

AL-Ittefaq Textiles Limited

Plot: 11, Mohara CDA I/A, Chandgaon, Chattogram.

(22.397304, 91.865605)

26 September 2023

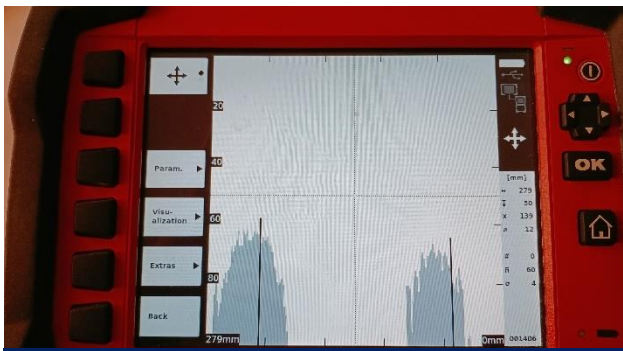


Building Information

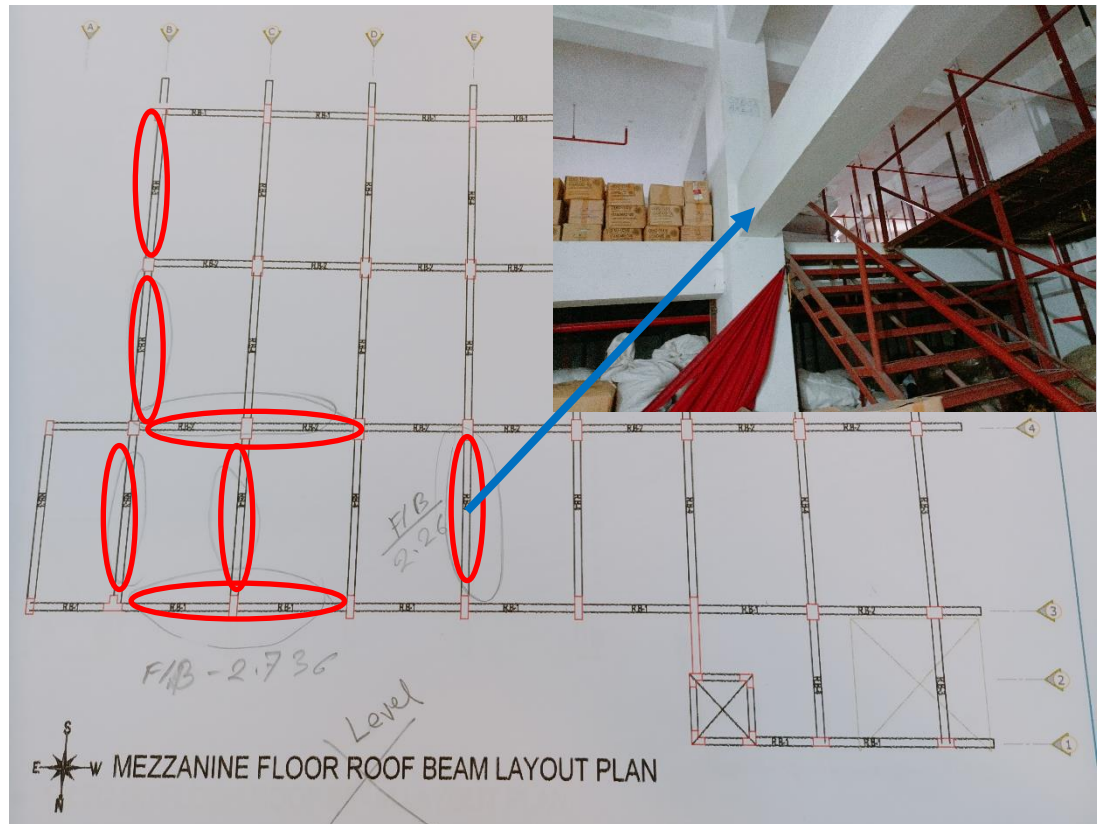
1. **Main Building:** Partially seven storied (G+M+6) RC building.
2. **Sub-station Building:** Single storey RC building.
3. **Security Post:** Single storey RC building.

