

A.K.M. KNIT WEAR LTD. (Extension)

14 No. Genda, Karnopara, Ulail, Savar

(23.829534, 90.260956)

24 March 2024



1. Building Information

- Building 06 (Utility Building II) is a four-storied reinforced concrete (RC) building.
- Building 07 (Childcare Building) is a three-storied prefabricated steel building.

2. Observations

Observation-1: The design report required to be revised. (Utility Building II)



Al-Mustafa Group

FOUR STORIED UTILITY BUILDING

2.7 Material

2.7.1.1 Concrete:

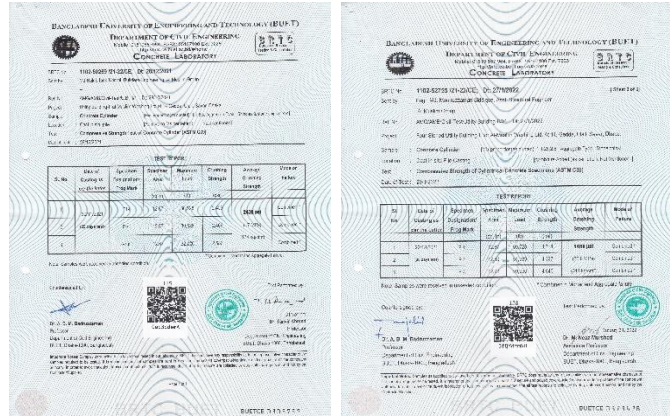
Compressive Strength of Concrete:

Compressive Strength of Concrete for R.C.C. column and all foundations are considered $f'_{c,c} = 4000$ psi, beams $f'_{c,b} = 4000$ psi & for Slabs $f'_{c,s} = 3500$ psi.

Reinforcing bar:

High strength deformed bar with Min^m Yield Strength, $f_y = 500$ Mpa (72,500 psi) conformed to one of the following ASTM specifications.

i) A615-40M, ii) A616-40M, iii) A617-40M, & iv) A706-40M



Description: In the design report, the compressive strength of concrete was considered 4000 psi. The factory has provided only 4 sets of concrete cylinder test reports from the pile, but no cylinder test report was found from the column, beam & slab. Which doesn't comply with the frequency of testing requirement of BNBC (section- 5.12.2).

Observation-3: Exposed rebar. (Utility Building II)



Description: Corrosion was observed on exposed rebars on the 1st floor slab. The building engineer is required to provide rust-proof paint on exposed rebars to protect from corrosion.

Observation-3: Lack of information in the provided drawing. (External Steel Stair, Utility Building II)



Description: The steel bracing connection details were not found in the provided drawing. The building engineer is required to prepare as-built drawings mentioning all the connection details.

Observation-4: Connection Gap. (External Steel Stair, Utility Building II)



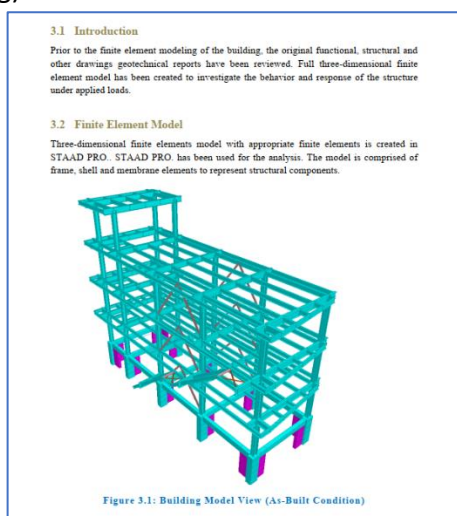
Description: Connection gaps were observed in the steel beam column joint. The building engineer is required to carry out suitable remedial works.

Observation-5: Mismatches in as-built drawings. (Childcare Building)



Description: The connection between the external steel stair and the steel column of the building was found welded, whereas the drawing shows a bolted connection. Also, the size and thickness of the pipe bracing were missing the as-built drawings. The building engineer is required to prepare as-built drawings reflecting the on-site condition.

Observation-6: The design report required to be reviewed against lateral loading. (Childcare Building)



Description: A design report has been prepared for the three-storied (G+2) Childcare Building. The structural design report needs to be reviewed against lateral loading.

Observation-7: Deflected deck slab on the stair. (Childcare Building)



Description: The deflected deck slab was found on the stair. The building engineer is required to check the adequacy of the steel deck and suggest proper remedial methods.

3. Action Plan:

SL No.	Observation	Action Plan	Timeline
01.	The design report required to be revised. (Utility Building II)	The building engineer is required to verify in-situ concrete strength by taking cores from lower-tier columns. Otherwise, consider minimum concrete strength.	within 6 weeks
02.	The design report required to be revised. (Utility Building II)	The building engineer is required to check & confirm the design strength in the design report and submit it to RSC.	within 6 weeks
03.	The design report required to be revised. (Utility Building II)	Implement the recommendations of the design report.	within 6 months
04.	The design report required to be revised. (Utility Building II)	Implement floor load plan.	within 6 months
05.	Exposed rebar. (Utility Building II)	The building engineer is required to provide rust-proof paint on exposed rebars to protect from corrosion.	within 6 months
06.	Lack of information in the provided drawing. (External Steel Stair, Utility Building II)	The building engineer is required to prepare as-built drawings mentioning all the connection details.	within 6 weeks
07.	Connection Gap. (External Steel Stair, Utility Building II)	The building engineer is required to carry out suitable remedial works.	within 6 weeks
08.	Mismatches in as-built drawings. (Childcare Building)	The building engineer is required to prepare as-built drawings reflecting the on-site condition.	within 6 weeks
09.	The design report required to be reviewed against lateral loading. (Childcare Building)	Prepared design report to be checked against lateral loads following BNBC 2006 by RSC.	within 6 weeks
10.	The design report required to be reviewed against lateral loading. (Childcare Building)	Carry out remedial works if required.	within 6 months
11.	Deflected deck slab on the stair. (Childcare Building)	The building engineer is required to check the adequacy of the steel deck and suggest proper remedial methods.	within 6 weeks
12.	Deflected deck slab on the stair. (Childcare Building)	Carry out remedial works if required.	within 6 months