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Maintenance Systems

Substantial advances have been made over the past several years in construction materials, paint finishes, and mechanical equipment and components. Many of the products on the market are advertised as maintenance free. These advances have lessened many routine maintenance functions, but they have not eliminated the need to perform routine and preventive maintenance. There is no such thing as a maintenance free building.

Ultimately it is far cheaper to perform routine maintenance and repair of a building than to wait until something is broken to fix it. The cost of the oil, grease or other supplies for regular maintenance is cheap compared to the greater expense of premature major repairs. A properly developed and applied maintenance plan will keep a property attractive for years. Such a plan will prevent many equipment failures and over the long haul lower the operating costs and frustration of both the owner or manager and the tenants of the property.

Each building, even if built from identical plans by the same general contractor as a neighboring building, has a certain inherent uniqueness built into it. Therefore each property calls for a customized approach to its maintenance routines.

The purpose of this section is to assist property owners and managers to develop a *Maintenance Policy and Procedures Manual* that addresses all aspects of their individual building and its systems. This manual is a guide that can be adapted to meet the needs of an individual property. It is a general framework that must be tailored to the requirements of your building, its' owner or manager, the maintenance staff and the tenants. The existing condition of the property will influence the procedures necessary to maintain safe, clean, and decent housing. Requirements for compliance with federal, state, and local codes will vary and policies and procedures must be adapted to meet those mandates.

Proper maintenance requires planning, an organized set of procedures, staff commitment to quality control, and the active support and supervision of the owner/manager. When maintenance is a priority, the result is increased tenant satisfaction, a reduced number of vacancies, less deterioration of the buildings and grounds, and increased value of the property. Proper maintenance can solve many problems before they start. Good planning and a systematic approach to preventive maintenance will keep minor problems from becoming major difficulties.

The purpose of maintenance is to keep the property safe, clean, environmentally pleasing and in good working condition. The physical property includes the actual dwelling units; building common spaces, like hall and storage areas; offices; structural systems of the buildings; mechanical systems of the buildings; and owned appliances, equipment, and vehicles. It also includes the open spaces, grounds and landscap-

ing. It includes walkways and parking areas; owned machinery and tools; playground equipment, swimming pools, and other recreational facilities; and the utility distribution systems.

There are three general types of maintenance service:

- Routine
- Preventive
- Request and Respond

1. **Routine maintenance** consists of activities that are planned for and occur on a scheduled basis.

Routine maintenance corrects problems resulting from continuing wear on the property and equipment, accidents, and abuse. Routine maintenance includes non-emergency repairs to the building, the equipment and the grounds. Examples of routine maintenance repairs are trash removal, snow removal, lawn care, mopping and sweeping, cleaning windows, vacuuming hallways and public areas, and policing the grounds.

2. **Preventive maintenance** is service that is programmed and is designed to avoid serious problems at a later date. It also serves to secure items that are always in repair. Preventive maintenance includes regularly scheduled upkeep on all areas of the property and equipment. It allows staff to handle problems in the

early stages and therefore prevents the necessity for an extensive and expensive solution. It preserves the integrity of the structure, its equipment and the condition of the exterior elements and landscape.

3. **Request and respond maintenance** includes services that are requested by a resident or an employee. Requested maintenance cannot be anticipated, but it can be reduced by a preventive maintenance program. Policies and procedures need to be in place to respond to these requests in a timely and appropriate way.

There are three basic types of requested service:

1. **Regular or Routine** – These include non-emergency services that need to be handled but are not critical to the tenant's quality of life. Regular services might include replacing a broken tile or repairing a drywall crack. A sound guideline would require that these services should be provided within seven days of the request.

2. **Urgent** – URGENT Problems need to be solved quickly but are not life-threatening. Urgent maintenance problems should be addressed and, if possible, repaired within 24 hours. Examples of urgent problems are toilet stoppages, lock changes, leaking roof, interior door and upper story window replacement.

3. **Emergency** - Emergency maintenance is maintenance service that must be handled immediately because health and safety are threatened. Examples of an emergency might be a gas leak, a non-securable exterior door, a broken water line, lack of heat in the winter, or a fire in an apartment.

Maintenance policies and procedures affect personnel, purchasing, service contracts, and budgeting. Maintenance policies should include information that relates to tenant responsibilities including:

- the schedule of charges for tenant neglect or damage to the unit or equipment
- the right of entry clause of the lease
- employee liability
- emergency procedures
- extermination
- preventive maintenance
- modernization
- unit inspection
- building inspection
- trash removal
- compliance with building, zoning, fire safety and housing codes.

Good maintenance includes adequate record keeping that allows the tracking of essential information such as the volume of work, utility consumption and warranties and, consequently, provides the information necessary to make informed, long term decisions about the property.

THE MAINTENANCE PLAN

Planning is the key to a cost effective, efficient, integrated maintenance program. A properly developed plan of operation can extend the useful life of the property. By working together, the owner, the management staff, the maintenance staff and the tenants can succeed in keeping the property in top shape year round. Planning insures that staff is an integral part of the process of decision making and implementation. Planning also eliminates the continuous need for crisis management.

The maintenance plan requires cooperation from everyone involved with providing ongoing maintenance service to the tenants. By working together to identify the aims and objectives of ownership, everyone can develop a vested interest in maintaining the property in optimum condition. Duplication of work can be eliminated. Staff responsible for day to day maintenance can provide insights into problems and possible improvements in service. The manager and the maintenance staff bring a larger perspective that includes organizational goals, owner's philosophy, management plan, and long term objectives. Suggestions from crafts people involved in providing service to the property that can aid in the plan's effectiveness and efficiency.

Aims and Objectives

A maintenance plan should provide a systematic way to maintain the following objectives:

- The plan should include a schedule for all maintenance activities.
- It should establish the criteria to evaluate quality and to control the time and materials used for maintenance.
- The plan should provide guidelines for effective maintenance service.
- A systematic plan for upkeep and repair should be formulated to keep the amount of down time charged to maintenance to a minimum.
- The plan should be developed to keep the maintenance function within the budget allocated to carry out necessary maintenance activities.

Implementation

Once a maintenance plan has been developed, it needs to be implemented and evaluated on a regular basis. The plan should be included in the property's maintenance manual. Drawing on regular meetings between the manager and the building staff, the plan should be regularly reviewed and modified to correct problems and keep it current. The plan should be revised to reflect purchase of new equipment, property improvements and changes in staff.

The following are suggestions that should be included in the creation of a maintenance plan:

- All maintenance activities should be covered by one or more of the three basic maintenance plans:
- Routinely scheduled maintenance.
- Preventive maintenance procedures
- Emergency work requests.

You should establish a system to manage the work of maintenance staff that is performed in response to requests by residents. Each work order should include the total time required to take care of each request for work and the total cost of materials. In order to provide effective maintenance service, the maintenance department should perform specific inspections of the buildings and grounds on a daily, weekly, monthly, quarterly, semi-annual, bi-annual and annual basis.

The Maintenance Manual should contain policies and procedures that ensure the safe, cost-effective operation and maintenance of the buildings, facilities, and equipment. The Maintenance Manual is a reference book that includes the documentation used by the maintenance department to provide routine, preventive and specially requested maintenance. The Maintenance Manual is a resource for the owner, the manager, the maintenance supervisor, and the janitorial staff. It is a guide that is tailored to the needs and requirements of an individual property.

