Jericho Imex Ltd
(Extension Building)

DAG NO. 1726 & 856, MONTRIBARI ROAD, SOUTH SHALNA, SHALNA BAZAR, GAZIPUR-1703.
(24.031022, 90.390951)

17 October 2021

RSC RMG SUSTAINABILITY COUNCIL

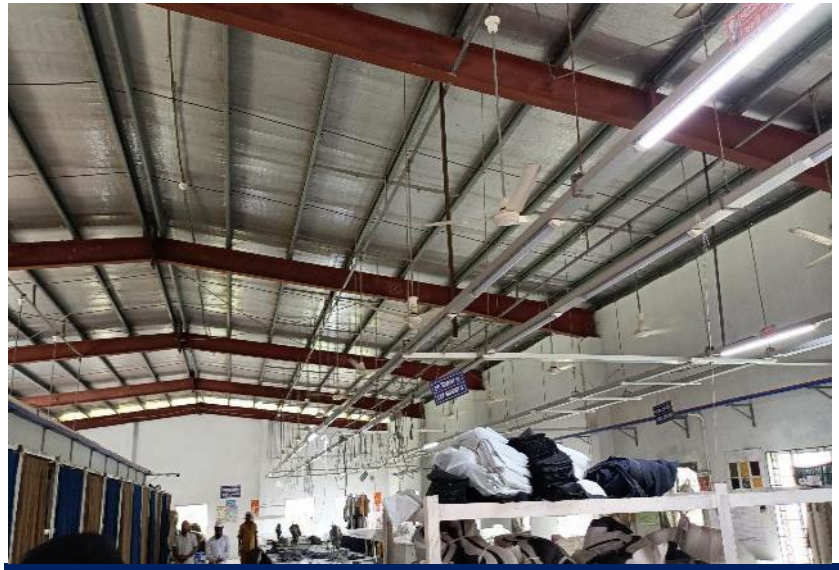
Executive Summary

1. Shed 3 (cutting shed) (G) is a single-storied lightweight steel shed building.
2. Boiler Shed (G) is a single-storied lightweight steel shed building
3. Pump Room (G) is a single storied steel shed.

Observations

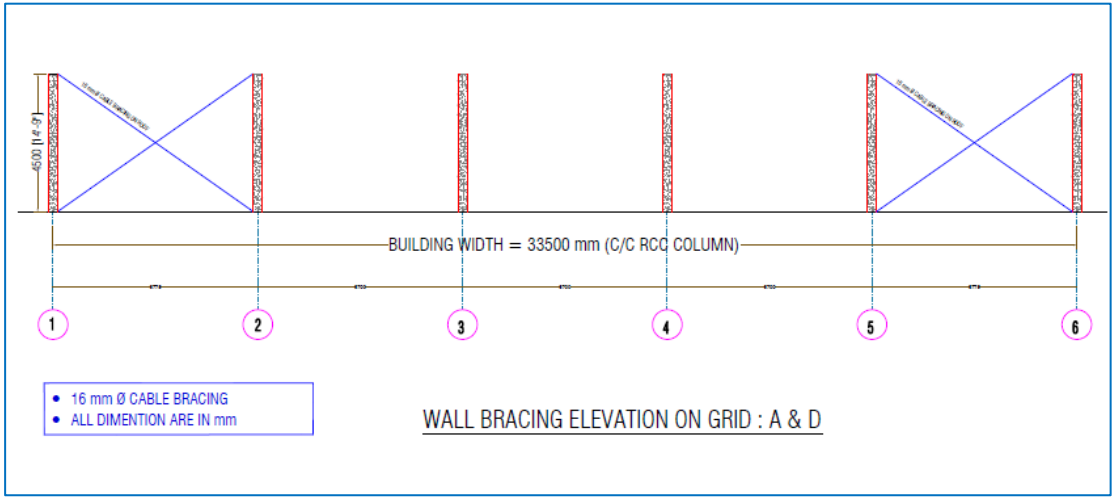
Lateral stability system

Observation: Shed-3



No compression strut/ lateral load transfer media at the roof level

No lateral load transfer media observed in roof. Also, bracing system has no compression member. As part of Engineering Assessment (EA) building engineer is required to check the stability system of the building and design the size & position of necessary compression element accordingly.



