

AL FARSHAH PHCC EXTENSION YEMEN

**Engineering
Services Unit**

2026

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Consulting**

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AL FARSHAH PHCC EXTENSION -- Tur Albahah - Lahij Governorate

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This report was
prepared for



LOCATION: Tur Albahah - ALFARSHAH

GPS coordinates : 13.132174191808623, 44.41869049947498



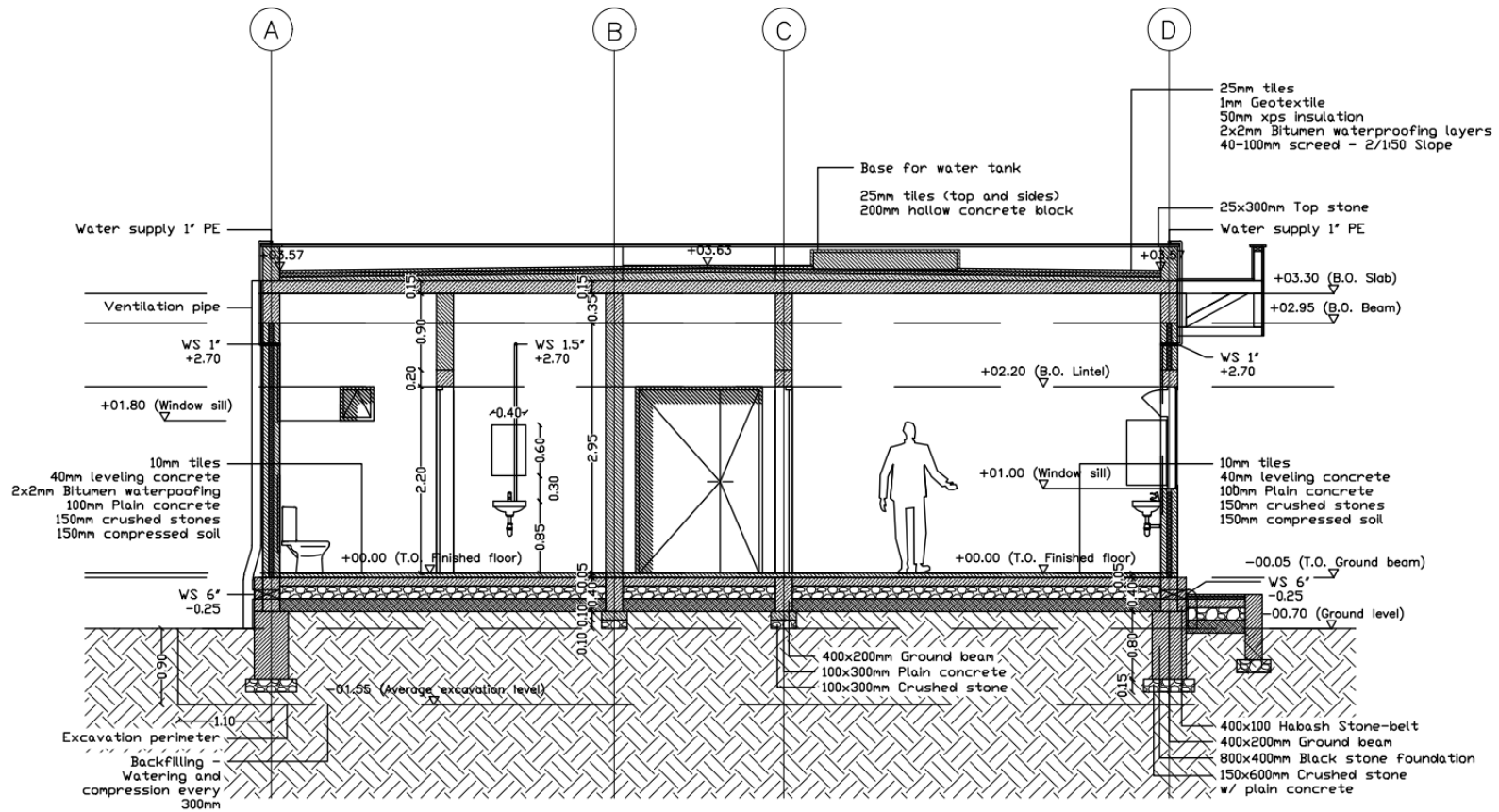
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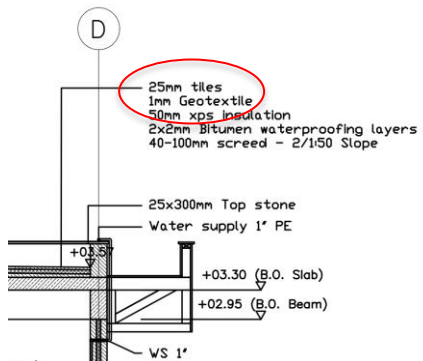
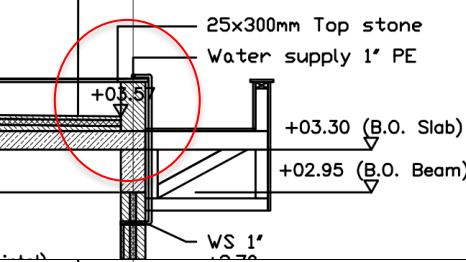
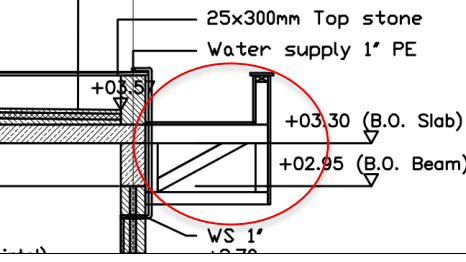


