

Fashion Pulse Ltd

Plot: A - 109, BSCIC Industrial Area, Tongi, Gazipur- 1710

(23.894927, 90.413462)

16 September 2025



1. Building Information

Factory Building: Partial 9 storied building with mezzanine & semi basement

RMS Room: Single storied building

Security Room: Single-story room

STP: Single-story underground structure

2. Observation:

Observation 01: Inconsistency in the prepared structural design report (Factory Building)

6.3 CODES AND PRACTICES

For the present project relevant sections of Bangladesh National Building Code (BNBC, 2006) have been used for analysis. For the reinforced concrete design check, American Concrete Institute (ACI 318-08) code has been consulted as and when became necessary to complement the BNBC.

6.4 MATERIAL PROPERTY

The principal material of construction is reinforced concrete. As per investigation and design drawings, the following material properties have been used:

- Yield strength of steel $f_y = 72,500$ psi
- Compressive Strength of concrete
 - $f'_c = 4,500$ psi for column, lift, foundation and
 - $f'_c = 4,000$ psi for beam, slab & stair.
- Young's modulus of concrete, $E_c = 57,000\sqrt{f'_c}$ (for Stone Chips)

6.5 GENERAL LOAD DATA

6.5.1 DEAD LOAD

Dead loads (D) are those gravity loads which remain acting on the structure permanently without any change during the structures normal service life. These are basically the loads coming from the weight of the different components of the structure. For the sake of convenience in the analysis, sometimes this kind of loads are divided into two types, namely a) self-weight of the structure (SW) and b) the weight coming from the non-structural permanent components of the building (SDEAD). In concrete building the weight of slabs, beams and columns etc. which form the main structural system is considered the self-weight (SW). The weights of floor finish, water proofing layer, partition walls and other non-structural

- Unit weight of reinforced concrete = 150 pcf
- Unit weight of brickwork = 120 pcf
- Floor Finish: Typical Floors = 30 psf

6.5.2 LIVE LOAD

Live load is the gravity load due to non-permanent objects like machines, furniture, and human or occupancy of the building as per Architectural Drawings and the recommendation of BNBC. Analysis has been carried out based on load recommended by BNBC (2006). According to BNBC we have considered 125 psf live load for analysis. [Ref. Table 6.2.3 of BNBC 2006]. Dead load & Live load considered for the structure is specified below:

Floor	Occupancy Type	Dead Load	Live Load
Ground Floor	Raw fabric & accessories store, day care room, medical room, boiler room, generator room, medical control room, fire control & CCTV room, pallet stack area, toilet, stair & lobby	-	-
1 st Floor	Admin office, prayer room, dining room, toilet, stair & lobby	60/110 psf	20/40/50/84 psf
2 nd Floor	Finished fabric store, metal free zone, moisture room, spot removing room, QA office, inspection room, toilet, stair & lobby	60/110 psf	20/40/84/125 psf
3 rd to 6 th Floor	Sewing area, finishing area, metal free zone, moisture room, spot removing room, packaging, ie & planning room, needle issuing room, production manager room, QC manager room, toilet, stair & lobby	60/110 psf	20/40/84/125 psf
7 th Floor	Production floor, toilet, stair & lobby	60/110 psf	20/40/84/125 psf
Roof Floor	Open stair roof area	92 psf	20/84 psf

 BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET) DEPARTMENT OF CIVIL ENGINEERING Mobile: 01819557964; PABX: (8802) - 55167100, 55167228-57 Ext. 7226, Info: http://brctest.ce.buet.ac.bd/ STRENGTH OF MATERIALS LABORATORY  BRTC Bureau of Research Testing & Consultation													
TENSION TEST OF M. S. PLATE (ASTM A572/A572M-15) Sent by: Mr. Md. Miladunnabi, Assistant General Manager (Engineering), Fashion Pulse Limited, Plot # A/109, BSCIC Industrial Estate, Tongi, Gazipur, Bangladesh. Project: Fashion Pulse Limited, Plot # A/109, BSCIC Industrial Estate, Tongi, Gazipur, Bangladesh. Location: Ground Floor Roof to 7th Floor Roof Beam. 1B-1 (Grid - C+3), 1B-2 (Grid - B+5)													
BRTC No.: 1102-75751/CE/22-23; Date: 13/11/2022 Reference: Letter; Date: 11/11/2022 Date of Test: 20/11/2022 Manufacturer/Supplier: Newaz Steel Limited.													
Serial No.	Sample Identification / Froq mark	Nominal plate thickness	Actual thickness	Test coupon width	Area Under Test	Yield or Load	Yield or Strength	Average Yield Strength	Tensile Load	Tensile Strength	Average Tensile Strength	Elongation, % (Gauge Length = 200 mm unless otherwise noted)	Average Elongation
1	-	20	20.20	40.20	812.0	334.8	412	417	457.0	565	565	29	28
2	-	20	20.00	40.00	800.0	337.8	422	(60.5 ksi)	454.0	570	(82.0 ksi)	28	
3	-	20	20.00	40.05	801.0	333.8	417		455.0	570		27	
1	-	16	15.85	39.80	630.8	258.6	410	411	355.1	565	560	23	23
2	-	16	15.85	39.75	630.0	259.6	412	(59.5 ksi)	354.1	560	(81.0 ksi)	23	
3	-	16	15.95	39.80	634.8	260.6	411		355.1	560		24	
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-

