AB APPARELS LTD (extension)

225, SINGAIR ROAD, HEMAYETPUR, SAVAR
(23.790530, 90.265082)
12th September 2021

RSC RMG SUSTAINABILITY COUNCIL

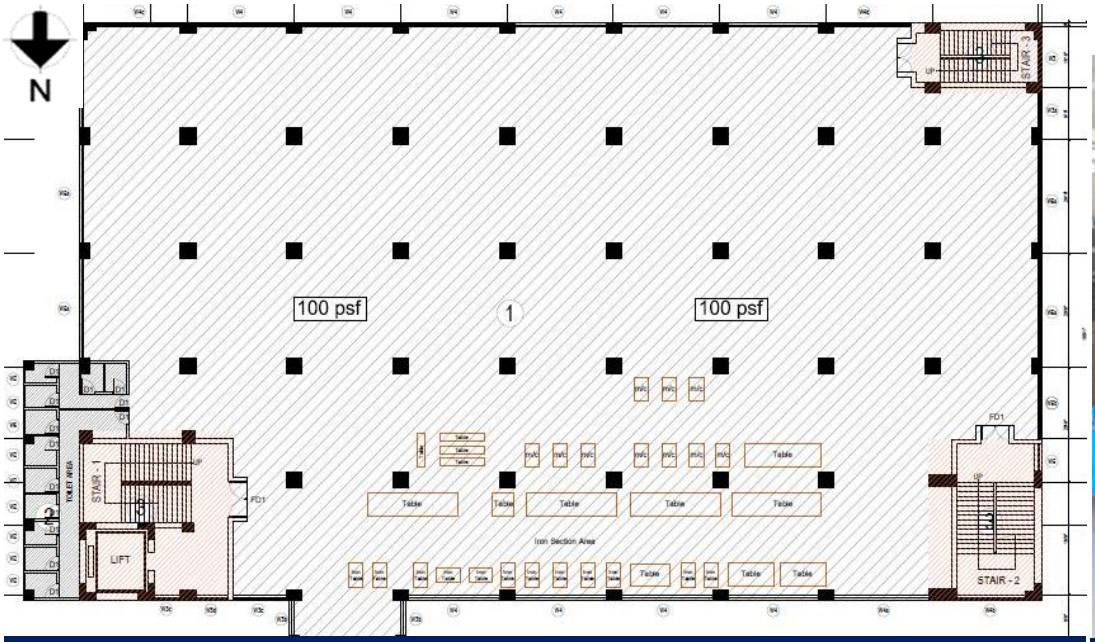
Buildings Information

1. Building 1 (Wash Building) (G+2) (reinforced concrete structure)
2. Building 2 (Chemical & Boiler Building) (G+1) (reinforced concrete structure)
3. Building 3 (Compressor & Sub-Station Building) (G+1) (reinforced concrete structure)

Observations

Prepared load plan to be revised

Observations: Building-1 (Wash Building)



Live load plan- 2nd floor 4.7 kPa (100 psf)

Storage on 2nd floor

Live load on typical floor is considered as 4.7 kPa in prepared load plan. As per BNBC- Part 6, live load for light storage areas is required to be considered minimum 6 kPa. However, the factory engineer is required to revise the load plan as per BNBC requirement and check the design accordingly.

INDUSTRIAL, STORAGE & HAZARDOUS (Occupancy - G, H & J)	Workshop, factory, warehouse	1 Light workroom without storage	3.0	2.7
		2 Machinery hall & circulation area	4.0	4.5
		3 Factory, workshop etc.	5.0	4.5
		4 Manufacturing : light	6.0	4.5
		heavy	12.0	9.0 (5)
		ice	15.0	9.0 (5)
		5 Printing plant :		(5)
		Press room	7.0	11.0
		Composing and linotype room	5.0	9.0 (5)
		Paper storage room	12.0	9.0 (5)
		6 Motor room, fan room etc. including the weight of machinery	7.5	4.5
		7 Cold storage, grain storage	15.0	9.0 (5)
		8 Storage warehouses : light	6.0	(5) 4.5
		heavy	12.0	9.0
		9 Foundries	20.0	12.0

