

JL SWEATER LIMITED-EXTENDED BUILDING

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5th September 2021

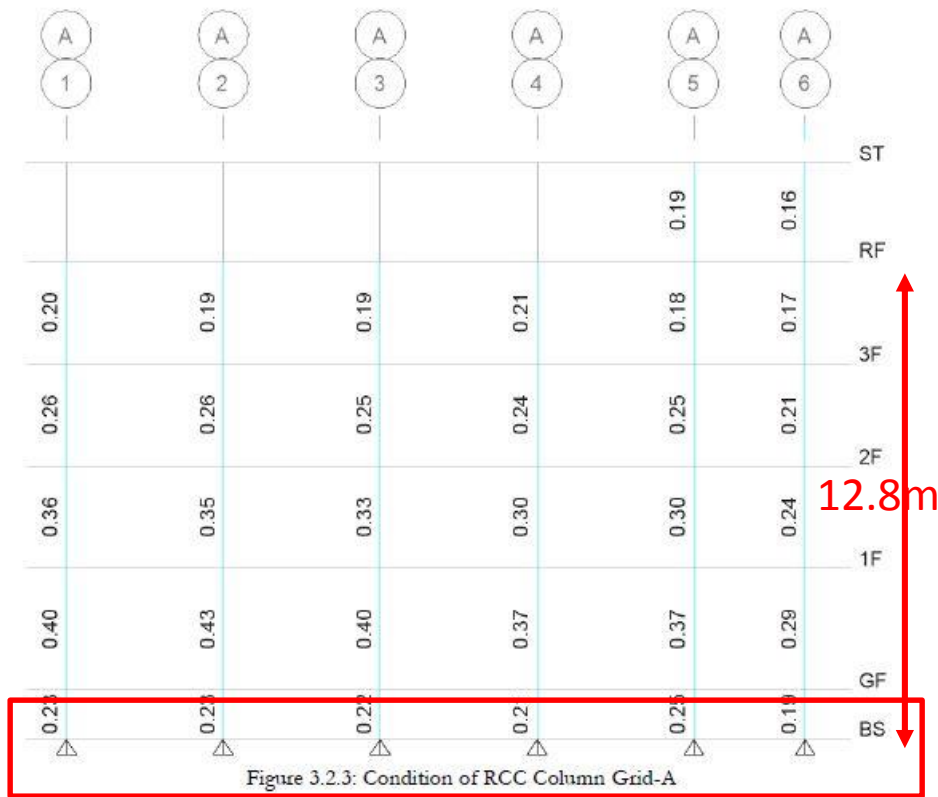


Buildings Information

1. Building 1 (G+3) (reinforced concrete structure)
2. Building 2 (single storied RCC building)
3. Shed-1(single storied steel structure)

Observations

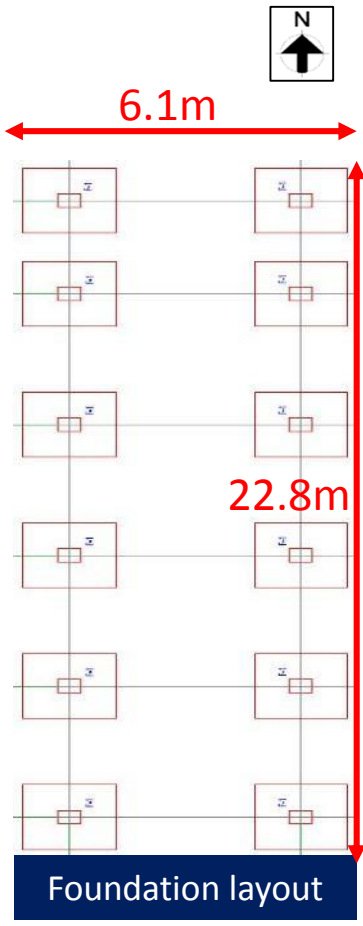
Overturning capacity of building to be checked



Pin connection considered at support



Width and height of Building



The length and width of structure are 22.8m and 6.1 m respectively. The height of the building is 12.8 m. The building has cantilever along the length. Hinge support for foundation to column joint is considered for analysis. As the building is single bay structure, height is more and have cantilever in critical direction, the factory engineer should check the sway & over-turning capacity of the building against the lateral loadings and revise the foundation adequacy accordingly.

