

**GENERAL NOTES-GROUP LATRINES ZONE 3**

- 01. All dimensions to be read, not to be measured.
  - 02. All structural drawings should be read in conjunction with architectural drawings.
  - 03. Minimum clear distance between the bars shall be one inch or diameter of bar, whichever is greater.
  - 04. One inch diameter spacer bar shall be used between two rows of steel bars in beams.
  - 05. Lap splice for column shall be provided in the center of column as per details given in the drawing.
  - 06. Lap splice for beam shall be provided at approximately 1/4 of the span length of beam as per details given in the drawing.
  - 07. Ties/Stirrups in Beams, Columns and Lintels shall be provided with 135° hooks and with an extension of 6d or 3 in., whichever is greater as given in the drawing.
  - 08. Mortar thickness in brick masonry wall shall be 3/8".
  - 09. All brick work shall be laid in English bond.
  - 10. Toothing in brick masonry shall be provided at all vertical connections between concrete and brick masonry wall.
  - 11. Foundation was designed using different bearing capacities. (Refer to Dwg. S-04).
- Note:* This design is applicable for normal load conditions, 1500-1800 gallons fiber glass water tank on roof top and assume adequate bearing conditions. The drawings are invalid for soil with bearing capacity less than 0.5 tsf, water logged areas etc.

- DESIGN DATA**
- 1. Minimum 28 days cylinder crushing strength of Reinforced concrete used in all members is 3000 psi.
  - 2. Steel reinforcement is Grade-40 (with minimum Yield strength of 40 ksi.) deformed round bars conforming to ASTM A-615.
  - 3. Compressive strength of first class solid fired clay bricks is 1,500 psi with actual dimensions of 8-5/8 in ± 1/8 in by 4-1/8 in ± 1/8 in by 2-5/8 in ± 1/8 in.

**MINIMUM CLEAR COVER**

S.No	LOCATION	MINIMUM COVER
1.	FOOTING	3"
2.	COLUMN	1-1/2"
3.	SLAB	3/4"
4.	BEAM	1-1/2"

**DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)**

BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 3,000 \text{ psi}$	$f_y = 40,000 \text{ psi}$
3/8"	18	6
1/2"	24	6
5/8"	30	8
3/4"	36	9

**SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)**

BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	$f_c' = 3,000 \text{ psi}$	$f_y = 40,000 \text{ psi}$
3/8"	16	23
1/2"	21	30
5/8"	26	38
3/4"	-	45

**STANDARD HOOKS (ACI 7.1)**

BAR DIA	A(in.)	B(in.)	C(in.)	Diagram
3/8"	2.5	2.5	4.5	<p>180° HOOK</p>
1/2"	2.5	3.0	6.0	
5/8"	2.5	4.0	7.5	<p>90° HOOK</p>
3/4"	3.0	4.5	9	