



***Maintenance Series Handbook  
MS-10***

***Floors, Care and Maintenance***

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### **PREFACE**

This handbook on floor care and maintenance applies to all facilities occupied by the United States Postal Service (USPS) where USPS is responsible for cleaning and maintenance.

This handbook provides guidance for installation heads, postmasters, station managers, maintenance managers and others responsible for the care and maintenance of floors.

All employees engaged in the maintenance or cleaning of floors are required to be familiar with the contents of this manual.

These procedures must be followed in order to prolong the life of our floors while obtaining the required level of appearance.

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# SECTION 1

## INTRODUCTION

### 1.1 SCOPE OF THIS HANDBOOK

The scope of this handbook is to provide direction on proper floor care and maintenance in Postal Facilities. This manual should be supplemented with manufacture's recommendations on specific equipment and products. The Senior Postal Official (SPO) is responsible for following the procedures and policies in this manual at each individual site.

### 1.2 PURPOSE

The following are standard safety precautions that do not appear elsewhere in this handbook except where special emphasis or precaution is required. Personnel working on floor care must understand and apply these precautions in all phases of maintenance.

Safety is the responsibility of every individual in the U.S. Postal Service. The supervisor is responsible for instructing personnel in safety practices applicable to the operation and maintenance of the equipment. Likewise, it is the responsibility of each individual operating and maintaining any equipment, products, and/or processes to understand and observe established safety standards and procedures. U.S. Postal Service Handbook EL- 803, Maintenance Employee's Guide to Safety, can be viewed on <http://blue.usps.gov> or ordered from the Material Distribution Center (MDC).

### 1.3 SAFETY STATEMENT

To ensure the safety of all employees and customers, Floor Care activities shall follow organizational practices as outlined in [Maintenance Employee's Guide To Safety, EL-803](#) and other related documents. Employees must complete training on safety procedures and Personal Protective Equipment (PPE) associated with hazards to which they are exposed. Some cleaning procedures require handling hazardous material(s) (including Blood Borne Pathogens), environmentally sensitive material(s), climbing on ladders, and/or using personnel lifting equipment. Personnel must refer to the current Safety Data Sheet (SDS) handling requirements for all hazardous or environmentally sensitive material used when performing any tasks. Personnel must observe all SDS warnings, use PPE as directed, and use appropriate safety harnesses on ladders or personnel lifting equipment when required.

### 1.4 SUSTAINABILITY STATEMENT

The Postal Service is committed to minimizing our environmental footprint in ways that are sustainable to our business and the customers we serve. The Postal Service complies with all applicable federal, state, and local environmental laws and regulations seeking to develop sustainable solutions for a safe and healthful working environment.

### 1.5 ELECTRICAL FIRE

Refer to MS-56 Fire Prevention and Control.

### 1.6 RESPONSIBILITIES

#### 1.6.1 6S

Every employee shares responsibility for good housekeeping, the proper disposal of trash, and maintaining a safe and healthful working environment in accordance with the continuous improvement 6S philosophy. The 6S program focuses on organizational cleanliness and standardization to improve profitability, efficiency, and safety by reducing waste of all types. It provides five keys to a total-quality environment (Table 1-1).

**Table 1-1. 6S: A visual control system for the workplace**

Sort	Eliminate unnecessary items and whatever is not required
Straighten	Arrange workplace in such a way that work flows smoothly, free of waste.
Systematic Cleaning	Clean workspace and all equipment.
Standardize	Ensure uniform setups throughout the operation to promote interchangeability.
Sustain	Maintain effective and efficient conditions without falling back into less productive work conditions.
Safety	Ensure each employee establishes a work ethos of following all safety guidelines. Employee Safety, Welfare, and Well-Being are a primary USPS goal.

Employees of each work area are responsible for the proper disposal of trash and recyclable materials such as plastic straps, labels, rubber bands, food waste, paper, and cardboard. Every employee must assume responsibility for disposal or recycling excess material produced by his or her work activities. Employees must place waste material in the proper containers.

### 1.7 HEADQUARTERS

USPS Headquarters develops and manages the national implementation of policies affecting the floor care and the cleanliness of postal facilities.

### 1.7.1 Headquarters Maintenance

Headquarters (HQ) Maintenance Operations is responsible for establishing and managing national policy affecting custodial operations. HQ Maintenance Operations evaluates the effectiveness of field custodial operations and monitors technological advances and improvements that may further improve these policies. Headquarters Maintenance Operations inspects and reviews field operations to verify cleaning policies in accordance with schedules established by the most current Maintenance Management Orders (MMO). HQ Maintenance Operations is responsible to:

Maintain, update, and revise national team cleaning methodology and administrative procedures.

Manage the Custodial Standardization Change Control Board (CSCCB).

Coordinate custodial training development and delivery.

Select Products and Tools used in the care and maintenance of floors.

### 1.7.2 Custodial Standardization Change Control Board (CSCCB)

The processes, tools, equipment, and chemicals used to support team cleaning are controlled, and cannot be changed, without approval from the CSCCB. This committee established by HQ Maintenance Operations receives, evaluates, and approves or denies each Custodial Change Request (CCR).

The Manager Maintenance Operations, Headquarters appoints the committee chairperson and its voting members. The committee chairperson identifies subject matter experts who conduct a technical evaluation of each change request. The board members will utilize the tools and process of Lean Six Sigma when evaluating Custodial Change Requests.

### 1.7.3 Human Resources

The Headquarters Safety and Health organization is responsible to work with HQ Maintenance Operations to ensure all aspects of the team cleaning program comply with applicable rules and regulations governing custodial operations.

The National Center for Employee Development (NCED) is responsible to maintain, update, and revise all team cleaning training materials with guidance and oversight from HQ Maintenance Operations.

## 1.8 SENIOR POSTAL OFFICIAL (SPO)

Each SPO is responsible to ensure a safe and healthful environment for all facility occupants and must assure that the floors are maintained at a satisfactory level. The installation head must raise employee awareness and promote employee commitment to maintain a clean and healthful working environment. The SPO shall ensure that floor care and maintenance in their facility follow [MS-47](#) Team Cleaning policy.

### **1.8.1 Supervisor Maintenance Operations**

Individuals that supervise custodial operations have major responsibilities in the care and maintenance of floors including following policy, training of employees, effective utilization of the custodial workforce, notifying senior management of changing workloads or conditions, performing employee observations, and enforcing postal safety policy.

## SECTION 2

### IMPORTANCE OF FLOOR CARE

#### 2.1 INTRODUCTION

In most postal facilities, floors represent a large capital investment. The life of the floors can be prolonged with proper care and scheduled maintenance. Additionally, well-kept floors reflect good housekeeping practices and promote a safe and healthful environment for customers and employees.

Many types of flooring exist throughout the USPS. Each type may require a different treatment during cleaning operations. The various types of floors react differently to compounds used in their cleaning. Improper cleaning techniques can affect the finish of floor surfaces; therefore, the cleaning materials used must not harm the particular type of floor. For example, wood floors are absorbent and can be easily damaged by water. Asphalt plank and rubber flooring materials are not easily affected by water, but can be damaged by oils or solvents.

This handbook is not intended to be all inclusive, but is intended to be used as a basis for floor care and maintenance.

#### 2.2 TYPES OF FLOORING

- Asphalt Plank
- Carpet
- Concrete
- Ceramic
- Vinyl Composite Tile (VCT)/Vinyl Asbestos Tile (VAT)
- Vinyl Sheet/Linoleum
- Rubberized
- Terrazzo/Marble
- Wood

#### 2.3 FLOOR FINISHES

A floor finish is a product that is applied to a hard floor and dries to a hard, durable, and smooth film. This film is about the thickness of waxed paper and is expected to protect and extend the life of the floor while providing an attractive appearance and slip resistant surface. After repeated mopping, the floor retains the finish, slip resistance, and durability.

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## SECTION 3

### SAFETY

#### 3.1 INTRODUCTION

Safety is the responsibility of every individual in the USPS. Accidents result from unsafe acts or unsafe conditions. Accidents do not just happen; they can be prevented by using common sense and staying alert in the performance of all tasks. The USPS has the responsibility of providing a safe and healthful working environment for its employees. The supervisor has the responsibility of instructing employees in safety practices applicable to the operation and maintenance of the equipment.

Whenever using any equipment or products you must follow the Personal Protection Equipment (PPE) requirements from that product or equipment.

Whenever performing any work on floors be sure to use the appropriate safety methods to secure the area protecting building occupants and employees performing the task.

#### 3.2 USPS SAFETY PUBLICATIONS

USPS handbooks and publications relative to safety are as follows:

- [EL-801, Supervisor's Safety Handbook](#)
- [EL-803, Maintenance Employee's Guide to Safety](#)

### 3.3 EQUIPMENT

#### 3.3.1 Storage

Janitorial carts, microfiber mops, mop wringers, buckets, or other equipment must not be left where someone may trip over them (Figure 3-1). Always store equipment off the workroom floor in approved areas.



**Figure 3-1. Janitorial Cart Storage**

#### 3.3.2 Tools and Equipment Utilization

##### 3.3.2.1 Electrical Equipment

Improper use of electrical equipment creates a potential shock hazard. Inspect electric cords on equipment, including extension cords, before using. DO NOT USE portable power equipment with a frayed, worn, or damaged cord.

- Extension cords must be visually inspected for external defects before use.
- Prior to starting each shift visually inspect portable equipment and extension cords.
- Immediately report equipment and / or extension cord damage to the supervisor.
- Remove the damaged equipment or cord from service.
- Record damage on the "Equipment Check-In/Check-Out Log.
- Obtain replacement equipment / cord and inspect for damage.



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Remove equipment with frayed cords, loose wiring, and defective grounds or plugs from service. Attach a properly completed Form 4707, Out of Order (tag), to defective electrical equipment immediately. A sample of a properly completed Form 4707 is shown in Figure 3-2.

PS Form 4707  
August 1991

U. S. Postal Service  
**Out of Order**  
(Defective or Inoperative Equipment)

Type of Machine or Equipment ADVANCE BUFFER	Number 27
Office YOUR POST OFFICE	Date TODAY'S DATE

Description of Defect  
CORD FRAYED  
GROUND MISSING

Handling Instructions  
REPLACE CORD AND PLUG  
RETURN TO Room 55

Employee  
J. BROWN

This equipment must be disconnected or properly locked out if connected to a power source.

Type of Machine or Equipment ADVANCE BUFFER	Number 27
Office YOUR POST OFFICE	Date TODAY'S DATE

Employee  
J. BROWN

Turn this stub into your supervisor. Affix tag to defective or inoperative article.

Figure 3-2. Form 4707, Out of Order (tag)

### 3.3.3 Remove Equipment from Service Until Repaired

Do not remove Form 4707 from defective equipment of any type until it has been properly repaired. Have damaged power cords (cut, worn, frayed, missing ground prong or broken, as shown in Figure 2-3) replaced by authorized personnel. Repairing power cords by applying electrical tape is unacceptable.

### 3.4 PORTABLE ELECTRIC CORD SAFETY

Always exercise caution and common sense to prevent any potential cord tripping hazards and practice proper lifting techniques when picking up the bundled cord to move to another work location.

- Portable equipment must be handled in a safe manner not causing injury or harm to personnel.
- Flexible electric cords connected to equipment must not be used for raising or lowering the equipment.
- Flexible cords must not be hung in such a fashion as could damage the outer jacket or insulation.

### 3.4.1 Cord Management

When using power equipment ensure that the cord is properly managed. If possible, position the cord such that it is behind you in the opposite direction of travel.

Use proper cord wrapping techniques to reduce, if not eliminate, tangling of the cord.

Lay the cord out rather than dropping it in a pile on the floor. Remember to bend at the knees when picking up the cord from the floor.

Minimize allowing the cord to cross aisles reducing the potential tripping hazard and for cord to be run over or entangled in mail transport equipment.

Ensure the equipment power switch is in the off position before connecting or disconnecting electrical equipment to or from the power supply.

### 3.4.2 OSHA 1910.334(a)(2)(i)

Portable cord and plug connected equipment and flexible cord sets (extension cords) shall be visually inspected before use on any shift for external defects (such as loose parts, deformed and missing pins, or damage to outer jacket or insulation) and for evidence of possible internal damage (such as pinched or crushed outer jacket). Cord and plug connected equipment and flexible cord sets (extension cords) which remain connected once they are put in place and are not exposed to damage need not be visually inspected until they are relocated (Figure 3-3).



**Figure 3-3. DAMAGED FLEXIBLE CORD**

## 3.5 POWER EQUIPMENT

Tag equipment that is defective with a properly completed Form 4707, Out of Order (tag). Immediately notify supervisor about defective equipment.

### 3.5.1 Power Industrial Equipment (Ride-On Sweepers/Scrubbers)

Follow the requirements listed below for ride-on equipment:

- Refer to [EL-803, Maintenance Employee's Guide to Safety](#).
- Inspect equipment for defects or unsafe condition before using it.
- Following the manufacturer's operating instructions and related USPS Manuals and MMO's. Check all pertinent parts of the equipment, such as brushes, for abnormal wear and check safety lights to ensure that they are operational. Report defects to supervisor immediately. Do not use defective equipment.

- When using any powered equipment, be particularly alert to pedestrian and vehicular traffic.
- Do not leave the keys in equipment when it is unattended.
- Keep children away from equipment.
- Empty and clean equipment prior to storage.

### **3.5.2 Power-Driven, Walk-Behind Equipment**

Follow the requirements listed below for power-driven, walk-behind equipment:

- Inspect equipment before using it.
- Following the manufacturer's operating instructions and related USPS Manuals and MMO's. Check pertinent parts of the equipment, such as brushes, for abnormal wear. Do not use any defective equipment.
- If equipped with vacuum bags, ensure that they are in good condition and are not full.
- When using any powered equipment, be particularly alert to pedestrian and vehicular traffic.
- If equipment is keyed, remove key when equipment is unattended. Put all non-keyed equipment in a secure area before leaving unattended.
- Never leave equipment unattended while motor is running.
- Charge batteries in accordance with directions in [MS-11, Industrial Storage Batteries](#).
- Empty and clean equipment prior to storage.



Before using cleaning chemicals, neutralizers, and floor finishes, always read and follow manufacturer's label instructions including each chemical's Safety Data Sheet (SDS). If a product contains ingredients that are irritating to the skin, wear proper protective safety equipment, such as face shields, safety gloves, and apron (Figure 3-5).



**Figure 3-5. Eye Protection**

Always refer to the chemicals SDS for the proper PPE, recommendations, and requirements.

### **3.7 SUPPLIES**

Refer to the most current MMO titled Floor Care Tools and Supplies for specific floor care products and tools.

### **3.8 STORAGE**

Store supplies properly. Store flammable materials and liquids only in approved safety containers. (See [MS-56, Fire Prevention and Control](#), Chapter 3 for additional information.) Store housekeeping chemicals in approved chemical storage areas.

### **3.9 CHEMICAL USE**

Take special care when working with chemical products. Never add water to cleaning chemicals, always slowly add cleaning chemicals to water by pouring on the container's side instead of directly into the water to prevent excessive splashing.

#### **WARNING**

**Always read and follow the instructions carefully. All containers must have labels that identify the material, the potential hazards, and what precautions to take. If you cannot find a label on a container, are uncertain of the contents, or how to use the material, notify your supervisor.**

### **3.10 RECORDKEEPING**

#### **3.10.1 Hazard Communication Standard: Safety Data Sheets**

The Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012, requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) (formerly MSDSs or Material Safety Data Sheets) for each hazardous chemical to downstream users to communicate information on these hazards. The information contained in the SDS is presented in a consistent user-friendly, 16-section format. This document provides guidance to help workers who handle hazardous chemicals to become familiar with the format and understand the contents of the Safety Data Sheets.

The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The information contained in the SDS must be in English (although it may be in other languages as well). In addition, OSHA requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200. The SDS preparers may also include additional information in various section(s).

Sections 1 through 8 contain general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures (e.g., firefighting). This information should be helpful to those that need to get the information quickly. Sections 9 through 11 and 16 contain other technical and scientific information, such as physical and chemical properties, stability and reactivity information, toxicological information, exposure control information, and other information including the date of preparation or last revision. The SDS must also state that no applicable information was found when the preparer does not find relevant information for any required element.

**Be familiar with the SDSs for all chemicals used on the job. Figure 3-6 shows sections of a typical SDS.**



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### Hazard Communication Safety Data Sheets

The Hazard Communication Standard (HCS) requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) to communicate the hazards of hazardous chemical products. As of June 1, 2015, the HCS will require new SDSs to be in a uniform format, and include the section numbers, the headings, and associated information under the headings below:

**Section 1, Identification** includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.

**Section 2, Hazard(s) identification** includes all hazards regarding the chemical; required label elements.

**Section 3, Composition/information on ingredients** includes information on chemical ingredients; trade secret claims.

**Section 4, First-aid measures** includes important symptoms/effects, acute, delayed; required treatment.

**Section 5, Fire-fighting measures** lists suitable extinguishing techniques, equipment; chemical hazards from fire.

**Section 6, Accidental release measures** lists emergency procedures; protective equipment; proper methods of containment and cleanup.

**Section 7, Handling and storage** lists precautions for safe handling and storage, including incompatibilities.

**Section 8, Exposure controls/personal protection** lists OSHA's Permissible Exposure Limits (PELs); ACGIH Threshold Limit Values (TLVs); and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the SDS where available as well as appropriate engineering controls; personal protective equipment (PPE).

**Section 9, Physical and chemical properties** lists the chemical's characteristics.

**Section 10, Stability and reactivity** lists chemical stability and possibility of hazardous reactions.

**Section 11, Toxicological information** includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

Section 12, Ecological information\*

Section 13, Disposal considerations\*

Section 14, Transport information\*

Section 15, Regulatory information\*

**Section 16, Other information**, includes the date of preparation or last revision.

### Figure 3-6. OSHA SDS REQUIRED SECTIONS

#### 3.11 MATERIAL DISPOSAL

Arrange for the prompt removal of all trash and waste material. Until such removal, use extreme care around the waste depository.