Live load table (BNBC part-6)

Observations: Building-1 (Wash Building)

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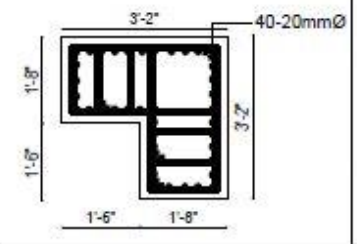
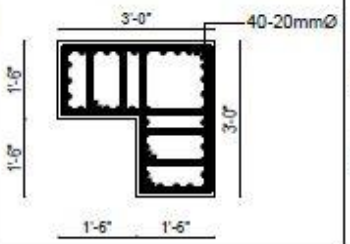
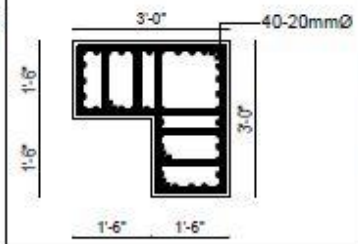
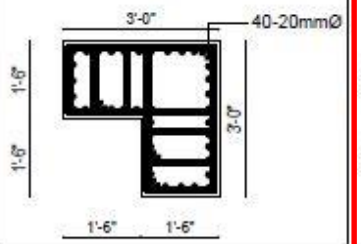
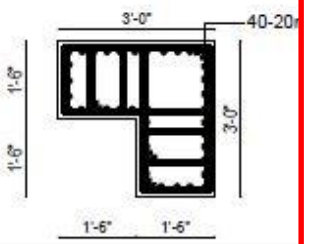
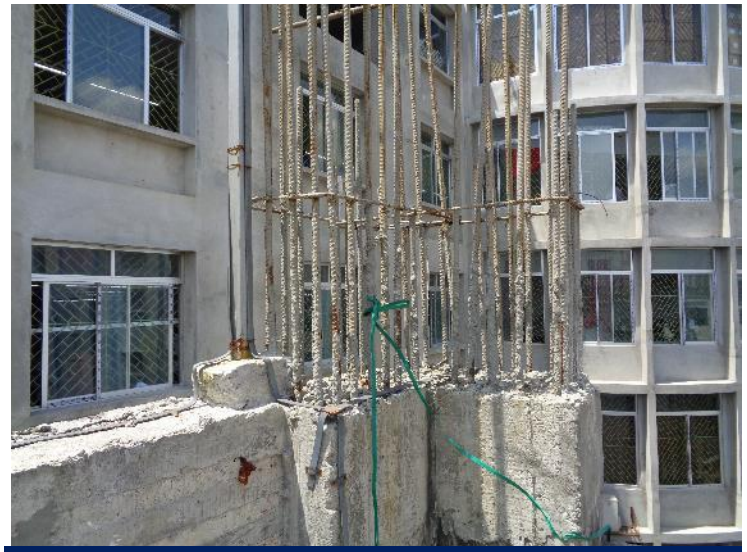
Inconsistencies in as-built drawing

Observation: Building-1 (Wash Building)

COLUMN NOS.	BELOW GROUND LEVEL	GROUND FLOOR	1ST FLOOR	2DN FLOOR	3RD FLOOR - ROOF
LC1					

40-rebar are shown for column LC-1 at 3rd floor (existing roof)

