Triple Apparels Ltd (Extension)

Holding 567, Block B, Ward no 06, Kewa, Sreepur PS, Gazipur-1740.
(24.212518, 90.431731)
5 October 2025

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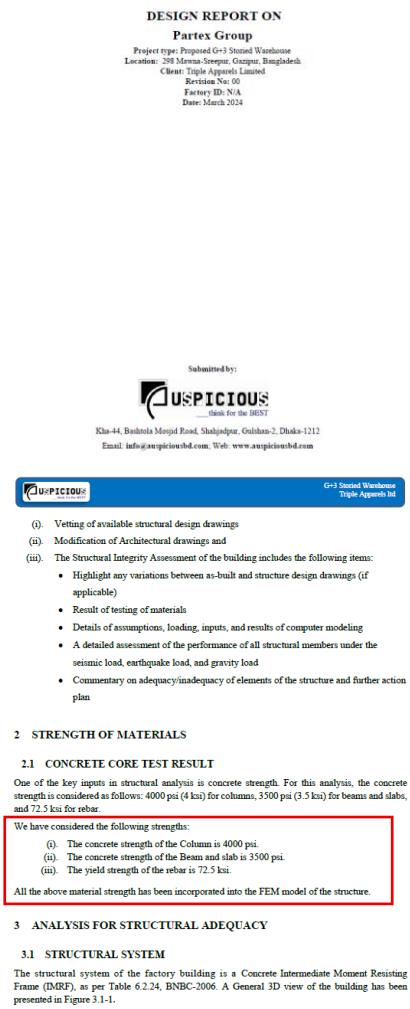
1. Building Information

- Two-storied (G+1) reinforced concrete (RC) Warehouse Building (proposed 4 storied).

2. Observation:

Observation-01: Prepared design report required to be reviewed by RSC. (Warehouse Building)



DESIGN REPORT ON

Partex Group

Project type: Proposed G+3 Storied Warehouse
Location: 298 Mawna,Sreepur, Gazipur, Bangladesh
Client: Triple Apparels Limited
Revision No: 00
Factory ID: N/A
Date: March 2024

Submitted by:

AUSPICIOUS
think for the BEST

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AUSPICIOUS — G+3 Storied Warehouse, Triple Apparels ltd

(i). Vetting of available structural design drawings
(ii). Modification of Architectural drawings and
(iii). The Structural Integrity Assessment of the building includes the following items:

- Highlight any variations between as-built and structure design drawings (if applicable)
- Result of testing of materials
- Details of assumptions, loading, inputs, and results of computer modeling
- A detailed assessment of the performance of all structural members under the seismic load, earthquake load, and gravity load
- Commentary on adequacy/inadequacy of elements of the structure and further action plan

2 STRENGTH OF MATERIALS

2.1 CONCRETE CORE TEST RESULT

One of the key inputs in structural analysis is concrete strength. For this analysis, the concrete strength is considered as follows: 4000 psi (4 ksi) for columns, 3500 psi (3.5 ksi) for beams and slabs, and 72.5 ksi for rebar.

We have considered the following strengths:

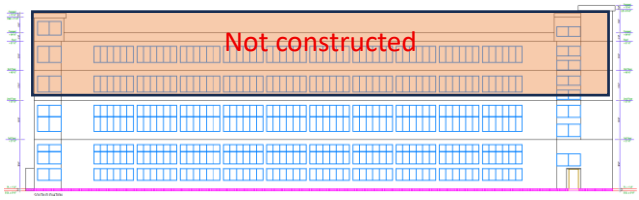
(i). The concrete strength of the Column is 4000 psi.
(ii). The concrete strength of the Beam and slab is 3500 psi.
(iii). The yield strength of the rebar is 72.5 ksi.

All the above material strength has been incorporated into the FEM model of the structure.