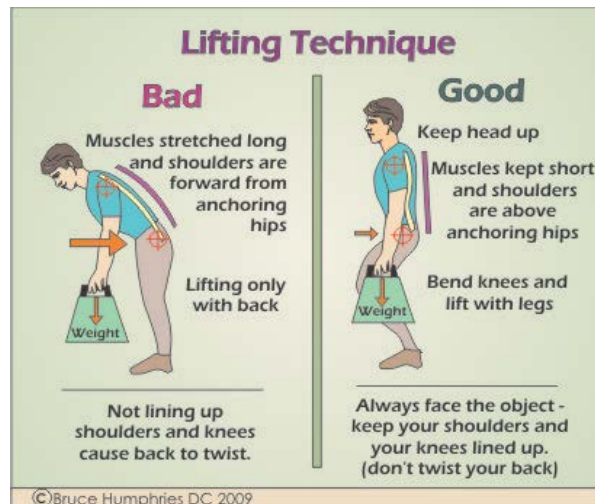
#### 3.12 PROPER LIFTING

It may be necessary to move equipment and furniture when performing floor care and maintenance. If manual lifting is required, lift with the legs, not the back (Figure 3-7). Use the following safe lifting procedure:

- Inspect area around object to be moved and the route over which it will be carried.
- Estimate the size of the load. Never attempt to lift objects that are too heavy or awkward to handle without help.
- Keep balanced.
- Be sure of good footing.
- Bend knees and keep back straight.
- Wear hand protection if needed.
- Get a good grip on the load.
- Hold load close to body with chin tucked in.



- Do not twist the torso or fight a "lost load."
- Never lift objects in crowded areas.
- Clear the area to make lifting safer and easier



**Figure 3-7. Proper and Improper Methods of Lifting**

### 3.13 REPORTING UNSAFE CONDITIONS OR NEEDED REPAIRS

Each custodian should carry "Service Request Forms" (PSN: 7690-17-000-5015) and pencil to report conditions they are not qualified to correct. For example, broken light switch, broken window, plumbing problem.

### 3.14 WET FLOORS

In order to avoid serious injuries caused by slips, trips, and falls on wet floors, use the following guidelines:

- Use Wet Floor signs and place them in high visibility areas to alert employees and/or customers.
- When possible, close off the area by barricading it with safety rope.
- When mopping or scrubbing floors, complete work in one small section at a time.
- After scrubbing or damp mopping the floor, check it for a slippery film. If a film is present, rescrub or mop the floor using a neutralizer to remove the film.



### CARE OF EQUIPMENT

#### 4.1 INTRODUCTIONS

Equipment represents a large capital investment for the Postal Service. Proper care prolongs equipment life and ensures a more efficient operation. Therefore, requirements for proper care must be followed.

#### 4.2 MECHANICAL EQUIPMENT

#### 4.3 FLOOR MACHINES

The requirements for proper care of floor machines, such as the machine shown in Figure 4-1, are as follows:

- Check switches, cables, plugs, and ground wires for defects before using or storing the machine. Do not use defective equipment. Tag the defective equipment with a properly completed Form 4707, Out of Order (tag), and ensure the supervisor is notified.
- When using a floor machine, with the power cord disconnected from power source, tilt the handle down and place the brush on the machine by hand. Never place the machine over the brush and attempt to lock it in place by clicking the start switch.
- Examine the brush before each use, ensuring that the drive plate screws or bolts are tight.
- Thoroughly clean (rinse) the brush after wet usage and hang to dry. Never store the brush with the bristles down, or under the machine, because this will flatten the bristles and reduce the efficiency of the brush.
- Before storing floor machines equipped with a solution tank, check the screen, rinse the tank with plain water, and flush the hose. After each use clean the spray heads and flush the system to prevent dried cleaning material from clogging the heads or system.
- Wipe off machine cable and housing with a damp cloth after each use.



**Figure 4-1. Floor Machine**

#### **4.4 POWER-OPERATED, COMBINATION SCRUBBER/VACUUMS**

The requirements for proper care of power-operated, combination scrubber/vacuums, such as the vacuum shown in Figure 4-2, are as follows:

- Follow manufacturer's instructions for maintenance, cleaning, and operation.
- Drain and flush the solution tank and distribution line after using the vacuum. Air dry the tank.
- Remove the sludge from the dirty water recovery tank. Flush the tank with plain water and allow it to air dry.
- After using the vacuum, wipe the squeegee clean and ensure that it is stored in the up position.
- Do not use any open flame in the area where batteries are charged. Refer to EL 803, Maintenance Employee's Guide to Safety, for additional information.
- Charge the battery according to the battery type and properly store the equipment so it is ready for the next use.



**Figure 4-2. Battery-Powered, Combination Scrubber Vacuum Machine**

### 4.5 MECHANIZED SWEEPERS

The requirements for proper care of mechanized sweepers, such as the sweeper shown in Figure 4-3, are as follows:

- Follow manufacturer's instructions for maintenance, cleaning, and operation.
- Before using, inspect brushes for excessive wear.
- Keep all filters clean, in good operating condition and replace as necessary.
- Agitate filters each time the contents of the hopper are dumped.
- Empty and clean the hopper before storing the sweeper.
- Before storing the sweeper, charge the battery according to the battery type and properly store the equipment it will be ready for the next use.
- Do not use any open flame in the area where a battery is being charged. Refer to EL 803, Maintenance Employee's Guide to Safety, for additional information.



**Figure 4-3. Battery-Powered, Walk-Behind, Mechanized Sweeper**

### 4.6 WET/DRY VACUUMS

The requirements for proper care of wet/dry vacuums are as follows:

- Check switches, cables, plugs, and ground wires for defects before using or storing the machine. Do not use defective equipment. Tag the defective equipment with a properly completed Form 4707, Out of Order (tag), and ensure the supervisor is notified.
- Check wands, hoses, and nozzles for clogs. Remove any clogs, before storage of the vacuum by flushing and cleaning wands, hoses, and nozzles.
- After each wet use, check the filter and replace it if it is clogged or full. After each dry use, check the bag and replace it if it is clogged or full.
- After using the vacuum for wet applications, flush the tank and/or filter with water to remove sludge. Air-dry the equipment before storing.

### 4.7 CARPET EXTRACTORS

- Check switches, cables, plugs, and ground wires for defects before using or storing the machine. Do not use defective equipment. Tag the defective equipment with a properly completed Form 4707, Out of Order (tag), and notify the supervisor immediately.
- Check wands, hoses, and nozzles for clogs. Remove any clogs, before storage of extractor, by flushing and cleaning wands, hoses, and nozzles.
- Drain and flush the solution tank, including the distribution line, after each use and allow the tank to air dry.
- Remove the sludge from the dirty water recovery tank. Flush the tank with water and allow it to air dry.

### 4.8 MANUAL EQUIPMENT

#### 4.8.1 Buckets and Wringers

Rinse out mop buckets and wringers after each use to prevent buildup of detergent, floor finish, and dirt. Never allow floor finish to dry on a bucket or wringer.

#### 4.8.2 Flat Microfiber Mops

Only flat microfiber mops should be used. Microfiber mops should utilize approved laundry service unless disposal mops are designated as disposable. Microfiber mops may be rinsed out using following method:

- 1) Soak microfiber mops in warm or hot water with mild soap
- 2) Agitate by hand
- 3) Rinse mops under running water
- 4) Wring out excess water

Dirty mop head should to be laundered and a new clean mop head needs to be utilized. (Refer to CTC Training Guide for the proper use of the different CTC Micro Fiber Nap Mop Heads). Dirty mops may eventually sour and give off a highly objectionable odor.

- Store in approved areas only. Never store wet mops on the floor or against the wall. Used microfiber mops should be returned to check in check out room and placed in proper bucket.
- In locations where laundry service is not feasible, disposable microfiber mops should be utilized.

### **4.8.3 Dry Floor Cleaning Tools**

Reference CTC Training Material for proper application and storage of backpack vacuum cleaners.

### **4.8.4 Squeegees**

The requirements for proper care of squeegees are as follows:

- After each use, wipe rubber blades clean and dry.
- Do not store squeegees with the blades touching the floor. Hang squeegees by the handles in a cool place away from the sunlight because blades are easily damaged. Never hang them outside to dry.

# SECTION 5

## FLOOR MATS

### 5.1 INTRODUCTION

Floor mats can be divided into three basic categories: entrance, interior, and anti-fatigue mats, entrance and interior mats are used to prevent the tracking of soil (dirt, water, etc.) from entrance areas or from where the soil is produced, into and throughout the facility. Floor mats also help reduce slipping hazards and prevent tracking of water, snow, ice, and ice-melting compounds into the facility. The proper use of floor mats protects floors and reduces unnecessary wear. Floor mats should be placed at all facility entrances and be at least 10 feet in length so two steps can be taken on the mat.

This section focuses on entrance and interior mats.

### 5.2 ANSI / NFSI B101.6-2012

The USPS recognizes American National Standard/National Floor Safety Institute (ANSI/NFSI B101) as the standard to aid in the prevention of slips, trips, and falls through education, research, and standards development.

### 5.3 TYPES OF FLOOR MATS

Selecting the correct floor mat depends on the physical attributes of the facility, climate, amount of inclement weather, and floor type. A list and description of a few of the most commonly utilized types of floor mats are:

- Recessed grill mats combine aluminum rails and hinge connectors with several different insert materials to offer maximum performance in high traffic entrances. Recessed grill mats are designed to allow dirt and debris to fall through the mat instead of remaining on the surface.
- Carpet mats are an excellent choice to protect lobby floors during wet weather. Mats are constructed of nylon or carpet pile and are available in various sizes. These mats effectively prevent tracking grit, fine dust, and moisture. Due to their heavy backing, carpet mats lie flat without needing to be taped to the floor.
- Rubber/synthetic mats are effective in preventing and tracking heavy soil, but pick up little moisture. These types of mats are constructed of plastic, vinyl, or rubber and can be used either inside or outside the building. Rubber matting is tough and resilient and is also well-suited for outdoor applications, making a great and functional surfacing option. Rubber is inherently resistant to water and will often be paired with raised textured designs, adding traction and grip. This type of mat is extremely durable and effective in preventing tracking of soil.

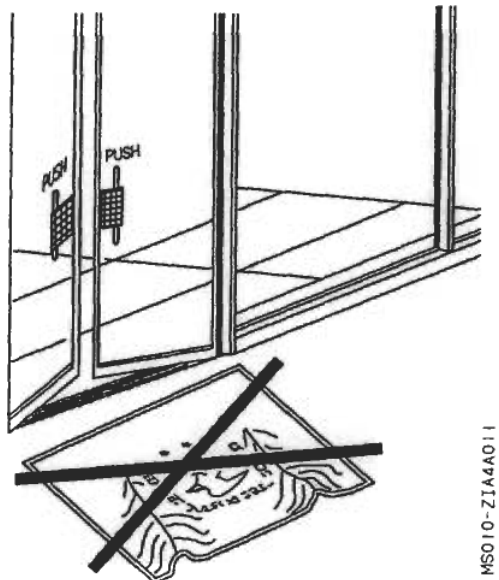
### 5.4 FLOOR MAT FUNCTIONALITY AND APPLICATIONS

Most soil enters a building on the building occupant's feet. A high performance floor mat effectively removes and stores soil and water as occupants enter the building. It

keeps soil and water on the mat, where it can be removed effectively and safely with minimum impact on the building.

A floor mat with a permanent bi-level construction will store soil and water below shoe level to prevent it from being transferred into the building. This is perhaps the most important thing an entrance mat should do. Floor mats with a non-reinforced surface will crush flat and, once soil is deposited on these mats, it can reattach to the shoe of another person and be tracked further into the building. Entrance mats should retain contaminants within the structure of the mat and not allow them to seep onto the floor, potentially causing a slip/fall accident. Floor mats without a rubber reinforced permanent bi-level construction can become saturated with water and cause a loss of traction on the mat or the floor adjacent to it. During extended periods of rain or snow, change these mats often to prevent oversaturation and slip hazards.

The most important factor when choosing a floor mat is selecting the appropriate material for the location, followed by the proper mat size for the location. It is equally important to ensure the proper mat maintenance by completing scheduled maintenance, and periodic servicing in areas such as lobbies, vestibules, and other entrances and exits. Floor mats must be wide enough to be walked on and should be of a type and construction that prevents tripping hazards. If curling occurs, as shown in Figure 5-1, consider replacing the mat with a more appropriate mat for the application.



**Figure 5-1. Floor Mat Has Curled Edge – Unsafe**

The following recommendations of floor mat usage are not intended to limit the use of mats, but to demonstrate their effectiveness.

- Use floor mats at all employee and customer entrances. Use extra mats at these locations during inclement weather and ensure cleaning and changes are performed as required by current conditions.



- Use floor mats at the transition point between different space types (i.e. boiler room to the workroom floor or other areas). This prevents the tracking of degreaser, soot, solvents, etc. from one area to another.

### 5.5 FLOOR MAT CLEANING

Most floor mats are easily cleaned and should be cleaned periodically to remove accumulated soil. Follow the manufacturer's recommendations and MS47 TL-5 for cleaning mats. Many floor mats should be cleaned where they are located, as described in the MS-47 manual during the normal duties of the custodian. Never vacuum wet mats.

<b>CAUTION</b>
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**Never seize long or heavy mats at one end and drag them out of their position on the floor. The strain from dragging the mats may cause breaks/tears, or the mats may develop curled edges, presenting a safety hazard. To remove a long section of matting, roll it up and obtain assistance, as necessary, to carry it.**

Reference the current Material Logistic Bulletin National Contract for floor mat rental service. The commercial firm replaces the mats periodically with clean ones according to the service agreement.

### 5.6 SNOW AND ICE REMOVAL MELTING COMPOUND ISSUES

Chloride compounds tracked onto floors from exterior snow and ice removal activities cause considerable damage to floor finishes. The use of matting helps reduce potential flooring damage from chloride compounds. Remove chloride compounds by damp mopping floor using appropriate chloride neutralizers mixed into the normal floor detergent solution. Change mopping solution often to prevent streaking.

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## SECTION 6

### HARD SURFACE FLOOR CARE AND CLEANING METHODS

#### 6.1 INTRODUCTION

The Postal Service uses three categories of cleaning work; policing, cleaning, and project work. Various cleaning methods are used depending on the location, floor type and job to be done. For the most part, the procedures found in this and the following sections of this book address floor care project work. Some of the methods used include using manual and mechanized sweeping, vacuuming, damp mopping, scrubbing, spray buffing, and burnishing.

#### 6.2 POLICING

Policing is a specific type of job assignment performed at a less detailed scope of work compared to specialists performing cleaning tasks. Policing is primarily performed at times when spaces are being heavily utilized so the custodial activities do not close the space thereby making the space unusable by building occupants or during periods when building occupancy is minimal, resulting in less trash is generated and the space does not require deep cleaning. Policing is sometimes performed in conjunction with cleaning on alternate days. Tools used vary based on the cleaning specialist duties being performed.

#### 6.3 CLEANING

Cleaning is a specific type of job assignment performed in areas that are typically closed for use by building occupants. Cleaning is often scheduled after building occupants have finished their work day, so custodians can perform many tasks in the space without interruptions and to reduce tripping hazards associated with floor cleaning procedures. The MS-47 describes the process for routine/daily floor cleaning which consist of the following tasks: sweeping, vacuuming, and damp mopping which may be performed using hand tools or mechanized equipment.

##### 6.3.1 Mechanized Equipment for Floor Care

Use mechanized equipment, such as walk-behind dry sweeper vacuums, ride-on dry sweeper vacuums, walk-behind wet floor scrubbers, and ride-on wet floor scrubbers when the space size and occupancy level permit. Use of mechanized equipment, when possible, increases productivity and decreases employee fatigue.

##### 6.3.1.1 Machine Applications

Machine scrubbing should be used on all floors except wood, cork, and in battery rooms. Use of mechanized equipment, when possible, increases productivity and decreases employee fatigue. Sites must use mechanized scrubbing machines when conditions permit and the space is large enough. Performance Standards listed in Table 6-1, below and MS-47, Facility Cleaning Section 14.4 apply to common sized walk-behind automatic scrubber machines.

**Table 6-1. Walk-behind Automatic Scrubber**

## Floors, Care And Maintenance

Specialist	Tasks	Performance	Freq. Range
Utility Specialist	If using walk-behind automatic scrubber	9,274 sq. ft. / hr. Based on 20 inch walk behind scrubber	Varies depending on space classification. See MS-47.

### 6.3.1.2 Powered Industrial Truck Safety

Reference [Employee and Labor Relations Manual \(ELM\)](#) Section 832, Powered Industrial Truck (PIT) Safety for specific PIT training requirements and other safety information. Employees authorized to operate PITs must be given operator training in accordance with Occupational Safety and Health Administration (OSHA) standard 1910.178, Powered Industrialized Trucks. Before operating PITs, employees must be evaluated and certified (Table 6- 2). They must follow the operating rules and regulations outlined in Postal Service handbooks, OSHA 1910.178, and the manufacturer's operating instructions.

**Table 6- 2. Mechanized Floor Cleaning**

<b>Specialist</b>	<b>Tasks</b>	<b>Performance</b>	<b>Freq. Range</b>
Utility Specialist	Using riding sweeper vacuum machine, vacuum clean floor. OR	39,474 sq. ft. / hr. Based on 36 inch riding sweeper.	
	Using riding sweeper vacuum machine, vacuum clean floor. OR	42,857 sq. ft. / hr. Based on 39 inch riding sweeper.	
	Using riding sweeper vacuum machine, vacuum clean floor. OR	59,406 sq. ft. / hr. Based on 43 inch riding sweeper.	
	Using riding sweeper vacuum machine, vacuum clean floor.	76,923 sq. ft. / hr. Based on 56 inch riding sweeper.	

### 6.3.2 Damp Mopping

Damp mopping helps remove particles and oily soil. Use damp mopping techniques when cleaning up small spills or to enhance areas where vacuuming alone does not achieve desired results. Damp mopping also protects the floor's finish and helps to reduce darkening or yellowing from embedded soil. Use a clean microfiber mop and follow the process outlined in the MS-47.

#### 6.3.2.1 Equipment and Products

Equipment and products needed:

- Wet-floor safety signs with rope
- Appropriate PPE
- Floor scraper
- Ergo dustpan and broom
- Yellow flat microfiber mop for spaces other than restrooms
- Dual compartment mopping bucket and proper solutions

- Backpack vacuum or mechanized vacuum equipment (if the space is large enough and conditions permit)

### 6.3.2.2 Procedure

Use the following steps:

1. Place safety signs and, when needed, rope in the work area to alert others to avoid walking on wet floors.
2. Use floor scraper to remove gum and other substances stuck to the floor.
  - a. Ensure the floor area is free of dirt and debris before conducting damp mopping.
  - b. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
3. Vacuum area with backpack vacuum or mechanized vacuum equipment (if the space is large enough and conditions permit).
4. Fill mop bucket with a measured amount of water and cleaning solution as recommended by the current CTC Course Training Material.
5. Dip flat microfiber mop in mop bucket containing solution and wring mop until nearly dry.
  - a. Position mop 1-inch from baseboards and moderately apply solution to floor, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - b. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
  - c. Return mop to bucket frequently, wring mop nearly dry, and repeat until entire section is damp mopped.
6. Allow the floor surface to dry completely before removing the safety equipment and signs.