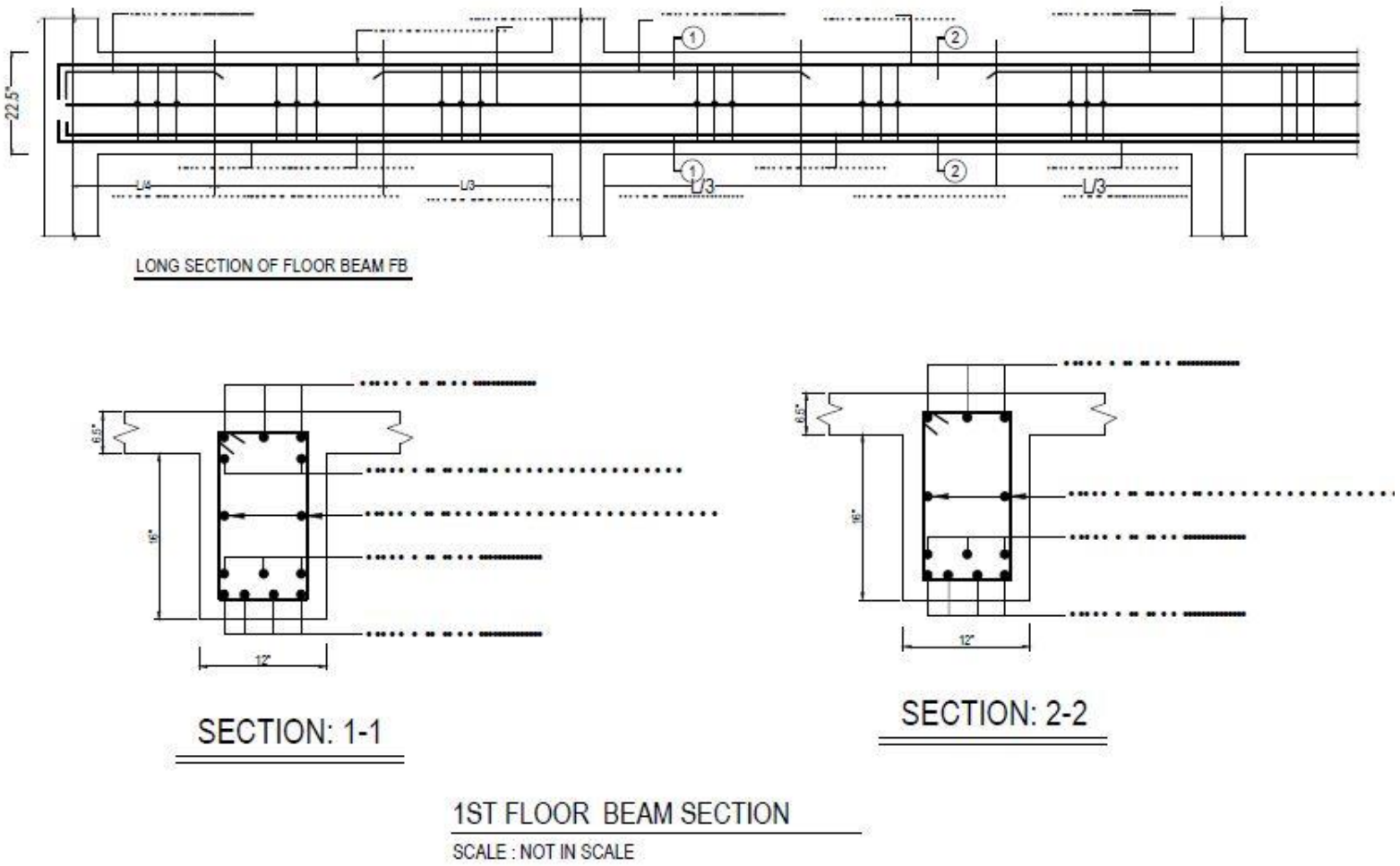


36-rebar at grid L-2

38-rebar at grid B1-9A

40-rebar are shown in schedule for column LC-1 at 3rd floor (current roof), but 36, 39, 38 rebar found in different locations. Factory engineer is required to update the as-built structural drawing.

Observation: Building-1 (Wash Building)



Reinforcement diameter is not shown in beam section.

