

Modiste (Bangladesh) Ltd. (Extension)

51/ C (A,B) Fouzderhat Heavy I/A, Sagorika Road, Chittagong
(22.358262 91.771981)

18 October 2023

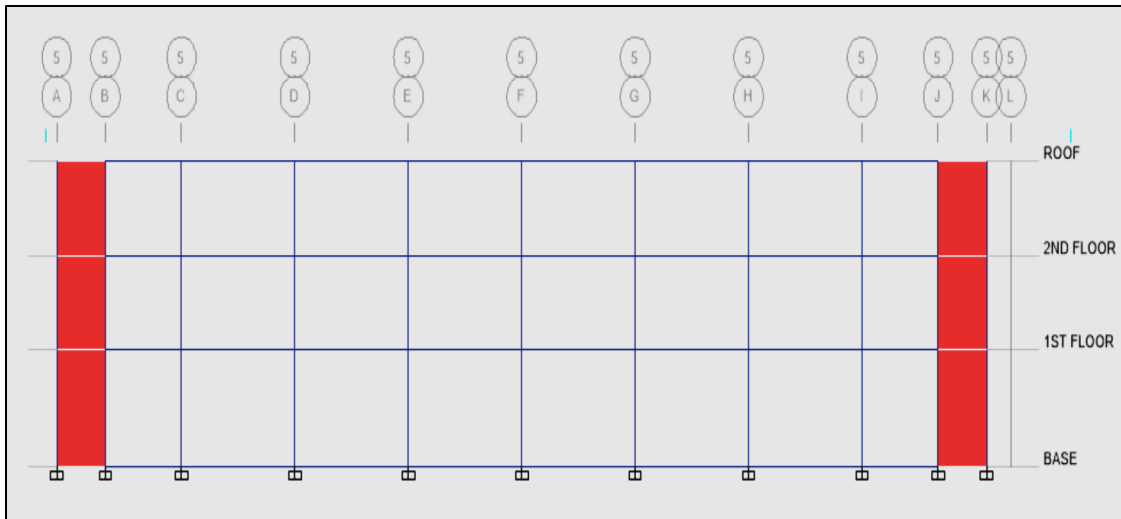


Building Information

1. **Building-A:** Three-storied (G+2) (proposed six-storied) reinforced concrete (RC) building.
2. **Store Shed:** Single-storied steel shed.
3. **Childcare and Doctor's Room:** Single-storied steel shed.
4. **Generator room:** Single-storied RC building.
5. **Fire command room:** Single-storied RC building.

Observations

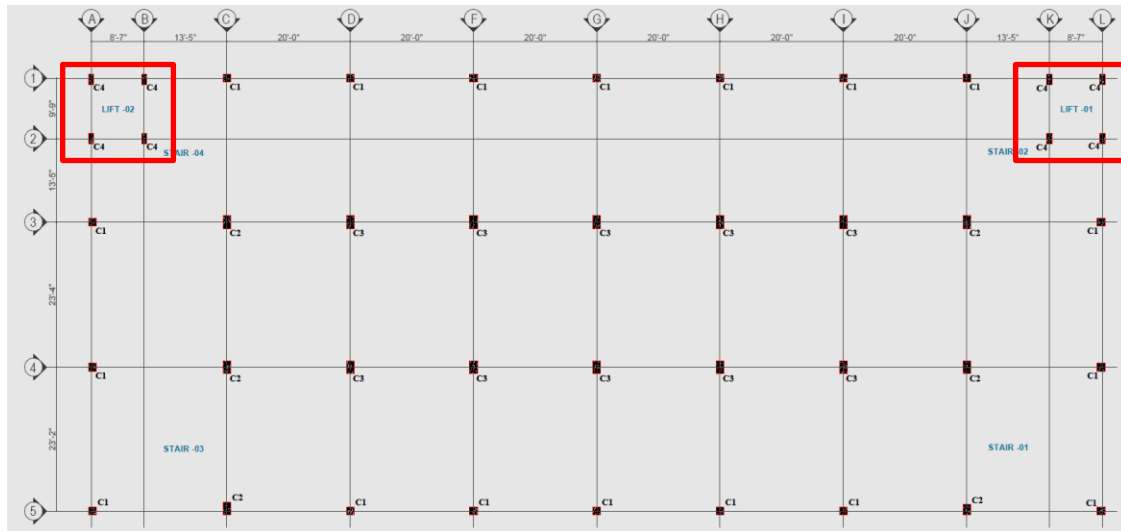
Shear walls consideration in analysis & stability system