### 6.3.3 Special Case Scrubbing Procedure

Manual scrubbing may be needed to maintain battery room floors or restrooms floors with excessive dirt and grime.

#### 6.3.3.1 Equipment and Products

Equipment and products needed include:

- Wet-floor safety signs and/or rope
- Appropriate PPE
- Floor scraper
- Ergo dustpan and broom
- Utility Specialist dual compartment mopping bucket and proper solutions

- Utility Specialist microfiber flat mop
- One deck scrub brush with handle

### 6.3.3.2 Procedure

Use the following steps for cleaning battery rooms or restroom floors:

1. Place safety signs and, when needed, rope in the work area to alert others to avoid walking on wet floors.
2. Use floor scraper to remove gum and other substances stuck to the floor.
  - a. Ensure the floor area is free of dirt and debris before conducting damp mopping.
  - b. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
3. Mix detergent and water in a mop bucket and pour solution on the floor.
4. Scrub floor with scrub brush. Do not use a floor machine in battery rooms.
5. Pick up solution using thick napped microfiber mop pads and bucket wringer.
6. Rinse floor with clean water.
7. Allow the floor surface to dry completely before removing the safety equipment and signs.

## 6.4 SPRAY BUFFING

Use spray buffing on all floors except wood and cork that require high gloss finish such as service lobbies or corridors in administrative areas. Use spray buffing for periodic maintenance of aisles, corridors, vestibules, and other high traffic areas to maintain the original appearance of initially prepared floors without resorting to initial preparation procedures. Low speed buffing is highly effective at removing minor surface scuffs, marks, and abrasions while simultaneously filling minor nicks and cuts in the floor finish's surface. Spray buffing is especially beneficial in high traffic areas such as hallways or in front of doorways. Spray buffing should not be performed on large areas such as workroom floors or other industrial work areas.

### 6.4.1 Solutions

Refer to the current Floor Care MMO titled Floor Care Tools and Supplies for complete list of HQ approved products. Refer to manufacture's documentation and SDS for safe and usage instructions.

### 6.4.2 Equipment and Products

Equipment and products needed include:

- Wet-floor safety signs and rope
- Floor scraper
- Backpack vacuum cleaner or vacuum scrubber machine
- Broom

- Ergo dustpan
- Appropriate PPE
- Spray buffing solution
- Floor buffing machine
- Soft pads designed specifically for buffing (typically white or yellow)

### 6.4.3 Procedure

Use the following steps:

1. Place safety signs and, when needed, rope in the work area to alert others to avoid walking on wet floors.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Use broom and ergo dustpan to remove debris that may damage or clog vacuum.
4. Vacuum the area with backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit).
5. Spray a light mist of buffing solution onto the floor 2 to 3 feet ahead of the machine.
6. Immediately buff the misted area with the floor machine and buffing pad.
7. Repeat previous two steps until the area is completed.
8. Remove safety signs and barricades.

### NOTE

Do not overspray. Over spraying causes a stripping action of the floor finish, resulting in streaking or a blotchy appearance.

The floor will become dull and smeared, but continued buffing will dry the surface and produce a brilliant gloss.

Turn the buffing pad over periodically, allowing a fresh side to be used. Buffing pads are porous; once they become full, it is necessary to change or clean them. Cleaning is accomplished by rinsing or soaking the pad in warm water or a diluted stripping solution and allowing it to air dry.

Spray buffing is effective only on floor finishes in which dirt or black marks are lightly imbedded. Heavy dirt accumulations require scrubbing or, as a last resort, initial preparation procedures.



### 6.5 BURNISHING

Use spray burnishing on all floors except wood and cork that require high gloss finish such as service lobbies or corridors in administrative areas. Burnishing is very similar to buffing except the machine's speed is much higher allowing it to create enough friction to momentarily soften floor finish causing a hard, durable, glossy finish. Burnishing should not be performed on large areas such as workroom floors or other industrial work areas. Basic differences between burnishing machines and buffers are as follows:

- Burnishing machines operate at speeds of 750 to over 3,000 rpm, while buffers operate at 160 to 350 rpm.
- Burnishing machines are operated in a slow forward motion, whereas buffers are operated in a sweeping, side-to-side motion.

#### 6.5.1.1 Advantages of Burnishing

The finish on a burnished floor surface will remain for a much longer time than the finish on a floor surface maintained through other methods. Burnishing provides a glossier floor surface and repairs the wear damage caused by pedestrian traffic. In burnishing, the shine is produced by the speed of the machine passing over the synthetic floor finish at a high enough rate to create heat using friction. This heat momentarily softens the floor finish, causing several coats of it to bond together as one, thus producing a very high gloss, hard finished surface.

#### **WARNING**

**Asphalt planking and Vinyl Asbestos Tile (VAT) are common Postal Service floor coverings. The asbestos fibers in them can be released during floor care only if the matrix of the material is disturbed. When caring for floors made of asphalt planking and VAT, you must comply with the following procedures:**

**Keep four coats of floor finish on these materials to contain the fibers and prevent contact with the matrix.**

**When stripping these floors, use wet methods, the least abrasive pad, and buffer speeds not greater than 250-300 revolutions per minute.**

### WARNING

**High-speed burnishing of Asbestos Containing Building Materials (ACBM) is prohibited.**

**Use extreme caution not to burn or disturb the matrix of asphalt planking or VAT.**

**See *EL-803, Maintenance Employees Guide to Safety and AS-556 Asbestos Management Guide* for updated safety policies regarding floor care, ACBM, and other important safety guidelines.**

### 6.5.2 Equipment and Products

Equipment and products needed for burnishing are the same as for spray buffing, except burnishing machines and burnishing pads are required in lieu of a buffer and buffer pads. Burnishing pads are manufactured with varying grades of aggressiveness. Think of all pads like sand paper; even the mildest pad has some abrasiveness. The level of abrasiveness and the designed rotational speed categorizes pads. There are two major divisions of pads:

- Low Speed pads - (less than 1,000 RPM), and
- High Speed pads - (over 1,000 RPM).

### WARNING

**Never use low speed pads on high-speed machines. High-speed pads can handle much higher rotational forces. Using low speed pads on high-speed machines may cause the pad to tear, break up, and cause personnel injuries or property damage.**

**Black, Purple, and Brown** pads are all classified as stripping pads; the colors tend to designate the aggressiveness of the abrasive and the level of "open weave" of the pad. There is not a firm industry color standard among manufacturers relating color to aggressiveness, but generally darker colored pads are more aggressive. Black is a basic stripping pad and is used for removal of finishes and other difficult issues. These pads are designed for low speed only.

**Green and Blue** pads are all classified as scrubbing pads. These are designed to be as aggressive as possible without removing much finish from the surface of a VCT style floor. They will definitely dull a floor's finish. They work well in automotive shops, and unfinished concrete floors. They tend to be too aggressive for epoxy coated floors as a daily pad. Blue is generally considered more aggressive than green. Do not confuse this blue pad for blue high-speed pads. These pads are designed for low speed only.

**Red and Tan** pads are general buffing pads and are suitable for most daily cleaning tasks. They generally have a slight abrasive to them, but not enough to damage most floors or their coatings. They are used in low speed polishing applications like spray buffing to help snap the floors back to a clean shine. They are designed for low speed machines only.

**White** pads are the softest of the low speed pads. They can be used on any surface. However, they will not last when used on textured surfaces or raw concrete. They are not designed for high speed applications.

Table 6- 3 summarizes pads by their color and abrasiveness.

**Table 6- 3. Buffing/Burnishing Pads**

COLOR	USE
Black Dark Blue Dark Green	Stripping
Dark Brown Light Blue Olive	Scrubbing
Yellow Red Beige	Buffing/Burnishing
White	Light Duty Buffing

Scrubbing pads are sufficient to remove imbedded soil and other visible markings without removing all of the floor finish. However, a coat of finish must be reapplied after performing a scrubbing operation. Soft buffing and burnishing pads remove light markings, restore smooth floor finish, and greatly improve appearance. White light-duty pads add high gloss to the floor finish. Generally, pads do not scratch the floor, put swirl marks, or grind off the floor finish coating. The most common root cause of scratches or swirl marks is debris trapped in the pad. Vacuuming before buffing and/or burnishing greatly reduces the risk of swirl marks caused by foreign debris trapped in the pad.

### 6.5.3 Procedure

The procedure for burnishing is the same as the procedure used in regular and high-speed spray buffing, except burnishing is done in a slow forward motion.

### NOTE

A floor surface must be properly cleaned and prepared before the burnishing procedure can be used. Usually five to eight coats of floor finish are sufficient preparation for a previously unburnished floor. Floor surfaces that previously have been burnished will require fewer coats of floor finish.

### CAUTION

Never hold a burnishing machine still on a floor surface as the high speed may cause damage to the floor surface (burn spots).

Use the following steps:

1. Place safety signs and, when needed, rope in the work area to alert others to avoid walking on wet floors.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Use broom and ergo dustpan to remove debris that may damage or clog vacuum.
4. Vacuum the area with backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit).
5. Spray a light mist of buffing solution onto the floor 2 to 3 feet ahead of the machine.
6. Immediately buff the misted area with the floor machine and buffing pad.
7. Repeat previous two steps until the area is completed.
8. Remove safety signs and barricades.

### NOTE

Do not overspray. Over spraying causes a stripping action of the floor finish, resulting in streaking or a blotchy appearance.

The floor will become dull and smeared, but continued buffing will dry the surface and produce a brilliant gloss.

## SECTION 7

### FLOOR TYPES

#### 7.1 INTRODUCTION

Application of floor sealer and finish is an important component in hard surface floor care. Application methods vary depending on the type of sealer or finish and also on the type of flooring. Several different application methods are discussed in this section. The goal of a good floor care program is to never have to strip and reseal the floor.

Floors are typically finished with several layers (coatings) of the same floor finish product or are sometimes finished with multiple products such as sealers and top finishes, allowing ample drying time between each layer. The types of products vary by the floor type and desired finish.

Generally, there are two finish types, a high gloss for high visibility and low sheen or matte finish for workroom areas. High visibility areas can be defined as customer lobbies, administrative areas, and other areas that are not subjected to rolling stock and other mail transport equipment as part of the normal operation. Workroom areas are defined as all areas not considered high visibility areas.

#### **WARNING**

**Asphalt planking and Vinyl Asbestos Tile (VAT) are common Postal Service floor coverings. The asbestos fibers in them can be released during floor care only if the matrix of the material is disturbed. When caring for floors made of asphalt planking and VAT, you must comply with the following procedures:**

**Keep three to four coats of floor finish on these materials to contain the fibers and prevent contact with the matrix.**

**When stripping these floors, use wet methods, the least abrasive pad, and buffer speeds not greater than 250-300 revolutions per minute.**

### **WARNING**

**High-speed burnishing of Asbestos Containing Building Materials (ACBM) is prohibited.**

**Use extreme caution not to burn or disturb the matrix of asphalt planking or VAT.**

**See *EL-803, Maintenance Employees Guide to Safety and AS-556 Asbestos Management Guide* for updated safety policies regarding floor care, ACBM, and other important safety guidelines.**

### **NOTE**

The key to quality and efficiency is professionalism. When applying floor finish ensure that no product is placed or splashed on baseboard or walls.

## **7.2 MAINTENANCE OF VARIOUS HARD FLOOR TYPES**

Hard floor types make up the majority of the flooring in the USPS and include vinyl composition tile, asphalt plank, and concrete. Other hard floor types include vinyl asbestos tile, ceramic, marble, terrazo, wood, cork, and raised floors in computer rooms. This section provides details on maintaining these types of floors.

### **7.2.1 Vinyl Composition Tile (VCT) Floors**

VCT, used in many locations throughout the USPS, is comprised of natural limestone, filler materials, a thermoplastic binder and color pigments. The individual tiles come in all shapes and sizes, but the typical VCT tile measures approximately 12" x 12" and is 1/8-inch thick. Weighing approximately one pound, the tile is durable and strong, but resilient due to the flexibility vinyl binders offer.

A VCT floor appearance is hard and smooth, but however they are actually slightly uneven and quite porous, requiring a finish to protect the flooring and provide an acceptable appearance. Floor sealer is a polymer-based product that fills the unevenness in the floor because it is composed of larger molecules. This compound fills the cracks and pore thereby preventing dirt and grime from getting into the VCT. Typically, two coats of sealer are applied first, then five coats of finish are applied over the sealer. Floor finish adheres much better to the sealer than it does to VCT. Taking a holistic approach to VCT care and ensuring there are always many layers of finish protecting it has critical long-term benefits and provides longer life at lower costs.

### **NOTE**

Refer to current MMO titled Floor Care Tools and Supplies for currently approved tools, supplies, and products used in these procedures.

### 7.2.1.1 VCT General Cleaning

General VCT cleaning includes first vacuuming the area, followed by damp mopping utilizing a walk-behind scrubber, ride-on scrubber, or flat microfiber mop, depending on the space size and use. When using powered equipment, always follow recommendations for that specific piece of equipment. When using a flat microfiber mop, begin the application by outlining an 8-foot by 8-foot section of the floor from the wall outward, outlining the sides and top. Choose a work space that easily allows maneuvering the mop in a figure-eight motion while walking backwards. Next, use a figure-eight motion to the inner edges of the parallel stripes to avoid splashing solution on the baseboards and walls.

### 7.2.1.2 Manual Stripping VCT

Stripping floors is labor-intensive and disruptive and should only be performed when scrubbing and recoating will no longer revive the floor. In this case, it may be necessary to remove the old coatings prior to applying new finish.

#### NOTE

Once the floor is refinished and properly maintained, stripping flooring finish to the bare tile will no longer be necessary.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for manual stripping VCT.

1. Tools required for the initial prep operation include: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), three flat microfiber mops, two-sided buckets, approved VCT stripping product, hand pad holder, and HEPA wet-dry vacuum.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.
6. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and the amount of stripping solution per quantity indicated by the manufacturer.
7. Fill other side of mop bucket half full with cold water, for rinsing the mop.
8. Use flat microfiber mops for initial prep operation (at least three mops will be required):
  - d. Work in approximately 8 by 8 foot sections at a time.

- e. Dip first mop in mop bucket containing stripping solution and do not wring out solution. Hold mop above bucket momentarily to allow excessive solution to drain from mop head.
- f. Position mop 1-inch from baseboards and moderately apply solution to floor, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
- g. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Do not permit stripping solution to dry while stripping the floor. It may be necessary to apply more solution as the floor is stripped.

- h. Allow stripping solution to remain on the floor the length of time indicated by manufacturer to allow chemical to loosen the old floor finish and dirt.
- 9. Use wet dry vacuum to pick up solution.
  - 10. Dip a clean flat microfiber mop in mop bucket containing clean fresh water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring mop nearly dry, and repeat procedure until entire section is rinsed.
  - 11. Dip a second clean mop in bucket containing water and apply water to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no solution remaining on the floor surface.
  - 12. After entire floor has been stripped, rinse one more time with fresh, clean water to remove all stripping solution residue.
  - 13. Clean all tools and equipment after each use.

### 7.2.1.3 Mechanized VCT Stripping

When a space is large enough and conditions permit, use a scrubber vacuum machine in lieu of mops to facilitate the stripping process. Use of mechanized equipment, when possible, increases productivity and decreases employee fatigue.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for mechanized VCT stripping.

- 1. Tools required for the initial prep operation include: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum, mechanized vacuum machine (if the space is large enough and conditions permit), three flat microfiber mops, two-sided buckets, approved VCT stripping product, hand pad holder, and HEPA wet-dry vacuum.



2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.
6. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity indicated by the manufacturer.
7. Fill other side of mop bucket half full with cold water, for rinsing the mop.
8. Place a stripping pad (black/dark green) in the mop bucket containing the stripping solution, and rotate the pad slowly until it is soaked.
9. Place the soaked stripping pad under the floor machine and scrub slowly in a back-and-forth motion.
10. Remove floor finish buildup and dirt along baseboards and in corners using a small hand stripping tool.
  - a. Size and cut a piece of stripping pad to fit a handle.
  - b. Dip pad in the mop bucket containing the stripping solution.
  - c. Scrub section.

### NOTE

If the floor is badly soiled, use more solution and repeat the machine operation. The second machine operation should be in the opposite direction from the first operation to help remove stubborn finish.

11. Use wet dry vacuum to pick up solution.
12. Dip a clean flat microfiber mop in mop bucket containing clean fresh water, wring nearly dry, and apply to floor surface. Return mop to bucket frequently, wring mop nearly dry, and repeat procedure until entire section is rinsed.
13. Dip a second clean mop in bucket containing water and apply water to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no solution remaining on the floor surface.
14. After entire floor has been stripped, rinse one more time with fresh, clean water to remove all stripping solution residue.
15. Clean all tools and equipment after each use.

### 7.2.1.4 Sealing and Finishing Stripped VCT

Once the floor is stripped of any old finish, the VCT is porous, uneven, and unprotected.

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Applying floor finish seals the VCT, fills in the uneven areas, and provides protection to the tile. The finish can also provide a high gloss shine to enhance the appearance.

When conditions permit, the area selected should be large enough so that when complete applying first coat of finish, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for sealing and finishing stripped VCT.

1. Tools required for finishing operation include: floor scraper, broom and ergo dustpan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, approved VCT sealer, approved VCT finish, and two-sided buckets.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Ensure no puddles of sealer or finish are left in low spots.

6. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
7. Pour a line of sealer, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
8. Mop in an overlapping figure-eight motion across the line of sealer to pick up more sealer with each pass and ensure it is evenly spread.