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Observation: Building-1 (Wash Building)

Falling Hazard

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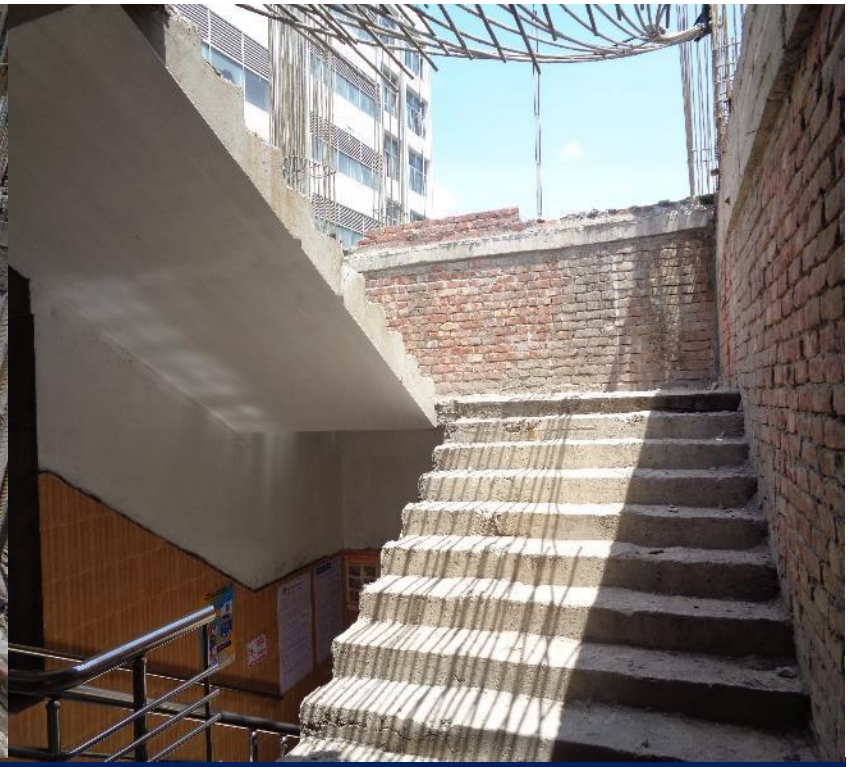


Parapet/railing was missing at several location on roof and staircase

Factory is required to provide parapet/railing at all locations of roof and staircase to avoid possible falling hazard.

Observation: Building-1 (Wash Building)

Design Report needs to be prepared

Observations: Building-2 (Chemical & Boiler Building)

