

Graphics Textiles Ltd. (Extension 2)

Sreerampur, Kalampur, Dhamrai, Dhaka.

(23.918865761435, 90.12480441852)

01 July 2025

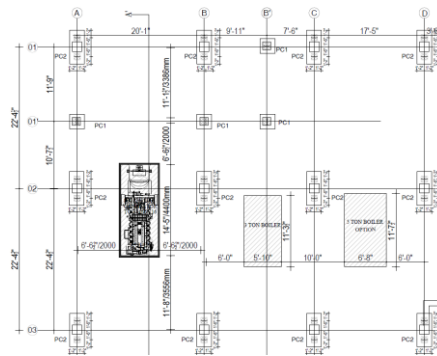


1. Building Information

- 1 Building- 4 REB Sub-station
- 2 Building- 5 Utility Building
- 3 Building- 6 Generator Building
- 4 Building-7 Biological E.T.P
- 5 Building-8 Printing Building
- 6 Building-9 Knitting Building
- 7 Building-10 New Dyeing Shed
- 8 Building-11 Fabric Store Shed A
- 9 Building-12 Fabric Store Shed B
- 10 Building-13 Gray Fabric Store Shed A
- 11 Building-14 Gray Fabric Store Shed B
- 12 Building-15 Gray Fabric Store Shed C
- 13 Building-16 Yarn Store
- 14 Building-17 Yarn & Chemical Store
- 15 Building-18 Cartoon Store & Workshop
- 16 Building-19 Wastage Storage Shed
- 17 Building-20 Anser Barrack
- 18 Building-21 Kitchen Shed
- 19 Building-22 LPG Station

2. Observations:

Observation-1: Incomplete as-built drawing. [Building- 6 (Generator Building)]



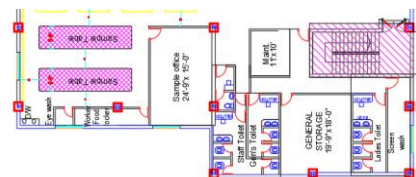
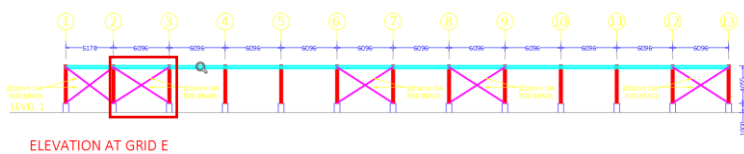
Description: During the inspection, a set of architectural and structural drawings was found. But column layout was found missing in the structural drawing. The building engineer is required to survey the full structure and update the as-built drawings to accurately reflect the current site conditions.

Observation-2: Lack of design report. [Building- 8 (Printing Building)]



Description: As per BNBC, every building or structure designed shall have its design documents prepared following 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, part 6 of BNBC.

Observation-3: Discrepancies in as-built drawings. [Building- 8 (Printing Building)]

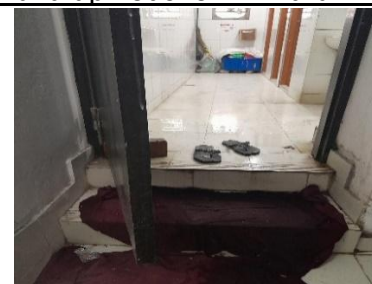


Section



Onsite condition

Build up not shown in drawing



On site condition (15 inch build up)

Description: Vertical bracing was found missing at grid location E/2-3. Additionally, the floor buildup on the 1st floor was not reflected in the as-built drawings. Also details of cable bracing (25 mm dia) were not mentioned in drawing. The building engineer is required to survey the full structure and update the as-built drawings to accurately reflect the current site conditions.

Observation 04: Inconsistencies in EA report (Building-9 Knitting Building)

Table 3.1: Compressive strength.

Structural Element	f'_c in Design Specification	f'_c used in analysis
Beam	3500 psi	3000 psi*
Column	3500 psi	3000 psi*
Foundation	3500 psi	3000 psi*

3.3.2 Live load

- 3 kPa live load in Mezzanine area
- 1.0 kPa on roof.

Compressive strength in EA report

Live load considered at mezzanine



Observed floor loading at mezzanine

Description: The factory has produced EA report following BNBC 2020. In EA report, compressive strength of concrete has been considered as 3000 psi for beam, column, foundation, but the available test results are insufficient to meet the evaluation and acceptance criteria of Art 5.12, Part VI, BNBC 2020.

Storage was found at mezzanine, but 3 kPa was mentioned at load plan.