Vertical bracings on drawings which are not found onsite

Observation: Shed-3

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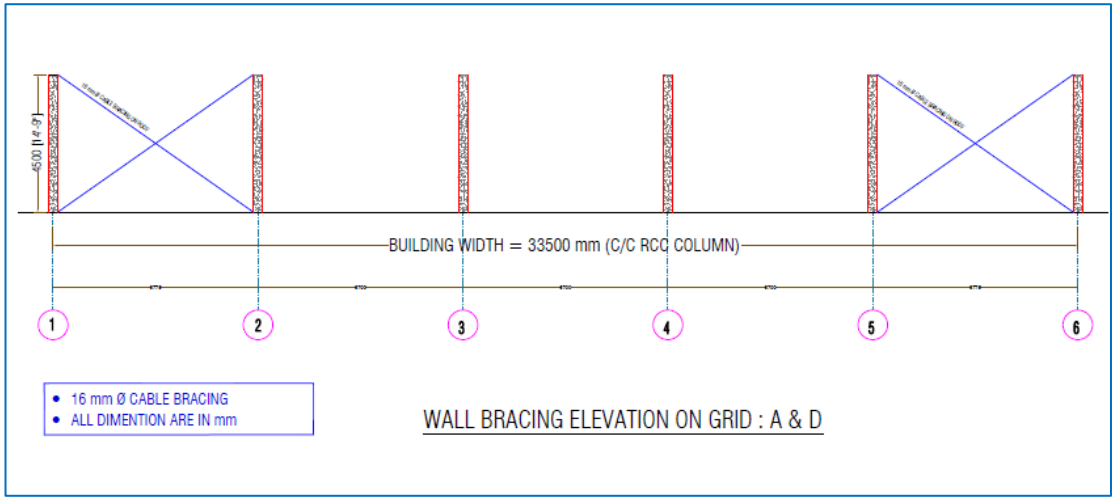
Inconsistencies in as-built drawing

Observation: Shed-3

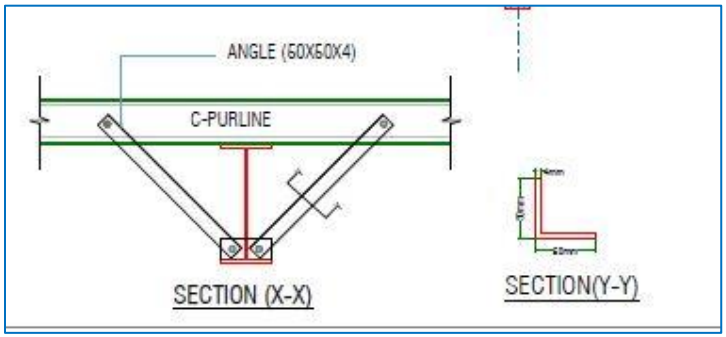
No vertical Bracings on site

Details of RC tie beams were not found in provided drawings. Vertical cross-bracing and flange bracings were shown in drawings but onsite those are not found. Moreover, connection details of bracings were not found in drawings.