Lift cores in analysis file



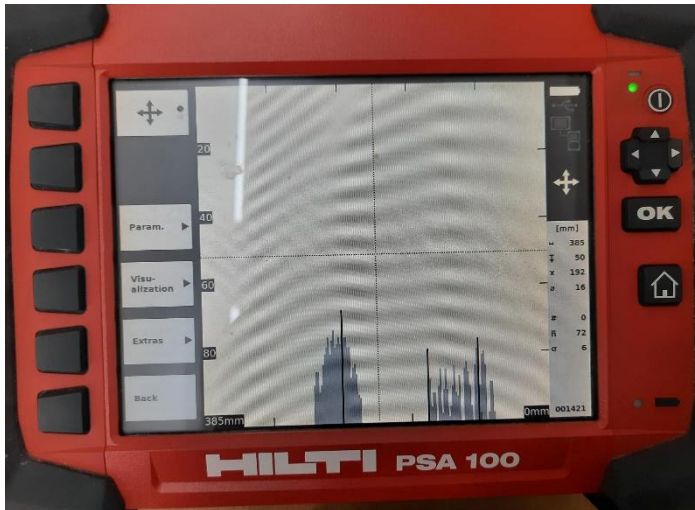
Columns on site



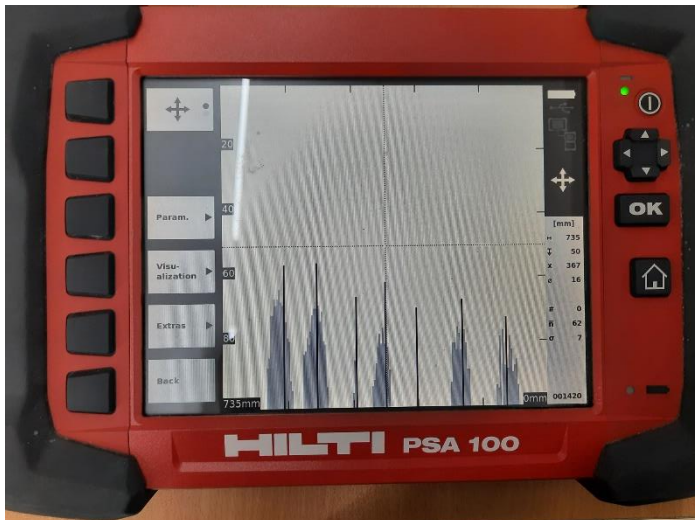
Lift core not shown in structural drawings

Design documents with software (FEA) analysis file was available on site for building-A. In FEA lift core was considered up to the roof level. But in drawings lift core was shown up to the plinth level. Also lift core was not found above the plinth level on site. Building engineer is required to confirm the lift core presence above plinth level and update the FEA model, check the stability system, design report and other requirements as per BNBC.

Mismatches in as built drawings



Ferro-scanning: 4 rebar at short face



Ferro-scanning: 7 rebar at long face

SCHEDULE OF COLUMNS:

Designation and no of Column	UP TO P.L. (PEDESTAL)	P.L. TO 1ST FLOOR (1 FLOOR)	2ND FLOOR TO TOP (2 FLOORS)
C1			
C3			
C2			
C4			

Column schedule: 5 rebar at short face and 8 rebar at long face

Rebar at C-2 type column not matched with drawings. Four rebars were found at short face and seven rebars were found at long face instead of five and eight, respectively. Total eighteen rebars were found instead of twenty-two rebars. Building engineer is required to confirm the amount of rebar in column and update the drawing.

Non-engineered stair roof shed



Non-engineered stair roof shed was observed on the roof.
Building engineer is required to check the stability against the uplift forces.

Dampness at ceiling of 1st and 2nd floor

Observation: Building-A



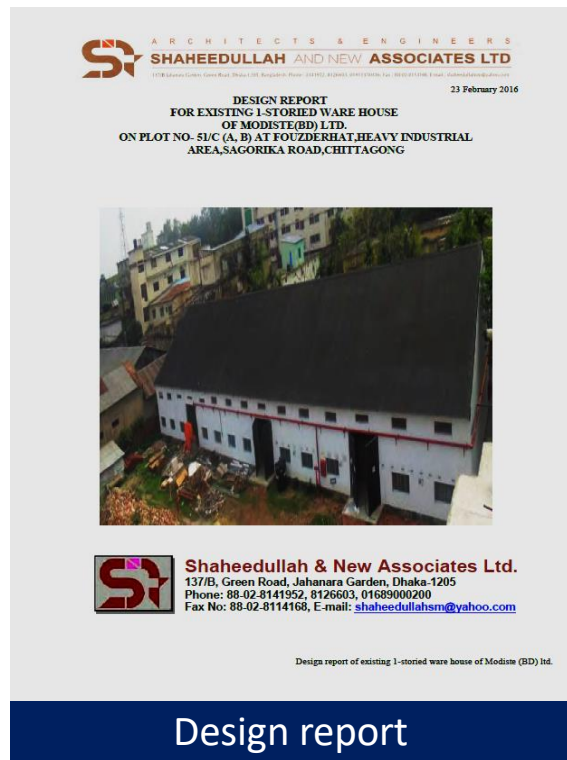
Dampness on slab soffit



Dampness on slab soffit

Dampness on ceiling of 1st and 2nd floor was observed. Building engineer is required to seal the source of water and repair the damp areas with suitable methods.