The building engineer is required to evaluate concrete strength as per BNBC, revise load plan & design report accordingly and submit to RSC for review.

Observation 05: Prepared EA report needs to be reviewed. (Building-10 New Dyeing Shed)

3 Design Parameter

3.1 Material strength

Based on the cylinder test results during construction, the summary of concrete strength for the major structural parts is mentioned in Table 3.1.

Table 3.1: Compressive strength.

Structural Element	f'_c in Design Specification	f'_c used in analysis
Beam	3500 psi	3000 psi
Column	3500 psi	3000 psi
Foundation	3500 psi	3000 psi

Table 3.2: Reinforcement yield strength.

Material Description	Unit Weight (pcf)	Yield Strength (psi)		Modulus of Elasticity (psi)
		Member	Flexure & Shear	
Steel rebar	490	All	60,000	29,000,000

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)

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Mobile: 01818557854, PABX: 55167100 Ext. 7226
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BRIC No.: 1102-37409/20-21/CE; Dt: 15/6/2021
Sent by: Graphics Textiles LM
225, Tejgaon IA (1st Floor), Dhaka

Ref. No.: GTL/Short Column casting Knitting Building/Test/2021/05; Dt: 14/6/2021
Project: Graphics Textiles LM, Shearampur, Ishampur, Dharmal

Sample: Concrete Cylinder (Mix proportion (as quoted): 1:1.5:3, Aggregate Type: Stone chipal)
Location: Knitting Building (Morture Added (as per letter): Not mentioned)

Test: Compressive Strength Test of Concrete Cylinder (ASTM C39)
Date of Test: 15/6/2021

TEST REPORT

Sl. No.	Date of Casting as per the letter	Specimen Designation/ Frog Mark	Specimen Area (sq. in)	Maximum Load (lb)	Crushing Strength (psi)	Average Crushing Strength (psi)	Mode of Failure
1	10/5/2021		11.54	57,144	4,786	4638 psi	Combined *
2	(17 days test)		11.64	57,144	4,786	(31.9 MPa)	Combined *
3			12.16	52,555	4,315	(326 kg/cm ²)	Combined *

Note: Samples were received in uncured condition.

Countersigned by: 
Dr. A. B. M. Bedrozzeaman

Test Performed by: 
Dr. Md. Mafizur Rahman

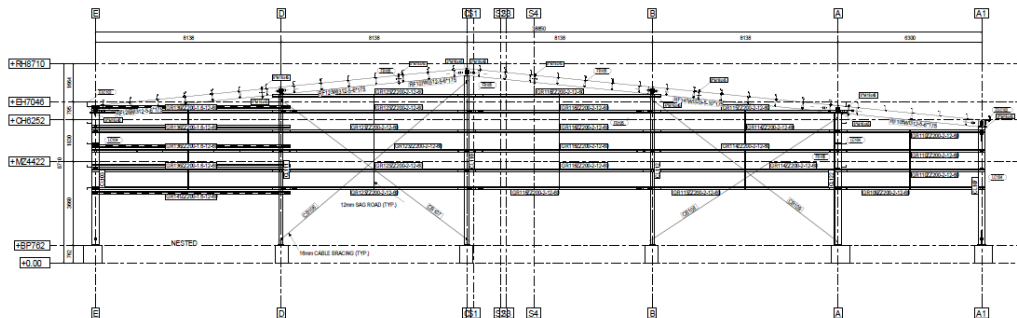
Compressive strength in EA report

Provided material test report

Description: The factory has produced EA report following BNBC 2020. In EA report, compressive strength of concrete has been considered as 3000 psi for beam, column, foundation, but the provided test reports are named Knitting Building. Also, serviceability check was provided only for deflection in wind load case.

The building engineer is required to evaluate concrete strength as per BNBC and submit the design report to RSC for review.

Observation 06: Inconsistencies in as-built drawing. (Building-10 New Dyeing Shed)



Description: Sufficient sectional drawing was not found. No column schedule and rafter schedule were provided in the drawing. As a result, all member's sizes were not verified due to lack of information.

The building engineer is required to conduct a full survey of the structure and revise the as-built drawings to reflect the actual site conditions.

