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Mazu Khan Bazar, Harbaid, Gazipur-1710.

(23.923323N, 90.436281E)

1st February 2021

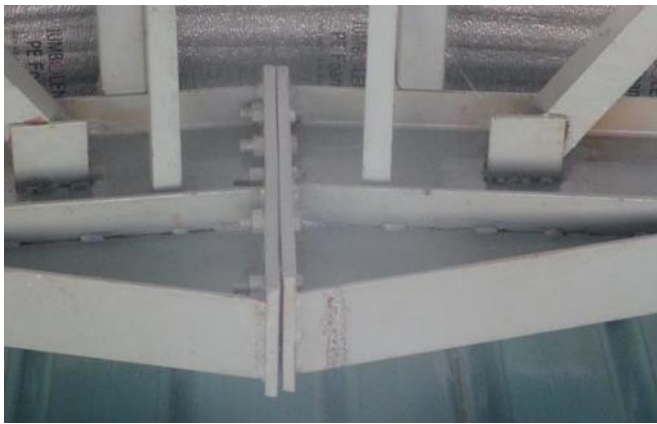


Building Information

1. Production building Part-A (Two storied prefabricated steel structure)
2. Production building Part-B (Single storied prefabricated steel structure)
3. Dinning shed (Single storied shed)

Observations

Lack of information in drawing



Bolted connections of Part - A



Welded connection of roof bracings
(Part - A)



Welded connections of Part - B

Connections of Part-A were found both bolted & welded. In Part-B, connections were found as welded. But in structural drawing, no connection details was provided.

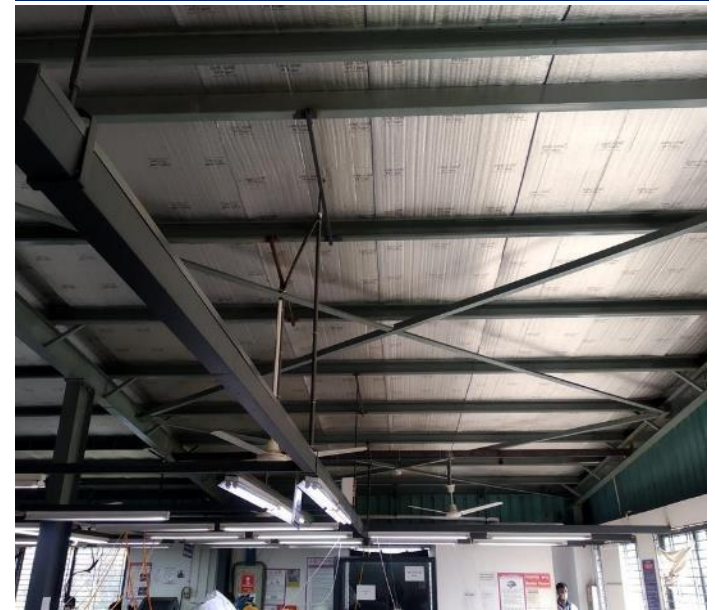


Stair on south-west side

There are two steel stairs on North-West and South-West side of Part – A of the structure. No details of any of the stairs was provided in the drawing. Moreover, bracing layout and bracing details were not incorporated in the drawing.



Vertical bracing at GF of Part - A

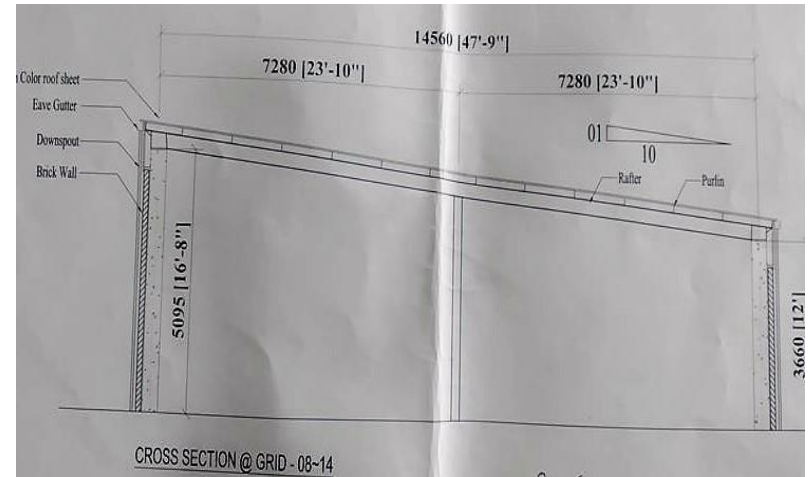


Roof bracing on Part - A



Framing system of Part - B

The provided section of Part – B has no dimensions mentioned. Moreover, section of grid- 1, 7 & 15 was not included in the provided as-built drawings.