3 ANALYSIS FOR STRUCTURAL ADEQUACY

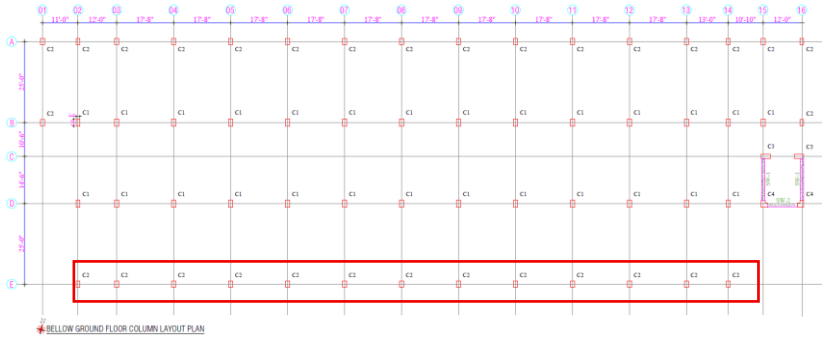
3.1 STRUCTURAL SYSTEM

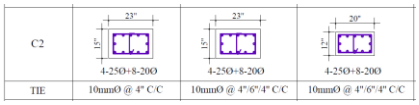
The structural system of the factory building is a Concrete Intermediate Moment Resisting Frame (IMRF), as per Table 6.2.24, BNBC-2006. A General 3D view of the building has been presented in Figure 3.1-1.



Description: A design report has been prepared for the four-story Warehouse Building. The prepared design report needs to be reviewed against lateral forces. Also, in the provided design report, the concrete compressive strength for columns and foundations is specified as 4000 psi. However, the available cylinder test reports appear to be insufficient to verify the concrete strength for these structural elements. The number of tests conducted does not meet the frequency requirements specified in the BNBC. The building engineer is required to justify the concrete strength in the design report by performing a core test and submitting the design report to the RSC for detailed review.

Observation-02: Mismatch in drawing and lack of construction drawing. (Warehouse Building)





Description: During inspection, mismatches were observed between drawings and the existing condition. At the grid "E", marked columns were found 300 x 575 mm instead of 300 x 500 mm at the first-floor level. Also, during inspection credible structural/construction drawing was not available. The building engineer is required to survey the structural components and produce accurate as-built structural drawings.

Observation-03: Falling hazard risk. (Warehouse Building)

Description: No parapet wall and hand railing were found on the roof and stairs, which may cause a falling hazard. The factory is required to increase the parapet height to avoid possible falling hazards.

Observation-04: Exposed re-bar on the roof level. (Warehouse Building)

Description: Exposed rebar was observed on the roof, which is prone to corrosion. The building engineer is required to provide anti-corrosive coating on the exposed rebar.

Observation-05: Construction material of the rooftop. (Warehouse Building)

Description: During inspection, construction materials were observed on the roof floor. The factory is required to remove all the construction material from the roof floor.

3. Action Plan

Item No	Observation	Action Plan	Timeline
1.	Prepared design report required to be reviewed by RSC. (Warehouse Building)	Verify in-situ concrete strength by taking 4-100 mm diameter concrete core from the column (lower level). Otherwise, provide an adequate number of cylinder test reports.	within 6 weeks
		Submit the design report to the RSC for detailed review.	within 6 weeks
2.		Carry out the suggested remedial works.	within 6 months
3.		Implement floor load plan.	within 6 months
4.	Mismatch in drawing and a lack of construction drawing.	The building engineer is required to survey the structural components and produce accurate as-built structural drawings. Also, submit the original construction drawing.	within 6 weeks
5.	Falling hazard risk. (Warehouse Building)	The factory is required to increase the parapet height to avoid possible falling hazards.	Immediate
6.	Exposed rebar on the roof level. (Warehouse Building)	The building engineer is required to provide anti-corrosive coating on the exposed rebar.	within 6 months
7.	Construction material for the rooftop. (Warehouse Building)	The factory is required to remove all the construction material from the roof floor.	within 6 weeks