

**EVEN WITH MODERN TRENDS  
THE BASICS STILL MATTER**

# So, What Are the Basics?

**Ordinary cementitious mixes shrink**

**Concrete is alive, it breathes!**

- **It fights attempted suffocation**

**Old Concrete has undergone Creep and Shrinkage**

- **Must be “unloaded” for load carrying repairs**
- **Working joints must be respected**

**Chemical Compatability**

# SHRINKAGE

- **Results in Cracks**
- **Shrinkage disrupts bond**
- **Causes early repair failure**





















# CONCRETE IS ALIVE

- **It fights attempted suffocation**
- **It breaths air (moisture vapor) in**
- **It expels moisture vapor**
- **Expands and contracts with temperature change**















# CREEP AND SHRINKAGE

**Old concrete compresses/shrinks under load**  
**Must relieve internal stresses before new patch**  
**Respect existing joints**









41

19







# CHEMICAL/PHYSICAL COMPATABILITY

- **Chemically compatible**
- **Physically compatible**
  - **Stiffness (Elastic modulus)**
  - **Thermal expansion**