Observation-7: Non-structural elements not anchored or braced. [Building-8 Printing Building, Building-11 Fabric Store Shed A]



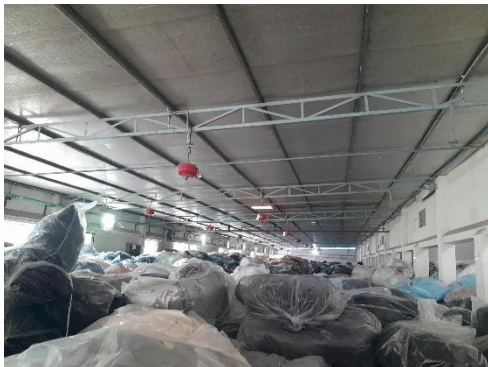
Building 8



Building 11

Description: Some racks on floors are not anchored or braced to resist lateral (earthquake) forces. The factory is required to anchor/brace all non-structural elements adequately to resist earthquake forces.

Observation-8: Lack of design report. [Building- 11 Fabric Store Shed A]



Building- 11 Fabric Store Shed A

Description: As per BNBC, every building or structure designed shall have its design documents prepared following 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, part 6 of BNBC.

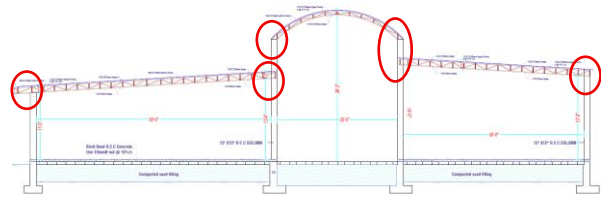
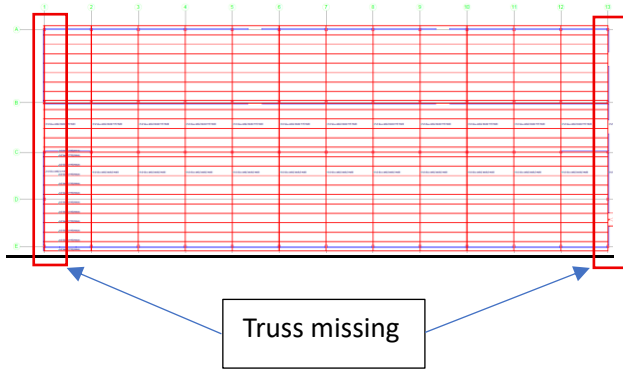
Observation-9: Lack of design report. [Building- 12 Fabric Store Shed B]



Building- 12 Fabric Store Shed B

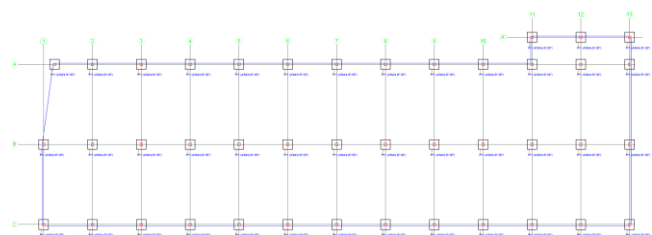
Description: As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2, part 6 of BNBC.

Observation-10: Mismatches in as-built drawing. [Building- 11 Fabric Store Shed A and Building- 12 Fabric Store Shed B]



