

Cheng Yi Garments Industries Ltd

Holding-E/44, Ward No-15, Vogra, Bashan Sarak, National University, Gazipur -1704.

(23.973255,90.380847)

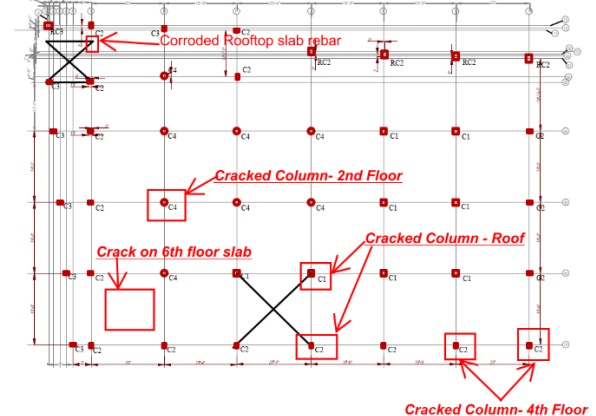
12 May 2026



1. Building Information

1. Production Building

4. Observation

Observation-01: Crack in column and slab that requires immediate action (Production Building)	
 Crack Layout	 Spalling of Concrete due to corrosion
 Crack on roof column 1	 Crack on roof column 2
Description: During the inspection, hairline cracks were found on the 2nd, 4th, and roof floors & slabs (6th floor) in the 7-storied RC Production Building. Also, concrete spalling was found on the stair top slab soffit. The factory must immediately engage a qualified structural consultant to investigate the identified cracks. Any necessary safety measures suggested by the consultant must be implemented immediately to ensure safety. The building engineer is required to prepare a crack investigation report (including drawings, on-site investigation & testing evidence, adequacy check, retrofitting scheme) and submit it to RSC for review. Upon acceptance from RSC, carry out remedial works (if any) as per the investigation report.	

Observation-02: Lack of information in DEA documents (including DEA report, details of phased construction) of the Production Building.

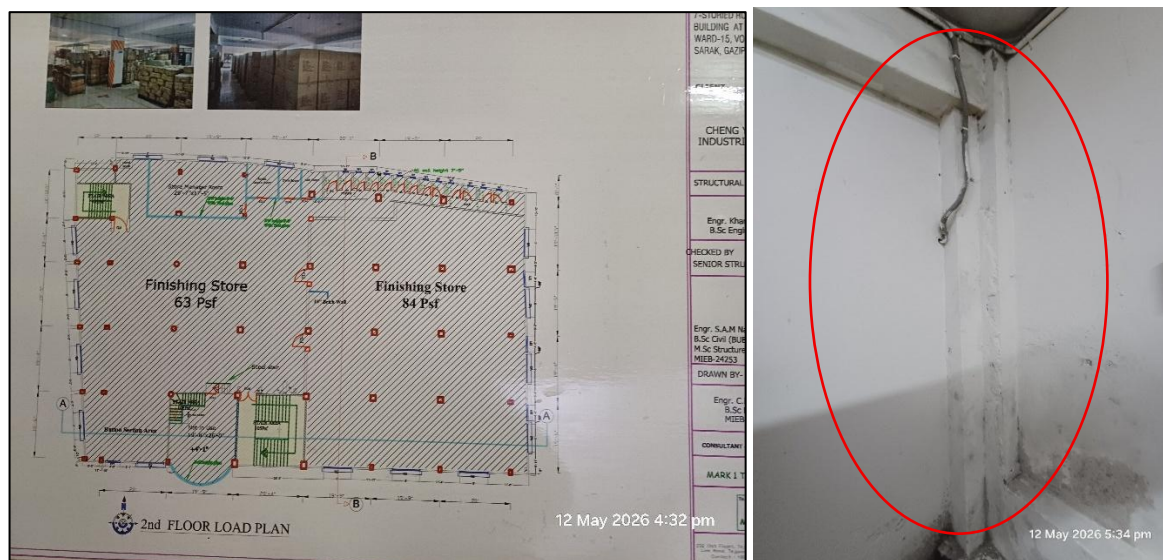


Roof top prayer room & 6th floor phased construction marked in Red

Description: The building was constructed in two phases. However, no such information has been included in the DEA report. Also, a detailed review is required for lateral loadings and serviceability requirements.

- The building engineer is required to incorporate the necessary information for phased construction & review the DEA, seismic requirements, framing system, and incorporate necessary measures (if necessary) as per Section 1.3.4; Section 1.3.5; Section 1.5.4.2; Section 1.5.4.3 & Section 2.5.5 of BNBC 2006 and update the analysis and design report in accordance with Section 1.9.1 of BNBC 2006.
- Also, the building engineer is required to incorporate necessary remedial works (if required).

Observation-03: Inconsistency in DEA documents (load plan, material test reports) of the Production Building.



Description: A 4 kPa & 3 kPa (84 psf & 63 psf) floor live load is considered in the design for dedicated storage on different floors.

