERGENCY EVACUATION TEAMS

Emergency evacuation teams must be formed to respond to events as outlined in [ELM, Section 853](#). Training will conform to [ELM, Section 853.15](#).

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## SECTION 16 INTEGRATED EMERGENCY MANAGEMENT PLANS

### 16.1 GENERAL

The [Integrated Emergency Management Plan](#) (IEMP) performs the following:

- Uses a standardized template to consolidate a facility's stand-alone plans (Contingency Plan, Emergency Action Plan, Continuity of Operations Plan, Crisis Management Plan, and emergency-specific plans).
- Establishes emergency management teams.
- Defines team roles and responsibilities.
- Positions USPS emergency management activities for integration with the country's National Response Plan.

The USPS established the [IEMP](#) as a single comprehensive emergency management plan to prepare for, mitigate, respond to, and recover from domestic emergencies that occur on USPS sites. Policy, templates, and training information are now available online. Reference [USPS Blue](#), click Inside USPS, then National Preparedness, and then Prepare for specific IEMP guidelines.

The plans and organization developed for compliance with this section must be consistent with the following publications:

- [ASM 28 Emergency Preparedness](#)
- [ELM 850 Emergency Action Plans and Fire Prevention and Control](#)

The SPO must know who is in the facility at any given time. This is especially important in the event of a Biohazard Detection System (BDS) alarm. All sections within a building having employees that do not make regular time clock inputs should use section-specific "in/out" sheets or some other method, to indicate whether or not an employee is in the facility.

#### 16.1.1 Identifying Cutoff Valves and Switches

Locating main utility disconnect switches and valves are one of the biggest problems encountered by emergency services personnel. This causes confusion and wasted effort when every second counts. Accordingly, conspicuously post signs giving cutoff valves and switches location in the security office in all buildings having such offices and any other location deemed appropriate by the SPO. Keep these signs current.

The signs must be of substantial construction and uniform as follows:

- White lettering on a colored background.
- Large enough to be noticed easily.
- Have the heading, UTILITIES CUTOFFS, in letters at least 3 inches high.

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- List all gas, electrical, steam, and water cutoffs and other utilities that may need to be turned off in case of emergency. These signs must not list any cutoff impairing a fire protection system such as sprinklers, standpipes, fire alarms, or fire pumps.
- List all locations if using more than one location for a single type of utility.

Clearly identify all cutoff valves and switches serving this function in all the building systems by a sign visible from the floor and permanently mounted near the valve or switch or hung from it. Use white letters on a colored background, the color to be the same as used for piping or electrical identification.



**APPENDIX A**  
**DEFINITIONS AND METHODS FOR COMPUTING BUILDING AREAS**

**A.1 GENERAL**

Definitions of building areas and the prescribed methods of measurement for computing them are covered in this appendix.

**A.2 GROSS AREA**

Gross area is the sum of the floor areas to the normal outside faces of the exterior walls, disregarding architecture setbacks or projections. This includes all stories or areas that have floor surfaces.

Compute gross area by measuring from the normal outside face of the exterior walls, disregarding cornices, pilasters, and buttresses that extend beyond the wall face.

Gross area also includes basements (except un-excavated portions), attics, garages, roofed porches, mezzanines, shipping platforms, penthouses, lobbies, corridors, and mechanical rooms provided they are within the normal face lines of the building. Since post office mailing platforms are always included in net assignable area, they must be included in gross area, regardless of whether they are within or outside the exterior wall lines of the building.

The gross area does not include open courts, lightwells, or upper portions of rooms or lobbies that rise above the story being measured or extend beyond the principal exterior walls of the building.

Do not include features that are not roofed, such as cooling towers, in the gross area.

**A.3 NET INTERIOR AREA**

**A.3.1 General**

Net interior area is that portion of the gross area available for either USPS or other agency use, including space available jointly to the various occupants of the building. It is measured from the interior face of the wall to the interior face of the opposite wall. It also includes space provided for the operation and maintenance of the building.

