



PREVENTIVE MAINTENANCE AND ROOFING REPAIR

– Extending the Life and Preserving the Investment of Roofing Systems

WHY'S and HOW'S of Roof Preventive Maintenance

Roofs receive more severe environmental stresses than any other building component, and as such, require a sound PM Program to maintain water-tight buildings. A good PM Program lays out how, when, and where various tasks should be done.

Establishing a Roofing Preventive Maintenance Program

A planned PM Program is simply a program of scheduled inspections and performance of the required corrective action. PM Programs should be initiated for aged roof systems and new installations alike. To be effective, the plan should consider the following:

1. Structure

Create a structure to implement the PM Plan, including selection of appropriate vendors when necessary, and identification of staff to coordinate projects, and delegate tasks.

2. Document all Roofs and their Condition

All buildings and their roofing components should be assessed as to their condition and maintenance needs to provide a baseline for resource allocation (money and personnel). This visual roof survey should be performed by a skilled professional at least twice a year (typically spring and fall). Additional inspections may be warranted after severe storms or physical roof work. Moisture surveys (by way of infrared scanning) are available by many skilled roofing companies and can provide more definitive analysis when moisture infiltration is suspected.

All surveys should consist of the visual evaluation of the various roof components, identification of deficiencies requiring corrective action, development of long range PM needs, and discussions of conditions observed that may impact the long term performance of the roof system. Documentation of the survey should consist of a written report, photographs, and notations on a roof plan indicating the conditions observed. The roof plan should supply sufficient data to facilitate performance of the corrective action required. Typically, these tasks are beyond the skills of most Parish/Diocesan Site personnel, and are more appropriately handled by skilled roofing contractors.

3. Create Historical Files

Compile all related information in a central location to permit easy access and updating. Historical file information assists in the diagnosis of conditions observed during roof surveys

and facilitates accurate and complete development of remedial actions. Historical files should include:

- **Current roof plans showing locations of penetrations and equipment**
- **Documentation of roof inspections or evaluations, including photos**
- **Documentation of repairs or corrective action performed**
- Manufacturer and contractor warranties
- As-built plans and specifications
- Relative correspondence and change orders
- Documentation of changes made to the roof or new equipment installed

4. Take Corrective Action

Once the roof survey information is obtained, a corrective action plan can be developed and work may begin. These activities can be accomplished by in-house personnel, roofing contractors, or both depending on the quantity and types of action required and technical abilities of available personnel. All work should be accomplished using industry standard repair procedures. If repairs are significant or are required on several roof areas, it is recommended that detailed repair plans and specifications be developed to assist in obtaining competitive pricing.

5. Schedule Frequency

The frequency of performing the various tasks associated with a Roof PM Program depends on the age and condition of the roof, environmental influences, roof-top traffic, occupancy sensitivity, size and accessibility of the roof area. The following guidelines are provided for determining the frequency of the work involved:

- Site-wide visual roof surveys should be performed semi-annually by technicians trained in the maintenance and servicing of the applicable roof types.
- Warranty surveys should be conducted prior to the expiration of a contractor or manufacturer's warranty. This allows the repair of any deficiency covered, prior to any possible monetary obligation.
- Housekeeping surveys are generally recommended on most roof areas monthly but minimally quarterly. These surveys are intended to keep drainage devices open and to identify potential damaging conditions.
- Corrective action or repairs should be accomplished reasonably soon after the survey is conducted. If corrective action is delayed, small isolated deficiencies may become major problems that can be expensive and difficult to repair.
- Roof moisture surveys are recommended on three year cycles, unless specific conditions exist that warrant or suspect moisture intrusion into the roof system. The initial or baseline survey should be performed prior to the expiration of any contractor's warranty to enable performance of any repairs covered under the terms of the warranty.

6. Ensure Trained Maintenance Workers

As previously mentioned, the comprehensive visual roof survey should be performed by

trained personnel/technicians knowledgeable in the applicable roof system types. This person should be thoroughly familiar with the design, installation, repair and modes of failure for the roof systems to be surveyed. Whether this is performed with in-house staff or contracted to consultants depends on the technical competence and availability of resources. Limited overview surveys, such as those performed in the fall, can easily be performed by in-house personnel who have had additional training in roof inspection. Inspection of complicated or unsafe roof systems should **only** be performed by qualified roofing technicians.

Housekeeping can normally be assigned to mechanics responsible for day to day building PM duties, provided they are trained in safety procedures. Specialized or extensive repairs and roofs covered by an active warranty are generally contracted to roofing professionals. Moisture surveys require special equipment and training and will need to be contracted as an independent service.

(7) Service Agreements

Service Agreements are recommended by DCFS. A service agreement is a maintenance or service contract between an owner and roofing contractor. These agreements generally cover a specified period of time and can have renewable options. Periodic inspections and routine maintenance is typically covered. Ideally, these agreements are placed in service immediately after the roof is installed.

The advantage to this type of service is that the roof will be periodically inspected and repaired by roofing professional. Thorough documentation should be requested and, normal housekeeping will still be required.

ADDITIONAL RESOURCES:

<http://firestonebpc.com/assets/2013/03/roofing-inspection-maintenance-and-repair-guide-pdf.pdf>

[http://www.gaf.com/Commercial Roofing Systems/Roofing Solutions Reference Manual for Property Managers Owners Architects and Specifiers.pdf](http://www.gaf.com/Commercial_Roofing_Systems/Roofing_Solutions_Reference_Manual_for_Property_Managers_Owners_Architects_and_Specifiers.pdf)

<http://www.roofhelp.com/preventativemaintenance.htm>