

To The Point Roofs

CHUBB®



Routine Inspection and Maintenance

Do you know if your roof is leaking? Roofs tend to be ignored until they begin to leak and expensive repairs are required. The key to maintaining a roofing system is through routine inspection and maintenance procedures. A roof should be considered a capital piece of equipment which must be kept functioning properly. A well planned and executed program of inspection and maintenance can anticipate possible problem areas and have them fixed before the intrusion of water causes a serious problem.

A service agreement with the roof installer is the building owner's best choice for routine maintenance procedures. However, building owners can have their own employees conduct the inspection and perform minor maintenance procedures.

It is best to negotiate a robust roof warranty that includes labor costs. Oftentimes, green roofs and solar arrays can negate the warranty. Due diligence must be performed up front before contracts are signed and the work begins.

Roof Inspection Program Basics

- Roof inspections should be conducted semi-annually
- Spring and fall are preferable so that damage is repaired prior to and following the winter months
- Inspections should begin inside the building
- High-risk areas should be examined last

A complete inspection of a roof should address:

- Building interior
- Building exterior
- Roof membrane
- Roof flashings

Roof inspections should begin with the building interior. Interior water spots on ceiling panels may be caused by actual roof leaks. Lift ceiling tiles and examine the underside of the deck for signs of water intrusion. Water marks on interior surfaces and walls should also be noted.

Inspect the building exterior for signs of settlement of the foundation and walls. Is the top line of the roof level from all

Risk Engineering Services

angles? Downspouts and conductor heads should be visually examined to ensure that they are clear of debris and not physically damaged. Water stains on exterior walls may be a sign of a clogged gutter or downspout.

The next step in the roof inspection process is to examine the roof membrane. It is helpful to create a roof plan on which you can mark any problem areas for later repair or monitoring. Note the general appearance of the roof. Signs of blisters, alligatoring, or bare spots on ballasted or gravel roof surfaces should be repaired immediately. Include all roof mounted equipment such as HVAC equipment, ventilation fans, smoke vents, antenna, piping, and cables on your sketch.

Has hail caused signs of impact-related damage that could jeopardize roof covering integrity? A qualified roofing contractor or engineer can verify potential damage.

Is there any evidence of standing water? Look for any debris that has accumulated on the roof such as ladders, paint cans, vegetation, tools, and equipment parts. Inspect the roof drains for obstructions to drainage. Address whether any physical damage has occurred to roof mounted equipment, or roof drainage components.

On all types of roofs unadhered laps and “fishmouths” should be addressed. Any split, tears or punctures in the membrane need to be documented. Note if the membrane is properly adhered to perimeters and flashings. If mechanical fastening is provided make sure the fasteners have not backed out on any spots.

The most attention during the inspection should be spent on roof flashings, where many roof leaks originate. Start with an inspection of the perimeter flashings, being wary of whether the flashing material is appropriately attached at parapet walls. While at the roof perimeter, check the counter flashing for adequate attachment, noting the condition of the parapet wall itself.

The last roof area for inspection should be the penetrations in the roof field. This includes roof-mounted equipment, pipes, wiring, and expansion joints. Careful attention to damage caused by dropped tools, worker traffic, and vented liquids or vapors should be applied in these areas.

Be aware of whether new equipment has recently been installed, as it is common for no flashing to be installed when a new AC unit, ventilation fan, or antenna is placed on the roof.

Piping should be supported off of the roof with special supports which allow the piping to expand and contract without causing abrasion to the roof surface. Blocks of wood are not adequate piping supports.

Once the inspection is complete, you should make a list of the conditions noted as suggested in the checklist below, and begin creating a list of repairs to correct any deficiencies.

Resources

ASCE 7 -10
www.asce.org/

National Roofing Contractors Association
www.nrca.net/

Insurance Institute for Business and Home Safety
www.disastersafety.org/

Whole Building Design Guide
www.wbdg.org/

Connect With Us

For more information about protecting your business, contact your local Chubb risk engineer or visit us at www.chubb.com/engineering.