Supporting documents are helpful in maintaining a maintenance program. The documentation included in the Maintenance Manual will provide guidelines for craftsmen, contracts, and others who perform work on the property. It is documentation, not a substitute for a complete building inspection. The building is the standing record. The documentation provides the information needed to insure that the building and grounds remain in optimum condition.

The following documents should be included in the Maintenance Manual and should be used in the preparation of the maintenance plan:

Emergency Information - Emergency information should be easily accessible and posted in the maintenance area. It should include the name of the building; the address of the building; the name and address of the person in charge of the structure; The business and home phone number of the person in charge and or the maintenance supervisor; the telephone numbers of the water department, the gas and electric utility companies, and the police and fire departments.

Original Drawings and Remodeling Drawings - The Maintenance Manual should include architectural diagrams that show the original schematics and any drawings that record subsequent remodeling. The Manual should indicate where the original documents are located. The Manual should include a list of information filed with the state or

local building departments. The name and address of the architect and construction firms that designed or remodeled the building should be included for future reference. Information obtained from these sources should be included in the Maintenance Manual.

Samples - Samples submitted as part of the construction or remodeling process for approval of materials and workmanship should be included in the Manual. If they can not be included in the Manual itself, the location of the samples should be listed.

Bonds - Bonds are a form of guarantee that certain products will be replaced if they fail. Information about bonds should be readily available in the maintenance manual in case a product needs repair or replacement.

Guarantees - Guarantees generally extend for one year from the date of purchase or installation. They are essential during the guarantee period and are also a record of the name of the sub-contractor who did the work.

Consultant Lists - The Maintenance Manual should contain the names, addresses, and telephone numbers of architects or other consultants employed in the course of construction, remodeling, or restoration of the property. This information may be of benefit in preparation of later work.

Quantity Survey - Previous contractors might be willing to provide lists of quantities that were used in preparing their estimates or ordering materials. This information would be useful in dealing with future independent contractors and the reordering of materials that have a limited life, such as paint coatings or gutters.

Easements, Rights Of Way, And Restrictive Covenants - Copies of any special consents that have been given to planning agencies, building departments or other governmental departments, utility companies, and private individuals should be included in the Maintenance Manual. The property also may be subject to special regulations if it is listed in the national register of historic places. If the owner has been the recipient of a grant, the grantor may have imposed certain regulations and controls. Any information that relates to these special regulations should be included in the Maintenance Manual.

Manufacturers' Data - Manufacturers' data or brochures that guide the installation mechanic and give detailed instructions on necessary adjustments of equipment should be included in the Maintenance Manual. These systems include mechanical equipment and devices installed during construction. Typical information might cover electrical components, such as panel boards, motor starters, transformers, and lighting fixtures; heating and cooling equipment such as boilers, stokers, refrigeration compressors and condensers and hot water heaters; and conveying systems, such as elevators, dumb waiters, hoists and cranes.

EMERGENCY MAINTENANCE SERVICES

Overview and Definitions

What is an emergency? Is it a priority? Is it urgent? Is it life threatening? Maintenance that has priority status may not be classified as an emergency. Maintenance that is urgent or a problem that inconveniences tenants or even makes them extremely uncomfortable is not always classified as an emergency. Only conditions that are a threat to life and health are classified as emergency situations that require immediate attention. If there is a gas leak, if an apartment floods, or if the smoke detectors are activated, you must follow emergency procedures.

Not every situation that is reported as an emergency is an emergency. If there is no hot water, tenants will be inconvenienced and even angry, but it is not an emergency. However, it is an emergency if there is no heat when outdoor temperatures are below freezing. You will need to determine which situations are so critical that they must be handled right away and classify them as an emergency situation.

Because an emergency always puts people at risk, procedures to handle the situation must be clearly defined and readily accessible. All maintenance staff must know how to evaluate the severity of a problem and the fastest way to obtain appropriate assistance. If there is danger that a boiler might blow up, if an electrical problem could cause a fire, or if flooding could reach a conduit and cause either fire or electrical shock, then all maintenance personnel must take immediate action.

Staff must be able to telephone quickly for emergency service. It is essential that important phone numbers are listed in the maintenance manual and are conspicuously posted. Phone numbers for the fire department, the gas company, the police, and the municipality's Streets and Sanitation department should all be readily available. All on-site staff should know the exact location of all emergency valves and fire extinguishers.

Procedures to insure the safety of the tenants must be instituted. Staff must be able to evacuate the building if necessary. Residents should be well informed about emergency procedures so they do not endanger themselves or interfere with emergency personnel. Procedures for fire and tornado safety should be posted for residents' information. Fire escapes should be kept in good repair; emergency lighting should be inspected; access to escape routes should be kept clear; and exits should be posted.

As quickly as possible after an emergency is detected, the manager, the maintenance supervisor or the foreman, and the building engineer must be notified of the problem. Management staff must provide emergency phone numbers so they can be located in case of an emergency.

The most important factor in emergency maintenance service is the ability of staff to analyze the problem and determine the emergency procedures that place the people and the property in the least amount of jeopardy for the shortest length of time.

When the emergency is under control, the entire process should be documented. A report should be on file that identifies the problem, explains in detail the sequence of events, and summarizes how the problem was finally resolved. Any damage to the structure or injuries should be included in the report. Insurance companies should be given a detailed report of all property damage immediately following the incident.

The Maintenance Manual is a valuable resource in case of an emergency. It must be available for emergency personnel. The emergency section of the Maintenance Manual should provide maintenance staff everything they need to know to handle an emergency situation on their property. Forms in the emergency section should be duplicated and posted in a prominent place for the maintenance personnel. Maintenance personnel must know where the Maintenance Manual is, what information is in the manual, how to use it in case of an emergency, and how to provide information from the manual to emergency personnel.

Maintenance Overview

Preventive maintenance is a process of identifying and remedying property problems in a systematic way. The objective of a preventive maintenance program is to increase productivity of the staff and lower the maintenance cost of doing business. Preventive maintenance includes regularly scheduled inspections of the plant and equipment to discover conditions that may lead to production or material breakdown. It insures the upkeep of the property by correcting defects while they are still at a minor stage. As a result of periodic inspections of the apartment units, equipment, and the building and grounds, the staff can maintain the property with fewer breakdowns, reduced replacement of equipment, improved service to tenants, and minimization of crises.

Preventive maintenance, which is designed to identify pending problems, is the most important means of reducing maintenance costs. By creating a maintenance system that includes regularly scheduled inspections of the building, grounds and equipment, the staff will become focused on planned maintenance. As a result of this planned maintenance, the life of equipment will be prolonged, grounds kept in top shape, and deterioration of the building avoided. Early detection of a potential problem allows staff enough lead time to correct the situation before it becomes critical. Repair or replacement can be carried out as part of the larger maintenance plan for the

property. Preventive maintenance increases the staff's effectiveness, reduces emergency conditions, and reduces maintenance costs. Preventive maintenance increases the staff's ability to plan work schedules. As each difficulty is identified, the problem is transferred to a work order, and the work is incorporated into the maintenance schedule. Preventive maintenance planning allows the staff to develop long term goals and objectives so that major needs can be remedied in a systematic way. Preventive maintenance reduces the number of requests for repair from tenants, because many problems are corrected before they become major difficulties.