Information missing in the design report



Design report



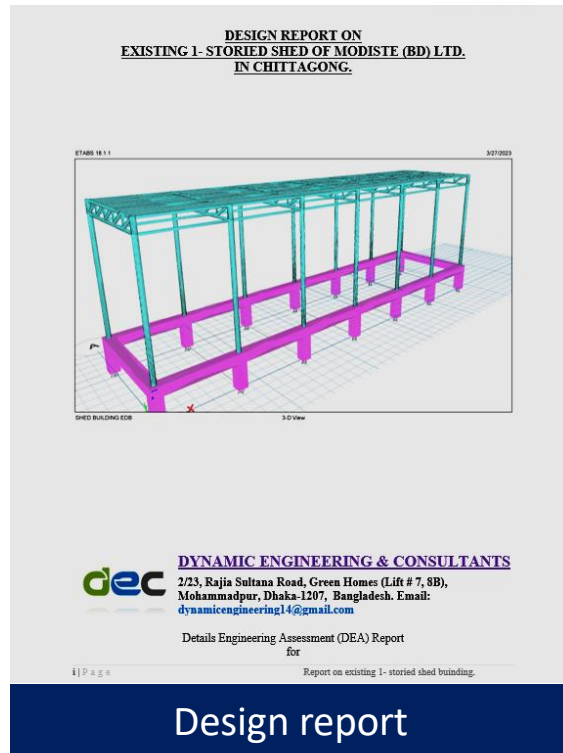
Store shed

A Design Report was available for the store shed which was prepared based on software analysis. Adequacy of connections and serviceability checks as per BNBC were not incorporated in the design report.

The building engineer is required to incorporate adequacy check of connections and serviceability check in the design report and submit to the RSC for review.

Information missing in the design report

Observation: Childcare and Doctor's Room



A Design Report was available for the childcare and doctor's room which was prepared based on software analysis. As per BNBC connection adequacy were not incorporated in the design report. The building engineer is required to incorporate adequacy check of connections in the design report and submit to the RSC for review.

Absence of as-built drawings

Observation: Generator room, Fire command room



Generator room



Fire command room

As-built drawings were not found for the generator room and fire command room. The building engineer is required to survey structures and prepare a full set of as-built drawings in compliance with section 1.9, part 6 of BNBC.

Observation: Generator room, Fire command room

Priority Actions

Problems Observed

Building-A:

Item 1: Shear walls consideration in analysis & stability system.

Item 2: Mismatches in as built drawings.

Item 3: Non-engineered stair roof shed.

Item 4: Dampness at ceiling of 1st and 2nd floor.

Store shed:

Item 5: Information missing in the design report.

Childcare and Doctor's Room:

Item 6: Information missing in the design report.

Generator room, Fire command room:

Item 7: Absence of as-built drawings.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Shear walls consideration in analysis & stability system. (Building-A)	Building engineer is required to update the FEA model, design report and all requirements as per BNBC.	6-weeks
02	Shear walls consideration in analysis & stability system. (Building-A)	Building engineer is required to check the stability system of the existing structure.	6-weeks
03	Shear walls consideration in analysis & stability system. (Building-A)	Carry out remedial works where necessary.	6-months
04	Mismatches in as built drawings. (Building-A)	Building engineer is required to confirm the amount of rebar in column and prepare accurate as-built structural drawing.	6-weeks
05	Mismatches in as built drawings. (Building-A)	Revise the design report based on corrected as-built drawing.	6-weeks
06	Non-engineered stair roof shed. (Building-A)	Building engineer is required to check the stability against the uplift forces.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
07	Non-engineered stair roof shed. (Building-A)	Carry out remedial works where necessary.	6-months
08	Dampness at ceiling of 1st and 2nd floor. (Building-A)	Building engineer is required to seal the source of water and repair the damp areas with suitable method.	6-weeks
09	Information missing in the design report. (Store shed)	Building engineer is required to incorporate all types of adequacy checks in the design report and the report should comply with section 1.9.1 of BNBC (part 6).	6-weeks
10	Information missing in the design report. (Store shed)	Carry out remedial works (if any) after reviewed by the RSC.	6-months
11	Information missing in the design report. (Childcare and Doctor's Room)	Building engineer is required to incorporate all types of adequacy checks in the design report and the report should comply with section 1.9.1 of BNBC (part 6).	6-weeks
12	Information missing in the design report. (Childcare and Doctor's Room)	Carry out remedial works (if any) after reviewed by the RSC.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
13	Absence of as-built drawings. (Generator room, Fire command room)	Building engineer is required to prepare a full set of structural drawings in compliance with section 1.9.1.2, part-6 of BNBC and submit it to RSC for review.	6-weeks