

LIBERTY KNITWEAR LTD. UNIT-2 (EXTENSION 3)

G-88/1, Chandra, Palli biddyut, Kaliakoir, Gazipur-1751

(24.036728, 90.253784)

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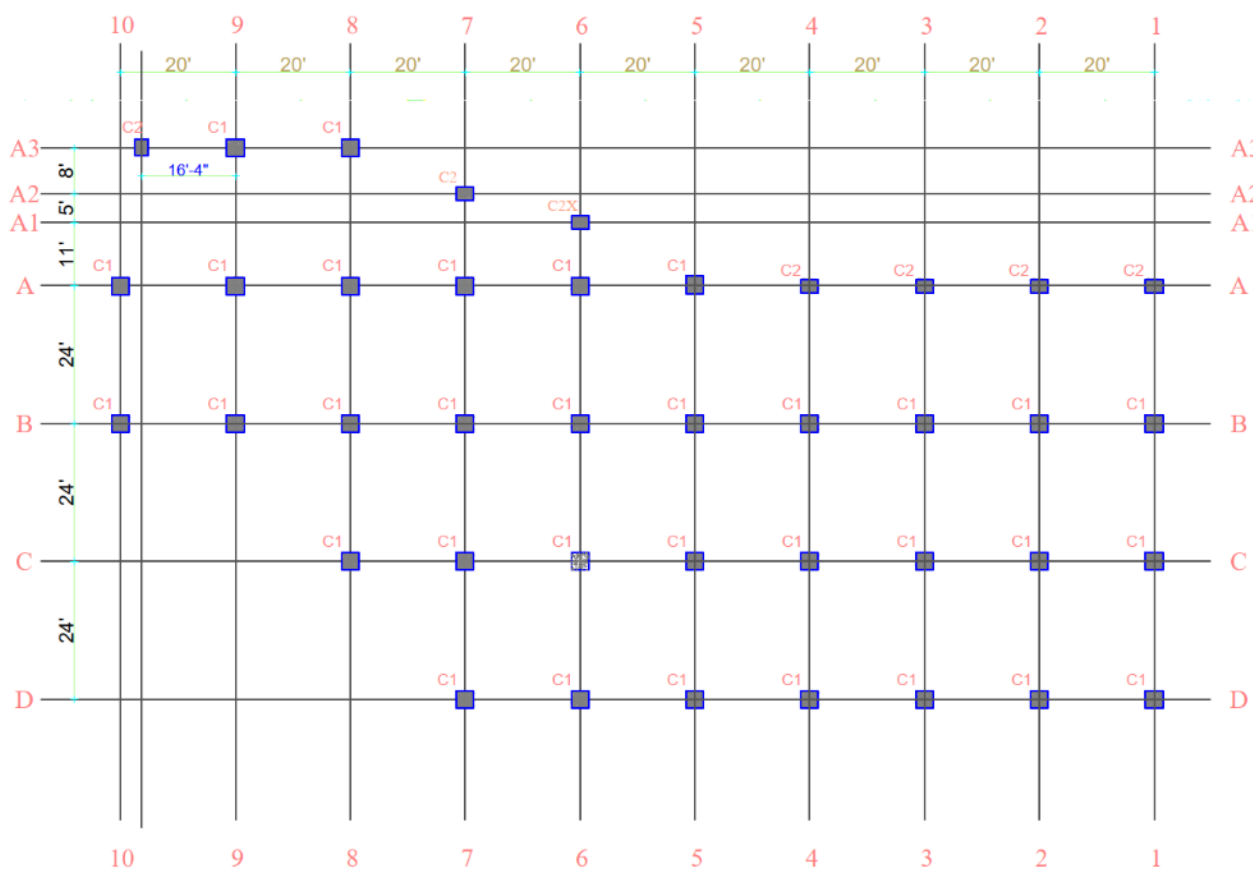


1. Building Information

- 1. Generator Powerhouse Building, G+9**
- 2. East Tower Building, G+Mz+9**
- 3. Generator Shed, G**

2. Observation

Observation-01: Stress in the column marginally above the design limit and lack of design report. (Generator Powerhouse Building & East Tower Building).

