

## Mitigating Water Damage

If water is not managed properly, it can damage a paver installation and result in structural or other damage to a property. The mitigation of standing water is critical to a successful and long-lasting installation.

### Problems Caused by Standing Water

#### Sinking Pavers

A drainage problem can cause the paver surface to sink as the ground beneath it erodes. Sunken pavers can begin to crack overtime. Another cause for sinking could be that the base was not properly prepared before the pavers were laid. The base material layer is the most vital component of the entire surface construction. Sunken pavers, as well as incorrect pitch, can lead to water “pooling” on top of the paver surface. This can lead to low areas that will always collect water.

#### Efflorescence and Color Fading

Efflorescence is the migration of lime, a salt, or other dissolved mineral to the surface of a porous material, such as precast concrete, leaving a white powdery residue. When there is an abundance of rainfall or water the lime from inside the concrete mix or the base material below (such as sand, gravel, mortar base, or earth) dissolves inside the concrete. The water flows to the surface and then evaporates leaving the chalky covering behind. Pigments that have been added to color the concrete mix can be eroded. Standing water and the effects of sunlight can result in color fading.

#### Heaving

Commonly, heaving or the shifting of pavers out of place, is the result of freeze-thaw cycles. Improper drainage can cause water to collect and freeze, causing the pavers to move. Frozen water inside of something inflexible, the ice will stress and eventually crack the concrete. Over time and freeze-thaw cycles the cracks will continue to grow larger.

### Solutions - Re-direct water flow away from paved areas

- Slope – ground that forms a natural or artificial upward or downward slant
- Grading – leveling the ground to provide for drainage
- Drainage – removal of surface and sub surface water
- Proper Installation methods - base layers and soil compaction (See our [Installation Basics](#) illustration)
- Consult with local building departments for guidelines
- [Winterize](#) with air entrainment to reduce water absorption
- Maintain Sealer – to minimize water absorption; see our FAQ on [Sealing Your Product](#)