Missing connection details in drawing

Building- 11 Fabric Store Shed A



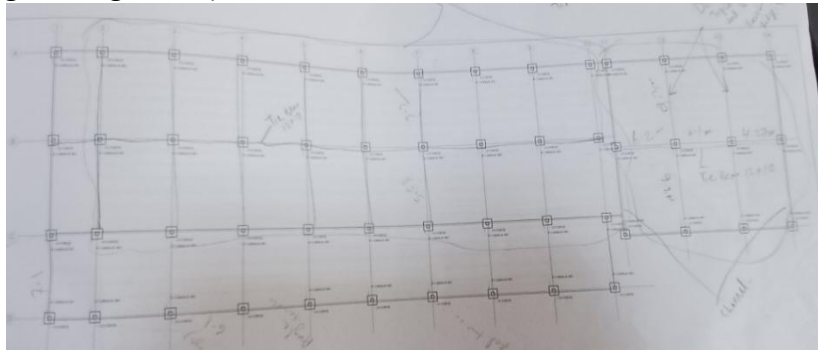
Missing connection details in drawing

Building- 12 Fabric Store Shed B

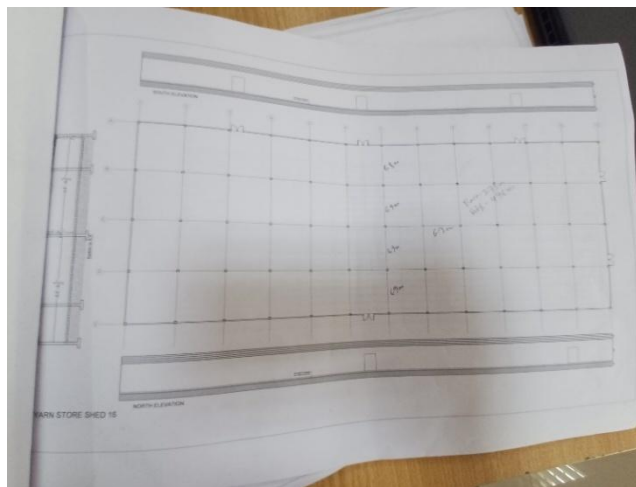
Description: Truss was found missing at marked area of Building- 11 Fabric Store Shed A and Building- 12 Fabric Store Shed B. Also, grid dimensions and connection details are missing in the as-built drawings of Building 11 Fabric Store Shed A and 12 Fabric Store Shed B. A typical section detail is included in the as-built drawings, but truss is not typical at all grids particularly along the edge grids.

The building engineer is required to conduct a full survey of the structure and revise the as-built drawings to reflect the actual site conditions.

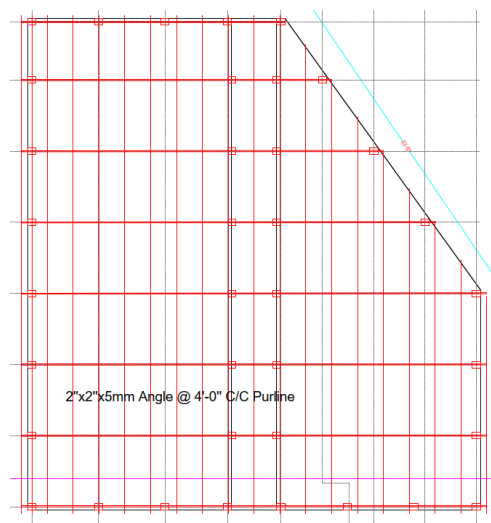
Observation 11: Inconsistencies in as-built drawing (Building-13 Gray Fabric Store Shed A, Building-14 Gray Fabric Store Shed B, Building-15 Gray Fabric Store Shed C, Building-16 Yarn Store Shed, Building-19 Wastage Storage Shed)



Building-13, 14, 15 [Gray Fabric Store Shed A, B, C]