Observations

Mismatches in as built drawings



Ferro-scanning: 2 rebar at short face



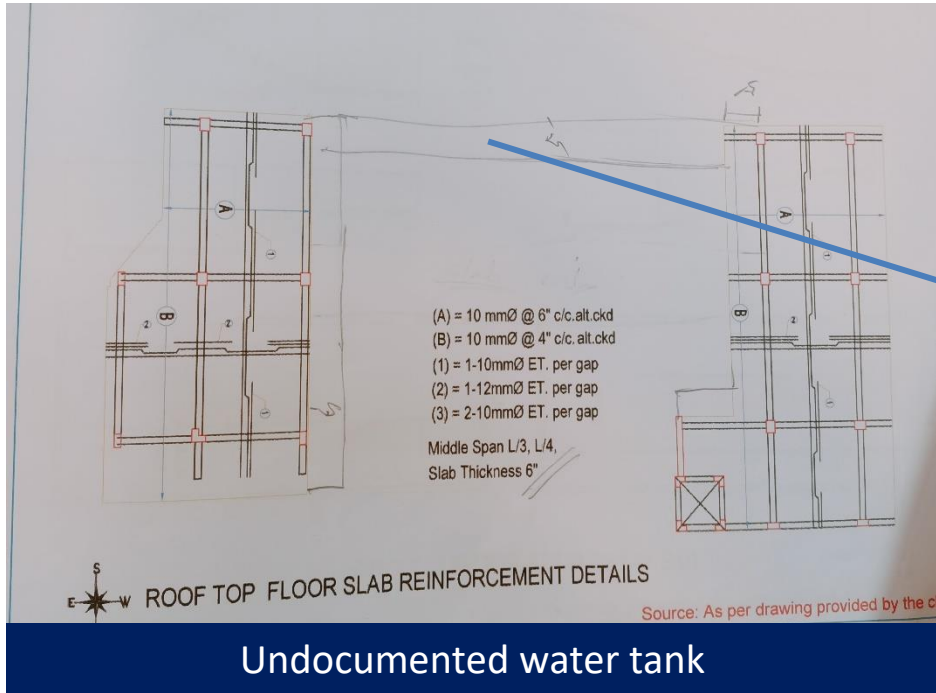
Marked beams are found at different level

Rebar at C-1 type column not matched with drawings. Two rebars were found at short face on 4th floor level instead of three. Moreover, some beams are found in different level at mezzanine level.

Building engineer is required to confirm the amount of rebar in column and update the drawing with connection details.