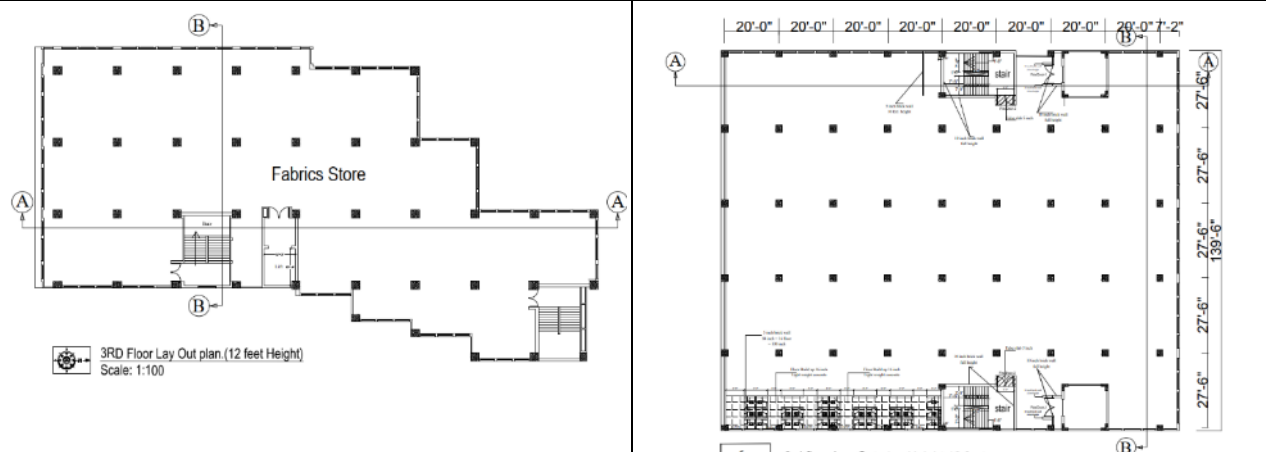


COLUMN LAYOUT PLAN

Description: The cursory calculation indicated that the columns are marginally stressed above the normal design limit, considering the prepared live load plan and minimum concrete strength due to an inadequate materials test report. The building engineer is required to review the design, load, and column stress, seismic requirements, framing system, and incorporate necessary measures (if necessary) as per section 2.5.8 (b)BNBC 2020 and update the analysis and design report in accordance with Section 1.9.1 of the BNBC.

Also, the building engineer is required to verify the concrete strength by taking cores (100 mm dia at least 4 nos) from the column, beam and slab for each building.

Observation-02: Lack of information in the provided drawing (Generator Powerhouse Building & East Tower Building).



Description: The thickness and height of the brick wall and the false slab are not shown in the drawing. In addition, the detailed dimensions of the wall, cantilever extension length, and wall thickness is not shown clearly in the drawings of both buildings. Also, details of the underground tank (at the Generator Powerhouse Building) are not shown clearly in the architectural drawings. The building engineer is required to survey the as-built condition and prepare an accurate set of as-built drawings and submit to RSC for review.

Observation-03: Nonstructural elements found unanchored/unbraced (Generator Powerhouse Building & East Tower Building).



Description: Nonstructural elements found unanchored/unbraced. Anchor/brace all nonstructural elements within the building.

Observation-04: Lack of a proper load-management plan (Generator Powerhouse Building & East Tower Building).



Description: No load markings and proper load management were evident. The building engineer is required to 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.

Observation 05: Lack of protection for trolley impact (Generator Powerhouse Building).



Description: During inspection, no impact protection was found in some of the columns. The factory is required to implement trolley impact protection (column guard) where required.

Observation 06: Crack between the brick wall and beam joint (Generator Powerhouse Building).



Description: During inspection, a non-structural crack was found between the brick wall and the floor beam joint. The building engineer is required to repair the crack with a suitable method.

Observation 07: Inadequate structural members, lack of material test report, and design documents (Generator Shed).



Description: Inadequate framing, poor connection and a lack of stability were observed. Moreover, there was no steel/concrete material test report or soil test report for the generator shed. The building engineer is required to carry out a Detail Engineering Assessment (DEA) for the structure to verify the foundation details, concrete/steel/soil material strength, and prepare an assessment report. Prepare a full set of DEA documents with a detailed remedial action plan. Submit the DEA documents to the RSC for review.

3. Action Plan

Item No	Observation	Action Plan	Timeline
1.	Stress in the column marginally above the design limit and a lack of design report (Generator Powerhouse Building)	Building engineer is required to review the design, load, and column stress, seismic requirements, framing system, and incorporate necessary measures (if necessary) as per section 2.5.8 (b)BNBC 2020 and update the analysis and design report in accordance with Section 1.9.1 of the BNBC.	within 6 weeks
2.		Verify the concrete strength by taking cores (100 mm dia at least 4 nos) from the column, beam, and slab.	within 6 weeks
3.		Implement remediation work if required.	within 6 months
4.	Missing information in the as-built drawing. (Generator Powerhouse Building)	The building engineer is required to survey the whole structure and produce an accurate & detailed as-built drawing.	within 6 weeks
5.	Implement a proper load-management plan (Generator Powerhouse Building).	Building engineer is required to post the load plan and provide load restriction height markings, signage on the storage area and manage the floor loading as per the load plan.	within 6 weeks
6.	Nonstructural elements found unanchored/unbraced (Generator Powerhouse Building).	Anchor/brace all nonstructural elements within the building.	within 6 weeks
7.	Crack between the brick wall and beam joint (Generator Powerhouse Building).	Building engineer is required to repair the crack with a suitable method.	within 6 weeks
8.	Lack of protection for the trolley impact (Generator Powerhouse Building).	The factory is required to implement trolley impact protection where required.	within 6 weeks

9.	Stress in the column marginally above the design limit and a lack of design report (East Tower Building)	Building engineer is required to review the design, load, and column stress, seismic requirements, framing system, and incorporate necessary measures (if necessary) as per section 2.5.8 (b)BNBC 2020 and update the analysis and design report in accordance with Section 1.9.1 of the BNBC.	within 6 weeks
10.		Verify the concrete strength by taking cores (100 mm dia at least 4 nos) from the column, beam, and slab.	within 6 weeks
11.		Implement remediation work if required.	within 6 months
12.	Missing information in the as-built drawing. (East Tower Building)	The building engineer is required to survey the whole structure and produce an accurate as-built drawing.	within 6 weeks
13.	Implement a proper load-management plan (East Tower Building).	Building engineer is required to post the load plan and provide load restriction height markings, signage on the storage area and manage the floor loading as per the load plan.	within 6 weeks
14.	Nonstructural elements found unanchored/unbraced (East Tower Building).	Anchor/brace all nonstructural elements within the building.	within 6 weeks
15.	Inadequate structural members, lack of material test report, and design documents (Generator Shed).	Carry out the Detailed Engineering Assessment (DEA) report with remedial actions considering the as-built structural system and material strength. Submit DEA documents to the RSC for review.	within 6 weeks
16.		Implement any required remediation work after acceptance from RSC.	within 6 months