Expansion joint filled with rigid material



Expansion joint filled with rigid material at every floor

Expansion joint with adjacent building was found filled with rigid material which may result in development of crack and falling hazard during an earthquake or lateral movement of the buildings. Factory is required to fill the gap with any flexible material suggested by the structural/fire engineer.

Water stagnant on roof slab



Water stagnant on roof slab

Water stagnant was found on roof slab. Factory is required to provide necessary slope and improve drainage system to prevent water stagnant.

Exposed reinforcement left at roof level



Exposed reinforcement left at Staircase



Exposed reinforcement left at roof

Exposed reinforcement is left at roof level & staircase which was prone to corrosion. Factory is required to provide rust proof paint on exposed reinforcement to protect from corrosion.

Lack of as-built drawing



Rafter connected with column rebar

No as-built drawing was provided for the stair roof shed. This shed is made of steel rafter and purlin . The rafters are connected with reinforcement of the stair columns by welding. Factory engineer is required to produce as-built drawing of this shed.



Stair roof shed at north side

Sign of water stagnant on roof slab



Water stagnant on roof slab

Sign of water stagnant was found on roof slab. Factory is required to provide necessary slope and improve drainage system to prevent water stagnant.

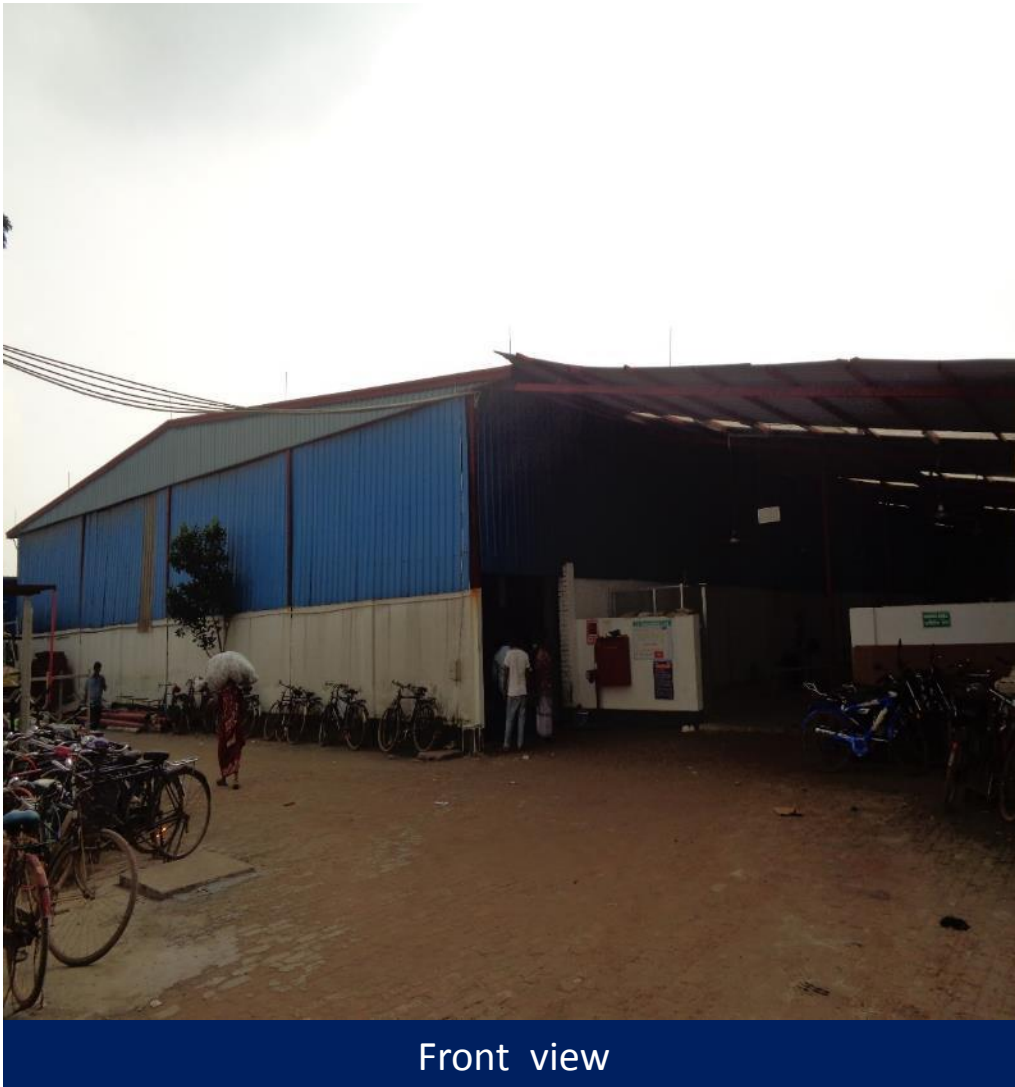
Exposed reinforcement left at roof level