Each area of the building is classified as one of the following types of space:

- Restroom
- Lunch/Swing Room
- Locker Room
- Work Room
- Office Space
- Supply Room
- Active Storage Room

- Inactive Storage Room
- Elevator
- Exterior Paved Area
- Exterior Unpaved Area
- Interior Parking/Maneuvering
- Platform Dock (Enclosed)
- Platform Dock (Non-Enclosed)
- Service/Box Lobby
- Stairway
- Corridor
- General Shop Area
- Janitors (Custodial) Closet
- Lookout Gallery

(Refer to [MS-47, Facility Cleaning](#))

### **A.3.2 Total Net Area**

Total net area is that portion of the gross area that is composed of the net assignable areas and the horizontal circulation areas.

### **A.3.3 Ratio of Net to Gross Areas**

This ratio is the total net area over the total gross area expressed as a fraction reduced to its lowest terms.

**APPENDIX B  
HANDBOOKS AND PUBLICATIONS RELATED TO BUILDING  
OPERATION**

**NOTE**

These Management Instructions are current at the time of this publication.

**Handbooks**

<a href="#"><u>MS-10</u></a>	<a href="#"><u>Floors, Care and Maintenance</u></a>
<a href="#"><u>MS-11</u></a>	<a href="#"><u>Industrial Storage Batteries</u></a>
<a href="#"><u>MS-24</u></a>	<a href="#"><u>Heating, Cooling, and Ventilating</u></a>
<a href="#"><u>MS-28</u></a>	<a href="#"><u>Maintenance of Electrical Switchgear</u></a>
<a href="#"><u>MS-45</u></a>	<a href="#"><u>Field Maintenance Program</u></a>
<a href="#"><u>MS-47</u></a>	<a href="#"><u>Housekeeping Postal Facilities</u></a>
<a href="#"><u>MS-56</u></a>	<a href="#"><u>Fire Prevention and Control</u></a>
<a href="#"><u>MS-63</u></a>	<a href="#"><u>Maintenance Operations</u></a>
<a href="#"><u>MS-110</u></a>	<a href="#"><u>Associate Office Postmaster's Facilities Maintenance Guidelines</u></a>
<a href="#"><u>RE-1</u></a>	<a href="#"><u>Postal Service Facilities Guide to Real Property Acquisitions and Related Services</u></a>
RE-12	Repair and Alteration Surveys (7610-03-000-9290)
RE-13	Repair and Alteration of Real Property Facilities (7610-03-000-9297)
<a href="#"><u>ELM</u></a>	<a href="#"><u>Employee and Labor Relations Manual</u></a>
<a href="#"><u>EL-602</u></a>	<a href="#"><u>Food Service Operations</u></a>
<a href="#"><u>EL-800</u></a>	<a href="#"><u>Managing Contract Safety and Health Compliance</u></a>
<a href="#"><u>EL-801</u></a>	<a href="#"><u>Supervisor's Safety Handbook</u></a>
<a href="#"><u>EL-803</u></a>	<a href="#"><u>Maintenance Employee's Guide To Safety</u></a>
<a href="#"><u>EL-812</u></a>	<a href="#"><u>Hazardous Materials and Spill Response</u></a>
<a href="#"><u>EL-912</u></a>	<a href="#"><u>Agreement between the United States Postal Service and American Postal Workers Union, AFL-CIO</u></a>

**Management Instructions**

<a href="#"><u>AS-530-2004-9</u></a>	<a href="#"><u>Safety Inspection of Heating Boilers, Unfired Pressure Vessels, Elevators, Escalators, Dumbwaiters, Platform Lifts, and Chairlifts</u></a>
<a href="#"><u>AS-550-95-10</u></a>	<a href="#"><u>Integrated Pest Management</u></a>
<a href="#"><u>EL-810-2000-1</u></a>	<a href="#"><u>Hearing Conservation Programs</u></a>
<a href="#"><u>EL-810-2000-2</u></a>	<a href="#"><u>Bloodborne Disease Exposure Control Plans</u></a>
<a href="#"><u>EL-810-2006-3</u></a>	<a href="#"><u>Response to Hazardous Material Releases</u></a>
<a href="#"><u>EL-850-2001-2</u></a>	<a href="#"><u>Emergency Evacuation and Fire Protection</u></a>

