FOUNDATIONS FOOTINGS & FORMWORK …. A PRACTICAL APPROACH

Foundations

Good Foundations provide sound bearing for the Structure to be built on without fear of collapse.

CLEAN YELLOW SAND COMPACTED TO 97%

FOOTINGS

Simple Strip Footings being excavated and poured

Simply Raft Ground Slab

SETTING OUT

- Setting Out requires accuracy and consideration regarding the sequence of excavation of the Footings
- The use of an experienced Engineering Surveyor pays benefits in the long term

PILING

- Piling is used to provided good Foundations where Ground conditions are suspect
- Different types of Piling are:
- Bored Piles
- Reinforced Piles
- Secant Piles
- Screw Piles
- Driven Piles
- Contiguous Piles

PLANNING

- Planning the excavation sequence and process is a very important part o f this sequence of works.

- Consideration should also be given tom the location and depth of **Temporary Services** , these should be clearly recorded and "marked up" on a Site Plan.

- Consideration needs to be given to what do you do with all the excavated material, some may need to be used for backfilling

FOOTING TYPES

There are various Footing Types all have different applications

- **Strip Footings** are those which will generally support Brickwork or Insitu Concrete Walls or carry the edge of a Edge Thickening of a Raft Slab. Strip Footings will also be used for the base of Retaining
-
- **Pad Footings** are simple isolated Footings of various sizes and depths which will generally support Steel Columns or Concrete Columns

QUALITY

- The Quality requirements are clearly articulated in the Project Specification
- Inspection Test Plans referred to as ITP's
- The ITPs are developed from the Specification and the Engineering Notes and Notes on the Structural Drawings

Concrete Pre-pour Checklist (FMS-MP01-07)

Project:		**Date:**	
Project No.:		**Area:**	
Drawings:		**Location:**	
Lot Name/No:			
Reference Docs:			

Inspection Activity	**Acceptance Inspection**			
	Y	**N**	**N/A**	**Comments**
Placement				
Survey values established				
Checked permanent survey marks				
Established temporary bench marks				
Checked lines & levels				

Authorization:

Surveyor: _____ (Name) _____ (Signature) _____ (Date)

Inspection Activity	**Acceptance Inspection**			
	Y	**N**	**N/A**	**Comments**
Sub-base/sub-structure				
Foundation preparation				
Blinding				
Scabbling of base structure				
Formwork				
Formwork approved by Engineer				Class of finish:
Material suitable for location and surface finish				
Fillet installed to exposed edges				
Checked location, dimensions, elevation and alignment				
Checked form ties, bottom bearing and propping				
Formwork clean and release agent applied				
Checked location of construction and expansion joints				
Voids/inserts/embedded items				
Checked type, size and number				
Checked location, rigidity and protection				

FORMWORK

- On todays faced paced construction sites boundaries are being pushed with Design , Specific Client requirements

- Temporary Works Engineers should be engaged to Inspect and Sign Off

  Formwork Installations prior to any Concrete being poured

Conclusion

- The importance of good Quality Control and Quality Assurance Practices cannot be under stated here , take a short cut eventually it will come to light as unforeseen loads are being imposed on part of a structure causing catastrophic failures.

- These failures have a serious impact on the Industry through loss of credibility and huge financial costs but most of all loss of life …can you afford to have that on your conscious