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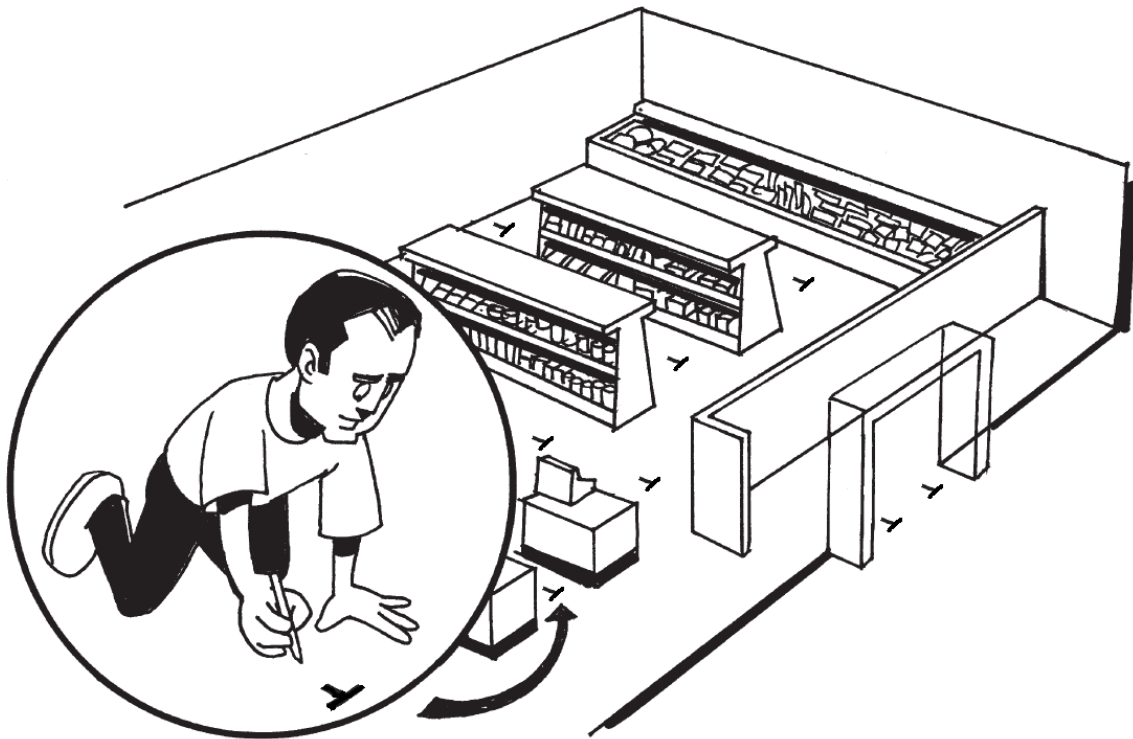
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9. Once the first coat is fully dry, apply an additional coat of sealer using the same method described above.
10. Apply five coats of floor finish using the same method described above until there is a total of seven coats (including the two sealer coats). Ensure each coat of product completely dries before applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.

11. Apply visible marks after (Figure 7-1) coat four and coat six, for monitoring when recoating is required using these steps:
  - a. Obtain a floor plan of the area where finish is applied.
  - b. Select locations to place marks in high traffic areas about 12 feet apart. In aisles, hallways, or corridors; place marks on both sides 18 inches from the wall no more than 12 feet apart in all directions.
  - c. Using a visible permanent marker make a line approximately one-inch in length from left to right after coat four is completely dry.
  - d. After coat six is dry add a one-inch mark perpendicular to the line applied on coat four one inch in length. See figure below.
  - e. Record the location of these marks on a floor plan.
  - f. Inspect marks weekly to monitor floor finish wear. When the mark applied to coat six is no longer visible, generate work orders to recoat this area with two coats of finish.

### NOTE

Ensure the left to right marks on coat four (applied during step c. above) are visible. If not, apply new left to right marks utilizing a visible permanent marker before applying additional coats of floor finish.



**Figure 7-1. Recoating Markd**

12. Clean all tools and equipment after each use.

### 7.2.1.5 Maintaining VCT Finish

The time between scrubbing, buffing, and/or recoating VCT can be extended with the routine floor maintenance program outlined in the MS-47. Proper cleaning and maintenance helps to extend the floor finish life. Always monitor the marks placed on the floor finish in the previous section to prevent damage and wear of the floor sealer and first two finish coats.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for maintaining VCT finish.

1. Tools required for maintaining operation would include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, and approved VCT cleaner.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
6. Clean all tools and equipment after each use.

### 7.2.1.6 Recoating VCT with Finish

When recoating VCT, apply three coats of floor finish to the existing finish. Ensure floor surface is clean and free of any dirt or debris by vacuuming and/or mopping if needed. When conditions permit, the area selected should be large enough so that when complete applying the first coat of finish the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for recoating VCT with finish.

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1. Tools required for recoating operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved VCT finish, and hand pad holder.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the backpack vacuum or mechanized vacuum machine.
5. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
6. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

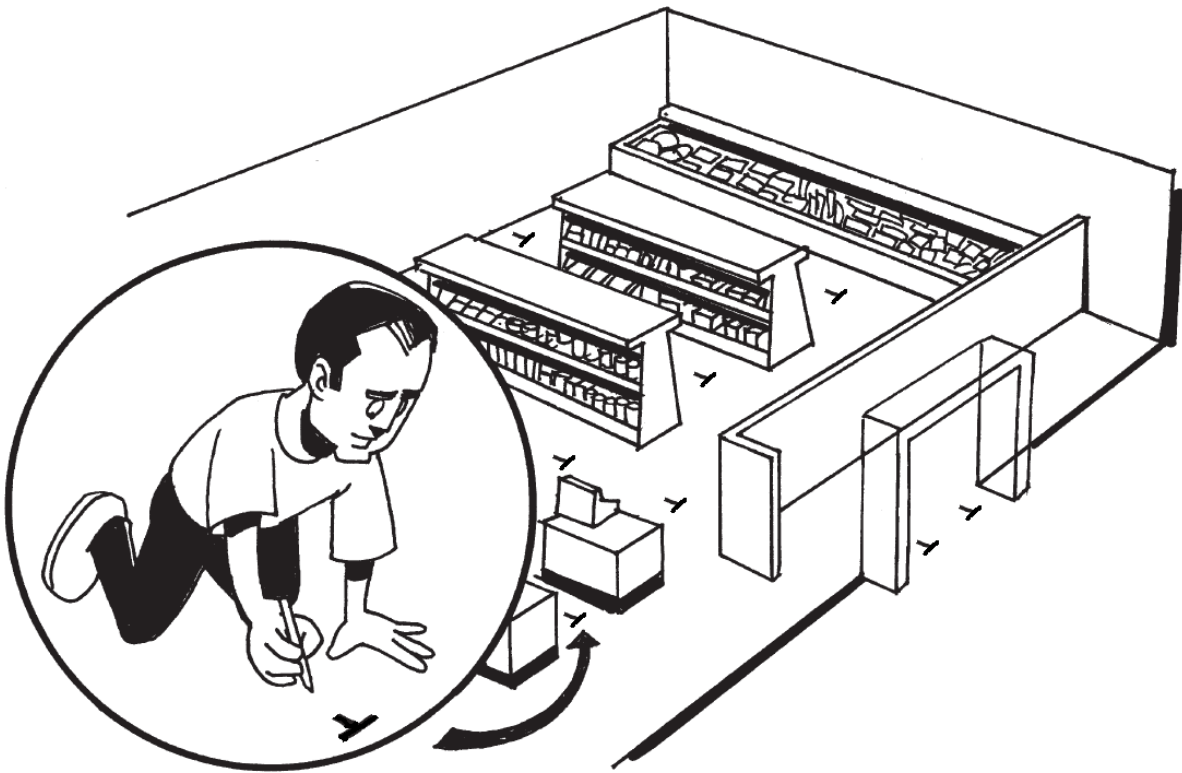
Ensure no puddles of sealer or finish are left in low spots.

7. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
8. Pour a line of finish, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
10. Once the first coat is fully dry, apply two additional coats and ensure each coat of floor finish completely dries before applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.

11. Apply visible marks (Figure 7-2) after coat four and coat six, for monitoring when recoating is required using these steps:
  - a. Obtain a floor plan of the area where finish is applied.
  - b. Select locations to place marks in high traffic areas about 12 feet apart. In aisles, hallways, or corridors; place marks on both sides 18 inches from the wall no more than 12 feet apart in all directions.
  - c. Using a visible permanent marker make a line approximately one-inch in length from left to right after coat four is completely dry.
  - d. After coat six is dry add a one-inch mark perpendicular to the line applied on coat four one inch in length. See figure below.
  - e. Record the location of these marks on a floor plan.
  - f. Inspect marks weekly to monitor floor finish wear. When the mark applied to coat six is no longer visible, generate work orders to recoat this area with two coats of finish.

### NOTE

Ensure the left to right marks on coat four (applied during step c. above) are visible. If not, apply new left to right marks utilizing a visible permanent marker before applying additional coats of floor finish.



**Figure 7-2. Recoating Marks**

12. Clean all tools and equipment after each use.

### 7.2.1.7 Buffing or Burnishing VCT

Maintaining attractive and glossy floor finish requires more than periodic vacuuming and mopping. Buffing and burnishing are two methods to restore shine to VCT finish. While both buffing and burnishing are done to obtain a glossy finish, the two different methods produce different results and require different pieces of equipment. Floor buffing is typically done to polish floors or remove residue from floors. Burnishing further polishes floors using a higher speed to achieve a high-gloss, wet-look shine. Burnishing is often done after buffing to achieve the high gloss shine and should only be done in high visibility locations such as customer service lobbies and administrative areas that do not have heavy traffic or rolling stock traffic.

Follow safety procedures outlined in Section 3 based on the work area and locations.

Use the following steps for buffing or burnishing VCT.

1. Wait 48 hours after applying finish before buffing or burnishing a floor. Only buff or burnish the final top coat of floor finish. Never buff or burnish between coats because that solution will be covered by additional layers.
2. Tools required for buffing or burnishing operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine /wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved VCT buffing and/or burnishing agent, buffing machine and/or burnishing machine.
3. Remove items such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
4. Use floor scraper to remove gum and other substances stuck to the floor.
5. Sweep with broom and ergo dustpan to remove debris that could damage the backpack vacuum or mechanized vacuum machine.
6. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
7. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.



8. Apply liquid buffing product on to the center of the floor beginning at one end of the area. Avoid edges near the walls to prevent excessive buildup in areas not walked on frequently.
9. Place the buffing pad on the floor machine, and turn on the machine.
10. Move the floor machine in small arcs across floor's surface to distribute the buffing agent and shine the floor evenly. Start in area at farthest end away from planned exit and walk backwards toward planned exit. Continue to apply buffing agent with every new area of floor being worked.
11. Allow ample time for floor to dry and repeat the application of buffing agent using the floor machine to achieve desired results.
12. Clean all the tools and equipment after each use.

### 7.2.2 Vinyl Asbestos Tile (VAT) Floors

Vinyl asbestos floor tiles (VAT) are similar to VCT, however tiles manufactured before 1960 most likely contain asbestos. VAT manufactured between 1960 and 1980 have a slight chance they contain asbestos. VAT are considered non-friable, however caution should be exercised when performing floor care. The frictional forces exerted on these materials during routine floor-care maintenance operations can generate asbestos-containing particles.

#### **WARNING**

**Custodial personnel responsible for the care and maintenance of asbestos containing floor coverings should be thoroughly trained in the safely and proper operation of the machines, pads, and floor care chemicals used at the facility. Stripping of vinyl asbestos tiles should be done as infrequently as possible. Never use aggressive techniques which will result in increased levels of asbestos fibers in the air**

#### **WARNING**

**Asphalt planking and Vinyl Asbestos Tile (VAT) are common Postal Service floor coverings. The asbestos fibers in them can be released during floor care only if the matrix of the material is disturbed. When caring for floors made of asphalt planking and VAT, you must comply with the following procedures:**

**Keep three to four coats of floor finish on these materials to contain the fibers and prevent contact with the matrix.**

**When stripping these floors, use wet methods, the least abrasive pad, and buffer speeds not greater than 250-300 revolutions per minute.**

### **WARNING**

**High-speed burnishing of Asbestos Containing Building Materials (ACBM) is prohibited.**

**Use extreme caution not to burn or disturb the matrix of asphalt planking or VAT.**

**See *EL-803, Maintenance Employees Guide to Safety and AS-556 Asbestos Management Guide* for updated safety policies regarding floor care, ACBM, and other important safety guidelines.**

### **NOTE**

Refer to current MMO titled Floor Care Tools and Supplies for currently approved tools, supplies, and products used in these procedures.

#### **7.2.2.1 VAT General Cleaning**

General VAT cleaning includes first vacuuming the area, followed by damp mopping utilizing a walk-behind, ride-on scrubber, or flat microfiber mop, depending on the space size and use. When using powered equipment, always follow recommendations for that specific piece of equipment. When using a flat microfiber mop, begin the application by outlining an 8-foot by 8-foot section of the floor from the wall outward, outlining the sides and top. Choose a work space that easily allows maneuvering the mop in a figure-eight motion while walking backwards. Next, use a figure-eight motion to the inner edges of the parallel stripes to avoid splashing solution on the baseboards and walls.

#### **7.2.2.2 Manual Stripping VAT**

Stripping floors is labor intensive and disruptive and should only be performed when scrubbing and recoating will no longer revive the floor. This is especially true with VAT. In this case, it may be necessary to remove the old coatings prior to applying new finish. Once the floor is refinished and properly maintained, stripping the floor down to bare tile will no longer be necessary.

### **NOTE**

Once the floor is refinished and properly maintained, stripping flooring finish to the bare tile will no longer be necessary.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for manual stripping VAT .

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1. Tools required for the initial prep operation would include nifty nabber, scraper, broom, ergo dust pan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved VAT stripping product, and hand pad holder, and HEPA Wet-Vacuum cleaner.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.

### **WARNING**

**Never perform dry stripping on VAT flooring. Only strip VAT floors while wet. Failure to comply may release hazardous asbestos fibers into the air**

6. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity indicated by the manufacturer.
7. Fill other side of mop bucket half full with cold water, for rinsing the mop.
8. Use flat microfiber mops for initial prep operation (at least three mops will be required):
  - a. Work in approximately 8 by 8 foot sections at a time.
  - b. Dip first mop in mop bucket containing stripping solution and do not wring out solution. Hold mop above bucket momentarily to allow excessive solution to drain from mop head.
  - c. Position mop 1-inch from baseboards and moderately apply solution to floor, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### **NOTE:**

Do not permit stripping solution to dry while stripping the floor. It may be necessary to apply more solution as the floor is stripped.

- e. Allow stripping solution to remain on the floor the length of time recommended by manufacturer to allow chemical to loosen the old floor finish and dirt.

9. Use HEPA wet dry vacuum to pick up solution.
10. Dip a clean flat microfiber mop in mop bucket containing clean fresh water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring mop nearly dry, and repeat procedure until entire section is rinsed.
11. Dip a second clean mop in bucket containing water and apply water to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no solution remaining on the floor surface.
12. After entire floor has been stripped, rinse one more time with fresh, clean water to remove all stripping solution residue.
13. Clean all tools and equipment after each use

### 7.2.2.3 Mechanized VAT Stripping

When a space is large enough and conditions permit, use a scrubber vacuum machine in lieu of mops to facilitate the stripping process. Use of mechanized equipment increases productivity and decreases employee fatigue.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for mechanized VAT stripping

1. Tools required for the initial prep operation include: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum, mechanized vacuum machine (if the space is large enough and conditions permit), three flat microfiber mops, two-sided buckets, approved VAT stripping product, and hand pad holder.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.

#### **WARNING**

**Never perform dry stripping on VAT flooring. Only strip VAT floors while wet. Failure to comply may release hazardous asbestos fibers into the air.**

6. Prior to machine operation apply an emulsion of chemical stripper in water to the floor with a mop to soften the wax or finish coat and to reduce chances of releasing asbestos fibers.

7. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity indicated by the manufacturer.
8. Fill other side of mop bucket half full with cold water, for rinsing the mop.

### **WARNING**

**Do not operate a floor machine with an abrasive pad on unfinished floor containing-asbestos materials.**

9. Place a non-abrasive stripping pad in the mop bucket containing the stripping solution, rotating the pad slowly until it is soaked.

### **WARNING**

**There is a direct correlation between machine speeds and the release of asbestos fibers from asbestos containing floor coverings. Always use low speed operation on VAT flooring. The higher the machine's speed the greater the probability of asbestos fiber release.**

10. Place the soaked stripping pad under the floor machine and scrub at a low rate of speed (i.e., ranging between 175-300 rpm), moving slowly in a back-and-forth motion. If the floor is badly soiled, use more solution and repeat the machine operation.
11. Remove floor finish buildup and dirt along baseboards and in corners using a small hand stripping tool.
  - a. Size and cut a piece of stripping pad to fit a handle.
  - b. Dip pad in the mop bucket containing the stripping solution.
  - c. Scrub section.

### **NOTE**

If the floor is badly soiled, use more solution and repeat the machine operation, at low speed. The second machine operation should be in the opposite direction from the first operation to help remove stubborn finish.

12. Use HEPA wet dry vacuum to pick up solution.
13. Dip second clean flat microfiber mop in mop bucket containing rinse water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring nearly dry, and repeat procedure until entire section is rinsed.

14. Dip third clean mop in bucket containing final rinse solution and apply to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no obvious solution remaining on the floor surface.
15. After entire floor has been stripped, rinse one more time with fresh water.
16. Clean all tools and equipment after each use.

### 7.2.2.4 Sealing and Finishing Stripped VAT

Once the floor is stripped of any old finish, the VAT is porous, uneven, and unprotected. Applying floor finish seals the VAT, fills in the uneven areas, and provides protection to the tile. The finish can also provide a high gloss shine to enhance the appearance.

Finishing can remove stains, build shine, correct previous poor strip jobs and improve the general look but it can never guarantee 100% return to the original appearance. VAT is a porous material and dirt and grime may become permanently embedded in the exposed tile if all of the finish is allowed to wear away.

When conditions permit, the area selected should be large enough so that when complete applying the first coat of finish, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for sealing and finishing stripped VAT.

1. Tools required for finishing operation include: floor scraper, broom and ergo dustpan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, approved VAT sealer, approved VAT finish, and two-sided buckets.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.