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<u><a href="#">EL-890-2007-2</a></u>	<u><a href="#">Asbestos Containing Building Materials Control Program</a></u>
<u><a href="#">EL-890-2007-4</a></u>	<u><a href="#">Lead Hazard Management</a></u>
<u><a href="#">EL-890-2007-5</a></u>	<u><a href="#">Integrated Waste Management</a></u>
<u><a href="#">EL-810-2016-1</a></u>	<u><a href="#">Hazard Communication (HazCom) Program</a></u>
<u><a href="#">EL-810-2009-4</a></u>	<u><a href="#">Personal Protective Equipment and Respiratory Protection Programs</a></u>
<u><a href="#">EL-810-2010-1</a></u>	<u><a href="#">Confined Space Safety</a></u>
<u><a href="#">ASM</a></u>	<u><a href="#">Administrative Support Manual</a></u>
<u><a href="#">AS-503</a></u>	<u><a href="#">Standard Design Criteria</a></u>
<u><a href="#">AS-550-A</a></u>	<u><a href="#">Paper and Paperboard Recycling Guide</a></u>
<u><a href="#">AS-550-B</a></u>	<u><a href="#">Paper and Paperboard Recycling Plan</a></u>
<u><a href="#">AS-552</a></u>	<u><a href="#">Pollution Prevention Guide</a></u>
AS-553	Hazardous Waste Management (7610-02-000-9920)
<u><a href="#">RE-6</a></u>	<u><a href="#">Facilities Environmental Guide</a></u>
<u><a href="#">AS-556</a></u>	<u><a href="#">Asbestos Management Guide</a></u>
<u><a href="#">AS-558</a></u>	<u><a href="#">Facility Energy Management Guide</a></u>
<u><a href="#">AS-701</a></u>	<u><a href="#">Material Management</a></u>
<u><a href="#">RE-4</a></u>	<u><a href="#">Standards for Facility Accessibility</a></u>
<u><a href="#">RE-5</a></u>	<u><a href="#">Building and Site Security Requirements</a></u>

### NOTE

The above referenced Facilities publications are dynamic rather than static in nature and are subject to frequent revision. All Facilities handbooks and directives may be accessed through <http://blue.usps.gov/cpim/manuals.htm>

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### Sources of Financial Data:

- Weekly Flash report
- Various eMARS reports
- *Financial Performance Report (FPR)*
- *Enterprise Information System (WebEIS)*
- *Enterprise Data Warehouse (EDW)*
- *PUB 24 Supply Catalog*
- *PUB 41 Purchasing Manual*

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**APPENDIX C  
MANAGEMENT INSTRUCTIONS (MI) AND  
MAINTENANCE MANAGEMENT ORDERS (MMO)**

**NOTE**

These Management Instructions are current at the time of this publication.

**Management Instructions**

<a href="#"><u>AS-550-91-10</u></a>	8/15/91	<a href="#"><u>Pollution Prevention Program</u></a>
<a href="#"><u>AS-550-92-2</u></a>	2/7/92	<a href="#"><u>Waste Reduction</u></a>
<a href="#"><u>AS-552</u></a>	8/96	<a href="#"><u>Pollution Prevention Guide</u></a>
<a href="#"><u>EL 890-2007-6</u></a>	8/1/07	<a href="#"><u>Water Quality Management</u></a>
<a href="#"><u>AS-550-92-8</u></a>	4/21/92	<a href="#"><u>Hazardous Waste Management</u></a>
<a href="#"><u>AS-550-95-9</u></a>	7/14/95	<a href="#"><u>Underground Storage Tank Management</u></a>
<a href="#"><u>AS-550-95-10</u></a>	7/21/95	<a href="#"><u>Integrated Pest Management</u></a>
<a href="#"><u>EL-890-2007-5</u></a>	7/15/07	<a href="http://blue.usps.gov/cpim/ftp/manage/e890075.pdf"><u>http://blue.usps.gov/cpim/ftp/manage/e890075.pdf</u></a>
<a href="#"><u>AS-550-96-4</u></a>	5/17/96	<a href="#"><u>National Environmental Policy Act Operational Guidance</u></a>
<a href="#"><u>AS-550-97-4</u></a>	6/17/97	<a href="#"><u>Facility Energy Management Program</u></a>
<a href="#"><u>EL-810-2010-1</u></a>	1/15/10	<a href="#"><u>Confined Space Safety Program</u></a>

