

PREPARATION & PLANNING

- Skill, knowledge and experience are required to deal with concrete. Having the proper manpower and equipment available is very important.
- A minimum of four inches is generally enough for a residential driveway or garage floor that will be used by cars only. If a parking area will be used by both cars and light trucks, the slab should be six inches thick. Frequent use by heavy trucks may require a slab eight inches deep.
- When excavating, be sure to take out all organic matter, such as tree roots, leaves, and wood.
- The Base is really important underneath the slab. You should have 3 - 4" of stone base, 304's or 411 stone work well. Once down, the stone must be compacted as well.
- The drainage for the surface of the finished job should slope at least 1/8 inch per foot. A slope of 1/4 inch per foot is best.
- Forms must be secure and capable of withstanding the load pressure of fresh concrete.
- Sub grade must be compacted and free of standing water.
- Determine what type of control joints will be used to control cracking; hand tooled or saw cut.
- Placement of control joints should be determined in the planning step: Control joints should be placed no more than ten (10) feet apart.
 - ✓ Sections should be square.
 - ✓ The joint depth should be at least ¼ the thickness of the concrete.
- Provide acceptable access for delivery:
 - ✓ Pathway must be of stable soil (support of up to 80,000 pounds).
 - ✓ Pathway must be at least ten (10) feet wide and fourteen (14) feet high.
 - ✓ Avoid bringing trucks over curbs, sidewalks, or driveways.
- Safety is necessary when working with all types of concrete. Special protection is needed to eliminate skin irritation and burns.

PLACEMENT

- Concrete must be discharged in a timely manner upon arriving to the job site. If you are using wheelbarrows to move the concrete from the truck to the forms, make sure you have enough help to finish the project in a timely manner.
- During the placement process, follow these easy steps:
 - ✓ Strike off or "screed" the concrete to the proper elevation or form height with a wood or magnesium straight edge.
 - ✓ Immediately after striking off and before bleed water appears, the concrete must be bull floated and the edges formed with an edger.
 - ✓ After bull floating, no finishing practices must take place until bleed water has completely evaporated.

FINISHING

Finishing is the process of texturing the concrete. If you are using hand-tooled control joints, these must be completed prior to final texturing. The following textures may be applied:

- Broom finish is recommended for exterior applications that require maximum skid resistance such as; sidewalks and driveways. To achieve a broom finish; simply push or pull the concrete broom across the concrete until it reaches the desired consistency; timing is a judgment call based on desired depth of broom texture.
- A porous trowel finish is recommended for exterior applications that require minimal skid resistance such as; patios and porches. To achieve a porous trowel finish; trowel the concrete when it reaches a consistency that supports your weight but leaves footprints approximately ¼" deep
- A hard trowel finish is recommended for interior applications that require a non-porous surface such as shop floors and garage floors. To achieve a hard trowel finish the concrete must be finished with a power trowel.

CURING

Curing is the most important step in concrete placement, yet is typically the most neglected. To ensure that concrete reaches its maximum designed strength and durability, it must be properly cured. This process must begin as soon as the concrete will accept the process without damage to the surface. There are two methods for curing concrete:

- Wet Curing is the process of keeping the concrete surface saturated. A garden sprinkler is typically used for this type of curing.
- Curing Compound is a chemical that seals in the moisture. They are typically applied with a sprayer but can also be rolled on with a paint roller.

For anymore question about planning tips, please call use at the Defiance Plant or Paulding Plant