No flange bracing onsite



Vertical Bracings on drawings



Flange bracing on drawings

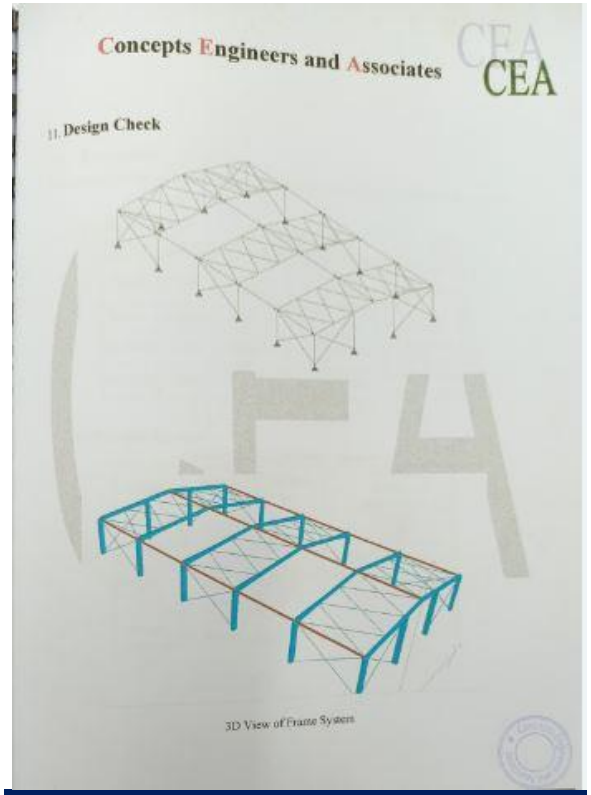
Observation: Shed-3

Design report required to be revised and submit to RSC

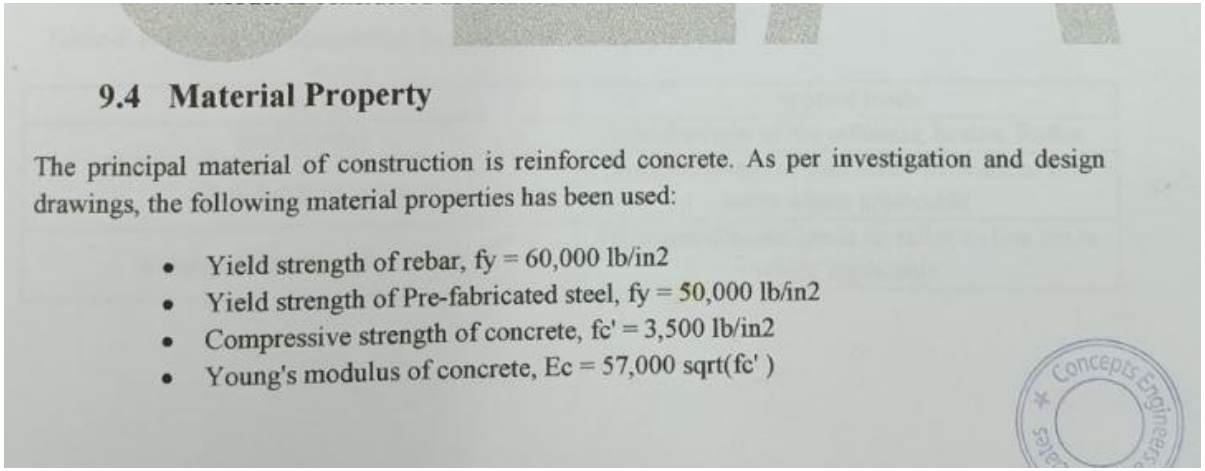
Observation: Shed-3

No vertical Bracings

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 of part-6, BNBC.



Design report



A Design Report with software-based analysis file was provided for Shed-3. Purlins are considered as compression strut, but adequacy check of the purlins are not provided in the design report.
Tensile strength of MS plate 50 ksi has been considered in design report but no test report was found.
Vertical bracings were not found on site whereas design report shows vertical bracings in both direction.

Observation: Shed-3

Loose cable bracing

Some of the horizontal cable bracings were found loose. The factory is required to tight the bracings for transferring the lateral loads properly.

Loose cable bracing at roof

Observation: Shed-3

Undocumented Structure

Observation: Boiler Shed & Pump Room

No drawings were available for these ancillary structures.

Observation: Boiler Shed & Pump Room

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Problems Observed

Shed-3:

1. Apparently lack of lateral stability system.
2. Inconsistencies in as-built drawing.
3. Design report required to be revised and submit to RSC.
4. Loose cable bracing.

Boiler Shed and Pump Room:

5. Undocumented Structure.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Apparently lack of lateral stability system (Shed-3).	As part of Engineering Assessment (EA) building engineer is required to check the stability system of the Building and design the size & position of necessary compression elements accordingly.	6-weeks
02	Apparently lack of lateral stability system (Shed-3).	Implement remedial actions where necessary.	6-months
03	Inconsistencies in as-built drawing (Shed-3).	The building engineer to survey the structure and prepare as-built structural drawings with connection details.	6-weeks
04	Design report required to be revised and submit to RSC (Shed-3).	Building Engineer to prepare design report as per BNBC (part-6; Article 1.9.1).	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
05	Design report required to be revised and submit to RSC (Shed-3).	The factory is required to carryout tensile test of MS plate from existing elements of the Shed-3 and fill the cutting space by same specification.	6-weeks
06	Design report required to be revised and submit to RSC (Shed-3).	Revise design report based on the result of MS plate test report.	6-weeks
07	Design report required to be revised and submit to RSC (Shed-3).	Implement the recommendation of design report.	6-months
08	Loose cable bracing (Shed-3)	The building engineer to check the bracing and tighten it properly.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
09	Undocumented Structure (Boiler Shed and Pump Room).	The building engineer to survey the structures and prepare full set of as-built drawings.	6-weeks