Exposed reinforcement left at Staircase

Exposed reinforcement is left at roof level & staircase which was prone to corrosion. Factory is required to provide rust proof paint on exposed reinforcement to protect from corrosion.

Design Report needs to be prepared



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. At the time of inspection, only as-built drawing was available, but no design report was available which is required to be prepared in compliance with section 1.9.1.1 (part-6, BNBC).

Lack of lateral stability



No roof bracing/compression member



Non-engineered connections

No roof bracing or compression member provided along long direction. There are some non engineered connections between column & rafter. Therefore, there is no obvious lateral stability along the long direction. Factory engineer is required to carry out the lateral stability check for this steel shed.

Problems Observed

Building-1:

Item 1: Overturning capacity of building to be check

Item 2: Expansion joint filled with rigid material

Item 3: Water stagnant on the roof slab

Item 4: Exposed reinforcement left at roof level

Item 5: Lack of as-built drawings

Building-2:

Item 6: Water stagnant on the roof slab

Item 7: Exposed reinforcement left at roof level

Steel Structure Shed-1:

Item 8: Design Report needs to be prepared

Item 9: Lack of lateral stability

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Overturning capacity of building to be check (Building-1)	Carry out Engineering Assessment to check the sway and overturning capacity of the building.	6-weeks
02	Overturning capacity of building to be check (Building-1)	Check the foundation adequacy.	6-weeks
03	Overturning capacity of building to be check (Building-1)	Implement any remediation work suggested by EA if required.	6-months
04	Expansion joint filled with rigid material (Building-1)	Factory is required to fill the gap with any flexible material suggested by the structural/fire engineer.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
05	Water stagnant on the roof slab (Building-1)	Factory is required to provide necessary slope and improve drainage system to prevent water stagnant.	6-months
06	Exposed reinforcement left at roof level (Building-1)	Factory is required to provide rust proof paint on exposed reinforcement to protect from corrosion.	6-months
07	Lack of as-built drawing (Building-1- Stair roof shed)	Factory engineer is required to produce as-built drawing of this shed.	6-weeks
08	Water stagnant on the roof slab (Building-2)	Factory is required to provide necessary slope and improve drainage system to prevent water stagnant.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
09	Exposed reinforcement left at roof level (Building-2)	Factory is required to provide rust proof paint on exposed reinforcement to protect from corrosion.	6-months
10	Design Report needs to be prepared (Steel Structure Shed-1)	Factory engineer is required to prepared the Design Report in compliance with section 1.9.1.1 (part-6, BNBC).	6-weeks
11	Design Report needs to be prepared (Steel Structure Shed-1)	Implement any remediation work if required.	6-months.
12	Lack of lateral stability (Steel Structure Shed-1)	Carry out Engineering Assessment and check the lateral stability of the structure in compliance with part-6, BNBC.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
13	Lack of lateral stability (Steel Structure Shed-1)	Implement any remediation work as per EA.	6-months