Description: During inspection, a set of design documents was found onsite where several inconsistencies were observed. Max. steel rebar strength was found in the test report 417 MPa where 500 MPa (72.5 ksi) considered in the design report. As per the floor load plan 20/40/84 psf floor load plan considered for floor & stair which to be revised as per BNBC requirement. Also, necessary checks are required to be incorporated to confirm IMRF framing system and to ensure there is no adverse effect for different irregularities. The building engineer is required to check the frequency of testing of concrete tests, revise the design documents based on actual material strength and framing system and submit them to RSC for detail review against lateral loadings.

Observation 02: Lack of floor load management plan. (Factory Building)



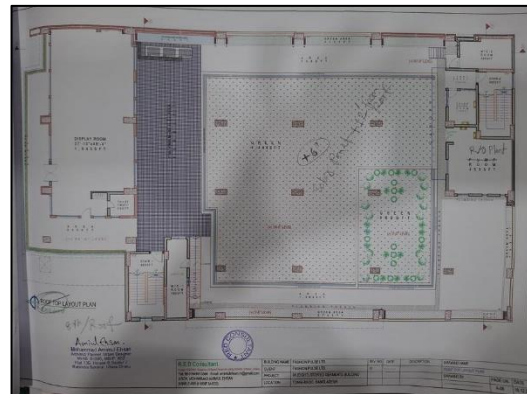
Storage on suspended ground floor



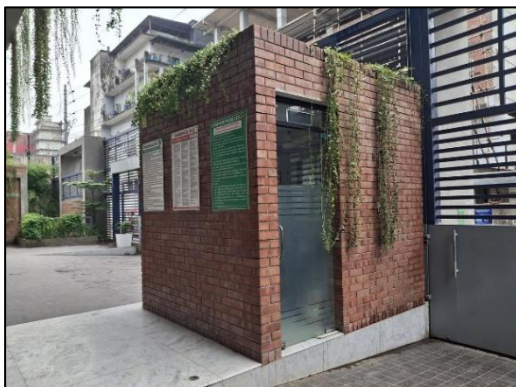
Storage area has no area/height limit

Description: At the time of inspection, floor load plan was not found posted suspended ground floor level. Also, storage area & height marking was not observed in several storage locations. The building engineer is required to post the floor load plan on all floor levels, provide storage area & height marking, and maintain floor loading accordingly.

Observation 03: Mismatch/lack of as-built drawing for Factory Building, RMS Room & Security Room



Factory Building



Security Room



RMS Room

Description: At the time of inspection, some minor discrepancies were observed between floor layout and drawings for factory building. Rooftop gardening soil-built ups were not properly mentioned in the drawings, solar panel on 9th floor not mentioned in the drawing. Also, structural details of Security & RMS rooms were not available on site. The building engineer is required to survey the structure and prepare accurate as-built drawings.

Observation 04: Falling hazard at elevated loading-unloading platform (Factory Building)



Description: Falling hazard observed on elevated loading-unloading zone due to lack of barriers. The building engineer is required to introduce mobile barrier system on the elevated platform to prevent unwanted falling hazard.

Observation 05: Vehicle impact risk on column (Factory Building)



Description: During inspection, damage due to vehicle impact on steel railing was. There was no protection system for the ground floor columns which are susceptible to vehicle impact. The building engineer is required to provide separate barriers around columns to avoid vehicle impact.

Observation 06: Non-structural elements were found not anchored or braced. (Factory Building)



Description: Non-structural elements (e.g. racks, tanks, panels) were not anchored or braced. The building engineer is required to anchor or brace all non-structural elements within the building.

3. Action Plan:

Item No.	Observation	Action Plan	Timeline
1.	Inconsistency in the prepared structural design report (Factory Building)	The building engineer is required to revise the design documents based on actual material strength, framing system and include necessary irregularities checks; submit revised design documents to the RSC for detail review against lateral loadings.	within 6 weeks
2.		Carry out remedial work if required.	within 6 months
3.	Lack of floor load management plan. (Factory Building)	The building engineer is required to post the floor load plan on all floor levels, provide storage area & height marking, and maintain floor loading accordingly.	within 6 weeks
4.	Mismatch in as-built drawing for Factory Building	The building engineer is required to survey the structure and prepare accurate as-built drawings.	within 6 weeks
5.	Falling hazard at elevated loading-unloading platform (Factory Building)	The building engineer is required to introduce mobile barrier system on the elevated platform to prevent unwanted falling hazard.	within 6 weeks
6.	Vehicle impact risk on column (Factory Building)	The building engineer is required to provide separate barriers around columns to avoid vehicle impact.	within 6 weeks
7.	Non-structural elements were found not anchored or braced. (Factory Building)	The building engineer is required to anchor or brace all non-structural elements within the building.	within 6 months
8.	Lack of as-built drawing for RMS Room & Security Room	The building engineer is required to survey the structure and prepare accurate as-built drawings.	within 6 weeks