FRIENDS KNITTINGS LTD (EXTENSION)

1406/1, South Salna, Word -19, Deshipara road, Gazipur, Bangladesh

(24.018977, 90.394195)

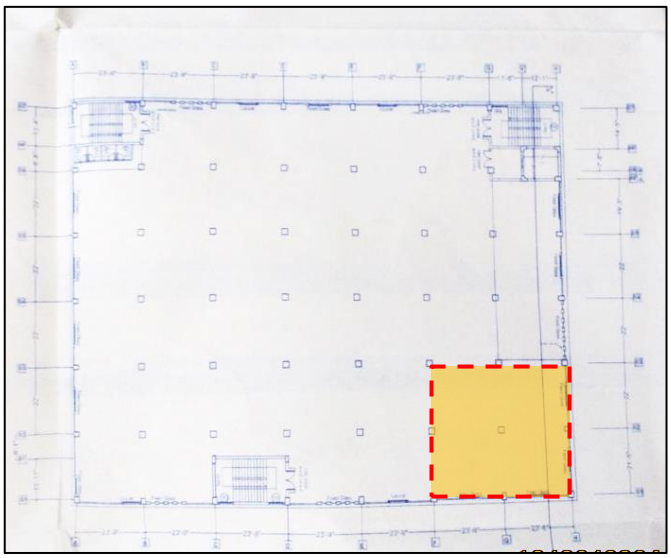
19 February 2024

1. Building Information

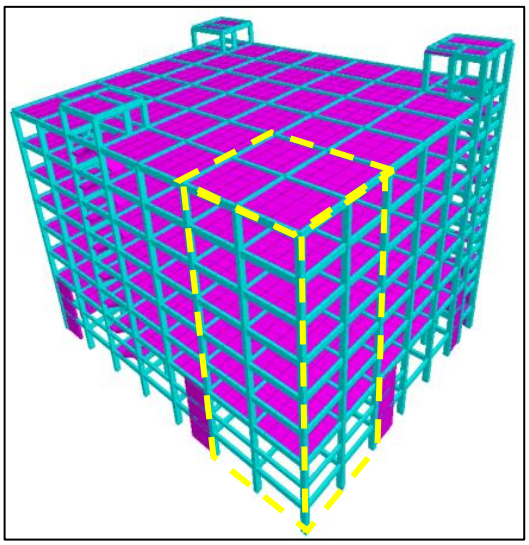
Warehouse Building: This is a seven-storied (G+6) RC building.

2. Observations

Observation-1: Inconsistency in the design documents.



Approved Layout by Local Authority



Snapshot of EA report

Existing Structure

Material Specification

1. Specified yield strength of steel reinforcement, fy=72,500 psi.
2. Compressive Strength of Concrete =4500 psi. (Column)
3. Compressive Strength of Concrete =4000psi .(Beam and Floor slab)
4. Compressive Strength of Concrete =4000psi .(Foundation)

Snapshot from EA report

STRENGTH OF MATERIALS LABORATORY

TEST OF DEFORMED M.S. BARS [ASTM A 615M-16]

Sent by: Asadul Islam Asad
Friends Knitting Ltd., Salna, Gazipur.
Project: Seven Storied Storage Building of Friends Knitting Ltd. At South Salna, Salna, Gazipur.

BRTC No.: 1102-92132/CE/22-23; Dt. 27/5/2023
Ref.: UE/FG-FKL/May/23/01; Dt. 25/5/2023
Date of Test: 28/5/2023

Samples were received in UNSEALED condition.

BUETCE OUT

Sl. No.	Frog Mark / Identification	Bar Desig./ Nominal dia. mm	Actual bar dia. mm	Unit Weight kg/m	Average Unit Weight kg/m	Yield or Proof Load kN	Yield or Proof Strength MPa	Average Yield or Proof Strength (YS) MPa	Tensile Load kN	Tensile Strength MPa	Average Tensile Strength (TS) MPa	TS/YS	Elongation (%) (G. length = 200 mm)	Average Elongation (%)	Bend Test
1	BSRM ULTIMA 420D	25	24.7	3.762		222	453	461	316	645	650		18		-
2	BSRM ULTIMA 420D	25	24.7	3.764	3.759	224	457	(67000 psi)	318	645	(94500 psi)	1.41	19	19	-
3	BSRM ULTIMA 420D	25	24.7	3.750		233	475		327	665			19		-
4	KSRM B420 DWR 60	20	19.9	2.439		137	435	431	198	630	625		19		-
5	KSRM B420 DWR 60	20	19.9	2.440	2.440	135	429	(62500 psi)	198	630	(91000 psi)	1.45	18	18	-
6	KSRM B420 DWR 60	20	19.9	2.441		135	429		196	625			18		-
7	KSRM B420 DWR 60	16	15.9	1.556		93.7	466	486	124	615	670		18		-
8	KSRM B420 DWR 60	16	15.9	1.559	1.562	99.7	496	(70500 psi)	140	695	(97000 psi)	1.38	18	18	-
9	KSRM B420 DWR 60	16	16.0	1.570		99.7	496		140	695			19		-

Rebar Test Report

Description: The marked portion at the local authority approved layout and a snapshot of the EA report has not been constructed yet. The yield strength of reinforcement has been considered as 72,500 psi, but from the rebar test report, it has been confirmed that lower-strength rebar was used in the construction of the building.

The building engineer is required to revise the EA report based on in-situ material strength and submit the EA documents to RSC for review. Also, prepare a set of as-built drawings for the as-built condition.

Observation-2: Column susceptible to vehicle impact.

Description: Column at the ground floor loading/unloading area was found susceptible to vehicle impact. The building engineer is required to provide barriers around the column to prevent vehicle impact.

Observation-3: Corrosion on exposed rebar.

Description: Corrosion was observed on the exposed rebar. The building engineer is required to remove rust and apply anti-corrosive paint on exposed rebars.

Observation-4: Non-structural elements found unbraced/not anchored.

Description: Non-structural elements suspended from, attached to, or resting atop the structure shall be adequately anchored and braced to resist earthquake forces. Factory is required to brace/anchor all non-structural elements.

3. Action Plan

Observation	Action Plan	Timeline
Inconsistency in the design documents	The building engineer is required to revise the EA report based on in-situ material strength and submit the EA documents to RSC for review.	within 6 weeks
	Prepare a set of as-built drawings for the as-built condition.	within 6 weeks
	Carry out remedial work where required.	within 6 months
Column susceptible to vehicle impact	Building engineer is required to provide barriers around the column to prevent vehicle impact.	within 6 weeks
Corrosion on exposed rebar.	The building engineer is required to remove rust and apply anti-corrosive paint on exposed rebars.	within 6 weeks
Non-structural elements were found unbraced/not anchored.	Building engineer is required to brace/anchor all non-structural elements.	within 6 weeks