

Deshbandhu Textile Mills Ltd

MSSFB # 1&2, Uttara Export Processing Zone, Shongalshi, Saidpur, Nilphamari.

(25.8576, 88.8629)

23 June 2022



Building Information

Main Structures:

1. Building-1 (Production Building & Management Office: Four storied (G+3), RC
2. Building-2 (Production Building): Four storied (G+3), RC
3. Building-3 (Utility Shed-1): Single storied Steel Shed
4. Building-8 (Washing Shed): Single storied Steel Shed
5. Building-9 (Utility Shed-2): Single storied Steel Shed
6. Building-10 (ETP & WTP Building): partially two storied (G+1) , RC

Ancillary Structures:

7. Building-4 (Fire pump room): Single story RC structure with a basement.
8. Building-5 (Fire control room): Single story RC structure.
9. Building-6 (Security control room): Single story RC structure.
10. Building-7 (Waiting room): Single story structure.

Observations

Cracks in brick wall



Crack in brick walls



Crack in the façade wall

Severe crack was found in brick wall at 3rd floor toilet zone area. Also, cracks were found at the façade walls. These cracks may have been generated due to the torsional irregularity of the structure or/and deflection of slab.

Factory engineer is required to investigate the cause of crack and repair the crack as per recommendation from investigation report.

Dampness at several locations



Severe dampness was found several locations of the structure (e.g façade, brick wall, column & beam). Factory engineer is required to investigate the source of dampness and take necessary measures to prevent the dampness.