- d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

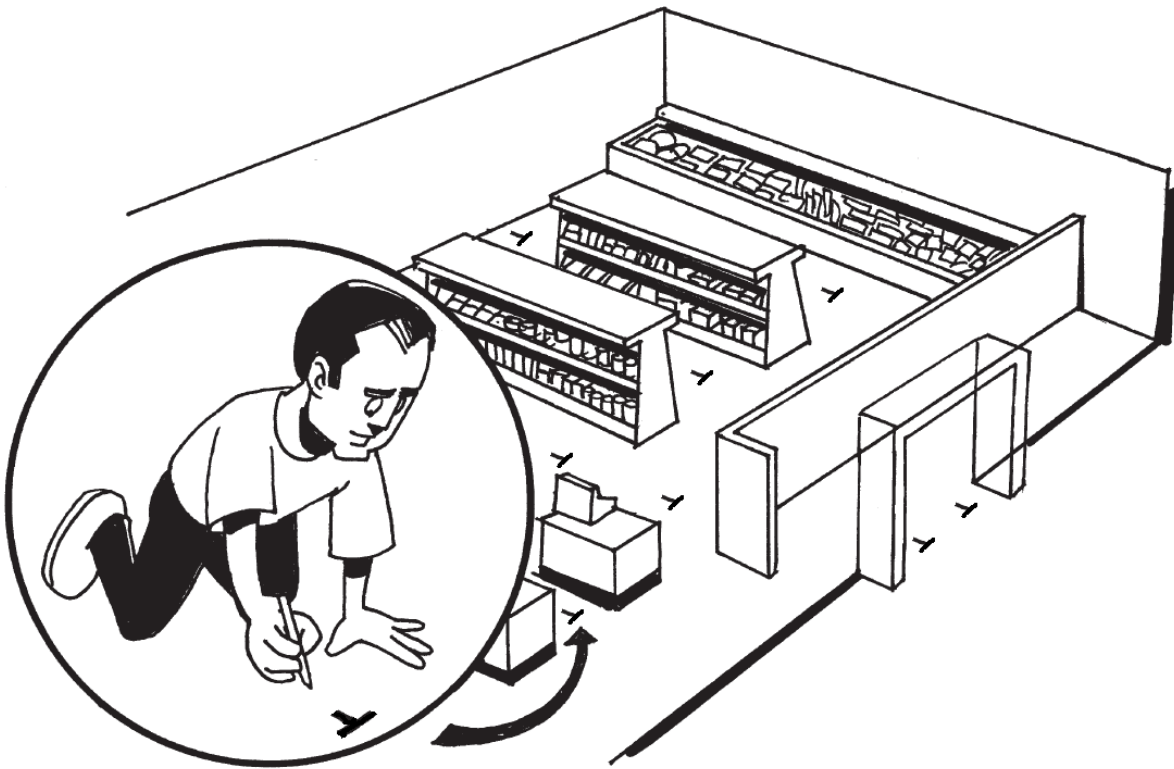
Ensure no puddles of sealer or finish are left in low spots.

6. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
7. Pour a line of sealer, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
8. Mop in an overlapping figure-eight motion across the line of sealer to pick up more sealer with each pass and ensure it is evenly spread.
9. Once the first coat is fully dry, apply an additional coat of sealer using the same method described above.
10. Apply an additional five coats of floor finish using the same method described above until there is a total of seven coats (including the 2 sealer coats). Allow sufficient time between coats to allow floor to finish completely drying before applying the next coat. With each additional coat of floor finish, start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.

11. Apply visible marks (Figure 7-3) after coat four and coat six, for monitoring when recoating is required using these steps:
  - a. Obtain a floor plan of the area where finish is applied.
  - b. Select locations to place marks in high traffic areas about 12 feet apart. In aisles, hallways, or corridors; place marks on both sides 18 inches from the wall no more than 12 feet apart in all directions.
  - c. Using a visible permanent marker make a line approximately one-inch in length from left to right after coat four is completely dry.
  - d. After coat six is dry add a one-inch mark perpendicular to the line applied on coat four one inch in length. See figure below.
  - e. Record the location of these marks on a floor plan.
  - f. Inspect marks weekly to monitor floor finish wear. When the mark applied to coat six is no longer visible, generate work orders to recoat this area with two coats of finish.

### NOTE

Ensure the left to right marks on coat four (applied during step c. above) are visible. If not, apply new left to right marks utilizing a visible permanent marker before applying additional coats of floor finish.



**Figure 7-3. Recoating Marks**

12. Clean all the tools and equipment after each use.



### 7.2.2.5 Maintaining VAT Finish

The time between scrubbing, buffing, and/or recoating VAT can be extended with the routine floor maintenance program outlined in MS-47. Proper cleaning and maintenance can help extend the life of the floor's finish. Always monitor the marks placed on the floor finish to prevent damage and wear of the floor sealer and first two finish coats.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for maintaining VAT finish.

1. Tools required for maintaining operation include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, and approved VAT cleaner.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
6. Clean all tools and equipment after each use.

### 7.2.2.6 Recoating VAT with Finish

When recoating VAT, apply three coats of finish to the existing finish. Maintaining three or more coats of finish on the floor will minimize fibers chance of becoming airborne. When conditions permit, the area selected should be large enough so that when complete applying the first coat of finish the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and locations

Use the following steps to recoat VAT with finish.

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1. Tools required for recoating operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved VAT finish, and hand pad holder.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
6. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

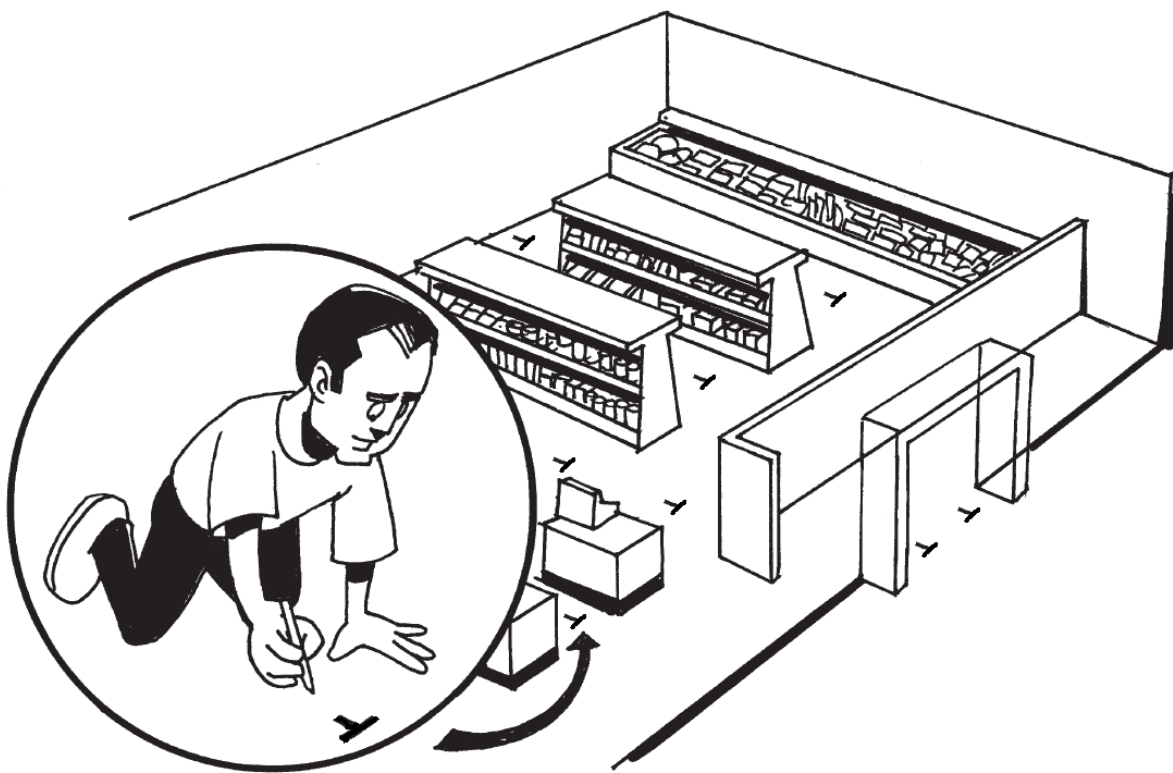
Ensure no puddles of sealer or finish are left in low spots.

7. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
8. Pour a line of finish, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Mop in an overlapping figure-eight motion across the line of finish to pick up more finish with each pass and ensure it is evenly spread.
10. Once the first coat is fully dry, apply two additional coats and ensure each coat of floor finish completely dries before applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.

11. Apply visible marks (Figure 7-4) after coat four and coat six, for monitoring when recoating is required using these steps:
- Obtain a floor plan of the area where finish is applied.
  - Select locations to place marks in high traffic areas about 12 feet apart. In aisles, hallways, or corridors; place marks on both sides 18 inches from the wall no more than 12 feet apart in all directions.
  - Using a visible permanent marker make a line approximately one-inch in length from left to right after coat four is completely dry.
  - After coat six is dry add a one-inch mark perpendicular to the line applied on coat four one inch in length. See figure below.
  - Record the location of these marks on a floor plan.
  - Inspect marks weekly to monitor floor finish wear. When the mark applied to coat six is no longer visible, generate work orders to recoat this area with two coats of finish.

### NOTE

Ensure the left to right marks on coat four (applied during step c. above) are visible. If not, apply new left to right marks utilizing a visible permanent marker before applying additional coats of floor finish.



**Figure 7-4. Recoating Marks**

12. Clean all tools and equipment after each use.
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### 7.2.2.7 Buffing VAT

Maintaining attractive and glossy finish requires more than periodic vacuuming and mopping. Floor buffing is typically done to polish floors or remove residue from floors.

#### **WARNING**

**Never DRY buff VAT floors, and NEVER BURNISH VAT FLOORS. Failure to comply may release hazardous asbestos fibers into the air**

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for buffing VAT.

1. Wait 48 hours after applying finish before buffing. Do not buff the floor between coats.
2. Tools required for buffing or burnishing operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved VAT buffing agent, and buffing machine.
3. Remove items such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
4. Use floor scraper to remove gum and other substances stuck to the floor.
5. Sweep with broom and ergo dustpan to remove debris that could damage the vacuum.
6. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
7. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
8. Apply liquid buffing product to the center of the floor beginning at one end of the area. Avoid edges near the walls to prevent excessive buildup in areas not walked on frequently.
9. Place non-abrasive buffing pad on the floor machine, and turn on the machine.

### **WARNING**

**When spray-buffing floors, always operate the floor machine at the lowest rates of speed possible and equip the floor machine with the least abrasive pad as possible. Spray buffing with high-speed floor machines may result in significantly higher airborne asbestos fiber concentrations than spray buffing with low speed machines. NEVER DRY buff VAT floors. Failure to comply may release hazardous asbestos fibers into the air.**

10. Move the floor machine at low speed in small arcs across floor's surface to distribute the buffing agent and shine the floor evenly. Start in area at farthest end away from planned exit and walk backwards with machine toward planned exit. Continue to apply buffing agent with every new area of floor being worked.
11. Allow ample time for floor to dry and repeat the buffing application using the floor machine to achieve desired results.
12. Clean all the tools and equipment after each use.

### **7.2.3 Asphalt Plank Floors**

Asphalt plank floor are primarily located in larger facilities and used on workroom floors. The majority of asphalt plank is black, but there are some red, gray, and other shades of asphalt plank in the postal inventory. Care must be taken when working on asphalt plank floors as they most likely contain asbestos. Review asbestos survey to determine if and where asbestos exists in the facility before performing floor maintenance. Much of the asphalt plank flooring was installed in the 70's but there is some that were installed into the 90's. They were installed typically over concrete floors to provide a cushion for the employees because of their long hours on their feet.

Asphalt Plank floor tile maintenance are similar to VAT in that they both likely contain asbestos. Asphalt plank floor tiles are considered non-friable; however caution should be exercised when performing floor care. The frictional forces exerted on these materials during routine floor-care maintenance operations can generate asbestos-containing particles.

### **WARNING**

Custodial personnel responsible for the care and maintenance of asbestos containing floor coverings should be thoroughly trained in the safely and proper operation of the machines, pads, and floor care chemicals used at the facility.

Stripping asphalt plank tiles should be done as infrequently as possible. Never use aggressive techniques which will result in increased levels of asbestos fibers in the air and never strip using dry methods.

### **WARNING**

Asphalt planking and Vinyl Asbestos Tile (VAT) are common Postal Service floor coverings. The asbestos fibers in them can be released during floor care only if the matrix of the material is disturbed. When caring for floors made of asphalt planking and VAT, you must comply with the following procedures:

Keep three to four coats of floor finish on these materials to contain the fibers and prevent contact with the matrix.

When stripping these floors, use wet methods, the least abrasive pad, and buffer speeds not greater than 250-300 revolutions per minute.

### **WARNING**

High-speed burnishing of Asbestos Containing Building Materials (ACBM) is prohibited.

Use extreme caution not to burn or disturb the matrix of asphalt planking or VAT.

See *EL-803, Maintenance Employees Guide to Safety and AS-556 Asbestos Management Guide* for updated safety policies regarding floor care, ACBM, and other important safety guidelines.

### NOTE

Refer to current MMO titled, Floor Care Tools and Supplies for currently approved tools, supplies, and products used in these procedures.

#### 7.2.3.1 Asphalt Plank General Cleaning

General cleaning includes first vacuuming the area, followed by damp mopping utilizing a walk-behind, ride-on scrubber, or flat microfiber mop, depending on the space size and use. When using powered equipment, always follow recommendations for that specific piece of equipment. When using a flat microfiber mop, begin the application by outlining an 8-foot by 8-foot section of the floor from the wall outward, outlining the sides and top. Choose a work space that easily allows maneuvering the mop in a figure-eight motion while walking backwards. Next, use a figure-eight motion to the inner edges of the parallel stripes to avoid splashing solution on the baseboards and walls.

#### 7.2.3.2 Manual Stripping Asphalt Plank

Stripping floors is labor-intensive and disruptive. It should only be performed when scrubbing and recoating will no longer revive the floor. This is especially true with asphalt plank tiles. In this case, it may be necessary to remove the old coatings prior to applying new finish. Once the floor is refinished and properly maintained stripping the floor down to bare asphalt will no longer be necessary.

### NOTE

Once the floor is refinished and properly maintained, stripping flooring finish to bare asphalt will no longer be necessary.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for manual stripping asphalt plank.

1. Tools required for the initial prep operation would include nifty nabber, scraper, broom, ergo dust pan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved asphalt plank stripping product, hand pad holder, and HEPA Wet-Vacuum cleaner.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.

### **WARNING**

**Never perform dry stripping on vinyl plank flooring. Only strip floors while wet. Failure to comply may release hazardous asbestos fibers into the air.**

6. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity indicated by the manufacturer.
7. Fill other side of mop bucket half full with cold water, for rinsing the mop.
8. Use flat microfiber mops for initial prep operation (at least three mops will be required):
  - a. Work in approximately 8 by 8 foot sections at a time.
  - b. Dip first mop in mop bucket containing stripping solution and do not wring out solution. Hold mop above bucket momentarily to allow excessive solution to drain from mop head.
  - c. Position mop 1-inch from baseboards and moderately apply solution to floor, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### **NOTE**

Do not permit stripping solution to dry while stripping the floor. It may be necessary to apply more solution as the floor is stripped.

9. Allow stripping solution to remain on the floor the length of time recommended by manufacturer to allow chemical to loosen the old floor finish and dirt.
10. Use HEPA wet dry vacuum to pick up solution.
11. Dip a clean flat microfiber mop in mop bucket containing clean fresh water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring mop nearly dry, and repeat procedure until entire section is rinsed.
12. Dip a second clean mop in bucket containing water and apply water to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no solution remaining on the floor surface.
13. After entire floor has been stripped, rinse one more time with fresh, clean water to remove all stripping solution residue.
14. Clean all tools and equipment after each use.



### 7.2.3.3 Mechanized Asphalt Plank Stripping

When a space is large enough and conditions permit, use a scrubber vacuum machine in lieu of mops to facilitate the stripping process. Use of mechanized equipment increases productivity and decreases employee fatigue.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for mechanized asphalt plank stripping.

1. Tools required for the initial prep operation include: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum, mechanized vacuum machine (if the space is large enough and conditions permit), three flat microfiber mops, two-sided buckets, approved asphalt plank stripping product, hand pad holder, and HEPA wet dry vacuum.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.

#### **WARNING**

**Never perform dry stripping on asphalt plank flooring. Only strip floors while wet. Failure to comply may release hazardous asbestos fibers into the air.**

6. Prior to machine operation apply an emulsion of chemical stripper in water to the floor with a mop to soften the wax or finish coat and to reduce chances of releasing asbestos fibers.
7. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity indicated by the manufacturer.
8. Fill other side of mop bucket half full with cold water, for rinsing the mop.

#### **WARNING**

**Do not operate a floor machine with an abrasive pad on unfinished floor containing-asbestos materials. Failure to comply may release hazardous asbestos fibers into the air.**

9. Place a non-abrasive stripping pad in the mop bucket containing the stripping solution, rotating the pad slowly until it is soaked.

### **WARNING**

**There is a direct correlation between machine speeds and the release of asbestos fibers from asbestos containing floor coverings. The higher the machine's speed the greater the probability of asbestos fiber release. Always use low speed wet operations on asphalt plank flooring. Failure to comply may release hazardous asbestos fibers into the air.**

10. Place the soaked stripping pad under the floor machine and scrub at a low rate of speed (i.e., ranging between 175-300 rpm), moving slowly in a back-and-forth motion. If the floor is badly soiled, use more solution and repeat the machine operation.
11. Remove floor finish buildup and dirt along baseboards and in corners using a small hand stripping tool.
  - a. Size and cut a piece of stripping pad to fit a handle.
  - b. Dip pad in the mop bucket containing the stripping solution.
  - c. Scrub section.

### **NOTE**

If the floor is badly soiled, use more solution and repeat the machine operation, at low speed. The second machine operation should be in the opposite direction from the first operation to help remove stubborn finish.

12. Use HEPA wet dry vacuum to pick up solution.
13. Dip second clean flat microfiber mop in mop bucket containing rinse water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring nearly dry, and repeat procedure until entire section is rinsed.
14. Dip third clean mop in bucket containing final rinse solution and apply to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no obvious solution remaining on the floor surface.
15. After entire floor has been stripped, rinse one more time with fresh water.
16. Clean all tools and equipment after each use.

#### **7.2.3.4 Sealing and Finishing Stripped Asphalt Plank**

Once the floor is stripped of any old finish, the asphalt plank flooring is porous, uneven, and unprotected. Applying floor finish seals the floor, fills in the uneven areas, and provides protection to the asphalt plank. The finish can also provide a gloss shine to enhance the appearance.

Finishing can remove stains, build shine, correct previous poor strip jobs and improve the general look but it can never guarantee 100% return to the original appearance. Asphalt plank flooring is a porous material and dirt and grime may become permanently embedded in the exposed tile if all of the finish is allowed to wear away.

When conditions permit, the area selected should be large enough so that when complete applying the first coat of finish, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for sealing and finishing stripped asphalt plank.

1. Tools required for finishing operation include: floor scraper, broom and ergo dustpan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, approved asphalt plank sealer, approved asphalt plank finish, and two-sided buckets.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. Vacuum area with backpack vacuum or mechanized vacuum machine. Use approved pH neutral cleaner in wet vacuum machine.
5. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
6. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Ensure no puddles of sealer or finish are left in low spots.

7. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.