Preventive Maintenance Scheduling

An effective preventive maintenance program starts with a schedule of inspections. Such inspections may be scheduled on a daily, weekly, or monthly basis. Some preventive maintenance activities may be scheduled bimonthly, quarterly, semi-annually or annually.

There are cycles to preventive maintenance. Some of these cycles are seasonal. In landscaping, for example, while it is necessary to check the grounds, pick up litter, and inspect the area daily, lawns are watered as needed. Bushes are pruned and flowers are planted annually.

Inspection of the heating system needs to be done annually. When the heat is turned off, the system needs to be cleaned, drained, inspected, and prepared for the following year. Even though filters are changed monthly during the heating cycle, new filters should be added to the system when it is shut down in anticipation of full start up. A preventive maintenance program keeps all systems ready to operate when they are needed.

Preventive maintenance is an acknowledgment that work must be done on a regular basis to keep the property in optimum condition.

Planning For Preventive Maintenance

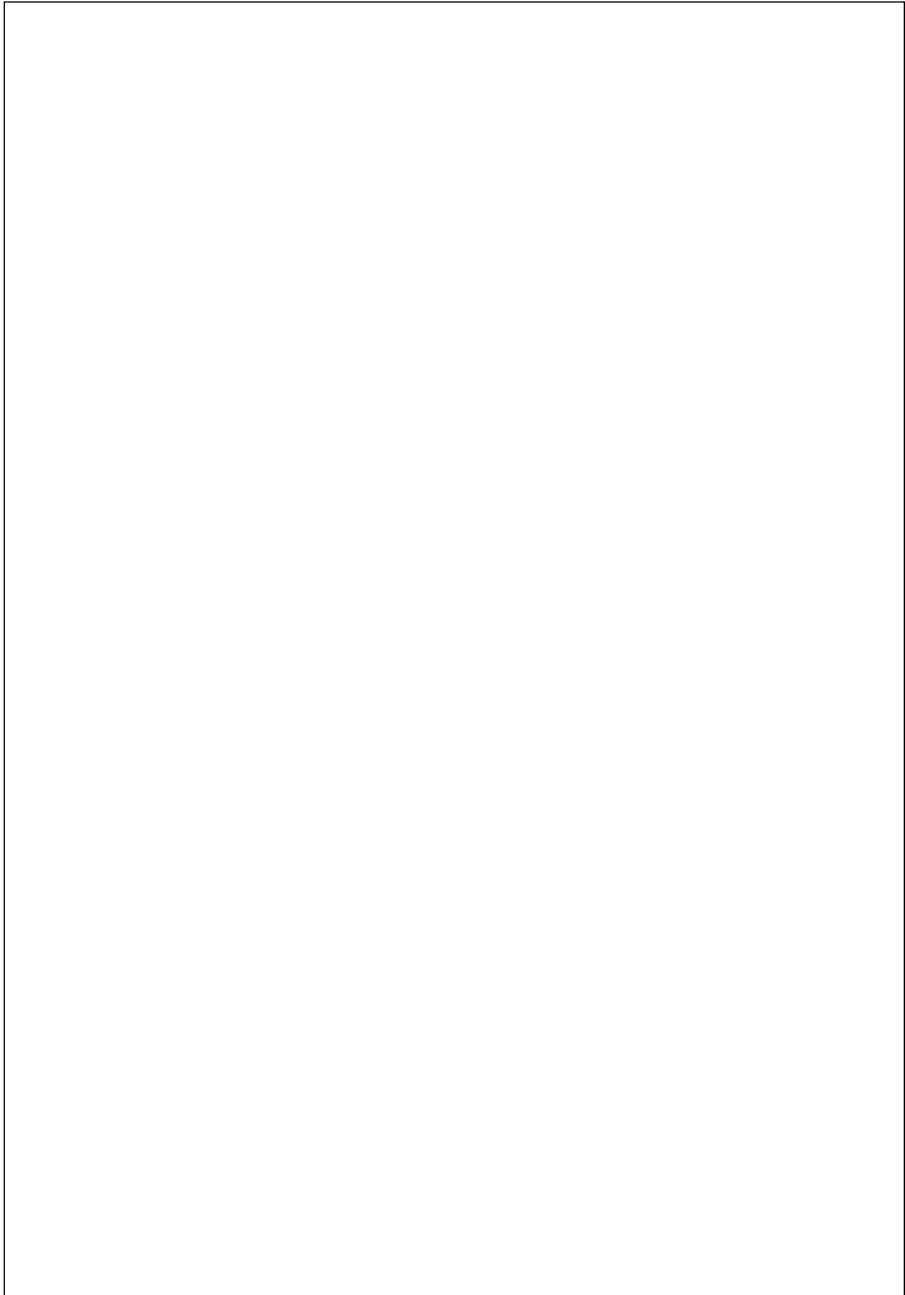
Preventive maintenance requires a long-term commitment from everyone on staff. Putting a preventive maintenance program into effect is extremely labor-intensive. When an owner is making the transition to a preventive maintenance program, the maintenance staff must be actively involved in the planning, implementation, and review of an organized, complete maintenance program.

It is important that all employees who will be part of the preventive maintenance program be part of the planning process. It is essential to bring in the people who do the work. They are aware of the needs and will have many ideas about how the maintenance can be done effectively.

The focus must be on long term development to eliminate as many difficulties as possible over time. Review teams can be developed to do a comprehensive assessment of the building's needs. These review teams should analyze the available data and make recommendations on priorities and on the scope of problems that have been identified. Together, the staff can look at the whole picture and develop a set of short term and long term goals and objectives.

Organizational goals and objectives provide a framework to develop a long term maintenance plan. This plan will incorporate routine and preventive maintenance activities. With this organizational process, preventive maintenance activities will become part of scheduled routine maintenance.

With this proactive maintenance approach, maintenance expenses are minimized. In addition, the preventive maintenance approach increases the life of equipment and efficiency of the staff thereby reducing the operating expenses.



SAMPLE PREVENTIVE MAINTENANCE FORM

MONTH	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Check & Lubricate circulating pumps												
Check Batteries in Hallway Smoke Detectors												
Check Boiler Water Treatment												
Check Emergency Lighting System												
Check Fire Extinguishers												
Check Steam Traps												
Clean Catch Basins												
Clean Dryer Vents												
Clean Gutters & Downspouts												
Clean Light Fixtures												
Clean Radiators check steam vents												
Drain Sediment from Water Heater												
Fertilize Lawn												
Inspect Masonry & Lintels												
Inspect Roofs												
Lubricate Hinges on CA door												
Prune Trees & Shrubs												
Purchase Ice Melt												
Rod Drain Lines												
Service Lawn Equipment												
Service Snow Blower												
Shampoo Hallway Carpet												
Shut off outside sillcocks												
Skim & Drain Boiler												
Strip & Wax Foyers												
Strip & Wax Laundry												
Test & Clean Smoke Detectors/ Replace Batteries												
Touch-up Hallway Paint												
Wash all Hallway Woodwork												
Wash Exterior of Windows												

Routine Maintenance Overview

Routine maintenance is a key factor in an effective strategic maintenance plan. Routine maintenance activities focus on keeping the building and grounds clean and safe. Unlike emergency services that respond to a crisis or preventive maintenance activities that are designed to identify and solve problems, routine maintenance is designed to eliminate problems before they start. Routine maintenance requires the staff to spend a portion of their time consistently maintaining the building and grounds. A plan that includes routine maintenance guarantees that upkeep to the property will be performed on a regular basis.