Roof

North view

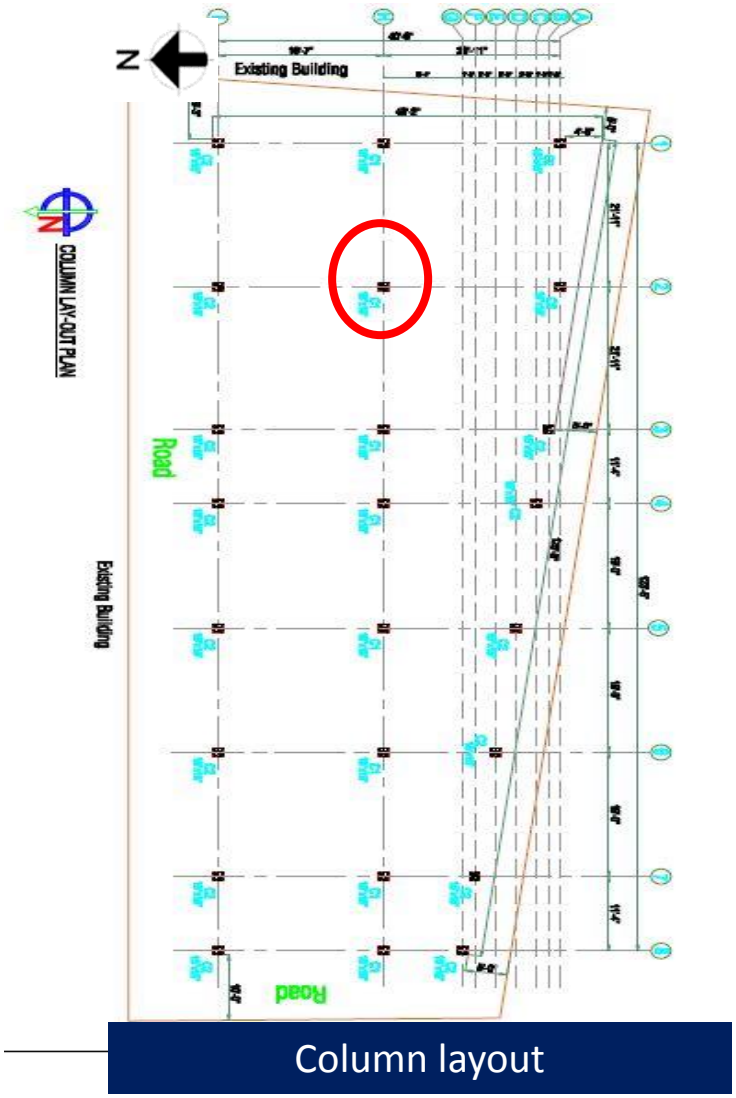
As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC. At the time of inspection, no design report was available which is required to be prepared in compliance with section 1.9.1.1 (part-6, BNBC).

Observations: Building-2 (Chemical & Boiler Building)

Column appears to be slender

Observations: Building-2 (Chemical & Boiler Building)

Column appeared to be slender with long unsupported length



Column layout

Cursory calculation shows that slenderness in highlighted columns exceeds normal design limit due to long unsupported length. Factory engineer is required to carryout adequacy check of the highlighted column considering slenderness effect.

Observations: Building-2 (Chemical & Boiler Building)

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Falling Hazard

Observation: Building-2 (Chemical & Boiler Building)

Parapet/railing was missing at several location of roof and staircase

Factory is required to provide parapet/railing at all locations of roof and staircase to avoid possible falling hazard.

Observation: Building-2 (Chemical & Boiler Building)

Design Report needs to be prepared

Observations: Building-3 (Compressor & Substation Building)