**Maintenance Management Orders**

<a href="#"><u>MMO-001-84</u></a>	<a href="#"><u>Use and Disposal of Polychlorinated Biphenyls (PCB)</u></a>
<a href="#"><u>MMO-007-80</u></a>	<a href="#"><u>Treatment of Cooling Tower Water to Control Disease Organisms</u></a>
<a href="#"><u>MMO-008-02</u></a>	<a href="#"><u>ITT McDonnell &amp; Miller Boiler Low Water Cutoffs Safety Recall</u></a>
<a href="#"><u>MMO-017-96</u></a>	<a href="#"><u>Inspection of Unfired Pressure Vessels</u></a>
<a href="#"><u>MMO-019-86</u></a>	<a href="#"><u>Eddy Current Testing of Central Chiller Evaporator and Condenser Tubes</u></a>
<a href="#"><u>MMO-022-83</u></a>	<a href="#"><u>Safety Inspection Checklists for Escalators and Dumbwaiters</u></a>
<a href="#"><u>MMO-024-87</u></a>	<a href="#"><u>PCB-Contaminated Power Factor Capacitors</u></a>
<a href="#"><u>MMO-025-85</u></a>	<a href="#"><u>Preparation and Maintenance of Cooling Towers</u></a>
<a href="#"><u>MMO-026-82</u></a>	<a href="#"><u>Maintenance of Electrical Switchgear</u></a>
<a href="#"><u>MMO-028-88</u></a>	<a href="#"><u>Computer Room Cleaning</u></a>
<a href="#"><u>MMO-031-82</u></a>	<a href="#"><u>Overloading of Freight Elevators</u></a>
<a href="#"><u>MMO-037-01</u></a>	<a href="#"><u>Potential Safety Hazards Associated with High Intensity Discharge Lamps</u></a>
<a href="#"><u>MMO-038-06</u></a>	<a href="#"><u>Hourly Rates For Computing Maintenance Labor Costs</u></a>
<a href="#"><u>MMO-038-78</u></a>	<a href="#"><u>Water Treatment Safety and Procedures</u></a>
<a href="#"><u>MMO-039-77</u></a>	<a href="#"><u>Cooling Tower Water Treatment During Severe Water Shortages</u></a>

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- [MMO-055-83](#) [Lighting Guideline](#)
- [MMO-055-94](#) [Dock Levelers Safety Lockout and Maintenance Procedures](#)
- [MMO-060-85](#) [Transformers With Polychlorinated Biphenyls \(PCBs\)](#)
- [MMO-064-99](#) [Potential Hazard, Freight Elevator Gate Counterweight Connecting Bolt](#)
- [MMO-065-84](#) [Safety Relief Valve Pop and Capacity Tests on Water Tube Heating Boilers](#)
- [MMO-066-99](#) [Non-Chemical Cooling Tower Water Treatment](#)
- [MMO-070-15](#) [Snow Accumulation on Postal Facility Roofs](#)
- [MMO-073-02](#) [Safety Information for Single Bottom Cylinder Hydraulic Elevators](#)
- [MMO-074-06](#) [Policy on Cleaning with HEPA Vacuums \(MMO-047-03 Supplement\)](#)
- [MMO-074-83](#) [Inspection of Expansion Tanks on Hot Water Boilers](#)
- [MMO-079-00](#) [Energy Conservation](#)
- [MMO-090-83](#) [Use of Ethylene Glycol Antifreeze in Chilled Water Systems](#)
- [MMO-099-15](#) [Elevator and Escalator Maintenance](#)
- [MMO-109-09](#) [Influenza Cleaning Contingency](#)
- [MMO-150-14](#) [Snow and Ice Removal](#)
- [MMO-115-09](#) [Lead Work Practices](#)
- [MMO-115-83](#) [Calibration and Testing of H.V.A.C. Controls](#)
- [MMO-120-84](#) [Flashing Light Warning System for Vertically Sliding Freight Elevator Doors and Gates.](#)
- [MMO-127-09](#) [Asbestos Work Practices](#)
- [MMO-133-06](#) [International Comfort Products LLC Heating and Cooling Units Recall](#)
- [MMO-135-15](#) [Used Lamp Management Maintenance Policies and Procedures](#)
- [MMO-141-06](#) [Elevating Work Platforms](#)



