

# Roofing Systems

## Introduction

Annually, millions of dollars in property damage are reported across the United States and North America. Some of these claims could be prevented with scheduled roof inspections and timely preventative maintenance.

Over time most roofing systems will deteriorate as a result of exposure to the elements. Conditions that impact the life expectancy of a roof include: exposures to high wind, extreme temperature changes, snow, ice and prolonged exposure to the sun's UV rays.

While it remains beyond our ability to control the weather, a prudent property owner should periodically take note of how conditions are affecting their building and promote an effective, preventative maintenance program. This is especially important when considering a flat roof, which is frequently forgotten, as they are not often seen. An *Out of sight, out of mind roof* can lead to unexpected losses.

## Precautions

Before engaging in a roof inspection, appropriate safety precautions should be observed. These should include, but are not limited to, the proper selection, training and use of required fall protection devices, use of other appropriate personal protective equipment and adherence with all governmental safety standards.

## Roof Access Control

There are at least three primary exposures that should be considered when it comes to controlling access to the roof. Security and liability issues are an ever present concern, as well as the risk of damage due to poor installation or repair work.

Therefore, property owners should consider a Roof Access Control Program, which restricts access to the roof to only those individuals who need access and then only after they have received authorization. A qualified owner's representative should review and approve of all work to be performed on the roof and monitor the progress of the activity. Work requiring the use of a torch or other sources of ignition, must be continually monitored.

Service personnel should also limit their movement on the roof to the area where work is being performed. Boundaries may be temporarily needed to protect the roof deck during maintenance, installation and repair activities.

LOSS CONTROL TIPS

Upon the conclusion of the work, all discarded and unused materials, supplies and trash should be removed. A post-work inspection of the work area should then be performed to insure that the work has been properly completed, disturbed decking, flashing or caulking has been replaced, and drains are clear and unobstructed.

There may also be local Fire Code or Life Safety issues to consider. The prudent property owner should consult with all appropriate authorities to determine any applicable requirements.

## Visual Inspection

A comprehensive Roof Inspection Program conducted on a regular schedule is an effective means of identifying deficiencies in the roofing system so that repairs can be conducted. Inspections should be conducted at least semi-annually (typically spring and fall) and following significant weather events.

Typical conditions that should be checked include but, are not limited to the following:

1. Obstructed drain, gutters and downspouts.
2. Missing weather proofing materials.
3. Cracks, tears, and other mechanical damage.
4. Roof debris (natural materials such as leaves, discarded materials, etc.).
5. Improperly installed roof mounted equipment.
6. Missing or detached flashing.

A sample roof inspection checklist is provided at the end of these materials for your consideration.

## Record Keeping

A historical record of the roof should be maintained. This record should include all pertinent information relative to the roofing system. Information that should be included in the record should consist of, but is not limited to, the following:

1. Date of roof installation.
2. Name of roofing installer.
3. Material specifications.
4. Plans, roof construction details.
5. Warranties.
6. Manufacturer's suggested preventative maintenance recommendations.
7. Reports of modifications, damage, leak and repairs.
8. Copies of past roof inspections.

## Summary

The prudent property manager may find that they can save money, reduce aggravation, avoid insurance claims and improve occupant comfort with minimal expense and effort with appropriate attention to this often overlooked building system.

For more information, contact your local Hartford agent or your Hartford Loss Control Consultant. Visit The Hartford's Loss Control web site at <http://www.thehartford.com/corporate/losscontrol/>

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# Sample Roof Inspection Checklist

**Building Name:** \_\_\_\_\_

**Physical Address:** \_\_\_\_\_

**Inspector's Name:** \_\_\_\_\_ **Date of Inspection:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Roof Access Control**

ISSUE	YES	NO	INSPECTOR'S REMARKS
Ladder or steps in good condition?			
Roof door or hatch properly secured or controlled?			
Notice posted requiring authorized access?			
Evidence of unauthorized roof access?			
Other?			

**General Appearance**

ISSUE	YES	NO	INSPECTOR'S REMARKS
Roof debris?			
Clear drains & drainage?			
Missing or displaced drain cover?			
Miscellaneous mechanical damage?			
New installations?			
Other?			

**Surface Condition of a Flat Roof\***

ISSUE	YES	NO	INSPECTOR'S REMARKS
Bare spots – missing aggregate?			
Excessive degrading of applied surface coating?			
Slippage or shrinkage?			
Cracking or splitting?			
Blisters?			
Punctures?			
Raised or missing fasteners?			
Missing or detached walking mats?			
Ponding or evidence of standing water?			
Other mechanical injuring to surface?			

\* Indicate this section as non-applicable (NA) if roof is of sloped construction



# Sample Roof Inspection Checklist

## Surface Condition of a Sloped Roof\*

ISSUE	YES	NO	INSPECTOR'S REMARKS
Buckled shingles?			
Curling?			
Missing or damaged shingle tabs?			
Metal: Rust or corrosion?			
Metal: Missing fasteners?			
Other mechanical injuries to surface?			

\* Indicate this section as non-applicable (NA) if roof is of flat construction

## Flashing Condition

ISSUE	YES	NO	INSPECTOR'S REMARKS
Missing flashing?			
Detached or loose flashing?			
Punctures?			
Missing fasteners?			
Caulking?			
Other?			

## Additional Roof Features

ISSUE	YES	NO	INSPECTOR'S REMARKS
Roof mounted mechanical equipment?			
Expansion joints?			
Skylight?			
Chimneys?			
Vents?			
Gutters?			
Scuppers?			
Downspouts?			
Anchor attachments?			
Other roof penetrations?			
Other?			

# Sample Roof Inspection Checklist

Inspector's comments concerning changes noted from previous inspection, overall roof condition or other relevant observations not otherwise addressed.

INDICATE ANY ADDITIONAL REPORTS OR INFORMATION ATTACHED	YES	NO
Photos		
Thermograph report		