- The building engineer is required to follow the floor live load as per BNBC 2006 (i.e., 6 kPa for storage).

Moreover, the necessary documentation to confirm material strength was not adequate. A total of 4 cores were available from the ground-floor column.

However, the core location couldn't be verified on-site. One of the four columns was confined with a brick wall on three faces and had no access to the remaining face (perimeter column), where core sampling might not be plausible.

Another one was confined with a brick wall on two faces and had no access to one face (perimeter column), and the remaining face showed no sign of core sampling. The remaining two-column location (marked in the core layout) was found to be in a retrofitted condition.

- The building engineer is required to validate the core location or submit evidence of core cutting.

Also, no cores were taken from the beam/slab member and upper floor level (constructed in 2nd phase)

- The building engineer is required to verify the concrete strength by taking cores (100 mm dia, at least 4 nos for each type of member and from each construction phase) from the columns, beams/slabs of the Production Building.

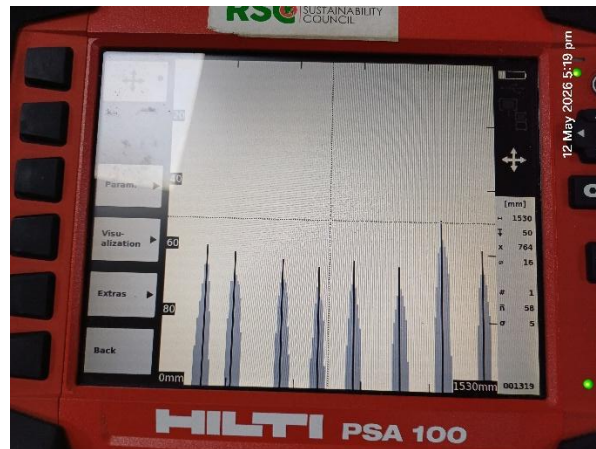
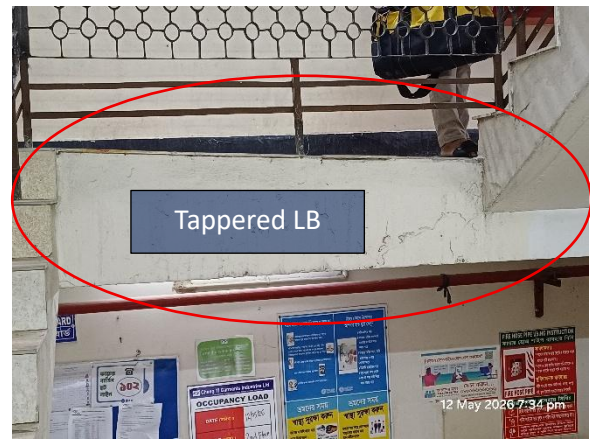
The building was constructed in the years 2000-2005, & no rebar test report was available.

- The building engineer is required to verify the rebar strength (used in the building) through necessary testing by taking rebar samples from the non-retrofitted portion of the building.
- Also, the building engineer is required to incorporate necessary remedial works (if required).

Observation-04: Mismatch in as-built drawings (Production Building).



(Scan of RC2 Column short face, at Grid Point J8 of 4th floor)



(Scan of C4 Circular Column, at Grid Point H4 of 2nd floor)

Description: The thickness and height of the brick wall, the floor build-up, and the false slab thickness are not shown appropriately in the drawing.

In addition, the detailed dimensions of the wall, wall thickness, and cantilever extension length are not shown clearly in the drawings.

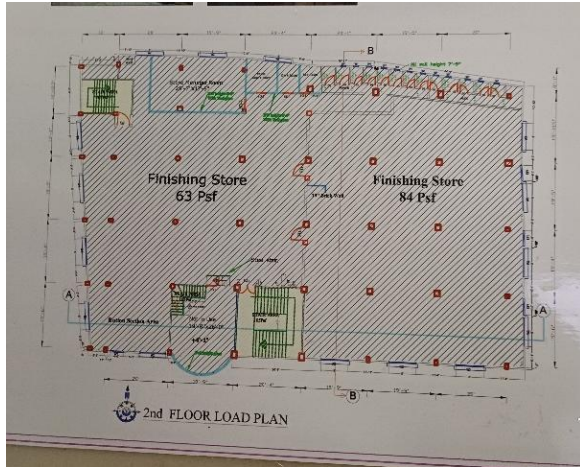
Moreover, the landing beam was found to be tapered (depth variation) on site.

Also, mismatches were observed between the drawings and the scanned result in the rebar quantity of the column's main rebar as follows:

- main rebar found 8 nos instead of 12 nos in C1 column at 2nd floor level grid location 3L
- main rebar found 8 nos instead of 12 nos in C4 column at 2nd floor level grid location H4
- main rebar found 3 nos in short direction instead of 4 nos in RC2 at 4th floor level grid location J8
- main rebar found 10 nos instead of 12 nos in C4 column at 5th floor level grid location K4

The building engineer is required to survey the as-built condition of whole structure, prepare an accurate set of as-built drawings (including verification of foundation size and thickness; verification of column & beam rebar), and submit them to RSC for review.