In a property where routine maintenance is an integrated priority, the grounds and entrances are neat and litter free. Trash is handled promptly and properly to assure a sanitary environment. Common areas are clean and free from safety hazards. A regular extermination program eliminates pests before they can become a problem.

Every property owner wants to have 100 percent occupancy. Recruiting and retaining tenants are major objectives in a property management plan. Tenant satisfaction and tenant occupancy are closely related. An effective routine maintenance plan is a major factor in providing a clean, safe environment that will result in tenants who are eager to renew their leases and who will recommend the property to other potential renters.

Developing A Routine Maintenance Plan

To develop a routine maintenance plan, it is necessary to look at the strategic plan for the maintenance of the property. What are the long term goals and objectives? What are the priorities that need to be addressed immediately? What activities are continuous in nature and can be implemented without waiting to respond to a tenant's request?

To develop a routine maintenance plan, the administrative and maintenance staff must establish criteria for acceptable maintenance service. If a goal is to provide a clean and sanitary environment for the tenants, how will "clean" be evaluated? An inspection can help the staff identify how clean the property is currently kept. Then the staff must find out how clean the management wants the property. There will be budgetary limitations on the time and material that can be devoted to cleaning the building and grounds. The routine maintenance plan ultimately will be a compromise reflecting several different elements:

- The condition of the property;
- The amount of time needed to fulfill current work orders and the preventive maintenance plan;
- The number of staff hours available for routine maintenance;
- The commitment of the management and maintenance staff to keep the property in optimum condition.

The planning group must identify the types of service necessary to achieve organizational maintenance goals. Information from property inspections can help the staff identify what activities need to be done on a regular basis. An analysis of past records may show recurring problems that could be avoided by routine maintenance. Previous documentation can also help the planning group identify what could be done to improve the quality of service based on past performance. Analyzing work orders may show a grouping of related problems. Patterns in work order requests can help the maintenance supervisor and the planning group find what tasks can be done on a regular basis to eliminate recurring difficulties.

There are a number of critical questions that should be considered as a routine maintenance plan is developed. The following are factors in an effective routine maintenance plan:

- What work needs to be done?
- How many units are you serving?
- How many people are available on staff to do the maintenance work?
- What are your staff's strongest qualifications and talents?
- How can each member of the staff help improve the quality of service to the tenants?
- How many personnel hours will be needed to keep the property at an acceptable level?

The routine maintenance plan is based on goals and objectives, the nature of recurring property problems, the availability of personnel, and the priorities determined jointly by the owners, the administrative staff and the maintenance staff. These objectives determine specific jobs that need to be done and how often these tasks need to be performed. The activities must be integrated into daily personnel scheduling so routine maintenance can be accomplished without sacrificing either preventive maintenance or the timely execution of work orders.

Scheduling Routine Maintenance Activities

Routine maintenance activities can be divided into four major areas. Most routine maintenance functions involve trash removal, cleaning common areas, maintaining the grounds area, or extermination of pests. Depending on the nature of the task, routine maintenance jobs may be scheduled on a daily, weekly, monthly, quarterly or seasonal basis. Every property presents an individual set of circumstances, but there are some general guidelines for routine maintenance scheduling.

Trash Removal

Prompt removal of trash and the maintenance of dumpsters and the surrounding area are key factors in keeping the environment clean and sanitary for the tenants. If trash is not removed regularly and if garbage is strewn on the ground, there will be a problem with insects and rodents. Routine maintenance can stop the problem before it starts.

Trash removal should be scheduled at least weekly. The number of units to be maintained and an evaluation of the effectiveness of current garbage removal procedures will determine more frequent scheduling. It may be necessary to modify the trash removal schedule based on the average amount of garbage and the peak times when garbage accumulates. Since many people are not home during the week, there is less garbage produced on a daily basis than during the weekends. Garbage pickup should match the needs of the tenants.

Problems with roaches, mice and rats will be reduced if the trash areas are kept clean and sanitized. Trash receptacles should be hosed down regularly. Both a disinfectant and a deodorizer should be used at least twice a week. In addition, the dumpster area may require more attention during hot weather or at times when the scavenger service is not available.

Recycling trash is becoming an increasingly important priority. Maintenance staff will have to incorporate additional tasks into the routine maintenance schedule to handle separately paper, metal, glass, plastic, and debris from grounds work, such as grass, brush or soil. grounds debris separately. To provide environmentally safe trash removal, cans should be smashed. Newspapers must be bundled. Both glass and plastic should be contained in separate bins.

Because of their detrimental effect on air quality incinerators are no longer an option for disposal of trash or lawn waste. The routine maintenance schedule must insure the appropriate disposal of trash.

Cleaning Common Areas

The lobby, stairwells, hallways, tenant storage areas and elevators are all common areas that may be used by all the tenants. Laundry areas, recreational areas, utility rooms, and storage areas for housekeeping are classified as common areas as well. The condition of the common areas of the buildings is important, and they should be kept as clean as possible. How much of the budget can be allocated for cleaning supplies, equipment and personnel will affect the amount of detail work that can be done to keep the common areas clean.

Some general scheduling guidelines can be followed to insure the common areas are kept clean and inviting to tenants.

Daily

- Sweep and mop all common areas, spot clean, at least, windows and glass in the lobby area.
- Clean laundry room and recreational areas at least once a day.
- Mop elevators and wipe down the elevator cabinet.
- Clean and remove debris from front and back staircases.
- Vacuum heavy traffic areas.
- Special attention should be paid to areas people see on entering the building.

Weekly

- Sweep and mop utility rooms.
- Sweep and mop storage areas.
- Wipe and vacuum vents and registers.
- Hose down trash chutes.
- Clean up interior trash collection areas.
- Dust, wipe and polish Public areas
- Check and clean door closures and polish doorknobs.

Some tasks may be scheduled less frequently but still should be scheduled on a routine basis. Light fixtures need to be dusted and bulbs should be replaced. Floors need to be stripped and waxed. Walls need to be washed.

Grounds Area Maintenance

The condition of the exterior of the building and the maintenance of the grounds are essential components of an organization's routine maintenance plan. Because the exterior of the property is always on display, special effort is needed to assure that the best possible image is projected. Litter and trash must be removed regularly. The grounds should be neat, with well-designed landscaping and properly maintained lawn area.

The grounds maintenance person must visually assess the property early each morning and again in the middle of the afternoon. Litter and trash must be picked up at least once a day. Cleaning the grounds should be scheduled early in the day. Often a second cleaning must be scheduled after school has dismissed and before the tenants' return home from work.

Scheduling of grounds area maintenance is determined by the landscape design, the climate, how specific areas of the property are used and the number of personnel hours that can be invested in grounds maintenance. Beautification of the property means that lawns, trees, shrubbery and garden areas must be maintained. Pruning and fertilizing must be scheduled on a seasonal basis. Grass must be watered and cut to maintain the lawns. Weed control in grass and gardens must be done on a regular basis. Use of pesticides and herbicides must be carefully scheduled so they are applied both economically and effectively. The use of mulching mowers will result in reduced lawn refuse and environmentally safe fertilization of the area. Watering should be scheduled early in the day using soaker hoses to conserve water.

