

## Rules of **Administration**

# Division 30—Division of Facilities Management, Design and Construction Chapter 4—Facility Maintenance and Operation

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## Title 1—OFFICE OF ADMINISTRATION

Division 30—Division of Facilities Management, Design and Construction Chapter 4—Facility Maintenance and Operation

#### 1 CSR 30-4.010 Objectives and Definitions

PURPOSE: This rule states the objectives of these rules and defines terms used in the rules under this chapter pertaining to the maintenance and operation of state-owned facilities.

- (1) The following objectives are covered in the rules under this chapter:
- (A) Establish standards for facility maintenance and operations;
- (B) Establish standards and procedures for maintenance programs;
- (C) Establish standards for physical security and safety programs;
- (D) Establish standards and procedures for maintenance evaluation and assistance; and
- (E) Establish standards and procedures for the procurement of standing maintenance and repair contracts in order to accomplish selected maintenance and repair projects at state facilities.

#### (2) Definitions.

- (A) The definitions, as established in 1 CSR Division 30, will apply to terms used in rules under this chapter.
- (B) Emergency repair. Emergency repair is the work performed to restore service or to prevent impending breakdowns of service or to correct hazardous conditions.
- (C) Maintenance. Maintenance is the systematic day-to-day work necessary to preserve the useful life of buildings, equipment, grounds and other facilities. If the services of a private contractor are used in addition to or in place of the services of in-house personnel for the type of work outlined above, they shall be obtained through the process outlined in Chapter 8 or 34, RSMo Supp. 2007.
- (D) Programmed repair. Programmed repair is the work performed to correct nonemergency deficiencies in accordance with a planned priority. This corrective repair emphasizes restoring the integrity of a facility or system.

AUTHORITY: sections 8.320 and 8.360, RSMo 2000 and subsections 6 and 7 of section 15, 1974 Reorganization Act.\* Original rule filed July 9, 1982, effective Nov. 15, 1982. Amended: Filed Nov. 30, 1993, effective July 10, 1994. Rescinded and readopted: Filed Nov. 5, 2007, effective June 30, 2008.

\*Original authority: 8.320, RSMo 1958, amended 1965 and 8.360, RSMo 1958, amended 1965.

#### 1 CSR 30-4.020 Facility Management

PURPOSE: This rule establishes standards and procedures for management of buildings or facilities under the operational direction of the Division of Facilities Management, Design and Construction.

- (1) General. The purpose of these rules is to provide direction and guidance for facilities operators within state government for asset management of state facilities, including space management and utilization, maintenance, energy conservation, safety and security, and facility records. The rules also include guidance on the operational diagnostics and performance tracking.
- (2) Space Management. Each department shall have enough assigned space to perform their mission. The director shall develop a space management plan in conjunction with the department's space master plan. The plan shall include space standards for employees based on job function. The director shall be responsible for making recommendation to the Office of Administration (OA) commissioner and the department for filling vacant space and acquiring new or additional space based on the forecast included in the space master plan.

#### (3) Energy Conservation.

(A) General. Under the direction of the Division of Facilities Management, Design and Construction each facility shall implement energy conservation programs and initiatives which have the goal of more efficient use of energy and utilities. The program shall include active management, supervision, and tracking in order to assure that energy conservation goals are achieved. Revisions of operational practices and procedures shall be incorporated to obtain revised goals and/or projects as conditions change or new requirements develop.

#### (B) Program Development.

1. New construction or alterations. New construction or alterations to existing facilities shall require that all major elements and systems which consume energy or utilities be evaluated to economically minimize energy use. Requirements shall be established for designers of new facilities or alterations to existing facilities to provide (at a minimum) a summary of the examination and conclusions which established the annual energy consumption, selection of each utility system and each major item of energy consuming equip-

ment. The energy conservation standards and criteria established by the director or the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) in the most current edition or Federal Energy Management Program (FEMP) standards whichever is more stringent and has been established as the energy standards and criteria for Missouri facilities. These standards and criteria shall be utilized in designing and selecting systems and equipment which consume utilities or energy.