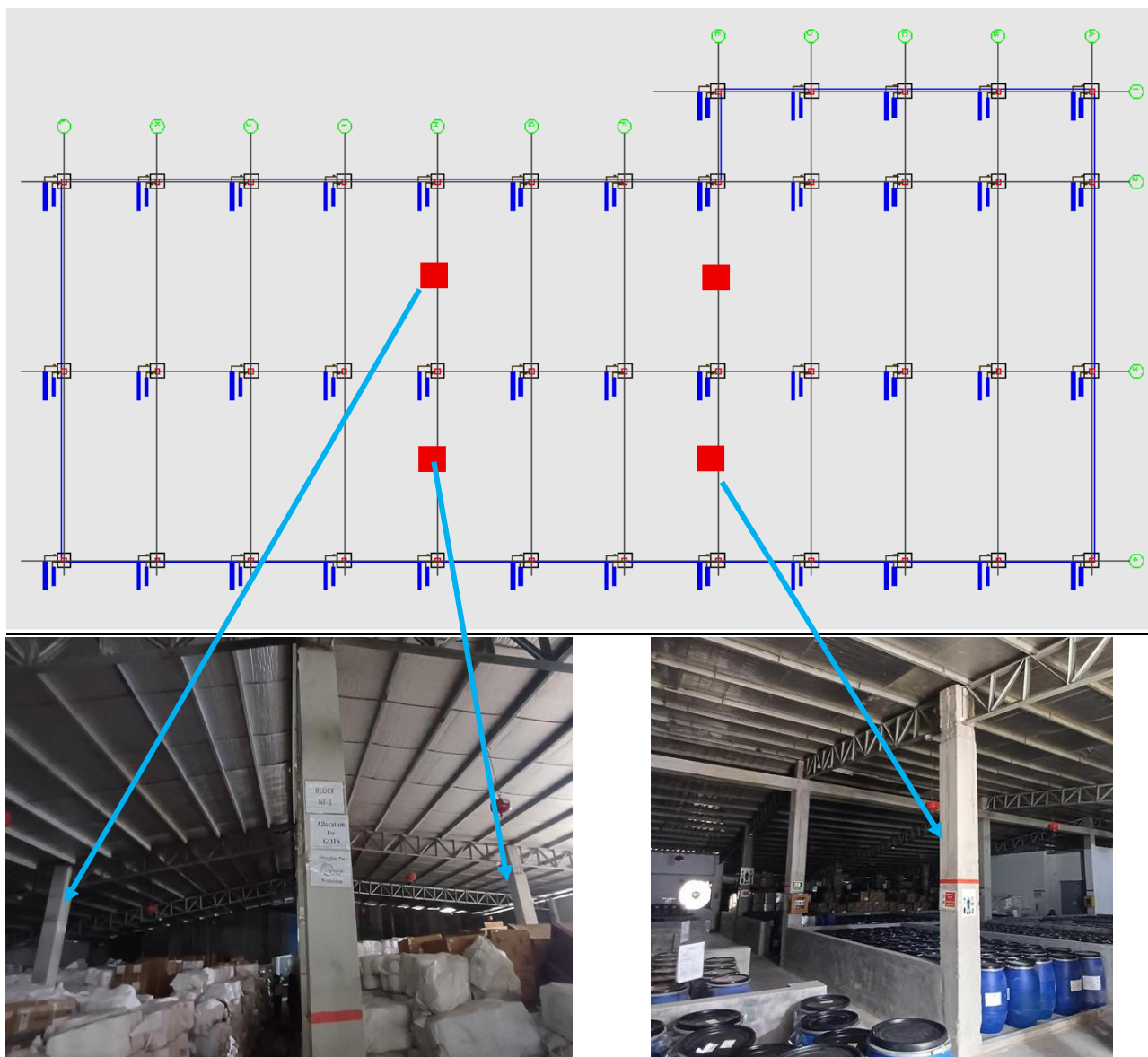
Building-16 Yarn Store Shed



Description: Grid dimensions and connection details are missing in the as-built drawings of Building 13, 14, 15, 16, 17, 18, 19. A typical section detail is included in the as-built drawings, but truss is not typical at all grids particularly along the edge grids.

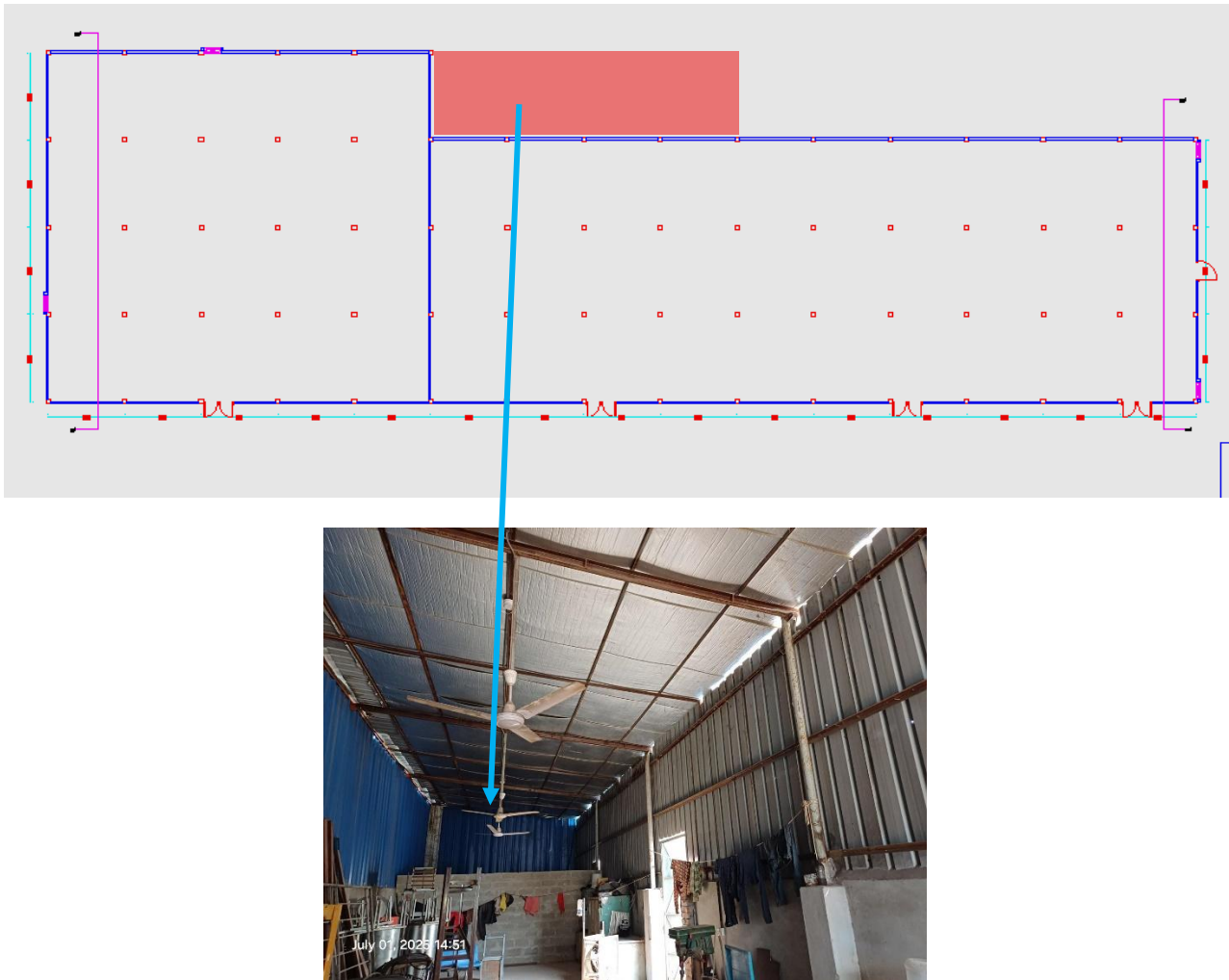
The building engineer is required to conduct a full survey of the structure and revise the as-built drawings to reflect the actual site conditions.