Snow removal will be scheduled during the winter season as needed. Applications of salt or a commercial melting compound should be scheduled to keep the walkways dry and free from ice.

Regular exterior inspections should also be part of the routine maintenance plan. Sidewalks should be visually inspected and hosed down if necessary. Stairs and porches should be checked to make sure they are safely maintained, no damage has weakened them, and foundations are in good condition. Exterior doors should be inspected and wiped off daily. Brass should be cleaned and polished on a regular basis.

Exterior maintenance tasks should be scheduled as frequently as possible. Maintenance activities that improve the look of the building are an investment that should be included in the routine maintenance schedule as often as permitted by budget and staff constraints.

Exterminating

Problems with pests are best handled by scheduling routine maintenance procedures that will reduce or eliminate infestation before it begins. Problems with roaches and rodents are reduced in areas that are kept clean. Trash must be picked up on a regular basis. Dumpsters and trash receptacles must be hosed down frequently. Staff should do visual inspections for roaches.

Housekeeping inspections can help identify problems before they get out of hand. Evidence of chewed wood may indicate a problem with rats or mice. Cleanliness throughout the property will prevent serious problems.

An exterminating company should be scheduled to provide a monthly evaluation of the property. Immediate steps should then be taken to eliminate any problems that are identified. Staff inspections of building and grounds can also identify problems that may need correcting. If an existing problem is critical, the exterminating company must be scheduled as often as necessary to correct it.

A routine extermination schedule should be developed based on past performance and current need. Documentation of frequency of exterminating service, cost, and quality of service will be valuable tools in planning for a pest free environment at a reasonable cost. Evaluation procedures and cost effectiveness will be essential components to determine an appropriate extermination schedule.

Work Orders Overview

Problems will still develop no matter how effective an organization's planning, routine and preventive maintenance procedures and preparation for emergencies. Normal wear and tear, damage done by residents and visitors, and unexpected repairs are part of the demands on any maintenance department. An organization's ability to respond to specific requests for work in a timely way is critical to keep tenants satisfied and to address problems while they are manageable.

All owners/managers need to develop a general policy to handle requests from tenants. A work order system can provide an efficient method for identifying work that needs to be done, categorizing the work, insuring that staff is assigned to handle the problem, and documenting the nature and location of difficulties and the procedures taken to correct them. When a resident calls with a work request, it is the responsibility of the owner/manager to respond to the request in one of three ways:

- An emergency work order.
- A routine work order.
- A preventive maintenance work order.

It is important that the person who takes the request is trained to handle the initial screening. This person must ask the correct questions to give the maintenance personnel adequate information about the problem. If there is an emergency situation, the secretary or dispatcher must transfer the call to the maintenance supervisor immediately. The maintenance supervisor can then make a visual inspection of the situation and decide what is to be done. Emergency work orders should be corrected immediately upon notification. The Department of Housing and Urban Development (HUD) requires that any situation requiring an emergency work order be handled within 24 hours.

If the problem is classified as routine maintenance, the work order should be incorporated into the daily request and respond maintenance plan. Personnel will be assigned to correct the difficulty as part of their regular duties. HUD standards require that routine work orders should be completed in no more than seven days from the date of notification.

Some requests, especially those generated by the maintenance staff, may be written up as preventive maintenance work orders. These work orders will be included in the preventive maintenance scheduling. Scheduling service for equipment would fall into this category.

Often preventive maintenance work orders require special parts and materials to make sure the work can be completed. The building's inventory of supplies should be checked against the work order to be sure everything is in stock. If not, the work order should be tagged and held until the part can be ordered. Once the maintenance supervisor is sure all the equipment and materials are available, the work order is scheduled.

Procedures

Many owners use a three-part work order system. This provides a set of checks to be sure the work is being performed in a timely way and it documents the process. When the secretary or dispatcher is contacted, the work order form is filled out a completely as possible. The more specific the information about the problem, the greater the ability of the staff to correct it without expensive extra effort. If a tenant reports a leak, the dispatcher needs to find out exactly where the leak is, how serious it is, and any damage it may cause.

The work order form is then turned over to the maintenance supervisor. If the problem is minor, the supervisor will keep the original page of the work order and proceed with scheduling the repair. However, it may be necessary to go and inspect the problem. Inventory must be checked and necessary materials should be ordered if they are not available.

When the purchase order is completed, a tentative shipment date should be included. The work order can then be tentatively scheduled based on the expected arrival date of the parts. Since the original work order sheet lists all the parts necessary for the job, it becomes a necessary part of inventory control. A bill of lading will indicate when the parts are in. Stock numbers should be double-checked, and routine or preventive maintenance should be scheduled. If the situation is an emergency, the part must be secured the same day so work can be completed as quickly as possible.

The second and third sheets of the work order go to the maintenance worker when the work is assigned. When the task is complete, the maintenance worker documents what was done; the date and time of the work; and any parts that were used. He or she then signs the completed work order and has the tenant sign as well. One copy of the work order should be left with the tenant for their records.

After sign-off, the maintenance person should enter the information on a daily log or report sheet. This daily log documents the work assigned, how much time it took to fix it, any problems encountered, and whether the tenant was home during the work. This recap sheet should coincide with the second sheet of the work orders. At the end of the day the recap sheets are reviewed by the maintenance supervisors. The maintenance supervisor should then approve and sign the recap sheet.

These logs enable the supervisor to evaluate the work being done and judge how many hours of staff time will be needed. The daily documentation is a valuable tool to identify patterns of work that should be incorporated into the preventive maintenance plan.

The signed copy of the completed work order should be returned to the maintenance supervisor. Signed work orders are recorded in the maintenance supervisor's log of completed work orders. This log should be reviewed weekly. The completed work order that has been signed by the tenant and the maintenance staff person should be filed in the apartment file.

Utilizing the Documentation

The work order system provides a wealth of information about the state of the property. Work orders in the apartment file insure that as much information on the unit as possible is available for a unit or housekeeping inspections. It is possible to do a complete assessment of the property simply by examining the unit files. The work orders will show categories of work that have been done in all areas of the building over a period of time. This will help the maintenance supervisor and the manager determine where major problems may exist. This information can be incorporated into the preventive maintenance plan and the source of the problem can be rectified.

The work orders system also provides an overview of the way personnel is being utilized. The work orders can indicate how the maintenance supervisor controls the work. By looking at the staff assignments, the amount of time personnel is spending performing each task, and the number of repeat complains, work orders can be part of a review of job responsibilities and performance.

The maintenance supervisor is responsible for making the work order system a functional management tool. When the work order system is used properly, it can help the agency provide service to tenants and assure the property is kept in optimum shape at the least expense. It becomes an organizing tool so the work flows smoothly. Consistent daily review of work orders keeps the maintenance supervisor in touch with the current condition of the buildings. The maintenance supervisor should occasionally inspect work after it has been completed on a random basis. This becomes a technique for quality control and it provides assurance that the work is being done correctly and as listed.

Owners who use a work order system for request and respond are building a maintenance team that works in partnership with the tenants to keep the property in good condition. The maintenance supervisor is only one part of the team. The work orders can help the entire maintenance staff focus on providing quality service while remaining accountable for their own performance.