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**APPENDIX D  
PROCEDURE FOR RELEASING PASSENGERS FROM  
A STALLED ELEVATOR**

**D.1 GENERAL**

This procedure for releasing passengers from stalled elevators shall be a part of the emergency contingency planning and training required by [ELM Section 851.1, Emergency Action Plans and Fire Prevention and Control](#).

Only qualified elevator mechanics or persons specifically trained in emergency procedures for elevators may release trapped passengers.

As stated in [Paragraph 8.5.1](#), if maintenance employees specifically trained in releasing passengers from stalled elevators and elevator contract personnel cannot be brought on site in a reasonable amount of time (1 hour), the facility's IEMP shall contact the local municipal agency (usually the Fire Department) handling such calls.

**D.2 RELEASING PASSENGERS FROM A STALLED ELEVATOR**

Elevators may stall because of power failure or malfunction of equipment. When this occurs, the following steps must be taken immediately.

1. Establish communication with the occupants of the car and assure them:
  - a. Steps are being taken for their release.
  - b. They are safe.
  - c. They should stand clear of the door when it is opened.
  - d. They must not smoke.
  - e. They must NOT try to leave the car unaided.
2. Find out the following:
  - a. Number of persons in the car.
  - b. Are any occupants in the car ill, injured, or otherwise handicapped?
  - c. Are lights on.
  - d. The location of the car in the hoistway.
3. Continue Contact

Maintain communication while rescue is underway to keep the trapped occupants informed and reassured of their safety.

### D.3 RESCUE PERSONNEL

Only experienced maintenance personnel specifically designated and trained shall attempt to release trapped passengers. The person in charge of the facility shall:

- Designate persons to perform rescue duties on each tour.
- Specify the responsibility of the designated persons.
- Train the selected personnel in the rescue procedures to be followed under various situations for the particular building and equipment.

### D.4 INSTRUCTIONS

Furnish written instructions containing steps to be taken to all persons designated to perform rescue duties. Include telephone numbers of elevator maintenance personnel in these instructions.

### D.5 RESCUE PROCEDURE

The preferred method for safe rescue of passengers from stalled elevators is to move the elevator to a landing. However, only a skilled elevator mechanic who is familiar with the equipment should attempt to move a stalled car by other than normal means. The procedures in [APPENDIX E](#) do not require the movement of a car by other than normal or inspection means. It should be noted that under each and every procedure, the main electrical disconnect switch shall be opened and locked, and the emergency stop switch inside the car placed in the stop position before the trapped passengers are helped from the car.

### D.6 POST RESCUE

After releasing the passengers, thoroughly and carefully inspect the elevator and correct the cause of the trouble before resuming service.

### D.7 DOCUMENTATION

Document the incident with a complete report containing the following:

- Summary of conditions just before the incident
- Cause of the trouble
- Action taken to correct problem
- Action taken to prevent recurrence
- Names of persons entrapped and any possible injury

**APPENDIX E**  
**FORMAT FOR WRITTEN PROCEDURES ON REMOVAL OF**  
**PASSENGERS FROM STALLED ELEVATORS**

The following procedures are only an example of what must be contained in a passenger removal procedure. Each facility is unique; tailor written procedures specifically for each facility. The exact procedures for each elevator or group of similar elevators must contain the following:

The following equipment is stored in and marked to indicate “for emergency use only”:

- Two 8-foot ladders
- Hoistway door unlocking key
- Elevator side emergency door key
- Two safety belts
- Sledge hammer and pry bar (forcible entry tool)
- Two flashlights with fresh batteries
- 20 feet of 1/2-inch nylon rope
- Portable evacuation bridge
- Two-way radio

*(This is just a sample list. Include any additional item needed for a particular plan.)*

**E.1 PROCEDURE**

The person receiving the call (usually in Maintenance Operations Support) must:

1. Acknowledge the call and maintain communications.
2. Contact the rescue team leader and set procedure in motion.
3. Advise persons in the car:
  - a. Steps are being taken to rescue them.
  - b. They are safe.
  - c. They must stand clear of the door when it opens.
  - d. They must not smoke.
  - e. They must not try to leave the car unaided.
4. Find out the following:
  - a. Is the emergency stop switch in the run position?
  - b. Number of persons in the car?
  - c. Is any person in the car ill, injured, or handicapped?

- d. Are the lights on in the car?
- e. The location of the car in the hoistway (if known)?

### **E.2 BEFORE PROCEEDING**

Before proceeding, do the following:

1. Ensure the mainline disconnect is in the closed position (Someone may have mistakenly opened the switch, stopping the elevator),
2. If elevator is equipped with firefighter's service, activate the switch to recall the elevator to the designated level. If this does not work, proceed with the rescue.

### **E.3 PROCEDURES FOR ELECTRIC TRACTION ELEVATOR**

#### **E.3.1 Procedure I - Movement of Car by Normal Means**

If there is electric power to the elevator and an elevator mechanic is available, have mechanic identify the source of the problem and move the elevator to the nearest landing. Maintain continuous contact with persons in the car. If this cannot be accomplished in approximately 30 minutes, proceed to Procedure II, III, or IV as appropriate.

#### **E.3.2 Procedure II - Two-person Rescue Team**

**Application:** The elevator is within 3-1/2 feet of landing, and the hoistway door can be opened.

1. Open and lock main disconnect in machine room to remove power from drive machinery.
2. Instruct persons in car to put the stop switch in the stop position.
3. Locate car and open hoistway door with unlocking device.

#### **NOTE**

If hoistway door is not equipped with an unlocking device and car is above the landing, it may be possible for someone in the car to open the car door and unlock the hoistway door.

4. If car is above the landing, protect the opening to the hoistway under the car with a board or a ladder. There have been instances where a person jumped from the car only to fall to his/her death under the car.
5. After the doors are propped open, verify the stop switch is in the stop position.
6. Establish two persons at the landing to assist with removing passengers one at a time.

#### **E.3.3 Procedure III - Side Emergency Exit (Three-person Rescue Team)**

**Application:** The car is not near a landing, and there is an adjacent operating elevator

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with side emergency exit.

1. Open and lock disconnect to the stalled elevator.
2. Have persons in the stalled elevator place the stop switch in the stop position.
3. Advise persons in the stalled elevator of rescue procedure.
4. Station person in machine room.
5. Put portable evacuation bridge in adjacent rescue car; two members of rescue team move the rescue car level with stalled car.
6. Place rescue car stop switch in the stop position and have person in machine room open and lock rescue car disconnect.
7. Open both side emergency exits, install portable rescue bridge between cars; one member of the rescue party enters the stalled car with a safety belt.
8. Use the safety belt to move persons from the stalled elevator to the rescue elevator across the rescue bridge one at a time.
9. After all persons are removed from the stalled car, move them to the most convenient landing in the rescue elevator. If the stalled elevator is heavily loaded, it may be necessary to make two trips with the rescue elevator. Likewise, if there are persons severely distressed or in need of medical attention, move them promptly and come back for remaining passengers.