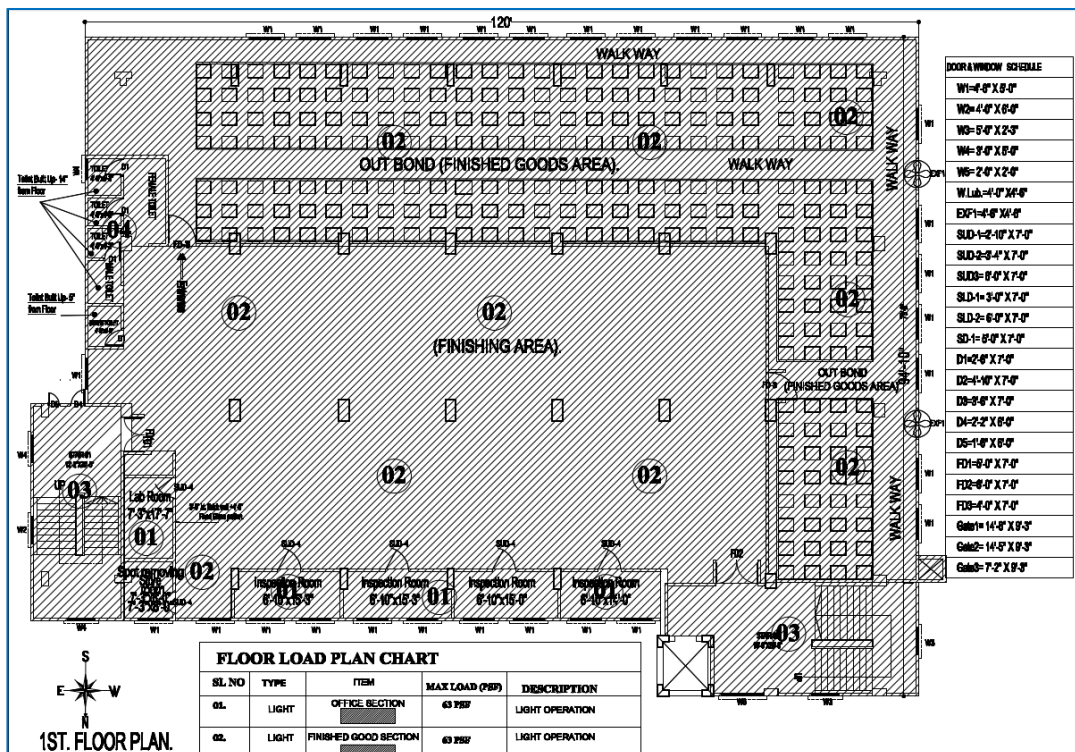
COLUMN NAME	C-1a	C-1
FLOOR		
FOUNDATION TO PLINTH	14"x26"	14"x36"
	Clear Cover=1/2"	Clear Cover=1/2"
GROUND FLOOR TO 3RD FLOOR	12"x24"	12"x36"
	Clear Cover=1/2"	Clear Cover=1/2"
4TH FLOOR TO 5TH FLOOR	12"x24"	12"x24"
	Clear Cover=1/2"	Clear Cover=1/2"

Column schedule: 3 rebar at short face



Undocumented walkway slab was found at the roof. Building engineer is required to confirm the amount of rebar in column and prepare accurate as-built structural drawing with necessary connection details.

Load plan not comply with BNBC requirements

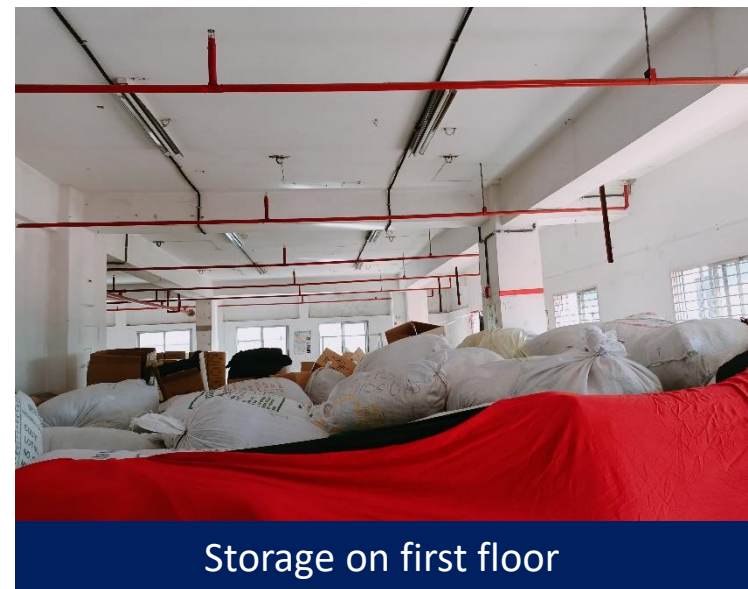


1st floor load plan: finishing area with 3 kN/m² live load

The first floor of the building is allotted for storage. As per BNBC, the minimum floor live load for storage is 6 kN/m² (126 psf). But the first floor of the building is designed for 3 kN/m² live loads.

Moreover, core cutting layout required was missing.

Factory engineer is required to revise the load plan and related design documents based on BNBC requirement.



