DESIGN DRAWINGS FOR NGARANNAM BOREHOLE (LOT 2) PROJECT







Raft Foundation Structural Details





Structural Details (Section 1-1)





(Section 2-2)





ANDMUST NOT BE SCALED AT ANY TIME. 7. FOUNDATION WAS DESIGNED FOR AN ASSUMED ALLOWABLE SOIL BEARING PRESSURE 150KN/M2 8. THIS DESIGN ENGINEER WILL NOT TAKE RESPONSIBILITY FOR ANY JOB NOT SUPERVISED E HIM. 1. HOLLOW BLOCKWALLS BELOW GROUND SLAB LEVEL ARE TO BE FILLED WITH MASS CONCRETE. BACK FILLING IS TO BE CARRIED OUT SIMULTANEOUSLY ON BOTH SIDES. 2. THE WALL THICKNESS OF THE BLOCKS SHOULD NOT BE MORE THAN 25MM. 3. THE MAXIMUM CRUSHING STRENGTH OF THE HOLLOW BLOCK IS TO BE 20N/MM OF GROSS AREA OF BLOCK AT 28 DAYS. BLOCKWORK TIES BETWEEN COLUMNS/STANTIONS ARE TO BE PROVIDED AT EVERY COURSE. TIES TO BE 6MM BAR STRAPS 700M LONG INTO THE BLOCKWORK. 5. MAXIMUM POUR HEIGHT FOR ALL FILLED BLOCK BLOCKWORK TO BE 2 COURSES 6. ALL SERVICE PIPES SHALL ONLY BE PUT INSIDE BLOCKWALL AFTER DUE CONSULTATION WITH STRUCTURAL

ENGINEERS. PUTTING SERVICE PIPES INSIDE LOAD BEARING BLOCKWORK CORNERS

No.	Revision/Notes.	Date.
1.	Issued for coordination	
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PROPOSED DEVELOPMENT