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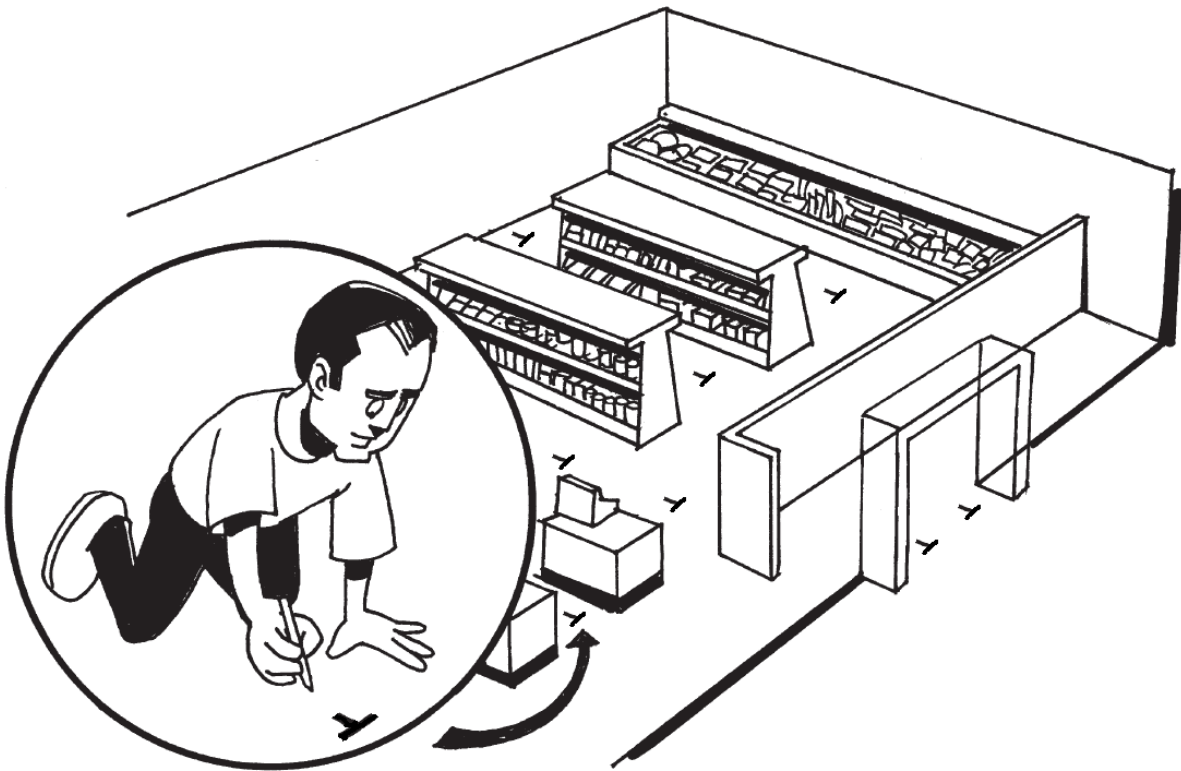
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8. Pour a line of sealer, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Mop in an overlapping figure-eight motion across the line of sealer to pick up more sealer with each pass and ensure it is evenly spread.
10. Once the first coat is fully dry, apply an additional coat of sealer using the same method described above.
11. Apply an additional five coats of floor finish using the same method described above until there is a total of seven coats (including the 2 sealer coats). Allow sufficient time between coats to allow floor to finish completely drying before applying the next coat. With each additional coat of floor finish, start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.

12. Apply visible marks (Figure 7-5) after coat four and coat six, for monitoring when recoating is required (Figure 7-5) using these steps:
  - a. Obtain a floor plan of the area where finish is applied.
  - b. Select locations to place marks in high traffic areas about 12 feet apart. In aisles, hallways, or corridors; place marks on both sides 18 inches from the wall no more than 12 feet apart in all directions.
  - c. Using a visible permanent marker make a line approximately one-inch in length from left to right after coat four is completely dry.
  - d. After coat six is dry add a one-inch mark perpendicular to the line applied on coat four one inch in length. See figure below.
  - e. Record the location of these marks on a floor plan.
  - f. Inspect marks weekly to monitor floor finish wear. When the mark applied to coat six is no longer visible, generate work orders to recoat this area with two coats of finish.

### NOTE

Ensure the left to right marks on coat four (applied during step c. above) are visible. If not, apply new left to right marks utilizing a visible permanent marker before applying additional coats of floor finish.



**Figure 7-5. Recoating Marks**

13. Clean all the tools and equipment after each use.

### 7.2.3.5 Maintaining Asphalt Plank Finish

The time between scrubbing, buffing and/or recoating can be extended with the routine floor maintenance program outlined in MS-47. Proper cleaning and maintenance can help extend the life of the floor's finish.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for maintaining asphalt plank finish.

1. Tools required for maintaining operation include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, and approved asphalt plank cleaner.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide the work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
6. Clean all tools and equipment after each use.

### 7.2.3.6 Recoating Asphalt Plank with Finish

When recoating vinyl plank flooring, apply three coats of finish to the existing finish. Maintaining three or more coats of finish on the floor will minimize fibers from becoming airborne. When conditions permit, the area selected should be large enough so that when complete applying the first coat of finish the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for recoating asphalt plank with finish.

1. Tools required for recoating operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved asphalt plank finish, and hand pad holder.

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2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
6. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

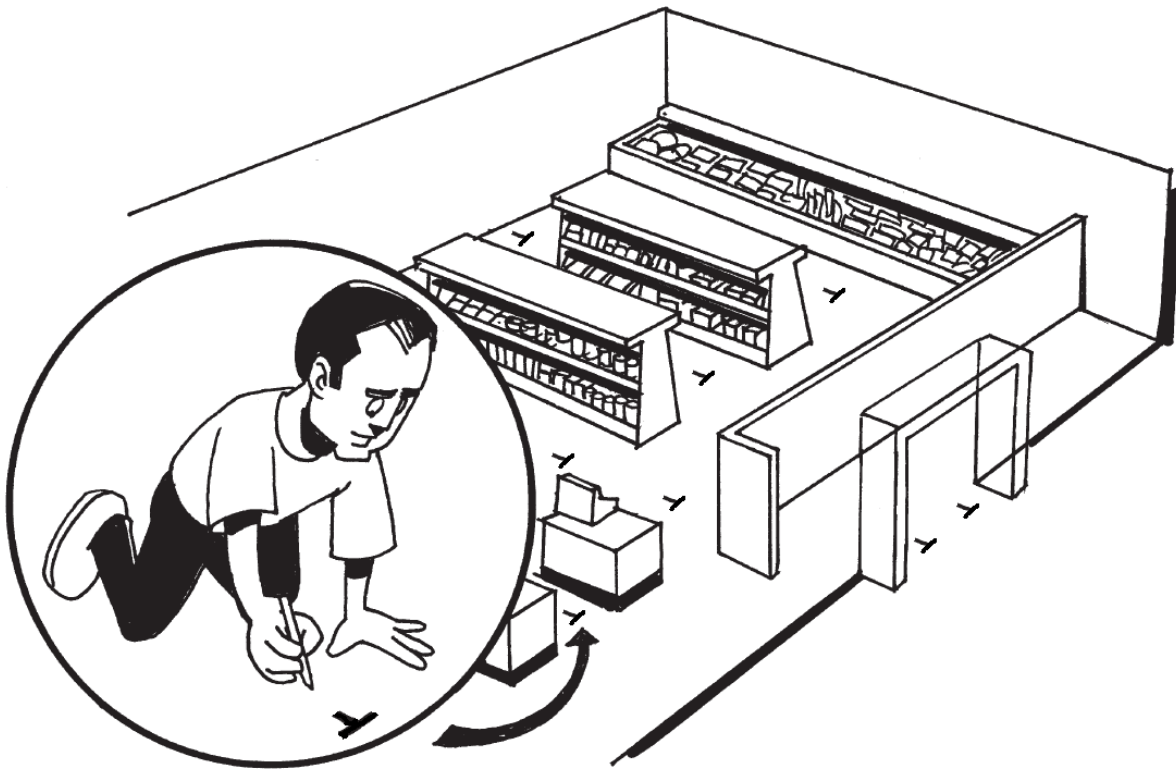
Ensure no puddles of sealer or finish are left in low spots.

7. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
8. Pour a line of finish, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Mop in an overlapping figure-eight motion across the line of finish to pick up more finish with each pass and ensure it is evenly spread.
10. Once the first coat is fully dry, apply two additional coats and ensure each coat of floor finish completely dries before applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.

11. Apply visible marks after coat four and coat six, for monitoring when recoating is required (Figure 7-6) using these steps:
  - a. Obtain a floor plan of the area where finish is applied.
  - b. Select locations to place marks in high traffic areas about 12 feet apart. In aisles, hallways, or corridors; place marks on both sides 18 inches from the wall no more than 12 feet apart in all directions.
  - c. Using a visible permanent marker make a line (Figure 7-6) approximately, one-inch in length from left to right after coat four is completely dry.
  - d. After coat six is dry add a one-inch mark perpendicular to the line applied on coat four one inch in length. See figure below.
  - e. Record the location of these marks on a floor plan.
  - f. Inspect marks weekly to monitor floor finish wear. When the mark applied to coat six is no longer visible, generate work orders to recoat this area with two coats of finish.

### NOTE

Ensure the left to right marks on coat four (applied during step c. above) are visible. If not, apply new left to right marks utilizing a visible permanent marker before applying additional coats of floor finish.



**Figure 7-6. Recoating Marks**

12. Clean all tools and equipment after each use.



### 7.2.3.7 Buffing Asphalt Plank

Maintaining attractive and glossy finish requires more than required cleaning. When spray-buffing floors, always operate the floor machine at the lowest rates of speed possible and equip the floor machine with the least abrasive pad as possible. Spray buffing with high-speed floor machines results in significantly higher airborne asbestos fiber concentrations than spray buffing with low speed machines.

<b>WARNING</b>
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**Never DRY buff asphalt plank floors. NEVER BURNISH ASPHALT PLANK FLOORS. Failure to comply may release hazardous asbestos fibers into the air.**

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for buffing asphalt plank.

1. Wait 48 hours after applying finish before buffing. Do not buff the floor between coats.
2. Tools required for buffing or burnishing operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved asphalt plank buffing agent, and buffing machine.
3. Remove items such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
4. Use floor scraper to remove gum and other substances stuck to the floor.
5. Sweep with broom and ergo dustpan to remove debris that could damage the vacuum.
6. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
7. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
8. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
9. Using flat microfiber mop and two-sided bucket begin mopping the floor:
10. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
11. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

12. Apply liquid buffing product to the center of the floor beginning at one end of the area. Avoid edges near the walls to prevent excessive buildup in areas not walked on frequently.
13. Place non-abrasive buffing pad on the floor machine, and turn on the machine.

### **WARNING**

**There is a direct correlation between machine speeds and the release of asbestos fibers from asbestos containing floor coverings. The higher the machine's speed the greater the probability of asbestos fiber release. Always use low speed operations with the least abrasive pad possible on asphalt plank flooring. Failure to comply may release hazardous asbestos fibers into the air. Never DRY buff asphalt plank floors.**

14. Move the floor machine at low speed in small arcs across floor's surface to distribute the buffing agent and shine the floor evenly. Start in area at farthest end away from planned exit and walk backwards with machine toward planned exit. Continue to apply buffing agent with every new area of floor being worked.
15. Allow ample time for floor to dry and repeat the buffing application using the floor machine to achieve desired results.
16. Clean all the tools and equipment after each use.

### **7.2.4 Terrazzo and Marble Floors**

Terrazzo is a composite material, poured in place or precast and is used for floors at some USPS locations. It consists of chips of marble, quartz, granite, glass, or other suitable material, poured with a cementitious binder (for chemical binding), polymeric (for physical binding), or a combination of both. These floors are almost impenetrable to moisture and very durable. Metal strips often divide sections, changes in color, or material in a pattern. Additional chips may be sprinkled atop the mix before it sets. After it is cured it is ground and polished smooth or otherwise finished to produce a uniformly textured surface.

Marble is a metamorphic rock formed by alteration of limestone or dolomite, often irregularly colored by impurities and used especially in architecture and sculpture. Marble floor tile are also used for both interior and exterior flooring applications.

Like other floor types of hard flooring, terrazzo and marble floors require periodic maintenance to maintain its luster and prolong its useful life.

### **NOTE**

Refer to current MMO titled Floor Care Tools and Supplies for currently approved tools, supplies, and products used in these procedures.

### 7.2.4.1 Terrazzo and Marble General Cleaning

General cleaning includes first vacuuming the area, followed by damp mopping utilizing a walk-behind, ride-on scrubber, or flat microfiber mop, depending on the space size and use. When using powered equipment, always follow recommendations for that specific piece of equipment. When using a flat microfiber mop, begin the application by outlining an 8-foot by 8-foot section of the floor from the wall outward, outlining the sides and top. Choose a work space that easily allows maneuvering the mop in a figure-eight motion while walking backwards. Next, use a figure-eight motion to the inner edges of the parallel stripes to avoid splashing solution on the baseboards and walls.

### 7.2.5 Manual Stripping Terrazzo and Marble

Terrazzo and Marble floors sometimes contain floor finish typically used on VCT. Terrazzo and Marble floors should only be sealed with the appropriate sealer for this floor type (refer to MMO titled Floor Care Tools and Supplies for approved sealers). Stripping floors is labor-intensive and disruptive and should only be performed when floor has finish on it. In this case, it may be necessary to remove the old coatings prior to applying the correct sealer. Once the floor is sealed and properly maintained it will no longer be necessary to remove any finish.

#### NOTE

Once the floor is refinished and properly maintained, stripping flooring finish to bare Terrazzo or Marble will no longer be necessary.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for manual stripping terrazzo and marble.

1. Tools required for the initial prep operation include: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum, scrubber vacuum machine (if the space is large enough and conditions permit), three flat microfiber mops, two-sided buckets, approved terrazzo and marble stripping product, hand pad holder, and HEPA wet dry vacuum.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.
6. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity indicated by the manufacturer.
7. Fill other side of mop bucket half full with cold water, for rinsing the mop.

8. Use flat microfiber mops for initial prep operation (at least three mops will be required):
  - a. Work in approximately 8 by 8 foot sections at a time.
  - b. Dip first mop in mop bucket containing stripping solution and do not wring out solution. Hold mop above bucket momentarily to allow excessive solution to drain from mop head.
  - c. Position mop 1-inch from baseboards and moderately apply solution to floor, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Do not permit stripping solution to dry while stripping the floor. It may be necessary to apply more solution as the floor is stripped.

- e. Allow stripping solution to remain on the floor the length of time recommended by manufacturer to allow chemical to loosen the old floor finish and dirt.
9. Use HEPA wet dry vacuum to pick up solution.
10. Dip a clean flat microfiber mop in mop bucket containing clean fresh water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring mop nearly dry, and repeat procedure until entire section is rinsed.
11. Dip a second clean mop in bucket containing water and apply water to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no solution remaining on the floor surface.
12. After entire floor has been stripped, rinse one more time with fresh, clean water to remove all stripping solution residue.
13. Clean all tools and equipment after each use.

### 7.2.6 Mechanized Terrazzo and Marble Stripping

When a space is large enough and conditions permit, use a scrubber vacuum machine in lieu of mops to facilitate the stripping process. Use of mechanized equipment, when possible, increases productivity and decreases employee fatigue.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for mechanized terrazzo and marble stripping.

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1. Tools required for the initial prep operation include: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum, mechanized vacuum machine (if the space is large enough and conditions permit), three flat microfiber mops, two-sided buckets, approved terrazzo and marble stripping product, and hand pad holder.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.
6. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity indicated by the manufacturer.
7. Fill other side of mop bucket half full with cold water, for rinsing the mop.
8. Place a stripping pad (black/dark green) in the mop bucket containing the stripping solution, and rotate the pad slowly until it is soaked.
9. Place the soaked stripping pad under the floor machine and scrub slowly in a back-and-forth motion.
10. Remove floor finish buildup and dirt along baseboards and in corners using a small hand stripping tool.
  - a. Size and cut a piece of stripping pad to fit a handle.
  - b. Dip pad in the mop bucket containing the stripping solution.
  - c. Scrub section.

### NOTE

If the floor is badly soiled, use more solution and repeat the machine operation. The second machine operation should be in the opposite direction from the first operation to help remove stubborn finish.

11. Use wet dry vacuum to pick up solution.
12. Dip a clean flat microfiber mop in mop bucket containing clean fresh water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring mop nearly dry, and repeat procedure until entire section is rinsed.
13. Dip a second clean mop in bucket containing water and apply water to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no solution remaining on the floor surface.

14. After entire floor has been stripped, rinse one more time with fresh, clean water to remove all stripping solution residue.
15. Clean all tools and equipment after each use.

### **7.2.7 Sealing and Finishing Stripped Terrazzo and Marble**

Once the floor is stripped of any old finish, a sealer appropriate for terrazzo or marble floor should be used. The finish can also provide a high gloss shine to enhance the appearance.

When conditions permit, the area selected should be large enough so that when complete applying first coat of finish, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for sealing and finishing stripped terrazzo and marble.

1. Tools required for finishing operation include: floor scraper, broom and ergo dustpan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, approved terrazzo and marble sealer, approved terrazzo and marble finish, and two-sided buckets.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. Vacuum area with backpack vacuum or mechanized vacuum machine. Use approved pH neutral cleaner in wet vacuum machine.
5. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
6. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### **NOTE**

Ensure no puddles of sealer or finish are left in low spots.

7. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
8. Pour a line of sealer, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Mop in an overlapping figure-eight motion across the line of sealer to pick up more sealer with each pass and ensure it is evenly spread.
10. Once the first coat is fully dry, apply two additional coats to ensure a total of three coats using same method described in previous steps. Ensure each coat of product completely dries before applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.
11. Clean all the tools and equipment after each use.

### **7.2.8 Maintaining Terrazzo and Marble Finish**

The time between scrubbing and recoating can be extended with the routine floor maintenance program outlined in the MS-47. Proper cleaning and maintenance help to extend the life of the floor's finish.

Follow safety procedures outlined in Section 3 based on the work area and locations

Use the following steps for maintaining terrazzo and marble finish.

1. Tools required for maintaining operation would include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, and approved terrazzo and marble cleaner.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
6. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
7. Using flat microfiber mop and two-sided bucket begin mopping the floor:
8. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

10. Clean all tools and equipment after each use.

### 7.2.9 Recoating Terrazzo and Marble with Finish

When resealing terrazzo and marble floors, apply three coats of sealer to the existing floor finish. Ensure floor surface is clean and free of any dirt or debris by vacuuming and or mopping if needed. When conditions permit, the area selected should be large enough so that when complete applying the first coat of finish the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and locations.

Use the following steps for recoating terrazzo and marble with finish.