Section of Part – B without any dimensions

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. During the inspection, the drawings were found incomplete and design report was not available which is required to be prepared in compliance with section 1.9.1 (Part-6, BNBC 2006).

Lack of lateral stability system



Interior of the building

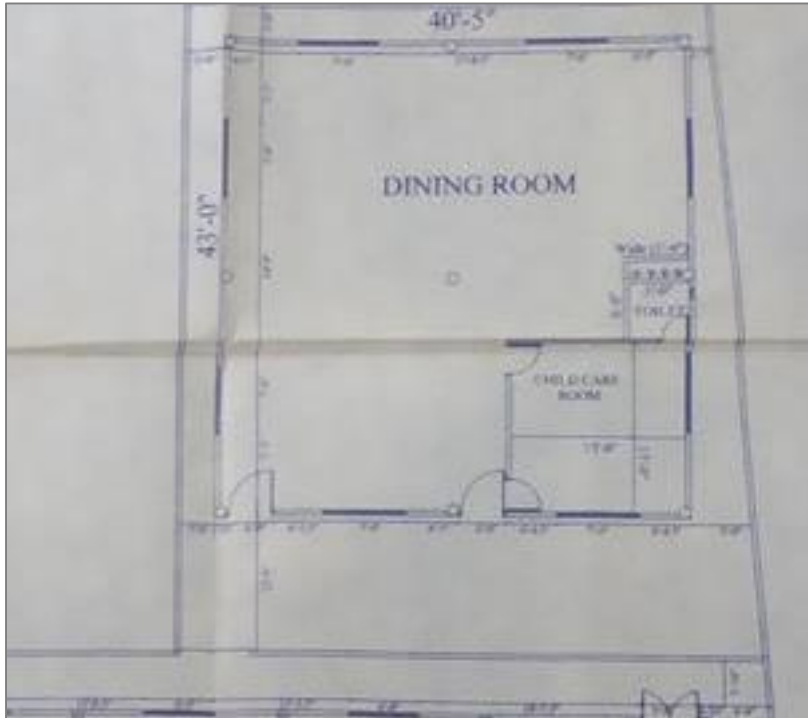


RC column to rafter connection

The steel roof shed did not have specified load path to transfer lateral loading. Also, apparently unclear connection between RC column to rafter was found. Factory engineer is required to specify the load path and connection of the structure. Moreover, check the lateral stability of the shed as well as the adequacy of the connection.

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Lack of as-built drawings



Approved layout plan from DIFE



Dining Shed

There were no credible as-built drawings and documents to review except permit drawing of Industrial layout from DIFE. Provided drawings were insufficient to represent the as-built structure. Factory engineer is required to survey the structures and prepare as-built drawings, in compliance with section 1.9.1.2 as per BNBC 2006.



Interior of the building



Ariel view

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. During the inspection, the as built drawings & design report has not been found which is required to be prepared in compliance with section 1.9.1 (part-6, BNBC).

Problems Observed

Production Building:

Item-01: Lack of information in drawing.

Item-02: Lack of lateral stability system (Part-B).

Dining Shed:

Item-03: Lack of as-built drawings.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Lack of information in drawing. (Production Building)	Factory engineer is required to survey the whole structure and prepare “as constructed” drawings (Architectural & Structural), in compliance with section 1.9.1.2 as per BNBC 2006.	6-weeks
02	Lack of information in drawing. (Production Building)	Building engineer to prepare the design document including a design report for the full structure, in compliance with section 1.9.1.1 as per BNBC 2006.	6-weeks
03	Lack of lateral stability system. (Production Building Part-B)	Factory engineer is required to check the lateral stability of the structure and adequacy of the connections as part of Engineering Assessment (EA) in compliance with section 1.9.1 (part-6, BNBC 2006).	6-weeks
04	Lack of lateral stability system. (Production Building Part-B)	Complete implementation of any remedial works deemed necessary by the Engineering Assessment (EA).	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
05	Lack of as-built drawings. (Dining Shed)	Building Engineer to survey the whole structure and prepare accurate as-built drawings in compliance with section 1.9.1.2 as per BNBC.	6-weeks
06	Lack of as-built drawings. (Dining Shed)	Building engineer to prepare the design document including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.	6-weeks
07	Lack of as-built drawings. (Dining Shed)	Complete implementation of any remedial works deemed necessary by the Design Report.	6-months