#### 2. Existing facilities.

- A. Energy audit. The Division of Facilities Management, Design and Construction should maintain energy information allowing for audits and benchmarking of each facility to determine where and how energy is used. The process should identify if energy usage can be reduced by changes in operating practices, equipment or building systems or physical conditions.
- B. Implementation. Those changes which can be made within current appropriations should be made immediately. Changes which require additional funding, for example, purchase of new equipment, energy saving capital improvements, should be implemented as soon as funds are available. Energy conservation measures shall be implemented which generate cumulative savings equal to their cost within the number of years considered by industry standards to be cost effective.

#### (4) Emergencies.

- (A) Preplanned Response. Preplanned response to emergencies is essential for the safety of personnel and for minimizing property damage. Evacuation plans shall be prepared and posted in prominent locations throughout the facility. A line drawing floor plan of a minimum eight and one-half inches by eleven inches (8 1/2" × 11") size paper shall be prepared for each floor to show evacuation routes. These floor plans, suitably protected, shall be posted in prominent locations throughout the facility. All exits and assembly areas shall be clearly marked.
- (B) Coordination with Local Agencies. Local agencies for fire and police protection and for disaster planning shall be consulted in the development of evacuation or shelter planning. The local agencies will be consulted for their recommended responses for those emergencies. State facilities may be used for shelter in cases of disasters. The use of state facilities for shelter will be coordinated and preplanned in the event other suitable local facilities are not available. Periodic emergency drills (annual at a minimum) shall be held to familiarize personnel with the



evacuation procedures. Each drill shall be evaluated by the agency to determine effectiveness and to make improvements as required.

(C) Damage Control. Preplanned responses for each type of emergency shall include designation of knowledgeable personnel to coordinate actions to minimize or control potential damage. The designated emergency personnel shall closely coordinate with local agencies to develop and provide instructions, directions, and plans to satisfy each emergency condition response.

#### (5) Facility Records.

- (A) General. Each facility shall maintain at the site complete up-to-date as-built drawings, manuals for equipment, warranty information, and service and repair records for each major piece of equipment.
- (B) Drawings. As-built drawings shall be maintained to reflect current status including significant changes resulting from construction or maintenance and repair work. Specifications for drawings shall also be maintained.
- (C) Equipment Manuals and Records. Equipment manuals and manufacturers' literature shall be maintained along with appropriate operational and maintenance logs.
- (D) Control Diagrams. Each separate control system shall have a control diagram identifying the equipment and sequence of operation.
- (E) Warranties. All warranties issued shall be recorded, filed and periodically reviewed by the facility operations personnel. A follow-up procedure shall be developed to review each item covered under warranty after approximately eighty percent (80%) of the warranty period. This inspection is used to determine the condition and performance of the warranted item. Any noted deficiencies shall be reported to the guarantor for correction. Newly completed capitol improvement and maintenance project deficiencies shall be reported through the Division of Facilities Management, Design and Construction for correction. A final warranty inspection shall be scheduled immediately prior to expiration of the warranty period and any noted deficiencies shall be reported for correction.
- (F) Safety Inspections. Fire systems, elevators, backflow preventers, emergency lighting, fire extinguishers, public address systems, as well as other life safety systems are required to be inspected according to all applicable local and state codes and ordinances.

AUTHORITY: sections 8.320 and 8.360, RSMo 2000 and subsections 6 and 7 of section 15, 1974 Reorganization Act.\* Original rule filed July 9, 1982, effective Nov. 15, 1982. Amended: Filed Nov. 30, 1993, effective July 10, 1994. Rescinded and readopted: Filed Nov. 5, 2007, effective June 30, 2008.

\*Original authority: 8.320, RSMo 1958, amended 1965 and 8.360, RSMo 1958, amended 1965.

## 1 CSR 30-4.030 Maintenance Program Standards and Procedures

PURPOSE: This rule establishes standards and procedures to be used in planning maintenance programs.