### **E.3.4 Procedure IV - Top Emergency Exit (Three-person Rescue Team)**

**Application:** Procedure I, II, or III cannot be used.

1. Locate the car.
2. Open and lock disconnect for stalled car and have someone in the car place the stop switch in the "stop" position.
3. Advise persons in the car of the rescue procedure.
4. Open the hoistway door immediately above car (forcibly, if necessary).
5. If car top is three (3) feet or more below the landing, place ladder (with nonskid feet) from landing to car top.
6. Remove car top emergency exit cover and place a second ladder (with nonskid feet) through exit into car.
7. Have member of rescue team enter the car.
8. With rescue team members stationed in the car, on top of car, and at the landing, wear a safety belt to move the passenger from the car to the landing one at a time. Give priority to passengers who may need medical attention.

## **E.4 PROCEDURE FOR HYDRAULIC ELEVATOR**

### **E.4.1 Procedure I - Movement of Car by Normal Means**

If there is electric power to the elevator and an elevator mechanic is available, identify

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the source of the problem, and have mechanic move the elevator to the nearest landing. If this cannot be accomplished in less than 30 minutes, proceed with Procedure II or III.

### E.4.2 Procedure II - Hoistway Door (Two-person Rescue Team)

**Application:** If elevator is within 3 feet of a landing and the hoistway door can be opened.

1. Open and lock electric disconnect in machine room to remove power from drive machinery.
2. Instruct persons in car to put the stop switch in the “stop” position.

#### NOTE

If hoistway door is not equipped with an unlocking device and car is above the landing, it may be possible for someone in the car to open the car door and unlock the hoistway door.

3. Locate car and open hoistway door with unlocking device.
4. If car is above the landing, protect the opening to the hoistway under the car with a board or a ladder. There have been instances where a person jumped from the car only to fall to his/her death under the car.
5. After the doors are propped open, verify the stop switch is in the “stop” position.
6. Establish two persons at the landing to assist with removing passengers one at a time.

### E.4.3 Procedure III - Manual Lowering Valve

1. Open and lock electric disconnect to elevator machinery.
2. Maintain contact with persons in car and advise them that the car will move down, and they must stay away from the door.
3. Station rescue team member at the floor to which the car will be lowered.
4. Slowly open manual lowering valve allowing car to lower to the designated landing. (Lowering valve must be identified with a tag showing its purpose and method of operation.)

#### NOTE

Person at rescue landing must open hoistway and car door, and provide or obtain any needed assistance.

### E.4.4 Procedure IV - Top Emergency Exit (Three-person Rescue Team)

**Application:** Procedures I, II, and III cannot be used.

1. Locate the car.
2. Open and lock disconnect for stalled car and have someone in the stalled car place the stop switch in the “stop” position.



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3. Advise persons in the car of the rescue procedure.
4. Open the hoistway door immediately above car (forcibly, if necessary).
5. If car top is three (3) feet or more below the landing, place ladder (with nonskid feet) from landing to car top.
6. Remove car top emergency exit cover and place a second ladder (with nonskid feet) through exit into car.
7. Have member of rescue team enter the car.
8. With rescue team members stationed in the car, on top of car, and at the landing, wear a safety belt to move the passenger from the car to the landing one at a time. Give priority to passengers who may need medical attention.

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## APPENDIX F GENERAL GUIDE FOR ELECTRICAL EQUIPMENT MAINTENANCE

### F.1 STANDARD WORK PRACTICES - ELECTRICAL EQUIPMENT

#### F.1.1 Basic Requirements

Limit work on energized conductors and circuit parts to situations where it is not feasible to de-energize and apply an energy isolation device, lock and identification tag. These situations are tied to activities requiring the USPS or building equipment be energized to perform the task, either because the task cannot be performed while de-energized; such as some electrical troubleshooting tasks or because de-energizing is more hazardous than energized electrical work.

USPS employees can perform energized electrical work in limited situations, provided all other sources of hazardous energy are de-energized, isolated, or otherwise rendered safe. Other hazardous energy sources include but are not limited to mechanical, pneumatic, and hydraulic energy. Apply energy isolation devices to bring all energy sources to zero and use mechanical devices (for example but not limited to a block or support pin) to prevent mechanical parts with stored energy from moving.

Energized electrical work requires additional safeguards to protect USPS employees from contact with energized conductors and circuit parts. These additional safeguards will vary depending on the activities to be performed, as well as the voltage and amperage for the equipment on which work will be performed.