Storage on first floor

4.5		1 Light workroom without storage	3.0	2.7
		2 Machinery hall & circulation area	4.0	4.5
1.8		3 Factory, workshop etc.	5.0	4.5
		4 Manufacturing : light	6.0	4.5 ⁽⁵⁾
		heavy	12.0	9.0 ⁽⁵⁾
		ice	15.0	9.0 ⁽⁵⁾
2.7		5 Printing plant :		
		Press room	7.0	11.0
4.5		Composing and linotype room	5.0	9.0 ⁽⁵⁾
		Paper storage room	12.0	9.0 ⁽⁵⁾
2.7		6 Motor room, fan room etc. including the weight of machinery	7.5	4.5
4.5		7 Cold storage, grain storage	15.0	9.0 ⁽⁵⁾
4.5		8 Storage warehouses : light	6.0	4.5 ⁽⁵⁾
4.5		heavy	12.0	9.0
		9 Foundries	20.0	12.0

BNBC live load table

Dampness at ceiling of 5th floor



Dampness on slab soffit



Dampness on slab soffit

Dampness on ceiling of 5th floor was observed. Factory engineer is required to seal the source of water and repair the damp areas with suitable method.

**Apparently non engineered racking system
on ground floor**



Racking platform on ground floor



Apparently inadequate member & connection

Apparently non engineered racking platform was found on ground floor. The platform is being used for storage purpose. The member size and connection seems to be inadequate. Building engineer is required to check the adequacy of member & connection of the structure and suggest necessary remedial actions.

Column and beam susceptible to vehicle impact

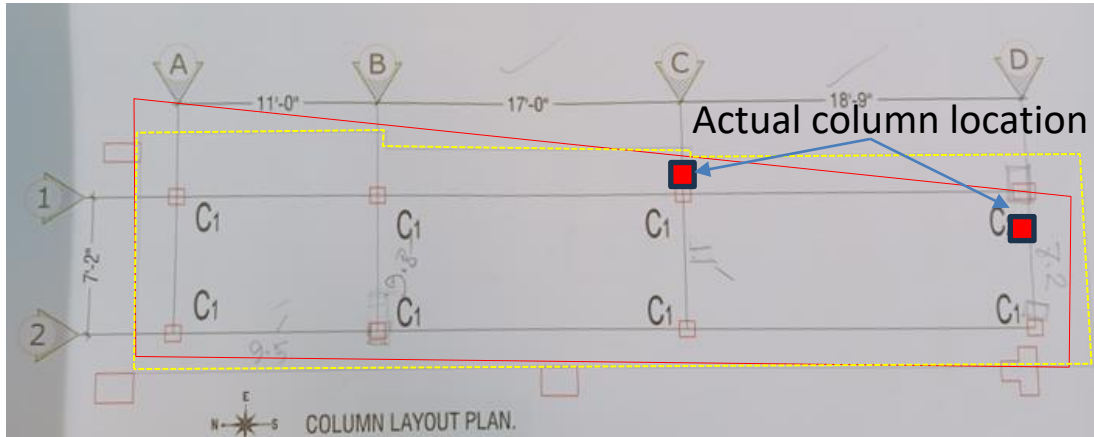


Column and beams adjacent of driveway of loading unloading zone

Column and beams adjacent to the driveway of loading unloading area is susceptible to vehicle impact. The building engineer is required to provide separate barrier and signage to avoid possible vehicle impact on column & beam.