- (1) General. An effective planned maintenance program provides for maintaining facilities and equipment in a safe and acceptable condition, promotes effective use of facility maintenance personnel, establishes a basis for determining budget requirements and long-range planning and provides a means of evaluating the maintenance effort. The program includes inspections, evaluation of conditions or requirements, or both, establishment of priorities, scheduling, servicing and operation of facility equipment, corrective work and supervisory evaluation of the maintenance effort. Standing maintenance and repair contracts may be used to perform routine maintenance and repair but contracts shall not be used to construct new facilities or to alter the exterior dimensions of existing facilities or make substantial interior alterations.
- (2) Preventative Maintenance. Preventative maintenance, accomplished on a regular schedule, will substantially reduce the scope and cost of corrective maintenance/repair, emergency repairs, downtime and overtime.
- (A) Inspection. Scheduled preventative maintenance for a facility element, system or equipment item shall include inspection of the items to meet or exceed manufacturers' recommendations. The inspection may include, but not be limited to, conditions and appearance of materials, fastenings, seals, drive systems, lubrication or other elements. Deficiencies shall be noted each time an item is serviced. A work order system will be utilized to record work required, work accomplished or conditions, or both, noted for each element. The work order also serves to assure that no element is inadvertently omitted. Remarks shall be included on the work order providing specific information concerning noted problems or deficiencies.

- (B) Minor Repairs. Normally, repair work is not a part of the regular scheduled service. However, when the individual performing the servicing has the supplies and tools available (and the repair can be accomplished quickly) minor repairs can be performed during the scheduled servicing. This repair work should not be undertaken if it will prevent completion of the servicing schedule. A condition requiring maintenance/repair, which is discovered during scheduled servicing, should be reported, so that work required can be evaluated and performed as an emergency repair (if required) or as a programmed maintenance item.
- (C) Procurement. Procurement of materials, equipment and supplies for preventative maintenance shall be a budget expenditure in accordance with the provisions of Chapter 8 or Chapter 34, RSMo Supp. 2007.

#### (3) Programmed Maintenance/Repair.

- (A) General. Programmed maintenance/repair is the work required to correct deficiencies. Emergency maintenance/repair is not included in this definition. Emergency work may include some items previously programmed, but only to the extent necessary to restore service, correct imminent hazards or prevent breakdowns. Because of the urgency, emergency work is expensive. Consequently, the scope of emergency work shall be limited to the items which are necessary to correct the emergency condition. In many instances, this will limit the work to temporary repairs until such time as a permanent solution can be achieved. Completion of any remaining corrective work shall then be programmed to provide the most cost-effective procedure.
- (B) Computerized Maintenance Management System (CMMS). Develop and implement standardized procedures and measurements of preventive maintenance, work orders, supply, inventory, labor time, purchase orders, cost, maintenance and work order history in the daily operations of each facility. This system shall accommodate facility scheduled, unscheduled and emergency needs. This system will be referred to as the CMMS system throughout the text of these rules.
- (C) Inspection. Regular periodic condition assessment inspections of all facility elements and systems are essential for discovery of deficiencies before they deteriorate into major repair requirements. These assessments are to occur on no less than four (4)-year cycles. Reports of deficiencies from facility occupants, or from preventative maintenance inspections, require verification and technically qualified examination to determine the cause and extent of the deficiency.



Additional information may be required to determine corrective action or work, as well as to estimate the cost of materials, equipment and labor for that action or work.