For more information on USPS policy and practices for de-energizing and locking out equipment, consult the most current MMO on Hazardous Energy Control, Electrical Work Plan and/or the equipment specific handbooks.

#### F.1.2 Lockout

All lockout activities must be in accordance with the most current procedures and Electrical Control Plan (ECP).

1. No person or crew may perform work on or close to a circuit until:
  - Properly de-energized the circuit.
  - Each person working on the job signs and personally locks the switch open and attaches completed Form 4812, High Voltage Equipment Lockout. A locking device (NSN 5975-00-000-4495) is available from Topeka Material Distribution Center (TMDC). This device allows use of up to six padlocks. The placing and removing of these tags cannot be delegated to any person.
  - Take all precautions to prevent accidental or premature energizing of the circuit.
2. The lockout devices indicated above must remain in place until removed by the persons who attached them.
3. Do not close a switch until all lockout devices have been removed by the persons who attached them.

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4. The lock may not be removed by anyone except the person who placed it there and not until all persons are clear of the circuit and all lockout tags have been removed.
5. In the event the worker is unavailable or unable to remove the tag and lock, and emergency or extenuating circumstances requires circuit restoration, the tags and locks may be removed only by the worker's next direct supervisor. The supervisor must ensure all of the work crew members are removed from the circuit and the circuit is clear. The supervisor must also confer with and obtain agreement from the USPS building manager or Postmaster before removing these tags and locks.

### F.1.3 Precautions Before Beginning Work

1. Each employee must be familiar with the equipment to be worked on and must understand and follow the supervisor's instructions concerning the work to be done.
2. A complete survey of existing hazards must be made and all necessary precautions and safeguards taken to provide for self-protection and the protection of other workers and equipment. Employees must consult with their supervisor when in doubt concerning proper safety measures.
3. Safeguards such as danger signs, roped-off space, and barriers to protect others must be used where the nature of the work requires it.
4. No work may be done near high-voltage lines, cables, or apparatus until specific safety instructions are obtained from the supervisor. No electrical apparatus of any kind may be cleaned until the equipment is de-energized and out of service.

## F.2 PROTECTIVE RELAY MAINTENANCE

### F.2.1 Application

Protective relays normally operate high-voltage (600V or above) circuit breakers. The relays are designed to sense abnormal conditions and usually have a time-delay characteristic.

### F.2.2 Maintenance Requirements

Maintenance requirements preventive maintenance guides have been prepared for the types of relays are normally found in buildings. However, because of the various types and models used, the manufacturer's instructions for each relay are essential for proper maintenance.

### **F.2.3 Maintenance Records**

Records of relay maintenance, including test results and settings, must be maintained with the preventive maintenance records. The contractor may furnish these records on their own forms.

### **F.3 CIRCUIT BREAKERS**

The Preventive Maintenance Guide for the various types of breakers specifies the required maintenance and test. The manufacturer's instructions should always be referred to for specific information on each breaker. Breaker settings may not be changed from the original settings without an engineering evaluation. The curves from coordination studies should be used when available. The cost to equip a shop to perform all of the tests specified on the electrical equipment guides would be in excess of \$150,000. A very high degree of technical expertise is also essential. Consequently, most of this work is beyond the scope of the field office. Also, few offices have a work load concentration large enough to justify undertaking all of the work with USPS employees. There are a number of companies that perform this type of maintenance by service contracts.

### **F.4 SERVICE CONTRACTS**

All contracts for switchgear maintenance of any kind shall be awarded in accordance with existing requirements as listed in [MS-28, Maintenance of Electrical Switchgear](#).

The preventive maintenance guides are used as specifications and the required test records are completed by the contractor. Care must be taken to assure that the contractor has the technical competence to perform the work as specified. All work must be scheduled at least four (4) weeks in advance and coordinated with operating personnel so that the de-energized circuits will have the least effect on the operation. Work is scheduled on evenings and weekends when necessary.

Maintain records in a permanent file of test results for all electrical equipment.