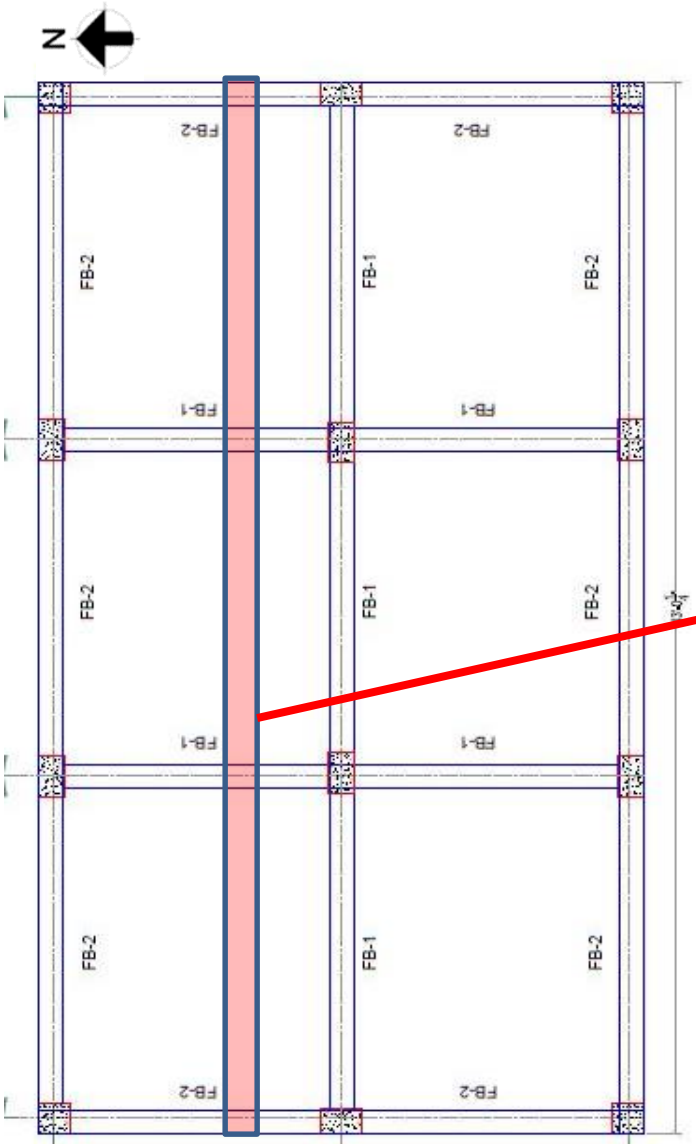
Front view

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

Observations: Building-3 (Compressor & Substation Building)

Discrepancy in as-built drawing

Observation: Building-3 (Compressor & Substation Building)



Extra beam found on roof level but not shown in beam layout

Extra beam at roof level

Extra beam found on roof level but not shown in beam layout. Factory engineer is required to update the as-built structural drawing.

Observation: Building-3 (Compressor & Substation Building)

Problems Observed

Building-1 (Wash Building)

Item 1: Prepared load plan to be revised
Item 2: Inconsistency in the as-built drawing
Item 3: Falling hazard

Building-2 (Chemical & Boiler Building)

Item 4: Design Report needs to be prepared
Item 5: Column appears to be slender
Item 6: Falling hazard

Building-3 (Compressor & Substation Building)

Item 7: Design Report needs to be prepared
Item 8: Discrepancy in as-built drawing

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Prepared load plan to be revised (Building-1 (Wash Building))	Produce and actively manage a set of floor live load plan following BNBC minimum live load requirement and considering foundation & column capacity of the building.	6-weeks
02	Prepared load plan to be revised (Building-1 (Wash Building))	Implement floor load plan.	6-months
03	Inconsistency in the as-built drawing (Building-1 (Wash Building))	The factory engineer is required to survey the structure and update the as-built structural drawing.	6-weeks
04	Falling hazard (Building-1 (Wash Building))	Factory is required to provide parapet/railing at all locations of roof and staircase to avoid possible falling hazard.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
05	Design Report needs to be prepared (Building-2 (Chemical & Boiler Building))	Factory engineer is required to prepare a Design Report in compliance with section 1.9.1.1 (part-6, BNBC).	6-weeks
06	Design Report needs to be prepared (Building-2 (Chemical & Boiler Building))	Implement any remediation work if required.	6-months
07	Column appears to be slender (Building-2 (Chemical & Boiler Building))	Factory engineer is required to carryout adequacy check of the highlighted column considering slenderness effect.	6-weeks
08	Column appears to be slender (Building-2 (Chemical & Boiler Building))	Implement any remediation work if required.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
09	Falling hazard (Building-2 (Chemical & Boiler Building))	Factory is required to provide parapet/railing at all locations of roof and staircase to avoid possible falling hazard.	6-weeks
10	Design Report needs to be prepared (Building-3 (Compressor & Substation Building))	Factory engineer is required to prepare a Design Report in compliance with section 1.9.1.1 (part-6, BNBC).	6-weeks
11	Design Report needs to be prepared (Building-3 (Compressor & Substation Building))	Implement any remediation work if required.	6-months.
12	Discrepancy in as-built drawing (Building-3 (Compressor & Substation Building))	The factory engineer is required to survey the structure and update the as-built structural drawing.	6-weeks