Observation 12: Mismatches in as-built drawing (Building 17 Yarn & Chemical Store)



Description: Red marked columns were found onsite but not shown in drawing.

Observation 13: Mismatches in as-built drawing (Building 18 Cartoon Store & Workshop)



Description: Red marked areas were not shown in drawing.

Observation 14: Lack of design documents (Building-13 Gray Fabric Store Shed A, Building-14 Gray Fabric Store Shed B, Building-15 Gray Fabric Store Shed C, Building-16 Yarn Store Shed, Building-17 Yarn & Chemical Store Shed)



Building 13



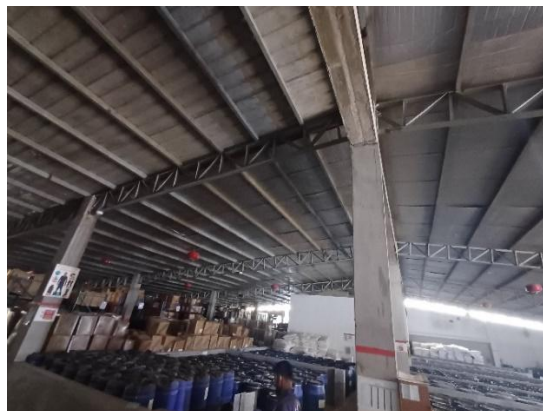
Building 14



Building 15



Building 16



Building 17

Description: As per BNBC, every building or structure designed shall have its design documents prepared under the provisions of Section 1.9. The design document shall include a design report and a set of structural drawings, which shall be prepared in compliance with section 1.9.2 and section 1.9.3 as per BNBC 2020.

Observation 15: Non-engineered shed (Building-18 Cartoon Store & Workshop Shed, Building-19 Wastage Storage Shed)



Building 18



Building 19

Description: Non-engineered framing and connection was observed. The building engineer is required to produce EA following BNBC 2020 or provide the necessary alternatives to make the structure stable. Otherwise, replace it with an engineered one.

Observation 16: Crack in joint between RC column top (truss joint) (Building-16 Yarn Store Shed)



Description: Crack was found at joint between RC column and truss. The building engineer is required to repair the cracks with suitable methods.

Observation 17: Column surface damage due to trolley impact (Building-9 Knitting Building 9, Building-15 Gray Fabric Store Shed C)



Building 9



Building 15

Description: Edges of columns were found damaged due to trolley impact.

Observation 18: Corrosion on steel member (Building-9 Knitting Building, Building-18 Cartoon Store & Workshop Shed, Building-19 Wastage Storage Shed)



Building 9



Building 18



Building 19

Description: During the inspection, corrosion was observed on several steel members.

