

Dear Friends,

Hope you all are well and enjoying reading 'In-Situ'. The long awaited winter is in the offing. As a common feature of any cement, your work may exhibit slower setting / hardening properties at lower temperatures. It is absolutely normal and weather driven, please do not panic and let your clients and associates to get panicked. The rate of cement reaction gets slower at lower temperatures. Many a time the common home builders, out of panic and lack of knowledge tend to take quicker decisions and incur huge losses. Which are totally undesirable. Being a responsible construction partner, we are committed to keep you reckoned by revisiting all such vital aspects, may be well known to all of you, yet it may be considered as a reminder to spread best construction practices amongst stakeholders.

Hope you shall enjoy reading. Keep giving up your valuable feedbacks and suggestions for further improvement.

## CONCRETE WORK IN FOUNDATION

It is very necessary to check the levels of foundation before concrete work. There are patches where excavated depth slightly exceeds and vice versa. Level the foundation base to same level. Now pour the concrete as per drawing specs. Generally concrete of ratio 1:4:8 is used for foundation.



Sometimes it is

even 1:5:10 or 1:6:20. **Here 1:4:8 means; 1 part cement: 4 parts of sand: 8 parts of coarse aggregates.**

Depth of PCC varies from 6" to 9". This is provided to have a uniform surface and level as a base of subsequent RCC / Brick foundations.

## POINTS TO BE CONSIDERED CAREFULLY DURING CONSTRUCTION

1. There should be no trees, roots, vegetation near the area where foundations are to be provided.
2. Foundations on natural water way should be avoided.
3. The depth and width of foundations in bricks and/or concrete should be designed properly depending upon the loading condition.
4. The foundation surface should be watered and left open for some time and finally compacted with suitable means. Using broken brick bats for embedding with hard ramming helps.
5. It should be ascertained that the foundations are laid in an absolutely straight line.
6. The base concrete to be provided should be 7.5 cm to 15 cm (3" to 6") more on either side of the foundation design width.
7. The base concrete should also be cured and rammed properly before commencement of work either for brick/stone foundation or for foundations in concrete.
8. The foundations should be constructed in a perfect vertical plumb line.
9. Proper cover to the reinforcement can be provided by placing cover blocks on base concrete. These can be made out of 1 : 4 mortar, say of size 2.5×2.5×2.5 cm (1"x1"x1") or as may be required.
10. M20 Grade concrete to be used for RCC foundation work with proper care and w/c (water-cement) ratio.
11. Proper curing of RCC work in foundations should be carried in order to obtain the required strength.
12. The entire depth of foundation should be at the same level to prevent differential settlement.



## ANTI-TERMITE TREATMENT

Termite growth is very much undesirable for any buildings, be it new or old. This can spoil the interior, timber and false ceiling, etc. It can even weaken the building structure and cause serious damage in the long run. It is always advisable to apply proper and adequate anti-termite treatment at the foundation stage for all new buildings at their foundation stage itself, engaging any competent agency. The following are some useful

tips to keep your home free of termites:

- 👉 The soil around the foundation should be treated up to the plinth level with appropriate chemicals
- 👉 The chemical barrier should be continuous and complete
- 👉 However treatment may be done pre, during and post construction stages, but it is

always advisable to get it done during construction work of foundation for best results.

- 👉 No wooden items should be used during electrical wiring work, these cheap timber items many a time causes termite attacks.
- 👉 Have a sharp eye to ensure that the chemicals do not contaminate any domestic water sources.

## SOME COMMON SIGNS OF A FAULTY FOUNDATION ARE AS UNDER:

### Foundation Cracks, Wall/Floor Cracks and Other Types Of Fractures:

- Diagonal cracks on walls / corners.
- Foundation Settling or Sinking.
- Doors that don't operate properly.
- Development of gaps Around Window Frames or Exterior Doors.
- Sagging or Uneven Floors.



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