Observation-05: Lack of load management (marking stack height) (Production Building).



Description: Lack of proper load management was evident. Load height markings were found missing in some locations. Storage area loads were found to be considered as 4 kPa (84 psf) instead of 6 kPa (125 psf) as required by BNBC 2006.

The building engineer is required to prepare the load plan following NTPA guideline section 4.13; post the floor load plan on each floor, provide load restriction height markings, signage on the storage area, and manage the floor load plan as per the acceptable load limits of BNBC 2006.

Observation-06: Lack of a drainage system on the roof (water ponding, improper slope) and Dampness on the wall & slab/beam of the Production Building.



Description: Signage of water ponding was evident on the roof of the Production Building. Also, water-related dampness was observed on the wall. Provide a waterproofing layer on the roof and maintain the necessary slope to improve the roof drainage system. Also, seal the source of water and repair the water-related dampness with a suitable method.

Observation-07: Non-structural cracks on the brick wall & RC lintel.



Description: Non-structural cracks were observed on the wall & RC lintel at several locations. The building engineer is required to investigate the extent of the crack and repair it with a suitable method.

Observation-08: Exposed steel rebar on roof top & corroded steel canopy.



Description: Exposed rebars on the rooftop were observed, and rust was observed on the steel canopy. The building engineer is required to apply an anti-corrosive coating to the affected steel member.

Observation-09: Lack of anchorage/brace at storage racks/ air cooler stand.



Description: Storage rack & non-structural element were found in unbraced condition/without anchorage. The building engineer is required to provide the necessary anchorage/brace for all non-structural elements.

Observation-10: Lack of trolley impact protection on column/wall.



Description: Column damage due to trolley impact was observed during the inspection. The building engineer is required to provide a safety barrier at all potential trolley impact locations.

5. Action Plan

Item No	Observation	Action Plan	Timeline
1.	Crack in column and slab that requires immediate action (Production Building)	The factory must immediately engage a consultant to investigate the cracks. Any safety measures, if required as suggested by the consultant, must be taken immediately to ensure safety. The consultant must perform a detailed concrete condition assessment to evaluate the extent of deterioration and to identify any potential impacts on the structural integrity of the concrete elements.	Immediate
2.		Building engineer is required to carry out the required NDT tests and prepare an investigation report. Submit the report to the RSC for review.	Immediate
3.		Implement remediation work if required.	within 6 weeks
4.	Lack of information in DEA documents (including DEA report, details of phased construction) of the Production Building.	The building engineer is required to incorporate the necessary information for phased construction & review the DEA as per BNBC 2006 and update the analysis and DEA report in accordance with Section 1.9.1 of BNBC 2006.	within 6 weeks
5.		Implement any required remediation work after acceptance from RSC.	within 6 months
6.	Inconsistency in DEA documents (load plan, material test reports) of the Production Building.	The building engineer is required to follow the floor live load as per BNBC 2006 (i.e., 6 kPa for storage).	within 6 weeks
7.		The building engineer is required to validate the core location or submit evidence of core cutting.	within 6 weeks
8.		The building engineer is required to verify the concrete strength by taking cores (100 mm dia, at least 4 nos for each type of member and from each construction phase) from the columns, beams/slabs of the Production Building.	within 6 weeks
9.		The building engineer is required to verify the rebar strength (used in the building) through necessary testing by taking rebar samples from the non-retrofitted portion of the building.	within 6 weeks
10.		Implement any required remediation work after acceptance from RSC.	within 6 months

11.	Mismatch in as-built drawings (Production Building)	The building engineer is required to survey the as-built condition, prepare an accurate set of as-built drawings, and submit them to RSC for review.	within 6 weeks
12.	Lack of load management (Production Building)	Produce and actively manage the load plan as per the capacity of the floor following BNBC 2006.	within 6 weeks
13.	Lack of a drainage system on the roof (water ponding, improper slope) (Production Building)	Provide a waterproofing layer on the roof and maintain the necessary slope to improve the roof drainage system.	within 6 weeks
14.	Dampness on the wall & slab/beam (Production Building)	The building engineer is required to seal the source of water and repair the water-related dampness with a suitable method.	within 6 weeks
15.	Non-structural cracks on the brick wall & RC lintel (Production Building)	The building engineer is required to investigate the extent of the crack and repair it with a suitable method.	within 6 weeks
16.	Exposed steel rebar on roof top & corroded steel canopy (Production Building)	The building engineer is required to apply an anti-corrosive coating to the affected steel member.	within 6 weeks
17.	Lack of anchorage/brace at storage racks/ air cooler stand (Production Building)	The building engineer is required to provide the necessary anchorage/brace for all non-structural elements.	within 6 weeks
18.	Lack of trolley impact protection on column/wall (Production Building)	The building engineer is required to provide a safety barrier at all potential trolley impact locations.	within 6 weeks