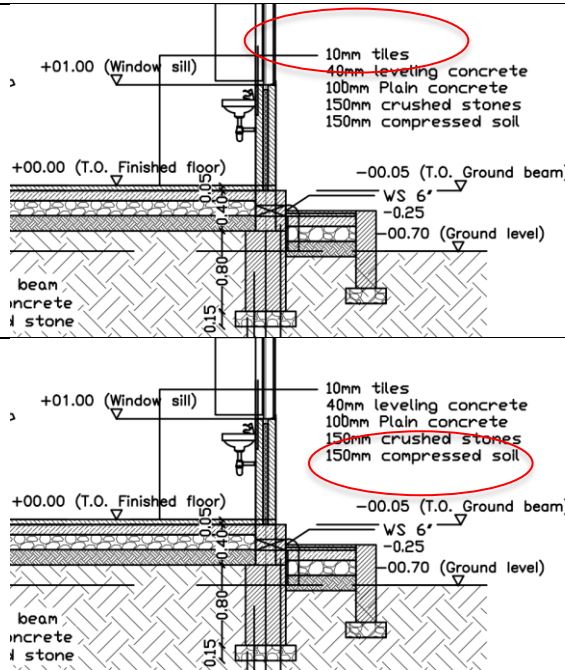
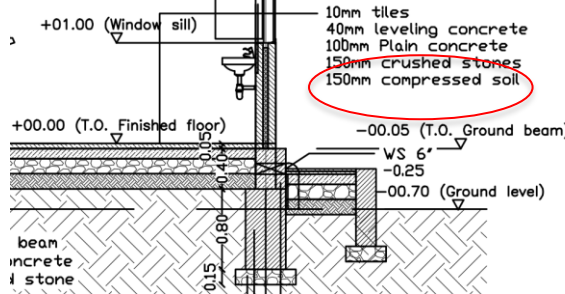
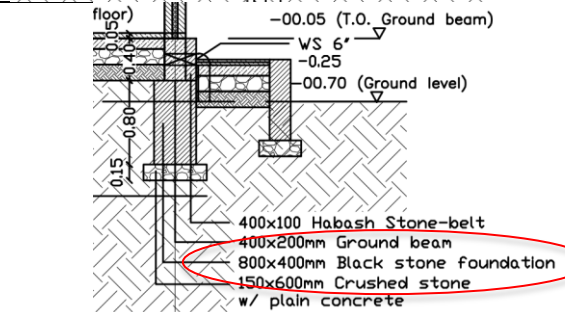
Please find attached below our technical and engineering recommendations concerning the submitted architectural drawings. These recommendations have been derived from our extensive field expertise and the lessons learned through designing, studying, and supervising the rehabilitation of numerous health facilities across various governorates, funded by several international organizations.

