

January 1, 2010

Volume 2. Issue 1

Hixson Consultants, Inc.  
947 1st Avenue West  
Alabaster, Alabama 35007  
Phone: 205-663-2220



# Compass

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Navigating Water Intrusion Problems

## HCI Team Members:

- Ben Hixson, Principal  
Mobile: 205-382-0111
- Tony Wright, Sr.  
Consultant  
Mobile: 205-515-5300
- Greg L. Cunningham, Sr.  
Consultant  
Mobile: 205-907-3913
- Mike Ray, Consultant  
Mobile: 205-876-3737
- Tyler Hixson, Sr.  
Technician  
Mobile: 205-994-0802

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## Optimal Value Warranties

### Part 3 - Terms and Definitions

By: Ben Hixson

The following terms and definitions may be stand alone aspects or implemented in conjunction with other concepts that affect risk associated with projects; and the concepts, components or systems need to be adequately addressed to minimize the likelihood for moisture intrusion.

**Consequential Damages** - Consequential damages, otherwise known as special damages, are one kind of two types of damages, the other being direct damages, that may be awarded to the plaintiff in a civil action who claims that terms of an agreement were not honored. Damages that result from moisture intrusion can include damages to finishes, equipment, furnishings, documents and sales items; usually not covered by warranties or guarantees.

**Leak-Only Warranty** - Warranty coverage is triggered by water intrusion. Warranty coverage doesn't address correcting defective workmanship or materials until there is a leak.

**Repair Warranty** - Warranty coverage is not for full cost replacement but is limited to repairs to restore a watertight condition. If not an NDL warranty, repair efforts may be limited to the original expenditure.

**Length of Coverage** - The majority of roofing and waterproofing systems can earn the manufacturer's ten-year material warranty. Twenty-year NDL systems warranty coverage better protects Owner interests.

**Prorated Warranty Coverage** - Usually associated with shingles and means coverage is reducing each year by 1/X where X - length of coverage.

**Gale Force Wind Speed** - A gale is a very strong wind. There are conflicting definitions of how strong. The U.S. Government's National Weather Service defines a gale as 34 to 47 knots (63 km/h to 87 km/h or 39 miles per hour to 54 miles per hour) of sustained surface winds. Forecasters typically issue gale warnings when winds of this strength are expected.

Other sources use minimums as low as 28 knots (52 km/h or 32 mph) and maximums as high as 90 knots (170 km/h or 106 mph). The 90-knot definition is very non-standard. A common alternative definition of the

maximum is 55 knots (102 km/h or 63 mph).

The most common way of measuring winds is with the Beaufort scale. It is an empirical measure for describing wind speed based mainly on observed sea conditions. Its full name is the Beaufort Wind Force Scale.

Decision-makers need to identify what mph wind speed is referenced by roofing system manufacturer's and determine if that criteria offers sufficient protection.

**Overburden** - Refers to topping slabs, pedestals and pavers, planting medium, plants and possibly planters, fountains and bollards.

**Adequate Ventilation** - The necessary ventilation required to properly ventilate the space under discussion. Ventilation that meets code requirements and roofing system manufacturer's requirements to avoid over heating the roofing system and prevent or limit condensation.

**Coping & Metal Edge** - A construction unit placed at the top of the parapet wall to serve as a cover for the wall. A construction unit placed along an open perimeter. Flat and low-slope roofing system components need to comply with ANSI SPRI's ES-1 mandates to be IBC 2006 compliant. ES-1 requirements include fully adhered perimeter flashing extending to below the bottom edge of blocking on walls, the coping top sloped to drain toward the roof, continuous cleating with a kicker and the component fascia adequately hemmed over cleating.

**Pitch Pockets** - At penetrations through roofing and waterproofing systems, pitch pockets or pitch pans are open topped metal boxes around penetrations that are filled to seal the penetration and pitch pocket against water entry over the long-term. Preformed pockets and proprietary filler may be warranted to perform watertight for ten or more years. Metal shop-fabricated pitch pockets and filler performance aren't covered by warranties.

**Adhesion** - Ability of sealant or membrane to adhere to the substrate.

**Cohesion** - Ability of sealant to adhere to itself. Cohesion failure is a splitting apart of the sealant.

**Weatherseal** - Should convey a watertight performance. HCI recommends specifying and obtaining warranty coverage for exterior joint sealants for weatherseal and adhesion.

**Glass** - There are a myriad of options for designers and constructors to deliver to Owners. With present green emphasis on daylighting and energy savings, the Owner's/tenant's tolerance for glare needs to be discussed.

**Intrusion** - moisture entry in any form that is objectionable and harmful; entry from any source and by any means. Most objectionable moisture entry can be avoided.

**Condensation** - The change of water from vapor to liquid when warm, moisture-laden air comes in contact with a cold surface. Occurs when moisture laden air reaches dew point and the moisture changes from gaseous state to liquid state. Condensation may be limited with dehumidification and increased thermal resistance.

**Enhanced Risk Management Performance Based/Results Oriented Specification and/or Contract Language and Photo Proof of Completion of Punch List** - Communicating the level of quality intended and anticipated can be enhanced with requirements for mock-ups and complete submittals. Photo proof of work in progress and completion of milestone details can greatly augment project quality control and quality assurance.

**High Wind Up-lift Warranties** - It may be prudent to obtain warranty coverage against wind up-lift damage if performance required by code isn't covered by a standard warranty. Specifications or scope of work need to require the site visits and documentation of the manufacturer's tech or warranty representative with project quality recommendations. Obtaining all components from the system manufacturer reduces risk of finger pointing accusations if there is a problem and should enhance the manufacturer's commitment to a top-quality project. Certified Foreman, recommended by the System Manufacturer, should be required to attend the Pre-installation Conference and should be required to work on the project continuously to completion unless a substitute is requested by the General Contractor, Architect or Owner.

We want to share our Building Envelope observations with our valued clients and other individuals who may be interested in receiving our semi-monthly publication. Call HCI today for cost effective solutions customized for your project.