Janitorial Overview

In addition to emergency, routine and preventive maintenance, the maintenance department has primary responsibility for housekeeping services and janitorial activities. To be effective, the maintenance department needs to assess the tasks that need to be done, the frequency of task performance, and the amount of time necessary to complete each task. Using this assessment, the maintenance supervisor can plan staff assignments to assure the buildings are maintained properly with the most effective use of personnel.

There are three basic procedures to be followed for effective janitorial service. They include monitoring the high traffic areas, performing routine housekeeping service and periodic maintenance.

Monitoring

Monitoring the condition of the building's common areas must be done regularly throughout the day and evening. The common areas are highly visible, and an organization is judged on the condition of these areas. Common areas also receive the greatest wear and tear and are the most likely to look dirty and illkept. Beginning early in the morning, the common areas need to be checked and tidied up during and after each high traffic period. All trash and litter need to be removed immediately. Spills need to be cleaned up as quickly as possible to prevent danger of slips or falls.

Surface soil needs to be removed to prevent stains from becoming imbedded in the surface. When the janitorial staff pays close attention to detail as part of their frequent monitoring of the common areas, the public sees the best possible view of your property.

Routine Housekeeping Service

The janitorial staff is responsible for the day to day housekeeping services. Regular upkeep of the building is a critical requirement for a well-maintained property. Housekeeping requires frequent brushing, sweeping, mopping, vacuuming, washing and polishing. A schedule to assure that areas are kept clean on a daily basis should be part of the routine maintenance program. The cleaning procedures the amount of staff time required for each area will depend on the frequency of use, the type of use it gets, and the material to be cleaned.

As the janitorial staff executes basic housekeeping tasks throughout the building, they are ideally situated to identify and correct minor maintenance problems. The more quickly problems can be identified and solved, the less likely they are to become expensive and difficult to fix. Part of the janitorial reporting system needs to include a procedure so work orders can be generated from problems identified during housekeeping procedures.

Periodic Cleaning

The janitorial staff is responsible for intensive cleaning procedures that are done on a periodic basis. The periodic cleaning is designed to remove accumulations of dirt and grime that are not generally removable during the frequent, ordinary methods of housekeeping. Periodic cleaning may use wet or dry methods depending on the surface to be cleaned. Periodic cleaning may include shampooing carpeting, stripping and waxing floors, and scrubbing walls and woodwork. These specialized cleaning procedures require careful attention to be sure that correct procedures are used.

Inspection Overview

An organization's management and preventive maintenance plans are designed to assure that tenants have a safe and sanitary environment and that the property is properly maintained. The only way to evaluate the condition of the property is to perform intensive inspections on a regular basis. Inspections should be based on the organization's goals and objectives and may focus on different aspects of the property. To insure thoroughness, a series of inspections may be done concentrating on structural conditions, plumbing, heating, grounds, and housekeeping. In addition, unit inspections may be necessary to look for fire hazards, repairs that need to be done, condition of appliances, and pest control.

Inspections should begin with a look at the property as a whole. Are the grounds and the facade neat and well maintained? Does the entrance project a welcoming atmosphere? Does the overall picture convey the image you want projected about your organization?

Grounds

Check the sidewalks, walkways and stairs for cracks and buckling. Driveways should be checked for cracks, buckling, oil spots and leaks of transmission fluid or antifreeze that need to be cleaned up. Blacktop should not show cracking. The Inspection sheet should indicate if blacktop needs to be redressed.

Check grass for brown or yellow spots. Review records of how often the lawn has been mowed and watered. List the dates that trees and shrubs have been fertilized and pruned. Make sure branches are not tangled into telephone or electrical wires and are not resting on the roof or in the gutters. Make sure shrubs are not growing wild. Be sure the branches are not a hazard for people who walk by them. Examine the bark and leaves of trees to make sure they are not diseased.

Fences

Fences should be erect and standing strong. Be sure there is no damage. No wires should be protruding. Look for sagging boards, paint deterioration, or dry rot on posts. Gates should latch properly. Hinges should be properly aligned. Adjustments should be made as needed. Refer problems to preventive maintenance program by filling out the appropriate work orders.

Playground Facility

Swings and park benches must be aligned properly. Check swings to make sure they are secure. The distance between swings should be adequate to keep children from bumping into each other. Slides should be solid. Sand or wood chips should be thick enough under the equipment to cushion a child's fall. Be sure equipment meets legal codes. Be sure to look for any damage that might injure children. Look for spaces where a small child could slip through or get caught.

External Security

Security of the building and grounds area should be reviewed quarterly. Check the external building perimeter security lighting. Be sure there are no bulbs that need replacing. Globes should be clean, and lighting fixtures should be free from bird nests and other debris. Be sure the back-up system is in working order to assure illumination of the property in case of power failure.

Be sure the managing agent's name and address are clearly identified near the entrance of the property. Residents' addresses should be available to police or fire department personnel. Check security procedures to assure that residents can be contacted without putting them in jeopardy.

Exterior Building Inspection

The exterior structural inspection should begin at the roof and work to the foundation. The inspection team should always look for things that are not as they should be. An inspection checklist will help personnel conduct the inspection in a systematic way, so that nothing is overlooked. The inspection checklist provides a dated record of the condition of the property. The checklist should have a place to include comments so the problem, its location, the severity of the difficulty and possible solution can be noted. Work orders are generated from the problems that are identified and then transferred to either the routine or preventive maintenance schedule.

When examining the roof, look for signs of structural deterioration, especially around the joints, the flashing and the gutters. If the roof is flat, look for cracks, blisters, holes, wrinkles, loose gravel or ponding (when the water sits in a depression). All can be indications of problems. If you have a shingled roof, look for loose shingles, joints and valley flashings. Leaks in the roof can cause tremendous damage if not taken care of in time. Cracks or blisters can allow water to cause dry rot. Wet insulation indicates that the roof is not water-tight. Holes can admit animals and should be corrected immediately.

Check vent pipes from the plumbing system. Be sure the seals around the pipes are tight and undamaged. Drain pipes should be tested to see if they are working properly and draining the roof as designed. Make

sure the foundation of the chimney is solid. Check to see if there are loose bricks that could fall back down the chimney. The flashing should be solidly sealed and tightly adjoined to the chimney so the water doesn't leak in. The chimney liner should be checked for soot. Chimneys should be inspected by a chimney sweep on a regular basis to be sure the inside is solid and not accumulating residue from the heating process.

Make sure the gutters and downspouts are in good shape. Is paint peeling? Are they rusty? Are there foreign objects blocking the gutters? Run a hose to see if the water is moving to the downspouts. Adjust the gutters so there is no free standing water. It is important to keep the gutters clean. Birds nesting in the gutters can be a real problem. Keeping the gutters clean will discourage pigeons. Look at the condition of the eaves and soffits.

Is there dry rot? What is the condition of the paint? How long has it been since the soffits, eaves and fascia were painted?

When you have thoroughly examined the roof, look at the condition of the siding. Is it wood or vinyl? Are there cracks in the siding? Even small cracks can leak air and increase the heating bills. Water can follow the cracks into the walls and cause extensive damage. Examine the condition of tuckpointing on brick buildings. Look for peeling paint. Cracks and splits in the paint indicate the area was not properly prepared before painting.

Are porches and balconies properly lined up or are they sagging? Are banisters in good shape? Are they smooth or splintered? Are they firmly bolted to the wall? Porch railings need to be firm, and the distance between the slats should be so narrow a child cannot get them. The team needs to identify broken joints or damage that could cause continuing deterioration.