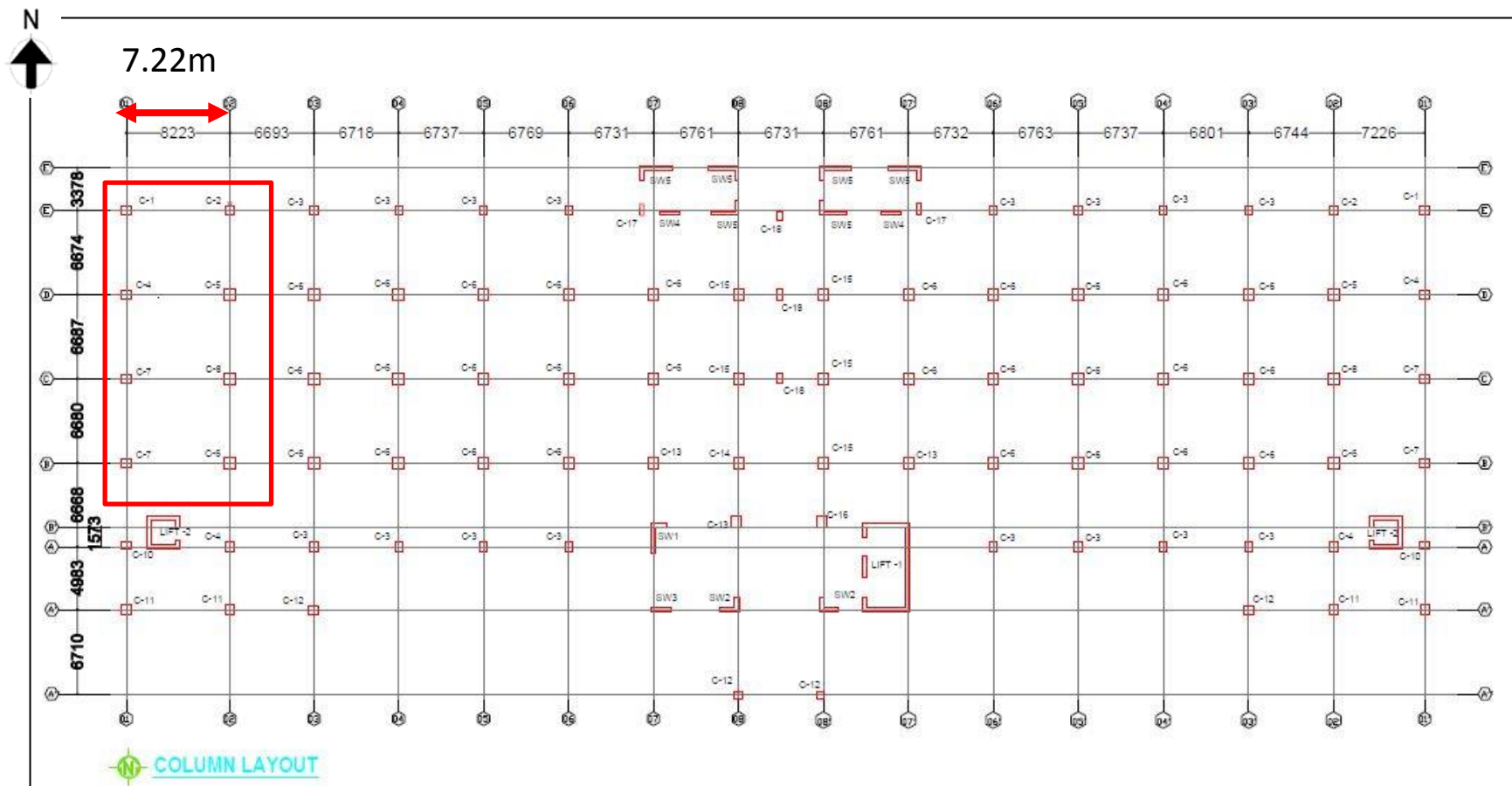
Signage of water ponding at roof



Signage of water ponding

Signage of water ponding found at roof. Factory engineer is required to take necessary measures improve the drainage system with adequate slope to prevent the water ponding at roof.

Discrepancies in as-built drawing



Grid dimension was measured 7.22m instead of 8.22m (marked)

Factory engineer is required to survey the whole structure and update as-built drawing accordingly.

Signage of water ponding on the roof



Signage of water ponding on roof slab

Signage of water ponding on roof slab due to poor drainage system. Factory is required to improve drainage system with proper slope to prevent the water ponding on the roof slab.

Dampness in toilet areas



Dampness was found on brick wall at toilet areas (east side). Factory engineer is required to investigate the cause of the dampness and repair as per investigation report.

Apparently lack of lateral stability



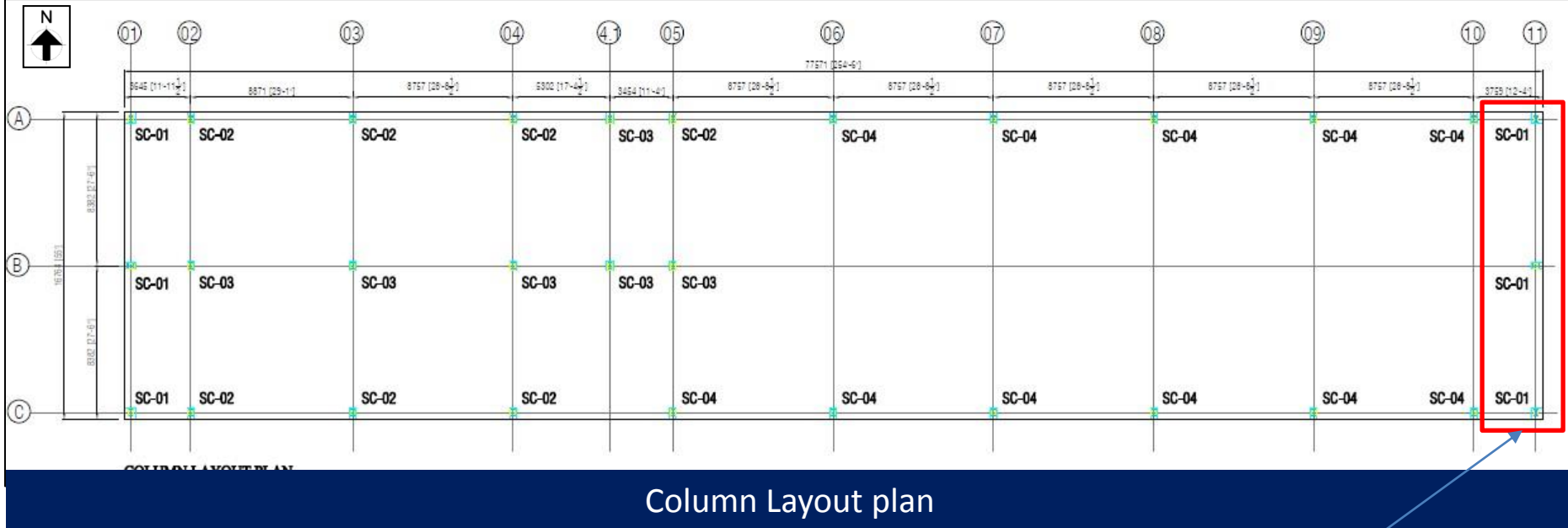
No bracing system/load transfer media provided



Poor connection at truss to column

No load transfer media provided from frame to frame along long direction. Besides, no roof bracing system is provided therefore there is no obvious lateral stability for this shed. In addition, poor connection was found at truss to column connection. Factory engineer is required to check the stability of the shed against the lateral forces. Also, check the connection adequacy for all connections against uplift forces.

Discrepancies in as-built drawings



The marked columns at gable end were not found onsite but shown in the drawing.