Roofing Inspection Checklist

Building Address: _____ Date: _____

Inspector: _____

General Observations	Yes	No
Is the roof in good condition?	<input type="checkbox"/>	<input type="checkbox"/>
Have any leaks been reported?	<input type="checkbox"/>	<input type="checkbox"/>
Is there any material that can become airborne during a high wind event?	<input type="checkbox"/>	<input type="checkbox"/>
Is there any vegetation on the roof?	<input type="checkbox"/>	<input type="checkbox"/>
Are roof drains clogged? If yes, describe:	<input type="checkbox"/>	<input type="checkbox"/>
Is there ponding of water? If yes, describe:	<input type="checkbox"/>	<input type="checkbox"/>
Are there wires laying on roof? If yes where and how many?	<input type="checkbox"/>	<input type="checkbox"/>
Is there any noticeable physical damage? If yes where?	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Roof Perimeter	Yes	No
Are the parapets in good condition?	<input type="checkbox"/>	<input type="checkbox"/>
Is flashing pulling away from roof? If yes where?	<input type="checkbox"/>	<input type="checkbox"/>
Is gravel evenly distributed across the roof's surface? If no, describe:	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Roof Cover	Yes	No
Has the roof cover deteriorated? If yes, describe:	<input type="checkbox"/>	<input type="checkbox"/>
Are there any soft areas? If yes, where?	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Roof Penetrations	Yes	No
Are there kitchen vent hoods on the roof? If yes, how many? Are they in good condition?	<input type="checkbox"/>	<input type="checkbox"/>
Is there any grease on the roof?	<input type="checkbox"/>	<input type="checkbox"/>
Are there skylights on the roof? If yes, are any cracked, broken or in need of repair?	<input type="checkbox"/>	<input type="checkbox"/>
Are there roof hatches/smoke vents? If yes, are any cracked, broken or in need of repair?	<input type="checkbox"/>	<input type="checkbox"/>
Are there any chimney/flue stacks? If yes, are any cracked, broken or in need of repair?	<input type="checkbox"/>	<input type="checkbox"/>

Are there expansion joints? If yes, are any cracked, broken or in need of repair?	<input type="checkbox"/>	<input type="checkbox"/>
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Comments:

Rooftop Equipment	Yes	No
HVAC Equipment on the roof?	<input type="checkbox"/>	<input type="checkbox"/>
Secured in a place with no missing screws?	<input type="checkbox"/>	<input type="checkbox"/>
Walkway pads? If yes, are there any walkway pads missing or need to be added?	<input type="checkbox"/>	<input type="checkbox"/>
Antennas and/or lightning rods? If yes, are wires in good condition and secured in place?	<input type="checkbox"/>	<input type="checkbox"/>
Satellite dishes? If there are satellite dishes, are they secured adequately in place?	<input type="checkbox"/>	<input type="checkbox"/>
Pipe/Conduit supports? If yes, are they in good condition and secured in place?	<input type="checkbox"/>	<input type="checkbox"/>
Chimney/Flue stacks If yes, are they in good condition and secured in place?	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Drainage	Yes	No
Internal gutter roof drains? If yes, are they unobstructed and in good condition?	<input type="checkbox"/>	<input type="checkbox"/>
Perimeter gutter roof drains? Are they secured to the building and free of debris?	<input type="checkbox"/>	<input type="checkbox"/>
Scuppers? If yes, are they unobstructed and in good condition?	<input type="checkbox"/>	<input type="checkbox"/>
Gutters? If yes, are they unobstructed and in good condition?	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Inside	Yes	No
Active leaks? If yes, how many _____ and where?	<input type="checkbox"/>	<input type="checkbox"/>
Water stains? If yes, how many _____ and where?	<input type="checkbox"/>	<input type="checkbox"/>
Signs of structural distress? If yes, how many _____ and where?	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

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