# CONCRETE CARE & MAINTENANCE

NORTH DAKOTA
READY MIX & CONCRETE
PRODUCTS ASSOCIATION

# CONGRATS

Your investment in concrete will add value and improved aesthetics to your property for years to come. Like any building material exposed to the elements, concrete will require routine care and maintenance to maximize its service life. This brochure is designed to inform you on the steps you should take during the construction process and into the future.

For more information, contact your local NDRM&CPA member company or visit our website:

WWW.**NDCONCRETE**.COM


P.O. Box 1076
Bismarck, ND 58502

**701.255.7250**

**EXECUTIVE DIRECTOR**
ART THOMPSON
701.425.7106
Art.NDConcrete@gmail.com


WWW.**NDCONCRETE**.COM

# PROTECT YOUR INVESTMENT

Ready Mix & Concrete Products Assoc.

# CONCRETE 101

Concrete. We drive on it, walk on it, and it provides the foundations for where we live and work. However, for most people, it is a product that few think about until they choose to add it to their property or replace some existing.

In its simplest form, concrete is a mixture of powder called “Portland Cement”, sand, rock and water. When mixed, the “Portland Cement” reacts chemically with water through a process called hydration, causing the mix to harden. Various additives can be included in the mix to improve strength, durability and workability.

Your local concrete supplier has engineered mix designs to meet every application. The mix designs are typically categorized by compressive strength (PSI). In our northern climate, all exterior concrete mixes must include air entrainment, to allow space for water to expand during freeze/thaw cycles.

It is important to note, the American Concrete Institute Standard 318 states, “ Concrete exposed to freezing-and-thawing and in continuous contact with moisture and exposed to deicing chemicals (F3 exposure class) shall be placed at a minimum of 4,500 PSI.”

Choosing the right mix for your project is just as critical as choosing the right contractor for the job. Do your homework. Ask to see a contractor’s license; if they are bonded; for references and/or inspect prior work. Further, ask if the contractor is ACI – Flatwork Finisher Certified. This will all help ensure the placement of your new concrete surface is done professionally and with proper base preparation, placement and finishing, and curing techniques. Application of a curing compound during placement helps to prevent moisture loss and regulate temperature while the curing process takes place.

After a project is complete, please see the ongoing care and maintenance that is required for your concrete to outperform its design expectations.

# SEAL YOUR CONCRETE

There is a common misconception that concrete is a maintenance-free product. However, in our northern climate, which is subjected to several freeze/thaw cycles per winter, the application of a penetrating concrete sealer is a great measure to protect your investment.

Concrete sealers are designed to provide a barrier against water and deicing agents. This will help extend the service life of your concrete pavement.

- Once freshly placed concrete has cured for 28 days, a concrete sealer can be applied, as long as weather conditions allow.
- Look for professional-grade, concrete sealers that are either Silane and/or Siloxane based products. If unsure, ask at your local contractor supply store, who specialize in concrete construction.
- Reapply every 2-4 years, or as recommended by the manufacturer. You can spot check your concrete by pouring water on it. If the water is absorbed, the concrete will darken, and you will need to reapply. If the water beads up and sheds off the surface, your sealer is working.

Applying a concrete sealer can be performed as a Do-It-Yourself project and generally can be completed in a few hours, depending on the size of your pavement. Sealers can either be sprayed or rolled on your concrete. Or you can also choose to ask your contractor for a quote on sealing your pavement

**IT IS IMPORTANT TO NOTE MOST SURFACE DEFECTS CAUSED BY SALTS AND DEICING AGENTS ARE AESTHETIC IN NATURE AND NOT STRUCTURAL. A FEW EASY STEPS CAN HELP MITIGATE POTENTIAL ISSUES.**

WWW.**NDCONCRETE**.COM

# AVOID DEICING AGENTS

Concrete can be vulnerable to damage when exposed to salts and other deicing agents.

It is recommended that you avoid using any type of deicer on your concrete. Make sure to read the labels of products sold that claim to be “concrete friendly.” If the ingredient list shows magnesium chloride or potassium acetate , do not use. Homemade vinegar deicing sprays, prevalent on the internet, are not good for concrete as vinegar is an acid. Also avoid using fertilizer as deicers as it too contains substances that can chemically attack concrete.

**YOUR BEST AND SAFEST BET IS TO UTILIZE PLAIN SAND FOR TRACTION.**

Minimize parking of vehicles on driveways when possible as salts and deicing chemicals will drip onto the pavement. Products applied to public roadways by local and state government agencies will eventually dry but will reactivate when moisture occurs again. The same goes for materials applied on public and private parking lots. Repeated freeze/thaw cycles will inflict damage to the surface layer of concrete if left exposed to salts and deicers.

## KEYS TO CONCRETE LONGEVITY

- Utilize Proper Concrete Mix Design.
- Select Qualified Contractor.
- Ensure Proper Placement and Finishing Techniques , including Application of Curing Compound.
- Seal the Concrete Surface; Reapply as recommended.
- Avoid Deicing Agents.