STEEL MEMBER SCHEDULE

C.S.	d (mm)	tw (mm)	bf (mm)	tf (mm)
SB-01	275	06	165	06
SB-02	375	06	200	08
MB-01	400	06	175	08
MB-02	600	08	225	10
SMB-01	400	06	225	10
SMB-02	300	06	175	06

TYP. X-SEC

Steel beam schedule.



The thickness of the SMB-02 has been shown 6.0 mm in as built drawing. But thickness of the flange was found 5mm on site.

Factory engineer is required to survey the structures and prepare accurate as-built drawings that follow section 1.9.1.2 of BNBC.

**Significant connection gap and bolt missing
at several locations**



Connection Gap was found at several locations



Bolt was missing

Significant connection gap and missing bolts observed at column rafter joint at several locations. Factory engineer is required to carry out suitable remedial works.

Corrosion in steel member



Corrosion in steel column

Corrosion was found in the steel column base. Factory is required to remove the corrosion and apply rust proofing coating on the corroded areas to protect the steel members from corrosion.

Absence of design documents



Building-9 (Utility Shed-2)

As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC. At the time of inspection, design report was not available. Factory engineer is required to prepared a design report in compliance with section 1.9.1.1 (BNBC).

Absence of design documents



Building-10 (ETP & WTP)

As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC. At the time of inspection, design report was not available. Factory engineer is required to prepared a design report in compliance with section 1.9.1.1 (BNBC).

Problems Observed

Building-1 (Production Building & Management office)

Item-1: Cracks in brick wall.

Item-2: Dampness at several locations.

Item-3: Signage of water ponding at roof.

Building-2 (Production Building)

Item-4: Discrepancies in as-built drawing.

Item-5: Signage water ponding on roof.

Item-6: Dampness in toilet areas.

Building-3 (Utility Shed-1):

Item-7: Apparently lack of lateral stability.

Building-8 (Washing Shed):

Item-8: Discrepancies in as-built drawings.

Item-9: Significant connection gap and bolt missing at several locations.

Item-10: Corrosion in steel member.

Building-9 (Utility Shed-2):

Item-11: Absence of design documents.

Building-10 (ETP & WTP):

Item-12: Absence of design documents.

Priority Actions

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Cracks in brick wall (Building-1)	Factory engineer is required to investigate the cause of crack and repair the crack as per recommendation from investigation report.	6-weeks
02	Dampness at several locations (Building-1)	Factory engineer is required to investigate the cause of the dampness and repair the damp areas as per the investigation report.	6-weeks
03	Signage of water ponding at roof (Building- 1)	Factory management is required to take necessary measures to proof the leakage in water supply line.	6-weeks
04	Signage of water ponding at roof (Building- 1)	Improve the roof drainage system with adequate slope.	6-weeks
05	Discrepancies in as-built drawing (Building-2)	Remove the corrosion & apply suitable corrosion resistance coating on the steel members.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
06	Signage water ponding on the roof (Building-2).	Factory is required to improve drainage system with proper slope to prevent the water ponding on the roof slab.	6-weeks
07	Dampness in toilet areas (Building-2).	Factory engineer is required to investigate the cause of the dampness and repair the damp areas as per the investigation report.	6-weeks
08	Apparently lack of lateral stability (Building-3)	As part of Engineering Assessment (EA), factory engineer is required to check the lateral stability of the structure and suggested necessary remedial actions.	6-weeks
09	Apparently lack of lateral stability (Building-3)	Also, check the connection adequacy against uplift forces.	6-weeks
10	Apparently lack of lateral stability (Building-3)	Carry out suggested remediation works as per EA.	6-Months
11	Discrepancies in as-built drawings (Building- 8)	Factory engineer to survey the structure and prepare accurate as-built drawings and design documents as per present condition of the structure following the section 1.9.1 of BNBC.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
11	Significant connection gap and bolt missing at several locations.(Building-8)	Identify the locations and carryout suitable repair works where necessary.	6-weeks
12	Significant connection gap and bolt missing at several locations.(Building-8)	Install the missing bolts as per specification.	6-weeks
12	Corrosion in steel column (Building-8)	Factory is required to remove the corrosion and apply rust proof coating to the corroded steel members.	6-weeks
14	Absence of design documents (Building-9)	Factory engineer is required to prepared a design report in compliance with section 1.9.1.1 (BNBC).	6-weeks
15	Absence of design documents (Building-9)	Implement remediation work if required from design report.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
16	Absence of design documents (Building-10)	Factory engineer is required to prepared a design report in compliance with section 1.9.1.1 (BNBC).	6-weeks
17	Absence of design documents (Building-10)	Implement remediation work if required from design report.	6-weeks