1. Tools required for resealing operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved terrazzo and marble finish, and hand pad holder.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
6. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Ensure no puddles of sealer or finish are left in low spots.

7. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.



8. Pour a line of finish, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Mop in an overlapping figure-eight motion across the line of finish to pick up more finish with each pass and ensure it is evenly spread.
10. Once the first coat is fully dry, apply two additional coats and ensure each coat of floor finish completely dries before applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.
11. Clean all tools and equipment after each use.

### **7.2.10 Buffing or Burnishing Terrazzo and Marble**

Maintaining attractive and glossy floor finish requires more than periodic vacuuming and mopping. Buffing and burnishing are two methods to restore shine to terrazzo and marble floors. While both buffing and burnishing are done to obtain a glossy finish, the two different methods produce different results and require different pieces of equipment. Floor buffing is typically done to polish floors or remove residue from floors. Burnishing further polishes floors using a higher speed to achieve a high-gloss, wet-look shine. Burnishing is often done after buffing to achieve the high gloss shine and should only be done in high visibility locations such as customer service lobbies and administrative areas that do not have heavy traffic or rolling stock traffic.

Follow safety procedures outlined in Section 3 based on the work area and locations

Use the following steps for buffing or burnishing terrazzo and marble.

1. Wait 48 hours after applying finish before buffing or burnishing a floor. Only buff or burnish the final top coat of floor finish. Never buff or burnish between coats because those surfaces will be covered.
2. Tools required for buffing or burnishing operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved terrazzo and marble buffing and/or burnishing agent, buffing machine and/or burnishing machine.
3. Remove items such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
4. Use floor scraper to remove gum and other substances stuck to the floor.
5. Sweep with broom and ergo dustpan to remove debris that could damage the vacuum.
6. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.

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7. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
8. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
9. Using flat microfiber mop and two-sided bucket begin mopping the floor:
10. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
11. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
12. Apply liquid buffing product on to the center of the floor beginning at one end of the area. Avoid edges near the walls to prevent excessive buildup in areas not walked on frequently.
13. Place the buffing pad on the floor machine, and turn on the machine.
14. Move the floor machine in small arcs across floor's surface to distribute the buffing agent and shine the floor evenly. Start in area at farthest end away from planned exit and walk backwards toward planned exit. Continue to apply buffing agent with every new area of floor being worked.
15. Allow ample time for floor to dry and repeat the application of buffing agent using the floor machine to achieve desired results.
16. Clean all the tools and equipment after each use.

### 7.2.11 Wood Floors

Wood floors are not commonly found in USPS facilities however there are some, and special care must be given to maintain them.

<b>CAUTION</b>
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**Do not over saturate wood floors with any liquid, especially water.**

#### **NOTE**

Refer to current MMO titled Floor Care Tools and Supplies for currently approved tools, supplies, and products used in these procedures.

### 7.2.11.1 Wood General Cleaning

General wood floor cleaning includes first vacuuming the area, followed by damp mopping utilizing a walk-behind, ride-on scrubber, or flat microfiber mop, depending on the space size and use. When using powered equipment, always follow recommendations for that specific piece of equipment. When using a flat microfiber mop, begin the application by outlining an 8-foot by 8-foot section of the floor from the wall outward, outlining the sides and top. Choose a work space that easily allows maneuvering the mop in a figure-eight motion while walking backwards. Next, use a figure-eight motion to the inner edges of the parallel stripes to avoid splashing solution on the baseboards and walls.

### 7.2.11.2 Stripping Wood

Stripping finish on wood floors is labor-intensive and disruptive. It should only be performed when floor has finish on it that can no longer be renewed. In this case, it may be necessary remove the old coatings prior to applying new finish. Once the wood floor is finished it should be properly maintained. It will no longer need the finish removed and can be lightly sanded and refinished.

#### NOTE

Once the floor is refinished and properly maintained, stripping flooring finish to bare wood will no longer be necessary.

Follow safety procedures outlined in Section 3 based on the work area and location. Wear a dust mask whenever dry sanding.

Use the following steps for stripping wood.

1. Tools required for the initial prep operation include floor sander, edger sander, nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved wood stripping product, and hand pad holder.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.
6. Use edger sander, with aggressive grit sand paper, to remove finish from about 6 to 8 inches around the perimeter of the room.

#### NOTE

A buffing machine with a maroon pad may be used in lieu of a floor sander, to scuff-sand wood flooring.

7. Use a floor sander if necessary to remove all finish down to the bear wood.
8. Start with a heavier sandpaper grit depending on the floor's condition (the lower the number the more coarse or heavier the paper or belt) and work up to at least 220 grit sandpaper or finer.

**CAUTION**

**Keep the sander moving at all times and avoid sanding in one location for any length of time, to avoid making indentations in the floor.**

9. Move the sander from side-to-side across the floor in the direction of the grain, overlapping each pass by six inches. The old finish turns to powder as its sanded, making it easy to see the areas covered.
10. If using a buffing machine, vacuum dust from pad approximately every five minutes.
11. Vacuum floor with felt-bottomed attachment to clean floor, once the dust residue settles.
12. Work in line with the flooring strips, then vacuum across them to get any dust residue that settled between the boards.
13. Use a microfiber cloth, pushing with the grain, to remove any of the dust residue left.
14. Clean all tools and equipment after each use.

### **7.2.11.3 Sealing and Finishing Stripped Wood**

Once the old finish has been removed, a finish appropriate for wood floor should be used. Consult MMO titled Floor Care Tools and Supplies for list of approved products. The finish will protect the floor and can also provide a high gloss shine to enhance the appearance.

The floor must be lightly buffed between coats. When conditions permit, the area selected should be large enough so that when complete applying first coat of finish, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for sealing and finishing stripped wood.

1. Tools required for finishing operation include: floor scraper, broom and ergo dustpan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, approved wood sealer, approved wood finish, and two-sided buckets.
2. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
3. Vacuum area with backpack vacuum or mechanized vacuum machine, if required.

4. Divide work area into 6 foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.

### NOTE

Ensure no puddles of sealer or finish are left in low spots.

5. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
6. Pour a line of sealer, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
7. Mop in an overlapping figure-eight motion across the line of sealer to pick up more sealer with each pass and ensure it is evenly spread.
8. Once the first coat is fully dry, lightly buff the finished floor and apply an additional coat. A total of three coats should be applied to wood floor taken down to the bare wood. Ensure each coat of product completely dries before lightly buffing and applying the next coat. With each additional coat of floor finish, start 6 inches from the baseboard to outline the work area.
9. Clean all the tools and equipment after each use.

#### 7.2.11.4 Maintaining Wood Finish

The time between scrubbing and recoated can be extended with the routine floor maintenance floor maintenance program outlined in the MS-47. Proper cleaning and maintenance helps to extend the life of the floor's finish.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for maintaining wood finish.

1. Tools required for maintaining operation would include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, and approved wood finish.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:

- c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
6. Clean all tools and equipment after each use.

### 7.2.11.5 Recoating Wood with Finish

When refinishing wood floors, apply two coats of finish to the existing finish and lightly buff after each coat. When conditions permit, the work area should be large enough so that when complete applying first coat of finish, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and locations.

Use the following steps for recoating wood with finish.

1. Tools required for recoating operation are: nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved wood finish, and hand pad holder.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
6. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
7. Lightly buff the area before applying finish.
8. Divide work area into 6 foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.

### NOTE

Ensure no puddles of sealer or finish are left in low spots.

9. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
10. Pour a line of finish, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
11. Mop in an overlapping figure-eight motion across the line of finish to pick up more finish with each pass and ensure it is evenly spread.
12. Once the first coat is fully dry, lightly buff and apply a second coat, ensuring each coat of floor finish completely dries before buffing and applying next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.
13. Clean all the tools and equipment after each use.

### 7.2.12 Concrete Floors

Concrete is a sturdy material for indoor and outdoor floors. It was originally restricted to most functional facility areas, such as basements, warehouses, and industrial work areas, but over several decades it has evolved into a popular flooring choice. Unsealed concrete is porous, soaks up dirt, spills and may harbor mildew, requiring periodic scrubblings. Sealed concrete is easy to clean and fairly resistant to stains.

The postal service now uses concrete floors in many new facilities. It is usually found on the workroom and dock areas of the facilities. Concrete can be amazingly durable and, when compared to other flooring materials such as stone, is very cost effective. Sealed concrete floors typically require less maintenance than other floors.

However, like other floor types, concrete floors (Figure 7-7) do require periodic maintenance to maintain luster and prolong useful life.



**Figure 7-7. Concrete Floor**

**NOTE**

Refer to current MMO titled Floor Care Tools and Supplies for currently approved tools, supplies, and products used in these procedures.

### **7.2.12.1 Concrete General Cleaning**

General concrete floor cleaning includes first vacuuming the entire area, followed by damp mopping using a walk-behind, ride-on scrubber, or flat microfiber mop, depending on the space size and use. When using powered equipment always follow recommendations for that specific piece of equipment. When using a flat microfiber mop begin the application by outlining an 8-foot by 8-foot section of the floor from the wall outward, outlining the sides and top. Next use a figure-eight motion to the inner edges of the parallel stripes so avoid splashing solution on the baseboards and walls.

### **7.2.12.2 Manual Stripping Concrete**

Concrete floors should only be sealed with the appropriate sealer for this floor type. Do not use concrete floor finish on concrete floors. Stripping floors is labor-intensive and disruptive and should only be performed when floor has finish on it. In this case, it may be necessary to remove the old coatings prior to applying the correct sealer. Once the floor is sealed and properly maintained it will no longer be necessary to remove any finish.

Follow safety procedures outlined in Section 3 based on the work area and location  
Use the following steps for manual concrete stripping.

**NOTE**



## Floors, Care And Maintenance

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Once the floor is refinished and properly maintained, stripping flooring finish to bare concrete will no longer be necessary.

1. Tools required for the initial prep operation include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum, mechanized vacuum machine (if space large enough and conditions permit), three flat microfiber mops, two-sided buckets, approved concrete stripping product, hand pad holder, and HEPA wet dry vacuum.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.
6. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity as indicated by the manufacturer.
7. Fill other side of mop bucket half full with cold water, for rinsing the mop.
8. Use flat microfiber mops for initial prep operation (at least three mops will be required):
  - a. Work in approximately 8 by 8 foot sections at a time.
  - b. Dip first mop in mop bucket containing stripping solution and do not wring out solution. Hold mop above bucket momentarily to allow excessive solution to drain from mop head.
  - c. Position the mop 1-inch from baseboards and moderately apply solution to floor, dragging mop parallel to baseboards, forming wet parallel stripes on the
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Do not permit stripping solution to dry while stripping the floor. It may be necessary to apply more solution as the floor is stripped.

- e. Allow stripping solution to remain on the floor per manufacturer recommendations to allow chemical to loosen the old floor finish and dirt.
9. Use HEPA wet dry vacuum to pick up solution.

10. Dip a clean flat microfiber mop in mop bucket containing clean fresh water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring mop nearly dry, and repeat procedure until entire section is rinsed.
11. Dip a second clean mop in bucket containing water and apply water to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no solution remaining on the floor surface.
12. After entire floor has been stripped, rinse one more time with fresh, clean water to remove all stripping solution residue.
13. Clean all tools and equipment after each use.

### **7.2.12.3 Mechanized Concrete Stripping**

Use a scrubber vacuum machine in lieu of mops to facilitate the stripping process, when space is large enough and conditions permit. Use of mechanized equipment decreases employee fatigue and increases productivity.

Follow safety procedures outlined in Section 3 based on the work area and location

Use the following steps for mechanized concrete stripping.

1. Tools required for the initial prep operation include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine (if space large enough and conditions permit), three flat microfiber mops, two-sided buckets, approved concrete stripping product, hand pad holder, and HEPA wet dry vacuum.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. Vacuum area with backpack vacuum or mechanized vacuum machine.
6. Follow manufacturer's label instructions and fill one side of mop bucket with a measured amount of water and exactly the amount of stripping solution per quantity as indicated by the manufacturer.
7. Fill other side of mop bucket half full with cold water, for rinsing the mop.
8. Place a stripping pad (black/dark green) in the mop bucket containing the stripping solution, rotating the pad slowly until it is soaked.
9. Place the soaked stripping pad under the floor machine and scrub slowly in a back-and-forth motion.

### NOTE

If the floor is badly soiled, use more solution and repeat the machine operation. The second machine operation should be in the opposite direction from the first operation to help remove stubborn finish.

10. Remove floor finish buildup and dirt along baseboards and in corners using a small hand stripping tool.
  - a. Size and cut a piece of stripping pad to fit a handle.
  - b. Dip pad in the mop bucket containing the stripping solution.
  - c. Scrub section.
11. Use HEPA wet dry vacuum to pick up solution.
12. Dip a clean flat microfiber mop in mop bucket containing clean fresh water, wring nearly dry, and apply to floor surface, turning every three or four strokes. Return mop to bucket frequently, wring mop nearly dry, and repeat procedure until entire section is rinsed.
13. Dip a second clean mop in bucket containing water and apply water to the floor surface using a wet-mop application. Do not wring the rinse mop dry. Repeat the rinse procedure until there is no solution remaining on the floor surface.
14. After entire floor has been stripped, rinse one more time with fresh water.
15. Clean all tools and equipment after each use.

### **7.2.12.4 Sealing and Finishing Stripped Concrete**

Once the floor is stripped of any old finish, a sealer appropriate for concrete floors should be used. Consult MMO titled Floor Care Tools and Supplies for list of approved products. The sealer can also provide a high gloss shine to enhance the appearance.

When conditions permit, the area selected should be large enough so that when complete applying the first coat of sealer, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for sealing and finishing stripped concrete.

1. Tools required for finishing operation include floor scraper, broom and ergo dustpan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if space large enough and conditions permit), flat microfiber mops, approved concrete sealer, approved concrete finish, and two-sided buckets.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.

4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
6. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
7. Using flat microfiber mop and two-sided bucket begin mopping the floor:
8. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Ensure no puddles of sear or finish are left in low spots.

10. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
11. Pour a line of sealer, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
12. Mop in an overlapping figure-eight motion across the line of floor finish to ensure an evenly coated finish, and pick up more floor finish with each pass.
13. Once the first coat is fully dry, apply additional coats using the same method described above until there is a total of three coats. Ensure each coat of product completely dries before applying the next coat. With each additional coat of floor finish, start 6 inches from the baseboard to outline the work area.
14. Clean all the tools and equipment after each use.

### 7.2.12.5 Maintaining Concrete Finish

Extend the time between scrubbing and recoating with a routine floor maintenance program as outlined in the MS-47. Proper cleaning and maintenance can help extend the life of the floor's finish.

Follow safety procedures outlined in Section 3 based on the work area and location

Use the following steps for maintaining concrete finish.

1. Tools required for maintaining operation would include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if space large enough and conditions permit), flat microfiber mops, two-sided buckets, and approved concrete finish.
2. Use floor scraper to remove gum and other substances stuck to the floor.

3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
6. Clean all the tools and equipment after each use.

### **7.2.12.6 Recoating Concrete with Finish**

When resealing concrete floors, apply three coats of sealer to the existing floor. When conditions permit, the area selected should be large enough so that when complete applying the first coat of finish the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and locations.

Use the following steps for recoating concrete with finish.

1. Tools required for maintaining operation would include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if space large enough and conditions permit), flat microfiber mops, two-sided buckets, approved concrete finish, and hand pad holder.
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Use floor scraper to remove gum and other substances stuck to the floor.
4. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
5. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
6. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.

- a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
- b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
- c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
- d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Ensure no puddles of sealer or finish are left in low spots.

7. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
8. Pour a line of finish, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Mop in an overlapping figure-eight motion across the line of finish to pick up more finish with each pass and ensure it is evenly spread.
10. Once the first coat is fully dry, apply two additional coats and ensure each coat of floor finish completely dries before applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.
11. Clean all the tools and equipment after each use.

### 7.2.12.7 Buffing or Burnishing Concrete

Maintaining attractive and glossy finish requires more than periodic vacuuming and mopping. Buffing and burnishing are two methods to restore shine on concrete floors. While both buffing and burnishing are done to obtain a glossy finish, the two different methods produce different results and require different pieces of equipment. Floor buffing is typically done to polish floors or remove residue from floors. Burnishing further polishes floors using a higher speed to achieve a high-gloss, wet-look shine. Burnishing is often done after buffing to achieve the high gloss shine and should only be done in high visibility locations such as customer service lobbies and administrative areas that do not have heavy traffic or rolling stock traffic.

Follow safety procedures outlined in Section 3 based on the work area and locations.

Use the following steps for buffing or burnishing concrete.

1. Wait 48 hours after applying finish before buffing or burnishing a floor. Only buff or burnish the final top coat of floor finish. Never buff or burnish between coats because those surfaces will be covered.

2. Tools required for buffing or burnishing operation include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, approved concrete buffing and/or burnishing agent, buffing machine, and/or burnishing machine.
3. Remove items such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
4. Use floor scraper to remove gum and other substances stuck to the floor.
5. Sweep with broom and ergo dustpan to remove debris that could damage the vacuum.
6. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
7. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
8. Apply liquid buffing product on the center of the floor beginning at one end of the area. Avoid edges near the walls to prevent excessive buildup in areas not walked on frequently.
9. Place the buffing pad on the floor machine, and turn on the machine.
10. Move the floor machine in small arcs across floor surface to distribute the buffing agent and shine the floor evenly. Start in area at farthest end away from planned exit and walk backwards toward planned exit. Continue to apply buffing agent with every new area of floor being worked.
11. Allow ample time for floor to dry and repeat the application of buffing agent using the floor machine to achieve desired results.
12. Clean all tools and equipment after each use.

### 7.2.13 Cork Floors

Cork floors, although not common, are found in some postal facilities and special care must be given to maintain them. When properly maintained, a cork floor can last for many years even in high traffic areas. Some preventive measures used to protect the cork floors include:

- Use floor mats at entrance ways
- Use curtains or shades to prevent sun damage to cork floors. Discoloration can occur from sun light.

### CAUTION

**Do not over saturate cork floors with any liquid, especially water.**

### NOTE

Refer to current MMO titled Floor Care Tools and Supplies for currently approved tools, supplies, and products used in these procedures.

#### 7.2.13.1 Cork General Cleaning

General cleaning primarily includes vacuuming. First vacuum the entire area using approved equipment. Damp mop using a flat microfiber mop, outlining an 8-foot by 8-foot section of the floor from the wall outward, outlining the sides and top. Choose a work space that easily allows maneuvering the mop in a figure-eight motion while walking backwards. Next, use a figure-eight motion to the inner edges of the parallel stripes to avoid splashing solution on the baseboards and walls.