Observation 19: Non-structural elements found unbraced/not anchored (Building-14 Gray Fabric Store Shed B, Building-15 Gray Fabric Store Shed C, Building-17 Yarn & Chemical Store Shed, Building-18 Cartoon Store & Workshop Shed)



Building 14



Building 15



Building 17



Building 18

Description: Unbraced and unanchored steel storage racks were found at several locations. The factory is required to brace/anchor all non-structural elements (storage racks) to resist falling during earthquake.

Observation 20: Building Permit from the local authority - not available (Building-18 Cartoon Store & Workshop Shed, Building-19 Wastage Storage Shed, Building-20 Ansar Barrack Shed, Building-21 Kitchen Shed, and Building-22 LPG Station Shed)



Building 18



Building 19



Building 20



Building 21



Building 22

Description: During the inspection, building permits from the local authority was not available for Building 18, 19, 20, 21, 22. The factory authority is required to collect building permits from the local authority for the buildings.

3. Action Plan:

SL	Observation	Action Plan	Timeline
1.	Incomplete as-built drawing. [Building- 6 (Generator Building)]	The building engineer is required to survey the full structure and update the as-built drawings to accurately reflect the current site conditions.	within 6 weeks
2.	Lack of design report. [Building- 8 (Printing Building)]	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, part 6 of BNBC.	within 6 weeks
3.		Carry out suggested remedial works if required	within 6 months
4.	Discrepancies in as-built drawings. [Building- 8 (Printing Building)]	The building engineer is required to survey the full structure and update the as-built drawings to accurately reflect the current site conditions.	within 6 weeks
5.	Non-structural elements are not anchored or braced. [Building- 8 (Printing Building)]	The factory is required to anchor/brace all non-structural elements adequately to resist earthquake forces.	within 6 months
6.	Inconsistencies in the EA report (Building- 9 Knitting Building)	Verify in-situ concrete strength either by 100 mm diameter cores or existing credible cylinder test reports.	within 6 weeks
7.		Update floor live load plan for mezzanines following BNBC requirements	within 6 weeks
8.		Building engineer is required to address the inconsistencies in the EA report and submit revised documents to RSC for detailed review.	within 6 weeks
9.		Carry out suggested remedial works if required	within 6 months
10.		Continue to implement load plan	within 6 months
11.	Column surface damage due to trolley impact (Building- 9 Knitting Building)	The building engineer is required to repair the damaged portion and provide barriers around the column to prevent trolley impact.	within 6 weeks
12.	Corrosion on steel members (Building- 9 Knitting Building)	The factory is required to remove the rust and apply anti-corrosive paint to the steel member	within 6 months

13.	Prepared EA report needs to be reviewed. (Building-10 New Dyeing Shed)	The building engineer is required to evaluate concrete strength as per BNBC and submit the design report to submit to RSC for review.	within 6 weeks
14.		Carry out suggested remedial works if required	within 6 months
15.	Inconsistencies in as-built drawing. (Building-10 New Dyeing Shed)	The building engineer is required to conduct a full survey of the structure and revise the as-built drawings to reflect the actual site conditions.	within 6 weeks
16.	Lack of design report. (Building- 11 Fabric Store Shed A)	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, part 6 of BNBC.	within 6 weeks
17.		Carry out suggested remedial works if required	within 6 months
18.	Mismatches in the as-built drawing. (Building- 11 Fabric Store Shed A)	The building engineer is required to conduct a full survey of the structure and revise the as-built drawings to reflect the actual site conditions.	within 6 weeks
19.	Non-structural elements are not anchored or braced. (Building- 11 Fabric Store Shed A)	The factory is required to anchor/brace all non-structural elements adequately to resist earthquake forces.	within 6 months
20.	Lack of design report. (Building- 12 Fabric Store Shed B)	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, part 6 of BNBC.	within 6 weeks
21.		Carry out suggested remedial works if required	within 6 months
22.	Mismatches in the as-built drawing. (Building-12 Fabric Store Shed B)	The building engineer is required to conduct a full survey of the structure and revise the as-built drawings to reflect the actual site conditions.	within 6 weeks
23.	Inconsistencies in as-built drawing (Building-13 Gray Fabric Store Shed A)	The building engineer is required to survey the whole structure and prepare accurate as-built drawings as per onsite conditions.	within 6 weeks
24.	Lack of design documents (Building- 13 Gray Fabric Store Shed A)	The building engineer is required to prepare a set of design documents in compliance with BNBC 2020 and submit the documents to RSC for review	within 6 weeks