- (D) Repair Versus Replacement. When repairs are estimated to cost more than fifty percent (50%) of the replacement cost of an item or system, the decision for repair or replacement should be supported by an analysis of the total cost of ownership. The total cost of ownership includes installed cost, operational cost, maintenance cost, salvage value and life cycle considerations. The most economical method (repair or replacement) shall be selected for programmed repairs.
- (E) Plans and Specification. All work which involves the facility structural integrity, life safety modifications, or major revisions or major additions of elements in the utility systems shall have plans and specifications prepared under the supervision of a registered architect or registered professional engineer. The professional is required to affix a professional seal to those plans. These plans and specifications shall comply with the requirements, codes and standards listed in 1 CSR 30-3.030. This requirement applies to work performed by in-house personnel, as well as by contract, including work accomplished with funding from operations appropriations or non-appropriated funds. This work will be done after securing competitive bids when required by the provisions of Chapter 8, RSMo and the award of an individual contract. Copies of these plans and specifications, with seal affixed, will be included in the permanent file and facility asbuilt records. Emergency work which involves the facility structure, or major revisions or additions of elements or controls in the utility systems, when time will not permit preparation of plans and specifications, shall be performed under the supervision of a registered architect or registered professional engineer. Emergency work shall be documented and maintained as a part of the asbuilt drawings for the facility.
- (F) Maintenance and repair may be accomplished through the use of in-house personnel, through the use of individual contracts, or through the use of standing maintenance contracts.
- 1. Procurement of any necessary materials, equipment or supplies to be provided by the agency shall be in accordance with the provisions of Chapter 8 or 34, RSMo Supp. 2007.
- 2. Standing alteration and repair contracts may be procured in accordance with the provisions of either Chapter 8 or 34, RSMo Supp. 2007.

- (4) Maintenance Standards.
  - (A) General.
- 1. Facility systems. The Division of Facilities Management, Design and Construction shall provide professional services to maintain assets and assist state entities in meeting their facility needs for the benefit of the public through preventive maintenance and repair of the facility systems. The mission is to provide a superior workplace environment to assure health and safety for state occupants and their visitors and protect the state's investments in property assets.
- 2. Equipment. Each item of facility equipment has a requirement for inspection and servicing after a specific interval of operation. The goal of this servicing shall be to maintain peak equipment efficiency during its expected life cycle to minimize downtime and equipment failure. Equipment preventive maintenance is scheduled and tracked through the Computer Maintenance Management System (CMMS).
- (5) Backlog of Maintenance/Repair. Facility managers are responsible for minimizing the maintenance/repair backlog, through preventative maintenance, conservation and effective use of available resources.
- (A) Operations Budget Items. Minor items in the backlog of maintenance/repair work, which can be accomplished by in-house forces, or with standing maintenance contracts, should be specifically identified and included in the written justification for operational maintenance and repair (OPMR) funding or operations budget.
- (B) Capital Improvement Items. Major items in the backlog of maintenance/repair work shall be specifically identified and included in the written justification for the Capital Improvement Budget and in the Long Range Plan.
- (6) Work Order System. A CMMS system shall be established by the division for assignment of work. The CMMS system should track all aspects of facility maintenance functions.

AUTHORITY: sections 8.320 and 8.360, RSMo 2000 and subsections 6 and 7 of section 15, 1974 Reorganization Act.\* Original rule filed July 9, 1982, effective Nov. 15, 1982. Amended: Filed Nov. 30, 1993, effective July 10, 1994. Rescinded and readopted: Filed Nov. 5, 2007, effective June 30, 2008.

\*Original authority: 8.320, RSMo 1958, amended 1965 and 8.360, RSMo 1958, amended 1965.

## 1 CSR 30-4.040 Facility Safety and Security

PURPOSE: This rule establishes standards for safety and physical security of state-controlled facilities.

- (1) General. The standards in this chapter apply to requirements for facilities and facility equipment. Requirements for or relating to operations of the facility programs are not addressed, except as they affect facility safety and security. References to codes will be interpreted to mean current codes as established herein.
  - (A) Fire Prevention and Protection.
- 1. Coordination with local fire department. Facility managers for each site shall establish liaison with the local fire department. The local fire department shall be invited to make informal inspections and make recommendations for fire prevention and protection. The visits by fire department also provide the opportunity for them to be familiar with the facility and contents, which will enhance the effectiveness of their operation if a fire occurs. The coordination shall also address emergency actions that are appropriate for state employees at the facility, including limitations on actions by these employees.
- 2. Inspections by the Facilities Management Design and Construction (FMDC). Facility managers shall designate one (1) or more persons to make regular scheduled fire prevention inspections. The number of persons designated will depend on the area, the items to be inspected and the interval between inspections. Inspection of fire extinguishers shall be included. Each extinguisher shall have a tag to record date and initials for each inspection. In some locations, these inspections can be incorporated into preventative maintenance schedules. A report of deficiencies noted shall be made to the facility manager and corrective action shall be initiated.
- 3. Installed alarm systems. Installed alarm systems shall be included in preventative inspection and maintenance schedules. Installed alarm systems shall be tested periodically on a regular schedule. The date and results of each test shall be entered into the system maintenance file record. Failure of an alarm system to function properly in a test shall be considered an emergency condition and corrective action shall be taken immediately.
- 4. Fires in adjacent facilities or areas. Emergency planning shall include actions to be taken in the event of fires in adjacent facilities or areas. Liaison to allow notification to