#### 7.2.13.2 Sealing and Finishing Cork

When conditions permit, the work area should be large enough so that when complete applying first coat of finish, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for sealing and finishing cork.

1. Tools required for finishing operation include: broom and ergo dustpan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, approved cork sealer, approved cork finish, and two-sided buckets.
2. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
3. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
4. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide the work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.



- d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Ensure no puddles of sealer or finish are left in low spot.

5. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
6. Pour a line of sealer, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
7. Mop in an overlapping figure-eight motion across the line of sealer to pick up more sealer with each pass and ensure it is evenly spread.
8. Once the first coat is fully dry, lightly buff the finished floor and apply additional coat. A total of three coats should be applied to cork floor. Ensure each coat of floor finish completely dries before lightly buffing and applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.
9. Clean all tools and equipment after each use.

### 7.2.13.3 Maintaining Cork Finish

We can extend the time between refinishing with a routine floor maintenance program outlined in the MS-47. Proper cleaning and maintenance can help extend the life of the floor.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for maintaining cork finish.

1. Tools required for maintaining operation would include nifty nabber, scraper, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, two-sided buckets, and approved cork cleaner.
2. Use floor scraper to remove gum and other substances stuck to the floor.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
4. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
5. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop

- a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.
6. Clean all the tools and equipment after each use.

### 7.2.13.4 Recoating Cork with Finish

When refinishing, apply two coats of finish to the floor and lightly buff between coats. When conditions permit, the work area should be large enough so that when complete applying first coat of finish, the beginning point is dry and ready for the second coat.

Follow safety procedures outlined in Section 3 based on the work area and location.

Use the following steps for sealing and finishing cork.

1. Tools required for finishing operation include: broom and ergo dustpan, backpack vacuum or mechanized vacuum machine/wet scrubber vacuum machine (if the space is large enough and conditions permit), flat microfiber mops, approved cork finish, and two-sided buckets.
2. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum.
3. If area is large enough and conditions permit, use a wet scrubber vacuum machine following manufacturer's instruction to clean floor.
4. If area is not large enough to use a wet scrubber vacuum machine, or conditions do not permit, clean floor using a backpack vacuum and flat microfiber mop.
  - a. Divide work area into 6-foot wide rectangles up to the baseboards. 6 feet is a good, safe working width using a standard length mop handle.
  - b. Using flat microfiber mop and two-sided bucket begin mopping the floor:
  - c. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
  - d. Walking towards area exit in a backward direction, mop in a figure-eight motion to the inner edges of the parallel stripes to avoid splashing baseboards and walls.

### NOTE

Ensure no puddles of sealer or finish are left in low spots.

7. Pour a small pool (about 1-foot in diameter) of finish onto the floor and soak microfiber mop in the finish to prepare it for use.
8. Pour a line of finish, about six inches wide, in the center of sectioned 6-foot wide work area. Position mop 1-inch from baseboards, dragging mop parallel to baseboards, forming wet parallel stripes on the floor.
9. Mop in an overlapping figure-eight motion across the line of sealer to pick up more sealer with each pass and ensure it is evenly spread.
10. Once the first coat is fully dry, lightly buff the finished floor and apply second coat. Ensure each coat of floor finish completely dries before lightly buffing and applying the next coat. Start each additional coat 6 inches from the baseboard outlining the work area to prevent getting floor care products on the wall.
11. Clean all tools and equipment after each use.

### 7.3 MAINTENANCE OF CARPET

Carpeted floors provide warmth and softness and can require less maintenance than other floor types, when used in select locations. Carpets can be found in some administrative areas and offices throughout the postal service. Protecting from daily wear and tear, dirt, stains, and spills will help prolong the life of the carpet. Some ways to help prolong the carpet life include:

- Use floor mats at entrance ways
- Use runners and desk mats to avoid premature wear
- Remove spots and stains immediately

#### NOTE

Refer to current MMO titled Floor Care Tools and Supplies for currently approved tools, supplies, and products used in these procedures.

#### 7.3.1.1 Carpet General Cleaning

General cleaning primarily includes vacuuming the entire area using approved equipment. Vacuum high traffic areas to ensure that embedded dirt is removed. Regular vacuuming is one of the most important steps in carpet maintenance to extend the carpet's life and ensure it looks great. Vacuuming removes dirt and debris, minimizes the effects of foot traffic, removes allergens, and helps reduce the dullness.

#### 7.3.1.2 Maintaining Carpet

Extend the life of carpeted floors with a routine floor maintenance program outlined in the MS-47. Proper cleaning and maintenance can help extend the life of the carpet.

1. Tools required for maintaining operation include nifty nabber, broom and ergo dust pan, and backpack vacuum.

2. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum. Use the nifty nabber to pick up any items that could damage the vacuum.
3. Vacuum area with backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit).
4. Clean tools and equipment after each use.

### 7.3.1.3 Spot Cleaning Carpet

When spot cleaning carpet, take care not to further stain the carpeted floor by spreading the current stain or soiled area. Spot cleaning should be used to clean small areas of carpet with recent dirt or stains.

Follow safety procedures outlined in Section 3 based on the work area and locations.

Use the following steps for spot cleaning carpet floors.

1. Tools required for spot cleaning include nifty nabber, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), approved carpet spot cleaner, and white cloth or paper towels
2. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
3. Sweep with broom and ergo dustpan to remove any debris that could damage the vacuum. Use the nifty nabber to pick up any items that could damage the vacuum.
4. Vacuum area with backpack vacuum or mechanized vacuum machine.
5. Test product in an inconspicuous area to ensure product does not further damage the carpet.

<b>CAUTION</b>
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**Use only clean white cloth or paper towel because cloth dye may transfer to the carpet. Do not use stiff brush as the bristles can damage the fibers in the carpet.**

6. Apply a small amount of product to a clean white cloth or paper towel and gently blot the stain, using only enough product to treat the stain or soiled area.
7. Avoid scrubbing the carpet, pressing hard, or rubbing vigorously, as this can drive the stain deeper into the carpet fibers.
8. Use a fresh clean white cloth or paper towel and water to rinse the carpet.

<b>CAUTION</b>
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**Do not soak the carpet with water as it may be absorbed into the pad beneath, leading to mold and mildew.**

9. Blot any remaining cleaning solution in the treated area. Any cleaning solution left in the carpet attracts dirt and may leave a larger stain.
10. Allow the area to air dry completely. If a large area, use a large fan or carpet dryer to dry the area more quickly, if necessary.
11. Clean tools and equipment after each use.

### **7.3.1.4 Deep Cleaning Carpet**

Deep cleaning requires significantly more resources and is more disruptive to the occupants than vacuuming and spot cleaning. As outlined in the MS-47, carpets require periodic deep cleaning. If proper vacuuming is done as well as spot cleaning, the deep cleaning process is performed less frequently.

Follow safety procedures outlined in Section 3 based on the work area and locations.

Use the following steps for deep cleaning carpeted floors.

1. Tools required for deep cleaning include nifty nabber, broom and ergo dust pan, backpack vacuum or mechanized vacuum machine (if the space is large enough and conditions permit), approved carpet cleaner, and white cloth or paper towels.
2. Use the equipment and solution on the approved product list within the MMO titled Floor Care Tools and Supplies in accordance with manufacturer's specifications.
3. Remove items in the work area such as furniture, walk off mats, and other removable items. For items that cannot be removed, place plastic under the legs to prevent damage.
4. Vacuum area with backpack vacuum or mechanized vacuum machine.
5. Spot treat major stains or soiled areas.
6. Clean the carpet starting in the farthest corner of the room and finishing near the door. Once the carpet is cleaned ensure no one walks on carpeting until completely dry.
  - a. Never use more cleaning solution than recommend, as it will cause the carpet to attract dirt.
  - b. Allow the equipment to remove as much of the water as possible to accelerate the drying process.
7. Vent the area allowing for free air circulation. Use fans or carpet dryers when possible to help accelerate the drying process.
8. Clean tools and equipment after each use.

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9. Remove any plastic from beneath furniture and replace all items removed from area.

[8]

## SECTION 8

### SOLUTIONS FOR COMMON PROBLEMS

Table 8-1. Problem-Cause-Remedy Chart

PROBLEM	CAUSE	REMEDY
Slippery floors.	Oily, dry mop residue on floor surface. Powdering floor finish. Overspray of polish.	Damp mop with neutral detergent. Use walk-off mats at entrances and doorways; vacuum clean periodically. Use scrubbing procedure.
Scratches or scuff marks on floors.	Abrasive dirt, grit, and dust on floor, due to exterior conditions.	Use walk-off mats at entrances and doorways; vacuum clean periodically.
Black marks on floors.	Floor finish worn away. Inadequate amount of floor finish used.	Perform periodic maintenance. Apply protective coats of floor finish.
Formation of traffic lanes.	Not performing periodic maintenance.	Follow periodic maintenance procedures.

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PROBLEM	CAUSE	REMEDY
Powdering of floor finishes.	<p>Stripper solution residue remaining on floor.</p> <p>Stripper mop used in place of finish mop.</p> <p>Finish applied too thinly.</p> <p>Excessive use of alkaline cleaner.</p> <p>Incompatibility of various floor finishes.</p> <p>Contamination of floor finish.</p> <p>Ice melting compound damaged floor finish</p>	<p>Perform stripping to remove poor or damaged finish and reapply finish.</p> <p>Perform stripping to remove poor or damaged finish and rinse thoroughly. Use neutral cleaner for routine maintenance.</p>
Poor initial gloss	<p>Excessive humidity causing long dry time</p> <p>Inadequate drying time</p> <p>Cold floor (below 50 degrees Fahrenheit)</p> <p>Floor finish product had frozen during storage period</p>	<p>Ensure humidity and floor temperature comply with manufacture's recommendations.</p> <p>Store floor finish per manufacturer's recommendations.</p>
Poor gloss.	<p>Dirty mops used in applying finish.</p> <p>Floor incorrectly rinsed.</p> <p>Insufficient number of coats applied.</p> <p>Buffing pad is too aggressive.</p>	<p>Perform stripping to remove poor or damaged finish. Apply finish as recommended by manufacturer.</p> <p>Perform stripping to remove poor or damaged finish. Apply finish as recommended by manufacturer.</p>



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PROBLEM	CAUSE	REMEDY
Poor durability.	Incorrect cleaner used. Incorrect buffing pad used. Dirt, sand, and grit on floor. Thick, heavy coats of floor finish do not dry and harden properly. Furniture damage.	Use manufacturer-recommended neutral cleaner for maintenance. Use recommended pad. Perform stripping to remove poor or damaged finish. Use walk-off mats at entrances and dust mop the floor
Poor removal of old finish or soil.	Stripper not strong enough. Extremely heavy buildup of previous finish or sealer. Improper stripping pad used.	Use manufacturer-recommended stripper and dilution ratios. Use more aggressive stripping pad.
Slow finish drying time.	Damp floor (finish applied before last rinse thoroughly dried). Too much finish applied. Excessive humidity causing long dry time. Cold floor (below 50 degrees Fahrenheit)	Ensure floor dries thoroughly before applying finish. Apply thin, even coats of finish. Ensure proper temperature and humidity

## Floors, Care And Maintenance

PROBLEM	CAUSE	REMEDY
Poor leveling or spreading of floor finish.	<p>Floor not adequately prepared or properly rinsed.</p> <p>Poor quality floor finish.</p> <p>Fan or air mover pointed directly at floor finish.</p> <p>Contaminated applicator or bucket.</p> <p>Floor finish product had frozen during storage period.</p>	Follow procedure for stripping to remove poor or damaged finish. or periodic maintenance.
Sticking of furniture to freshly finished floors.	Floor finish applied too heavily.	Use thin coat of floor finish. Allow floor to dry thoroughly before moving furniture.
Yellow film.	<p>Excessive coats of floor finish.</p> <p>Use of a finish that has a yellow color.</p>	<p>Perform stripping to remove poor or damaged finish. Apply finish in thin coats.</p> <p>Use a non-yellowing floor finish.</p>
Color fading.	Strong cleaners used.	Use neutral synthetic detergents.
Color bleeding.	Alkaline cleaners or abrasive materials used.	Do not use these cleaners or materials. Use <u>only</u> neutral synthetic cleaners.
Buckling of vinyl asphalt or other resilient tile.	Water and detergent seepage between tiles that damages the adhesive and loosens the tiles.	Replace tiles; Use only enough water during the stripping process to keep stripper solution from drying out. Use a wet vacuum machine to remove water from the floor.

**APPENDIX A**

**STAIN REMOVAL GUIDE**

Removing stains from floors can be a cumbersome task. The method recommended for removal of a stain may remove the stain, but injure the floor. For instance, most solvents dissolve asphalt; strong alkalis destroy linoleum and damage grouting in ceramic tile.

Any product used for the removal of stains must be on the headquarters approved products list. Some manufacturers of floor care maintenance products offer their own product for stain removal. However, the product must be on the headquarters approved products list for local purchase. When such products are used, follow manufacturer's label instructions.

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## APPENDIX B

### COMPUTER ROOM FLOOR CARE

#### B.1 INTRODUCTION

Custodial operations in computer rooms require special consideration in order to avoid damage to computer equipment. Do not use buffers or scrubbers because bumping or shaking may damage the computer equipment.

#### B.2 FLOOR TYPES

Basically, two types of tiles are used on computer room floors:

- High-pressure laminated tile
- Vinyl asbestos tile

#### B.3 CLEANING PROCEDURE FOR HIGH-PRESSURE LAMINATED TILE FLOOR

The cleaning procedure for high-pressure laminated tile floors includes the following:

**CAUTION**

**Do not bring buckets of mopping solution or rinse water  
into computer room; leave them outside of room.**

##### B.3.1 Damp Mopping

Use the following steps for damp mopping.

1. Damp mop with a new mop that is used exclusively on the laminated floor.
2. Use a mild synthetic detergent mixed according to the manufacturer's label instructions.
3. Wring mop until it is almost dry and apply solution to tiled floors only.
4. Use extreme caution to ensure that water does not drip through to the sub floor or contact the computer equipment.
5. Rinse the floor with tap water, using a second new mop that is well wrung (almost dry).
6. Remove perforated floor panels and hand wash. Rope off open areas for safety.

### NOTE

Never apply floor finish to a high-pressure laminated tile floor.

#### **B.3.2 Periodic Maintenance**

Vacuum the floor. Do not use a mop saturated with oils or chemicals, because a film on the floor will affect the static properties. When using a vacuum, care-fully avoid bumping into the computer equipment with either the vacuum or the cleaning attachment. Do not plug the vacuum into any of the equipment outlets; use an outlet outside of the computer room.

#### **B.3.3 Spot Removal**

Spilled liquids are not readily absorbed by high-pressure laminated tile floors; on the other hand, certain substances can create a stain if allowed to remain on the floor for an extended period. Avoid floor stains by attending to spills as soon as possible. Remove black marks from floor by using a nonabrasive cleanser, similar to those available for home bathtub cleaning, and a soft cloth.

### **B.4 CLEANING PROCEDURE FOR VINYL ASBESTOS TILE FLOOR**

#### **B.4.1 Damp Mopping**

Use the following steps for damp mopping:

1. Use a mild synthetic detergent mixed according to the manufacturer's label instructions.
2. Wring mop until it is almost dry and apply solution to tiled floors only.
3. Use extreme caution to ensure that water does not drip through to the sub floor or contact the computer equipment.
4. Rinse the floor with tap water, using a second new mop that is well-wrung (almost dry).
5. Remove perforated floor panels and hand wash. Rope off open areas for safety.

#### **B.4.2 Periodic Maintenance**

Use same procedure as for high-pressure laminated tile floors (see Section III, part b).

##### **B.4.2.1 Other Floor Maintenance**

After the floor has completely dried, carefully apply synthetic finish so that finish does not drip onto the sub floor or come in contact with computer equipment. Do not apply finish to perforated floor panels.

### **B.4.2.2 Other Cleaning Tasks**

Other routine cleaning tasks can be done using conventional techniques. Take particular care when working around computer equipment to avoid bumping or otherwise disturbing it. Routine maintenance of vinyl asbestos floors does not create a health hazard. Sanding, cutting, or other activities, which may release asbestos fibers, must be prohibited.





APPENDIX C  
CUSTODIAL CHART

The chart on the following page has been designed to help the custodian prepare more efficiently for his work. This chart should be posted on the inside door of the custodial closet.

EQUIPMENT AND PRODUCTS FOR CUSTODIAL TASKS

	VACUUMING	DAMP MOPPING	SPRAY BUFFING	BURNISHING	WET STRIPPING	FLOOR FINISHING	DRY STRIPPING
EQUIPMENT	Floor scraper  Broom Ergo dustpan Backpack vacuum cleaner or vacuum scrubber machine	Wet-floor safety signs/rope Floor scraper Back pack vacuum cleaner or vacuum scrubber machine Broom Ergo dustpan Mop head with handle for wet use  Mop bucket on wheels; wringer, cleaning solution  Appropriate PPE listed on SDS.	Wet-floor safety signs/rope Floor scraper Back pack vacuum cleaner or vacuum scrubber machine Broom Ergo dustpan Spray buffing solution  Floor-buffing machine  Buffing pads. Appropriate PPE listed on SDS.	Wet-floor safety signs/rope Floor scraper Back pack vacuum cleaner or vacuum scrubber machine Broom Ergo dustpan Spray buffing solution  Burnishing machine Burnishing pads Appropriate PPE listed on SDS.	Wet-floor safety signs/rope Floor scraper Back pack vacuum cleaner or vacuum scrubber machine Broom Ergo dustpan Cleaning cloths Walk-off mats Three mop heads with handles for wet use  Mop bucket on wheels; wringer, stripping solution  Mop bucket on wheels; wringer, rinse water  Mop bucket on wheels; wringer, final rinse solution  Floor machine, low- speed, 160 to 185 rpm  Stripping pads, black/dark green  Wet pickup vacuum  Appropriate PPE listed on SDS.	Wet-floor safety signs/rope  Two mop heads with handles for wet use  Mop bucket on wheels; wringer, floor sealer  Mop bucket on wheels; wringer or lamb’s-wool pad with applicator and synthetic floor finish  Appropriate PPE listed on SDS.  Floor sealer Synthetic floor finish	Wet-floor safety signs/rope Floor scraper Back pack vacuum cleaner or vacuum scrubber machine Broom Ergo dustpan Cleaning cloths Mop head with handle for wet use  Mop bucket on wheels; wringer, rinse solution  Floor machine, low- speed, 160 to 185 rpm  Floor Stripping pads, red/brown  Appropriate PPE listed on SDS.      Rinse solution
PRODUCTS					Stripping solution Final rinse solution		Dry-stripping spray