Protect Your Property From Water Damage

Water may be essential to life, but, as a destructive force, water can diminish the value of your home or building. Homes as well as commercial buildings can suffer water damage that results in increased maintenance costs, a decrease in the value of the property, lowered productivity, and potential liability associated with a decline in indoor air quality. The best way to protect against this potential loss is to ensure that the building components which enclose the structure, known as the building envelope, are water-resistant. Also, you will want to ensure that manufacturing processes, if present, do not allow excess water to accumulate. Finally, make sure that the plumbing and ventilation systems, which can be quite complicated in buildings, operate efficiently and are well-maintained. This article provides some basic steps for identifying and eliminating potentially damaging excess moisture.

Identify and Repair All Leaks and Cracks

The following are common building-related sources of water intrusion:

- **windows and doors:** Check for leaks around your windows, storefront systems and doors.
- **roof:** Improper drainage systems and roof sloping reduce roof life and become a primary source of moisture intrusion. Leaks are also common around vents for exhaust or plumbing, rooftop air-conditioning units, or other specialized equipment.
- **foundation and exterior walls:** Seal any cracks and holes in exterior walls, joints and foundations. These often develop as a naturally occurring byproduct of differential soil settlement.
- **plumbing:** Check for leaking plumbing fixtures, dripping pipes (including fire sprinkler systems), clogged drains (both interior and exterior), defective water drainage systems and damaged manufacturing equipment.
- **ventilation, heating and air conditioning (HVAC) systems:** Numerous types, some very sophisticated, are a crucial component to maintaining a healthy, comfortable work environment. They are comprised of a number of components (including chilled water piping and condensation drains) that can directly

contribute to excessive moisture in the work environment. In addition, in humid climates, one of the functions of the system is to reduce the ambient air moisture level (relative humidity) throughout the building. An improperly operating HVAC system will not perform this function.

Prevent Water Intrusion Through Good Inspection and Maintenance Programs

Hire a qualified InterNACHI inspector to perform an inspection of the following elements of your building to ensure that they remain in good condition:

- **flashings and sealants:** Flashing, which is typically a thin metal strip found around doors, windows and roofs, are designed to prevent water intrusion in spaces where two building materials come together. Sealants and caulking are specifically applied to prevent moisture intrusion at building joints. Both must be maintained and in good condition.
- **vents:** All vents should have appropriate hoods, exhaust to the exterior, and be in good working order.
- Review the use of **manufacturing equipment** that may include water for processing or cooling. Ensure wastewater drains adequately away, with no spillage. Check for condensation around hot or cold materials or heat-transfer equipment.
- **HVAC** systems are much more complicated in **commercial** buildings. Check for leakage in supply and return water lines, pumps, air handlers and other components. Drain lines should be clean and clear of obstructions. Ductwork should be insulated to prevent condensation on exterior surfaces.
- **humidity:** Except in specialized facilities, the relative humidity in your building should be between 30% and 50%. Condensation on windows, wet stains on walls and ceilings, and musty smells are signs that relative humidity may be high. If you are concerned about the humidity level in your building, consult with a mechanical engineer, contractor or air-conditioning repair company to determine if your HVAC system is properly sized and in good working order. A mechanical engineer should be consulted when renovations to interior spaces take place.
- **moist areas:** Regularly clean off, then dry all surfaces where moisture frequently collects.
- **expansion joints:** Expansion joints are materials between bricks, pipes and other building materials that absorb movement. If expansion joints are not in good condition, water intrusion can occur.

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- **interior finish materials:** Replace drywall, plaster, carpet and stained or water-damaged ceiling tiles. These are not only good evidence of a moisture intrusion problem, but can lead to deterioration of the work environment, if they remain over time.
- **exterior walls:** Exterior walls are generally comprised of a number of materials combined into a wall assembly. When properly designed and constructed, the assembly is the first line of defense between water and the interior of your building. It is essential that they be maintained properly (including regular refinishing and/or resealing with the correct materials).
- **storage areas:** Storage areas should be kept clean. Allow air to circulate to prevent potential moisture accumulation.

Act Quickly if Water Intrusion Occurs

Label shut-off valves so that the water supply can be easily closed in the event of a plumbing leak. If water intrusion does occur, you can minimize the damage by addressing the problem quickly and thoroughly. Immediately remove standing water and all moist materials, and consult with a building professional. Should your building become damaged by a catastrophic event, such as fire, flood or storm, take appropriate action to prevent further water damage, once it is safe to do so. This may include boarding up damaged windows, covering a damaged roof with plastic sheeting, and/or removing wet materials and supplies. Fast action on your part will help minimize the time and expense for repairs, resulting in a faster recovery.