Inconsistencies in as-built drawing

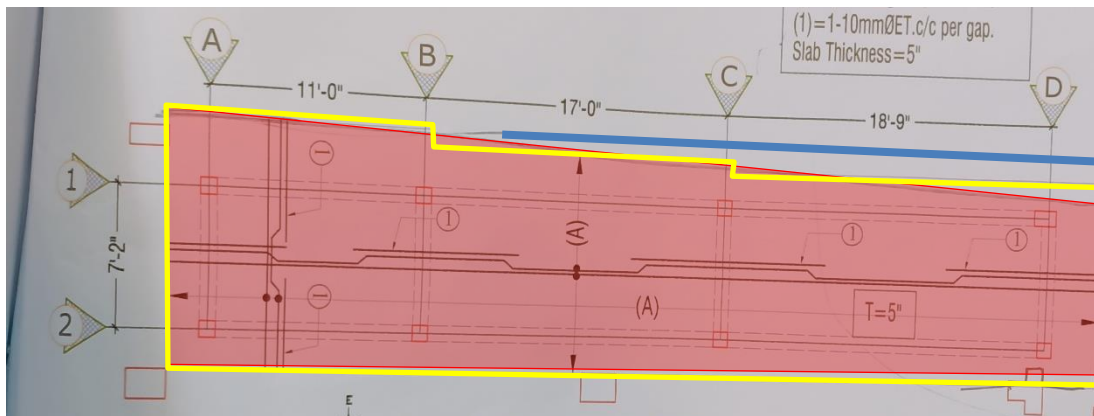
Grid dimension and slab layout did not match with as-built condition. Also, core cutting location has not been prepared and all core cutting location could not be verified. Building engineer is required to survey the structure and prepare accurate as-built drawings showing all structural details. Also, revise the design report based on as-built drawing and submit to RSC.



As per drawing column & slab layout marked in yellow



Core cutting location



Actual slab layout mentioned in red



Slab of sub-station

Observation: Sub-station Building

Water ponding on roof



Water ponding on the roof

The factory is required to improve roof drainage system with adequate slope and provide sufficient water outlets to drain out water.

Observation: Sub-station Building

Exposed rebar at roof



Exposed rebar on roof

Exposed rebar observed on roof which is prone to corrosion. The factory is required to provide anti-corrosive coating on the exposed rebar.

Observation: Sub-station Building & Security Building

Problems Observed

Main Building:

Item-01: Mismatches in structural drawings.

Item-02: Load plan not comply with BNBC requirements.

Item-03: Dampness at ceiling of 5th floor.

Item-04: Apparently non engineered racking system on ground floor.

Item-05: Column and beam susceptible to vehicle impact.

Sub-station Building:

Item-06: Inconsistencies in as-built drawing

Item-07: Water ponding on roof.

Sub-station Building and Security Building:

Item-08: Exposed rebar at roof.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Mismatches in structural drawings. (Main Building)	Building engineer is required to confirm the amount of rebar in column and prepare accurate as-built structural drawing with necessary connection details.	6-weeks
02	Mismatches in structural drawings. (Main Building)	Revise the design report based on corrected as-built drawing.	6-weeks
03	Load plan not comply with BNBC requirements. (Main Building)	Factory engineer is required to revise the load plan and related design documents based on BNBC requirement.	6-weeks
04	Load plan not comply with BNBC requirements. (Main Building)	Implement the recommendations of design report.	6-months
05	Load plan not comply with BNBC requirements. (Main Building)	Implement floor live load plan.	6-months
06	Dampness at ceiling of 5th floor. (Main Building)	Factory engineer is required to seal the source of water and repair the damp areas with suitable method.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
07	Apparently non engineered racking system on ground floor. (Main Building)	Building engineer is required to check the member and connection adequacy of the structure and suggest necessary remedial works.	6-weeks
08	Apparently non engineered racking system on ground floor. (Main Building)	Carry out suggested remedial works.	6-months
09	Column and beam susceptible to vehicle impact. (Main Building)	The building engineer is required to provide separate barrier and signage to avoid possible vehicle impact on column & beam.	6-months
10	Inconsistencies in as-built drawing. (Sub-station Building)	Building engineer is required to survey the structure and prepare accurate as-built drawings showing all structural details.	6-weeks
11	Inconsistencies in as-built drawing. (Sub-station Building)	Revise the design report based on revised as-built drawing.	6-weeks
12	Inconsistencies in as-built drawing. (Sub-station Building)	Implement the recommendations of design report (if any).	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
13	Water ponding on roof. (Sub-station Building)	The factory is required to improve roof drainage system with adequate slope and provide sufficient water outlets to drain out water.	6-months
14	Exposed rebar at roof. (Substation & Security Building)	The factory is required to provide anti-corrosive coating on the exposed rebar.	6-months