

Columbia Garments Ltd. (Extension)

Vogra, Chandana, Gazipur sadar, Gazipur

(23.969316, 90.381480)

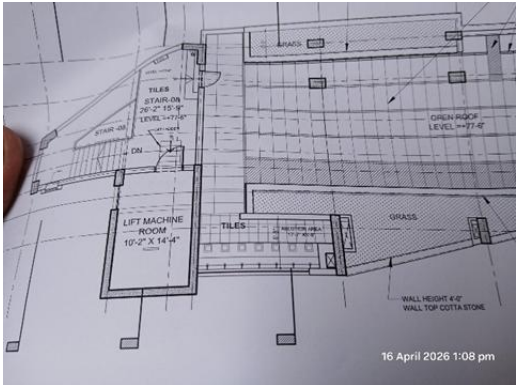
16 April 2026



1. Building Information

1. **Amenity Building:** Six-storied (G+5) Reinforced Concrete building.

2. Observation

Observation-01: Mismatch in as-built drawing	
	
	
Description: Discrepancies were identified between the as-built drawings and actual site conditions. Specifically, the built-up thicknesses of the gardening area and toilet block, as well as the built-up details of the ablution zone, were not indicated in the as-built drawings. The building engineer is required to revise the as-built drawings to accurately reflect the actual site conditions and submit them to the RSC.	

Observation-02: Inconsistency in design concrete strength and inadequate cylinder test report.	
1.5 MATERIALS The principal material of construction is reinforced concrete. For Analysis purposes, the following materials properties have been used: Yield strength of steel (Rebar), f_y = 60,000 lb/in² Compressive strength of concrete Column, f_c = 3000 lb/in² Compressive strength of concrete Beam, f_c = 3000 lb/in² Compressive strength of concrete Shear Wall, f_c = 3000 lb/in² Compressive strength of concrete Slab, f_c = 3000 lb/in² Young's modulus of concrete, E_c = 57000 √ f_c Concrete: Concrete compressive strength was investigated at different phases of the construction. Up to 1st floor bottom. Compressive strength of concrete for column was found 6980 psi at 54 days test, 5020 psi at 47 days test, 5050 psi at 39 days test. Compressive strength of concrete for ground floor slab was found 6320 psi at 41 days test. Compressive strength of concrete for pile cap 5630 psi at 72 days test, 6120 psi at 64 days test, 5288 psi at 49 days test, 5530 psi at 36 days test. 1st Floor column & shear wall concrete compressive strength was found 5360 psi at 33 days test, 6350 psi at 38 days test. 2nd Floor column & shear wall concrete compressive strength was found 4560 psi at 43 days test. 3rd Floor Slab concrete compressive strength was found 8180 psi at 42 days strength was at 42 days test. 4th Floor Slab concrete compressive strength was found 6990 psi at 38 days test, 8130 psi on the 42 days test, for column & shear, Compressive strength was 5870 at 33 days test. All the test results reports are attached to Appendix I	3. CONCRETE: a. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. b. CONCRETE DIMENSIONS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES AND/OR THICKNESS OF BLINDING CONCRETE. c. CONCRETE QUALITY AND MIX CONSTITUENTS ARE TO BE IN ACCORDANCE WITH THE SPECIFICATION. d. TYPE: CONCRETE COMPRESSIVE STRENGTH (CYLINDER) CONSIDERED AS FOLLOWS: I) FOR MAT/RAFT FOUNDATION: f_c 4000 psi II) FOR COLUMNS & FLOOR BEAMS: f_c 4000 psi III) FOR SLAB AND STAIR: f_c 4000 psi IV) FOR LINTEL, FIN, SIL, FALSE SLAB: f_c 3000 psi e. MINIMUM CYLINDER STRENGTH: BASED ON CYLINDER TEST OF DIAMETER D = 4" & HEIGHT = 8" OR DIAMETER D = 6" & HEIGHT = 12" I) 28 DAYS STRENGTH = AS SPECIFIED IN 3(d) II) 7 DAYS STRENGTH = 75% OF THE 28 DAYS STRENGTH. f. CURING OF C.C & R.C.C WORK: I) CURING TIME MINIMUM 20 DAYS II) METHOD OF CURING: * HORIZONTAL SURFACE: BY PONDING OF WATER * OTHER SURFACES: BY WRAPPING MOIST JUTE FABRIC AND SPRINKLING WATER BY HOSE PIPE FREQUENTLY.
Description: Discrepancy was identified in the concrete compressive strength, where 3000 psi was indicated in the design report and 4000 psi in the construction drawings. In addition, the frequency of concrete cylinder test reports does not comply with the requirements of BNBC 2020 (Sec. 5.12.2). The building engineer is required to verify the in-situ concrete strength by taking a minimum of four core samples each from columns and floor (beam-slab), revise the design report based on the verified in-situ concrete strength, and submit the revised design report to RSC for detailed review against lateral forces.	

3. Action Plan

Item No	Observation	Action Plan	Timeline
1.	Mismatch in as-built drawing	The building engineer is required to survey the whole structure and prepare accurate as-built drawings reflecting the onsite conditions.	within 6 weeks
2.	Inconsistency in design concrete strength and inadequate concrete cylinder test report.	The building engineer is required to verify the in-situ concrete strength by taking a minimum of four core samples each from columns and floor (beam-slab).	within 6 weeks
3.		The building engineer is required to revise the design report considering the verified in-situ concrete strength and submit the revised design report to RSC for detailed review against lateral forces.	within 6 weeks
4.		Implement remediation work if required.	within 6 months