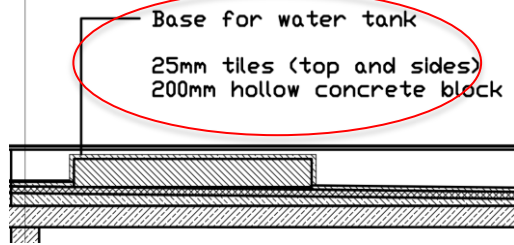
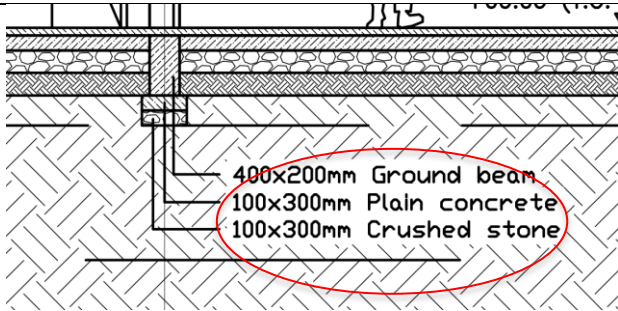
These observations aim to avoid such issues, thereby enhancing design efficiency, ensuring structural and architectural compatibility, and guaranteeing the highest standards of operational sustainability for health infrastructure.

We invite you to review the attached recommendations. Our engineering team remains at your full disposal to clarify any inquiries or discuss technical details via phone or email.



No	Item		Recommendations	Notes
1	Roof tiles		Replacing roof tiles with an acrylic insulation layer, which offers high effectiveness in preventing water leakage and reduces indoor temperatures by reflecting sunlight.	The amendment has been incorporated into the Bill of Quantities for the structural works.
2	rooftop masonry (blockwork) situated above the reinforced concrete roof slab		Replacing the rooftop masonry (blockwork) situated above the reinforced concrete roof slab with an upward-projecting concrete beam (inverted beam) to minimize separation between the masonry and the concrete.	The amendment has been incorporated into the Bill of Quantities for the structural works.
3	shading		Replacing the shading surrounding the building with sun-shading devices above the windows reduces costs and offers greater effectiveness across the seasons, accounting for the changing path of the sun.	

No	Item		Recommendations	Notes
1	Floor tiles		The floor tiles are made of ceramic, which is characterized by water and moisture resistance and ease of cleaning..	
2	Compressed soil		Modification the compaction specification from 15 cm to compaction in layers not exceeding 30 cm for the entire fill depth.	
3	Black stone		The height of the black stone masonry is to be adjusted; the masonry will extend from the level of the plain concrete footings up to the level of the grade beams, which will be determined by the excavation depth.	An excavation level of 1.60 m was assumed in the designs; however, the actual level will be determined by the supervising engineer based on excavation conditions encountered during execution.

No	Item		Recommendations	Notes
1	Tank base	 Base for water tank 25mm tiles (top and sides) 200mm hollow concrete block	The specification is being revised from hollow block masonry and tiling to a concrete base with cementitious cladding, as the tiles and blockwork would be susceptible to the effects of temperature fluctuations and the weight variations caused by the filling and emptying of the water tank.	.
2	Plain concrete and crushed stone beneath the ground beams	 400x200mm Ground beam 100x300mm Plain concrete 100x300mm Crushed stone	1- The dimensions of the ground beams are to be adjusted to 25 x 50 cm to increase the thickness of the concrete cover, given that the beams are in contact with the soil and exposed to moisture. 2- There is no structural requirement to place plain concrete and a crushed-stone layer beneath the internal ground beams, as they are supported by the columns; laying a polyethylene sheet beneath the ground beams is sufficient.	Polyethylene sheeting has been included under the reinforced concrete item for the grade beams.

General recommendations

- Construct a pedestrian walkway around the building.
- Install a joint at the junction of the old and new buildings and fill it with a waterproof rubber sealant.
- Relocate the water tank and any water or electrical lines from the proposed expansion site.
- Carry out opening works in the existing building using power tools, exercising extreme care to ensure the existing structure remains unaffected.