or from occupants in adjacent facilities shall be established. Grounds maintenance shall incorporate measures to minimize potential for trash, grass or brush fires.

- 5. Evacuation plans. In coordination with local fire departments, an evacuation plan shall be established for each facility. The plan shall include routes, exits and assembly areas for occupants. A plan of the exit routes for each floor shall be posted on that floor. Evacuation plans shall include the appointment of one (1) designated employee to ensure evacuation of the area. The plan shall also include designation of fire lanes in drives adjacent to the facility and actions to assure that these lanes remain clear.
- 6. Fire drills. At least once annually, in addition to regular alarm system tests, a fire drill shall be held. All personnel shall be required to evacuate the facility by designated routes to designated assembly areas. One (1) or more employees, as appropriate, shall be designated to assure that fire lanes have been cleared. After each fire drill, the facility manager shall require a report of actions and observations from each person who is assigned a fire emergency task. Reports may be formal or informal and they will be considered in reviewing the effectiveness of the fire drill. After reviewing actions and results of fire drills, the facility manager shall take action and/or make recommendations, as appropriate, to incorporate improvements into the plan.
- (B) Preparedness for Other Emergencies. Similar plans for action in the event of other emergencies shall be prepared. The plans shall be coordinated with local agencies to assure organized efforts by all parties when action is necessary. The plans shall emphasize actions and procedures to promote protection and safety of personnel and to minimize potential damage to property. The plans are to maintain a listing of all current staff that are Federal Emergency Management Agency/State Emergency Management Agency (FEMA)/(SEMA) certified staff members.
- (C) Electrical System Safety. Electric code requirements shall be met for all wiring and electrical equipment on maintenance, renovations or new construction projects.
- 1. Inspections. Preventative inspection and maintenance schedules shall include inspection (and servicing as appropriate) of electric wiring and equipment. Deficiencies noted in capacity or condition of electric wiring or equipment shall be evaluated immediately to determine the potential as imminent hazards. Deficiencies determined to be imminent hazards shall be scheduled for immedi-

ate correction. Other noted deficiencies shall be scheduled by priority.

- 2. Controls. Electrical protection and control equipment shall be secured in locked cabinets or enclosures, with access limited to authorized personnel. Emergency planning shall include actions for appropriate operation of electrical controls. This planning shall be coordinated with local emergency agencies to assure their awareness of these actions for their own operations in an emergency.
- 3. Repairs. Repairs to electrical wiring and equipment shall be accomplished only by experienced personnel following procedures to assure minimum potential hazards. Repairs to electrical wiring or electrical equipment shall be accomplished by using a lockout/tagout procedure with a team of two (2) or more persons. Materials and equipment which are installed during the electrical repairs shall be in accordance with current International Building Code (IBC) electrical codes.
- 4. Lighting. Safety and/or emergency lighting shall provide minimum lighting levels to assure safe movement of personnel. Emergency lighting, including exit lights, shall be included in preventative inspection and maintenance programs, to assure proper functioning in accordance with current IBC electrical codes. Date and result of each test or inspection shall be recorded in the system maintenance record file. Night lighting shall be adequate to provide minimum essential light levels in all corridors or aisles.
  - (D) Facilities and Facility Equipment.
- 1. Floor loads. Floors are designed to carry specific loads. Normally these loads are expressed in terms of concentrated loads (such as file cabinets) on a small area or uniform loads (such as desks) spread over a wider area. Facility managers shall become familiar with the design floor loads and insure that equipment and/or rows of file cabinets or similar heavy loadings do not exceed the designed capacity. When expertise is not available in the department/agency, requests for assistance in establishing floor load capacities may be directed to the Division of Management, Facilities Design Construction.
- 2. Floor and stair finishes. Floor and stair finishes shall be maintained in a safe condition. Selection of floor waxes shall include consideration for skid resistance and stairs shall have nonskid surfaces or strips. Tiles on floors or stairs, stair nosing, nonskid surfaces or strips shall be maintained in a secure uniform surface. In corridors, aisles or stairs, loose, broken or missing tile, stair nosing or nonskid materials shall be considered