As the inspection team is scrutinizing the building, it is also important to see how well things work. Doors should close properly without interference. Striker plates, hinges, and door closure should be properly aligned. The closure and crash bar hardware of exterior doors needs to be in proper condition to adhere to safety regulations and fire codes. The inspection team must be sure that doors can not become a trap in an emergency. Check the windows for weather-stripping and caulking. Are any panes missing or broken? Doors should be checked for warping, and weather-stripping and caulking should be inspected as well.

Examine the foundation for crumbling in the concrete. Look for wet spots and leaks that could be causing internal structural damage. Make sure there are no holes that can admit pests. Look for cracks and missing mortar. If cracks have been repaired, make sure the repair work is still smooth, even and tight to the foundation material. If the foundation is brick, do a visual inspection to make sure it is level and that the mortar is in good shape.

If you have a maintenance area that falls outside the expertise of your staff, consider hiring a qualified expert to do the inspection. Tuckpointing, chimney inspection, and roofing may be areas that are beyond your staff's capacity. Develop a request for proposals for the service you want. Put the RFP out for bid. Contact at least three companies to find out the cost for a thorough inspection. After the bids are in, bring in the company that has submitted the best offer. After the inspection is complete, the company should submit a written report on their findings, what must be done to correct the problem, and any additional problems that may have been discovered during the inspection.

Interior Inspections

Once you have completed the external inspection, an initial structural inspection will lay the groundwork for the inspections of the electrical, plumbing, and heating systems. Begin in the basement. Look for cracks on the inside of the foundation. Does any inside wall show signs of splitting wood or termites? Look for signs of dry rot? Are the joists straight or are they sagging. Are there water stains or signs of rust that may indicate water damage? Check the floors for cracks or splitting. Floor drains should be clean and clear of debris. The ceiling should be inspected to identify damage resulting from problems with the foundation.

Stairs should not sag or have missing or loose treads. Do the steps OR woodwork need to be painted? Are the stairs worn and slippery? Do they need to be repaired or replaced? Handrails should be in place and firmly bolted to the wall at a comfortable height. Check the walls of the stairwell for cracks, buckling, dirt, or peeling paint. Check landings as well. Be sure the smoke detectors have been inspected once a month.

As you proceed from one floor to the next, the basic inspection sequence remains the same. Always look at the walls for peeling paint, abuse, water stains, and wall damage. Ceilings should be checked for cracks and water damage.

Floors require special consideration because of the diversity of floor types and coverings. Carpets should be neither worn nor torn. Look critically to see if they need repair or replacement. Look for dirt that is ground into the carpet or for stains. Check for the smell of mildew. Make sure the carpet is solidly attached to the floor and not pulling away from the floor or the walls. Note wrinkles or bubbles and write a work order immediately so no one will trip. Hazards must be handled as soon as they are identified to eliminate trips, falls and sprains.

Tile should be tight to the floor. Are the floors clean and shining? Look at the building records to identify when the floor was last stripped and refinished. Hard surface floors such as masonry, magnesite, marble, quarry tile, or slate should be well maintained and free from chipping or

cracks in the mortar. If the surface is dull, the floor might need to be resurfaced. Check records for the most recent maintenance. If it has not been done recently, find out why.

Hardwood floors should not squeak. Squeaks can be repaired by nailing the floor to the subfloor or putting a shim between the joist and the subfloor to take up the slack. Is the floor in need of stripping? Is it marred from furniture or traffic? If so, the floor should be stripped, repaired and refinished. Smoothing the hard surface will take care of the problem. The floor then must be re-sanded, sealed and finished.

During the inspection, all doors should be examined for the condition of the hardware. Hinges should be properly aligned. The right hardware should be used in the right location. Locks should work freely and doors should not stick. Be sure each door is aligned so the strike plate and tumbler are properly positioned. The mortise lock sets on exterior doors are the security locks. They should be checked most frequently.

Electrical Inspection

Inspect all the duplex receptacles. Make sure the faceplate covers the receptacle. Take the plate off and inspect the wires with a flashlight to be sure they are properly attached and grounded. Visually inspect light fixtures to make sure there is no water or stain in the globes. Be sure light fixtures are hanging properly and are firmly attached to the ceiling.

In the basement, the circuit breaker distribution panel box should be checked. Be sure that everything on the panel door is properly identified. Fuses should be removed and inspected, and extra fuses should be available. Insure the circuit breakers are all locked in properly. Flip all the switches and flip back in position. Note if there is any repair work that has to be done. If any electrical work must be done, be sure to hang a highly visible sign on the circuit breaker box to be sure no one tampers with it while the electricity should be off. Complete the electrical inspection by looking for hanging or frayed wires and by checking the electrical conduit to be sure it is in good condition.

Plumbing

Water Supply System

Inspect the system for water leaks. The valve on the riser that distributes the water throughout the building should not show any evidence of leaking. Visually check the piping to the boiler and to the hot water tank. Check the valves for leaks. Make sure there is no dripping water.

It is only necessary make a visual inspection of the water tank and the boiler system during the structural inspection. The hot water tank should be clean and dry. Check to make sure there are no leaks under the tank. Check the temperature pressure relief valve to be sure it is not rusted. Check on the tank is to see when it was last drained and when thorough preventive maintenance was done. Be sure there are no gas leaks from gas fired hot water tanks.

Electrical hot water tanks should be checked to be sure the ignition control is working properly and the wiring is in good shape. Heating elements are checked during the preventive maintenance procedures. Check the piping to be sure it is properly lined up. Piping should never be forced or bent to make it fit.

On each floor, check bathrooms, storage areas, and public interior areas. Apartment inspections should also focus on identifying plumbing problems. Check all toilets. Flush to make sure running properly. Be sure the unit is properly aligned to floor. Tank top toilets and flush o meter toilets should cycle properly. Look at sinks, vanity, and tubs. Check for leaks in handles, spouts, foundations, piping or the P-trap. Look for wet spots, water damage, or water stains. Check for excessive rust. Check the valves for hot and cold water lines. Be sure there is no leaking. Sinks and tubs should be properly caulked. The appliance should be attached to wall firmly and without wobbles.

Sanitary Drainage and Vent Piping System

The sanitary drainage system carries waste away from toilets and other fixtures. It is connected with the main building drain that leads to the sewer. The system must be inspected once a year to assure proper drainage. The inspection should identify clogged lines, water leaks and other plumbing problems.

The vent system is designed to eliminate sewer gas and to prevent pressure build up in the pipes. Each plumbing fixture in the building must be vented. Inspect the vent lines to be sure they are not clogged.

Heat Ventilation and Air Conditioning

Boilers

Boiler inspections should be an ongoing process. During the heating season, inspections should be done daily and properly documented. Routine inspections include checking the water gauge level, the relief valve and the thermostat. The relief valve should be tested weekly. For preventive maintenance, document latest unit blow down in order to prevent rust and corrosion.

Boiler ignition systems differ, depending on whether the unit is operated by steam or hot water. If you have a steam system, find out if it was balanced and how long ago. If the property has a hot water heating system, check the circulating pump. Look at the ports to be sure that each one is not rusted and that the flame is blue rather than yellow to be sure there is the correct mixture of gas and air. Document when the systems were inspected, serviced, and tested with a voltage meter.