25.		Carry out remedial work if required.	within 6 months
26.	Inconsistencies in as-built drawing (Building- 14 Gray Fabric Store Shed B)	The building engineer is required to survey the whole structure and prepare accurate as-built drawings as per onsite conditions.	within 6 weeks
27.	Lack of design documents (Building- 14 Gray Fabric Store Shed B)	The building engineer is required to prepare a set of design documents in compliance with BNBC 2020 and submit the documents to RSC for review	within 6 weeks
28.		Carry out remedial work if required.	within 6 months
29.	Non-structural elements found unbraced/not anchored (Building- 14 Gray Fabric Store Shed B)	The factory is required to brace/anchor all non-structural elements (storage racks) to prevent falling during an earthquake.	within 6 months
30.	Inconsistencies in the as-built drawing (Building- 15 Gray Fabric Store Shed C)	The building engineer is required to survey the whole structure and prepare accurate as-built drawings as per onsite conditions.	within 6 weeks
31.	Lack of design documents (Building- 15 Gray Fabric Store Shed C)	The building engineer is required to prepare a set of design documents in compliance with BNBC 2020 and submit the documents to RSC for review	within 6 weeks
32.		Carry out remedial work if required.	within 6 months
33.	Column surface damage due to trolley impact (Building- 15 Gray Fabric Store Shed C)	The building engineer is required to repair the damaged portion and provide barriers around the column to prevent trolley impact.	within 6 weeks
34.	Non-structural elements found unbraced/not anchored (Building- 15 Gray Fabric Store Shed A)	The factory is required to brace/anchor all non-structural elements (storage racks) to prevent falling during an earthquake.	within 6 months
35.	Inconsistencies in the as-built drawing (Building- 16 Yarn Store)	The building engineer is required to survey the whole structure and prepare accurate as-built drawings as per onsite conditions.	within 6 weeks
36.	Lack of design documents (Building- 16 Yarn Store)	The building engineer is required to prepare a set of design documents in compliance with BNBC 2020 and submit the documents to RSC for review	within 6 weeks
37.		Carry out remedial work if required.	within 6 months

38.	Crack in joint between RC column top (truss joint) (Building- 16 Yarn Store)	The building engineer is required to repair the cracks with suitable methods.	within 6 weeks
39.	Mismatches in as-built drawing (Building- 17 Yarn & Chemical Store)	The building engineer is required to survey the whole structure and prepare accurate as-built drawings as per onsite conditions.	within 6 weeks
40.	Lack of design documents (Building- 17 Yarn & Chemical Store)	The building engineer is required to prepare a set of design documents in compliance with BNBC 2020 and submit the documents to RSC for review	within 6 weeks
41.		Carry out remedial work if required.	within 6 months
42.	Non-structural elements found unbraced/not anchored (Building- 17 Yarn & Chemical Store)	The factory is required to brace/anchor all non-structural elements (storage racks) to prevent falling during an earthquake.	within 6 months
43.	Mismatches in as-built drawing (Building- 18 Cartoon Store & Workshop)	The building engineer is required to survey the whole structure and prepare accurate as-built drawings as per onsite conditions.	within 6 weeks
44.	Non-engineered shed (Building- 18 Cartoon Store & Workshop)	The building engineer is required to produce EA following BNBC 2020 or provide the necessary alternatives to make the structure stable. Otherwise, replace it with an engineered one.	within 6 weeks
45.		Carry out remedial work if required.	within 6 months
46.	Corrosion on steel members (Building- 18 Cartoon Store & Workshop)	The factory is required to remove the rust and apply anti-corrosive paint to the steel member	within 6 months
47.	Non-structural elements found unbraced/not anchored (Building- 18 Cartoon Store & Workshop)	The factory is required to brace/anchor all non-structural elements (storage racks) to prevent falling during an earthquake.	within 6 months
48.	Inconsistencies in the as-built drawing (Building- 19 Wastage Storage Shed)	The building engineer is required to survey the whole structure and prepare accurate as-built drawings as per onsite conditions.	within 6 weeks

49.	Non-engineered shed (Building- 19 Wastage Storage Shed)	The building engineer is required to produce EA following BNBC 2020 or provide the necessary alternatives to make the structure stable. Otherwise, replace it with an engineered one.	within 6 weeks
50.		Carry out remedial work if required.	within 6 months
51.	Corrosion on steel members (Building- 19 Wastage Storage Shed)	The factory is required to remove the rust and apply anti-corrosive paint to the steel member	within 6 months
52.	Building Permit from the local authority - not available (Buildings 18, 19, 20, 21, 22)	The factory authority is required to collect building permits from the local authority for the buildings.	within 6 months