- as imminent health and safety hazards and shall be scheduled for immediate correction.
- 3. Equipment, controls and moving elements. Equipment with exposed moving elements or drives shall be in enclosed and/or locked spaces to prevent accidental contact by personnel. High voltage, high amperage and high temperature equipment or controls shall be in locked cabinets and/or spaces with access limited to authorized personnel. Main electrical control equipment, main valves and other utility or equipment controls shall be in locked spaces with access limited to authorized personnel.
- 4. Storage of flammable materials and gases. Storage for flammable materials and gases shall be limited to the minimum quantities, consistent with usage rates and available delivery schedules. Since these materials are especially hazardous to health, safety and property, they will be stored and handled accordingly. Ventilated, secured storage accessible only to authorized personnel shall comply with current codes, standards and Missouri Emergency Response Commission (MERC) reporting requirements. The access to and storage or use of these materials shall be carefully controlled in accordance with current codes and standards.

#### (2) Security.

- (A) General. Security standards indicated in this section are minimal and apply to physical security of facilities. These standards do not address requirements for security personnel or security requirements for functions or activities of the facility occupants, since these are operations responsibilities of the various department/agencies.
- (B) Locks and Access Control. The security of locks within a facility shall be commensurate with the level of need for security of the area or element being secured. All access devices made for locking facilities or facility equipment shall be numbered and identified (in records) with the locking device. Each access device for a facility locking mechanism shall be issued by number to a specific individual and the issue of all access devices shall be recorded in a control register. All personnel leaving employment at the facility shall be required to return all access devices issued for facility locking devices and the returns shall be recorded in the register. A periodic inquiry shall be made to determine the location of all access devices for facility locking devices. If an access device is missing, a determination of need for changing the locks and issuing new keys shall be made.
- (C) After Hours Access. After hours access to every facility shall be limited to an absolute minimum, consistent with

requirements for accomplishing assigned functions or tasks. This access shall be documented.

- (D) Security Lighting. Security lighting shall be designed and used with consideration for minimum effective light levels and energy conservation. Controls for automatic turn-on and turn-off shall be incorporated in all security lighting.
- (E) Coordination with Local Law Enforcement Agency. Coordination shall be established with local law enforcement agencies to enhance the security of all state facilities. Coordination shall include providing names of persons to be notified in case of emergency or breach of physical security and a request for surveillance and/or patrols of the area. Local law enforcement authorities shall be notified of the presence and/or location of items needing a high degree of security and items which may be likely targets for theft and vandalism. Posted signs, for notification in case of emergency, shall list only the telephone number of the local law enforcement or security office. The local law enforcement or security office can then notify personnel who should respond for an emergency. This notification system avoids the danger of an employee being forced to provide entry for unauthorized persons.

AUTHORITY: sections 8.320 and 8.360, RSMo 2000.\* Original rule filed July 9, 1982, effective Nov. 15, 1982. Rescinded and readopted: Filed Nov. 5, 2007, effective June 30, 2008.

\*Original authority: 8.320, RSMo 1958, amended 1965 and 8.360, RSMo 1958, amended 1965.

### 1 CSR 30-4.050 Public Use of State Facilities

(Rescinded November 30, 1998)

AUTHORITY: sections 8.100, 8.320 and 37.005, RSMo 1986. Original rule filed Nov. 16, 1987, effective May 2, 1988. Rescinded and readopted: Filed Aug. 20, 1991, effective Jan. 13, 1992. Rescinded: Filed April 23, 1998, effective Nov. 30, 1998.