Unit Furnace System

If the building is heated by individual forced air furnace systems, the first items to be checked are the motor and the motor belt. Examine the

thermal couples and look at relay systems. Are the filters clean? Are the filters being changed every thirty days according to the date stamped on the filter? Document all inspections and repair as part of preventive maintenance.

When checking individual unit thermostats, take off the face cover. Check the calibration. Manually check that the thermostat will turn the unit on. A torpedo level can be used to measure the balance of the thermostat. Be sure to remove any dust and dirt. All radiator valves should be checked to be sure they are not leaking and that they are functioning properly. Check the preventive maintenance scheduling to find out when system was bled. Vents should be examined to make sure they are properly attached to the wall and free of holes, rust, soot, dirt and dust.

Air Conditioning

There are two basic systems for providing air-conditioning:

- central air or
- window and sleeve units.

Central Air

For central air conditioning system, the compressor, the motor and the fan should be checked. Check the on and off switch for correct wiring. Look at the records to find when preventive maintenance was done. When was the compressor last serviced? Was freon put in? Look at the seal. Check the preventive maintenance schedule for the central air conditioning system.

Window or Sleeve Units

For wall unit air conditioners, the compressor, the fan, and the pulley belt should be examined. Be sure enough filters and pulley belts are on hand in inventory.

Laundry Rooms

Laundry rooms should be checked for damage to the walls, ceiling and floor. Check the ductwork to be sure it is not filled with lint. Is the room well lit? Are all the lighting fixtures working properly? Is the room clean? Are there leaks under the utility tubs or around any of the washing machines? Regularly inspect washers and dryers. Examine the ignition system on the dryers and be sure there are no gas leaks. Be sure there is no dust and dirt around ignition system or vents. Refer to preventive maintenance documentation to make sure all appliances have been properly serviced.

Electrical Power Room

Check the cards on the power banks. Be sure there are no water stains or signs of leakage, which could cause electrical shorts and fires. Review the check sheets on each electrical power panel to be sure they have been examined regularly by the electric company. Check for cleanliness and proper lighting.

Fire Alarm and Sprinkler System.

Check the sprinkler system on a regularly scheduled basis. Test the fire alarm system quarterly. Review the preventive maintenance records.

Elevator Rooms

Elevators should be checked at each level. Look carefully at the elevator doors. How well are they aligned? Is there any warping? Do the doors close properly? Is the finish hardware in good shape? Check the motor. Determine when the relay system, motor, and microprocessor were last serviced. An elevator service log should be prominently displayed in the elevator room listing dates of service. Make sure the elevator room and the elevator pit are clean, dry and well lit. Check to see when the sump pump was inspected and serviced.

The elevator should be running smoothly, with even stops. All lights should be working. All floor buttons should be lit. Fans should be working. Alarm systems should be working properly. The elevator car should be clean. Telephones should be in working order in case the elevator gets stuck. Be sure emergency procedures are posted in case someone does get stuck in the elevator. There should be an emergency elevator key with the maintenance department and in the management office.

Inventory and Purchasing

Inventory

An inventory is the record of the furniture, supplies, and equipment of the company. Keeping a well-managed inventory allows an agency to identify and catalog its stock. It provides a method to control purchasing and encourages rapid turnover of supplies to maintain quality. Every agency should have a master inventory list that includes all the furniture, equipment, supplies, and appliances on site. Organize the master list by specific departments for clarity of analysis. It provides the documentation necessary for insurance purposes. While inventory control is the baseline used to assess cost efficiency, it is also a necessary tool for budget preparation.

The maintenance department needs a manageable system to identify items and quantities purchased and the frequency of each item's use. A running inventory can allow the maintenance supervisor to easily evaluate how supplies and equipment are being used and assure that purchasing is coordinated with current stock and available on a timely basis when work is requested.

It is important to establish an orderly storage system for the large and diverse quantity of supplies needed for proper routine, preventive and emergency maintenance. Items that are inventoried should be clearly labeled. Emergency, routine and preventive maintenance materials

should be coded with an initial indicating its category and use. In addition, the label should include the identification assigned at the time of the original purchase and an indication if it is to be used for housekeeping or maintenance. This identification number should be listed on the purchase order.

Inventoried items should be maintained in a proper storage area or stock room. The room should be secure, and one person should distribute the materials. Even in a small operation, one person should be in charge of stock to insure control and documentation of use. Label shelves by item and category. Once an item is taken off the shelf, put it on a work order to show where it was used and who used it. The stock clerk should compile the daily inventory from the work orders for the day. It is important that someone check what has been taken off the shelves. If supplies are not used up in one application, the work orders will indicate where they are being stored.

The maintenance supervisor should check the inventory daily. The running inventory sheet should be cross-referenced against the work orders for the final inventory sheet for the week. This allows the maintenance supervisor and the manager to track what stock that is being removed from storage and what must be replaced. This running inventory sheet is an important tool to be used in preparing purchase orders in a timely and cost-effective way.

Purchasing

Purchasing supplies and equipment for cleaning and maintaining the property is the responsibility of the maintenance supervisor. It is essential that supplies are purchased in a timely way so there is no lag caused by lack of materials. Purchasing decisions should be based on acquiring products of adequate quality for the lowest possible price. The purchasing process should begin with a list of trustworthy vendors. Old purchasing lists, former vendors, information from hardware or vendor shows, and recommendations from other professionals provide places to start. Send appropriate vendors a cover letter and an initial specification sheet. This information should include exactly what service or materials you want. Add any clarification that will help the vendor identify your situation and requirements. The vendors will return a written bid for the product or service you are soliciting. It is a good idea to get at least three bids to be sure you are getting the best quality for the best price. You may want to talk to the three lowest bidders to be sure that you are getting the quality you want. Ask questions to find out if the purchase will be economical in the long run. Have it demonstrated if necessary. Be sure to find out if a service contract is necessary.

Once a decision is made, a purchase order must be filled out to document the purchase. The purchase order should have an identification number, the company name and address, and the contact person you have been working with. It should also include a description of the purchase, its use and the apartment being charged. The completed purchase order should go to the property manager, who should countersign as part of the checks and balances. In any purchase order system, numbered purchase order forms should be used. The maintenance supervisor should retain one copy for maintenance records, the property manager should retain one copy for accounts payable, and one copy should be filed in a purchase order file by number and month.

Quality Control

It is always essential to attempt to buy the best product at the best price on the market. That requires research and careful decision making. Buying quality means buying the best product for the money. Ultimately the choice must be based on a balance of price against length and quality of service from the purchase.

Quality control also requires documentation. A computer program, or a ledger can be utilized to keep track of purchases. Often the accountant keeps a copy of the lists of purchase dates and amounts. Products that are purchased directly must be backed up with receipts. These purchases are logged immediately upon purchase. Whenever possible it is more efficient to purchase in larger amounts based on projected need rather than directly purchasing items to complete a job.

Here are some hints to keep control of the content and quality of the organization's inventory.

- Prominently engrave or stamp tools for identification and to reduce the temptation to remove them from the premises.
- Periodically review inventory to be sure stockroom is not full of materials that are not going to be used.
- Check expiration dates to be sure that products are current and effective.
- Do not over purchase.
- Inspect each product to see how well it works. The maintenance supervisor should document staff reaction to the product and the positives and negatives to facilitate future purchases.