Ngarannam, Mafa LGA, BORNO. United Nations Development

STRUCTURAL DRAWINGS







REINFORCED CONCRETE 1. DESIGN IS TO BS 8110 2. CONCRETE GRADES ARE TO BE AS FOLLOWS WITH FIGURES IN BRACKET DENOTING MAXIMUM SIZE AGGREGATE: -COLUMNS -COLUMNS 30(25) -COLUMNS 30(20) -BEAMS & SLABS 30(20) 3. UNLESS OTHERWISE INDICATED, REINFORCEMENT SHALL BE HIGH YIELD STEEL(TYPE 2), DENOTED BY '', HAVING CHARACTERISTIC STRENGHT NOT LESS CHARACTERISTIC STRENGHT NOT LESS
1. DESIGN IS TO BS 8110 2. CONCRETE GRADES ARE TO BE AS FOLLOWS WITH FIGURES IN BRACKET DENOTING MAXIMUM SIZE AGGREGATE: -FOUNDATION 30(25) -COLUMNS 30(20) -BEAMS & SLABS 30(20) 3. UNLESS OTHERWISE INDICATED, REINFORCEMENT SHALL BE HIGH YIELD STEEL(TYPE 2), DENOTED BY Y', HAVING CHARACTERISTIC STRENGHT NOT LESS THAN INDIVIDUATION CONTINUES
-OULDINNS 3U(20) -BEAMS & SLABS 30(20) 3. UNLESS OTHERWISE INDICATED, REINFORCEMENT SHALL BE HIGH YIELD STEEL(TYPE 2), DENOTED BY 'Y', HAVING CHARACTERISTIC STRENGHT NOT LESS
THAN 410N/MM2
4. COVER TO REINFORCEMENT SHAL BE THE FONDATION: 50MM(BOTTOM)75MM(SIDES) COLUMNS: 25MM
SLABS: 20MM 5. DRAWINGS MUST BE READ IN CONJUCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS AND IN CASE OF ANY DISCREPANCY REFER TO T DESIGN ENGINEER FOR CLARIFICATION. 6. DIMENSIONS ARE IN MILLIMETRE(MM) ANDMUST NOT BE SCALED AT ANY TIME 7. FOUNDATION WAS DESIGNED FOR AN ASSUMED ALLOWABLE SOIL BEARING PRESSURE 150KN/M2 8. THIC DESIGN ENGINEER WILL NOT TAKE
BLOCKWORK
1. HOLLOW BLOCKWALLS BELOW GROU SLAB LEVEL ARE TO BE FILLED WITH MASS CONCRETE. BACK FILLING IS TO BE CARRIE OUT SIMULTANEOUSLY ON BOTH SIDES.
2. THE WALL THICKNESS OF THE BLOCK SHOULD NOT BE MORE THAN 25MM. 3. THE MAXIMUM CRUSHING STRENGTH
OF THE HOLLING BLOCK IS TO BE 20N/M OF GROSS AREA OF BLOCK AT 28 DAYS.
BLOCKWORK VALL AND COLUMNS/STANTIONS ARE TO BE PROVIDED AT EVERY COURSE. TIES TO BE 6MM BAR STRAPS 700M LONG INTO THE BLOCKWORK.
5. MAXIMUM POUR HEIGHT FOR ALL FILLED BLOCK BLOCKWORK TO BE 2 COURS AT A TIME.
6. ALL SERVICE PIPES SHALL ONLY BE P INSIDE BLOCKWALL AFTER DUE CONSULTATION WITH STRUCTURAL ENGINEERS. PUTTING SERVICE PIPES INSID LOAD BEARING BLOCKWORK CORNERS MUST BE AVOIDED.
No. Revision/Notes. Date.
Project
PROPOSED DEVELOPMENT AT Ngarannam, Mafa LGA, BORNO.
FOR United Nations Development Programme, UNDP.
Drawing Title. STRUCTURAL DRAWINGS
NAME Water Tank SHEET No.







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1:20

FRONT ELEVATION 1:20



Figured dimension must be taken in preference dimensions.

Contractor, sub-contractors and suppliers must verify all dimension on site before commencing any work or making any shop drawing.

All timber to be pressure-treated with anti-fungal and anti-infestion on approved treatment.

All Internal Doors to have 25mm undercut to avoid internal pressure build up

ISSUED FOR REVIEW

KEY	
1	RESIDENTIAL UNITS
2	PRIMARY SCHOOL
3	POLICE STATION
4	MARKET
5	MOSQUE
6	COMMUNITY CENTER
7	BULAMA'S HOUSE
8	PRIMARY HEALTH CARE CENTER
9	BORE HOLE
10	TEACHER ACCOMMODATION
11	EXTENSION OF PRIMARY SCHOOL
12	POLICE ACCOMMODATION
13	PROPOSED FUTURE CONSTRUCTION (IMMIGRATION)
14	PROPOSED FUTURE CONSTRUCTION (CUSTOMS)
	DOUBLE SOLAR STREETLIGHT
	SINGLE SOLAR STREETLIGHT
	ARROW HEAD (DRAINAGE FLOW PATH)
	WATER POINT

NOTE: THE FENCE HAS BEEN INCLUDED AROUND THE POLICE OUTPOST AND THE DISTANCE FROM THE ROAD HAS BEEN REVISED

PROPOSED IMMIGRATION OFFICE AND CUSTOMS OFFICE / ACCOMODATION INTRODUCED

HOMES FOR NGARANNAM, MAFA LGA, BORNO.

WATER FETCHING POINT DETAILS

Scale: 1 : 20 Date: NOVEMBER 2021 Drwg. No. A435 - 00 - 026 Suffix:

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230mm sandcrete block wall

150mm sandcrete block wall

150mm concrete floor thickness

1180	
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WIRE MESH WITH BLOCK WALL PERIMETER FENCE



