Renown Apparels Ltd. (11800)

Bhatiary Link Road (South Side), Barodighir Par, Hathazari, Chittagong – 4335

(+22.348568N, 91.796524E)

20.August.2014

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Identified Priority 1 Concerns

1st Priority 1 Concern

High stresses to internal columns, factor of safety between 1.25 & 1.50 based on current loading.

If all floors are loaded to 2kPa (40psf) the columns would still be overstressed.

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Identified Priority 2 Concerns

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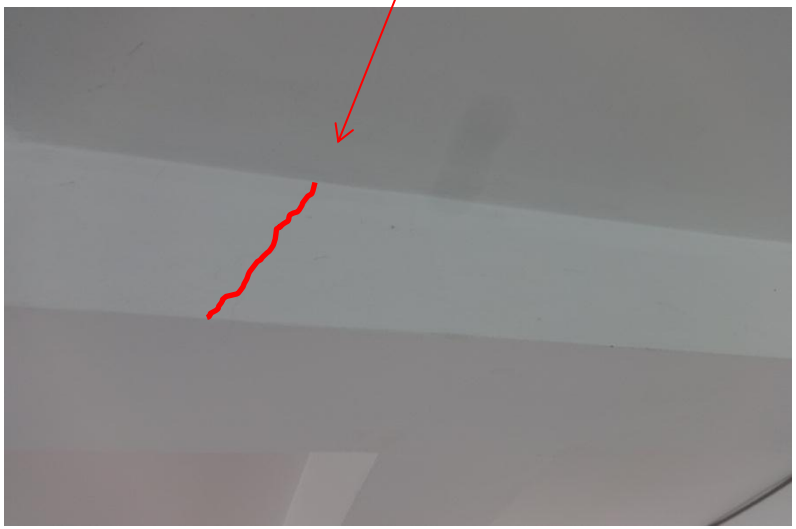
1st Priority 2 Concern



Shear cracking observed at beam – beam connections.

The column grid of the building is staggered resulting in multiple beam – beam connections.

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2nd Priority 2 Concern

Plinths have been constructed on the slab around wash room areas & cracks were observed in the beams below.

150mm – 250mm plinths constructed on slab around the washing area

The plinth will weigh up to 5.0kPa.
(250/1000) x 20 = 5.0kPa

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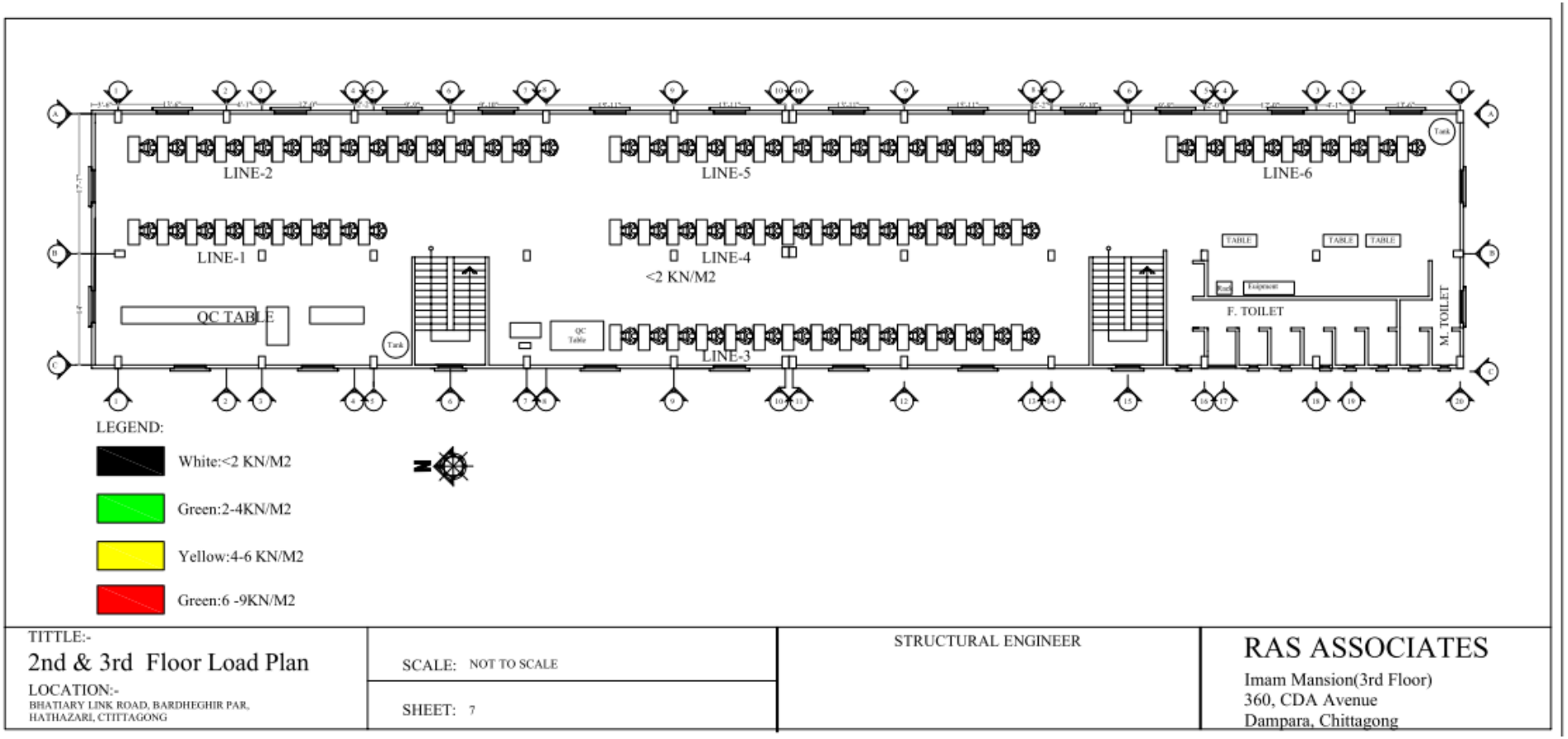
3rd Priority 2 Concern

Loading plans exist for the structure, but are not displayed.



TITTLE:-
2nd & 3rd Floor Load Plan

LOCATION:-
BHATIARY LINK ROAD, BARDHEGHIR PAR, HATHAZARI, CTITTAGONG

SCALE: NOT TO SCALE

SHEET: 7

STRUCTURAL ENGINEER

RAS ASSOCIATES
Imam Mansion(3rd Floor)
360, CDA Avenue
Dampara, Chittagong

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Identified Priority 3 Concerns

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1st Priority 3 Concern

The 30,000 litre water tank on the roof is leaking or overflowing.

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Overall Stability System

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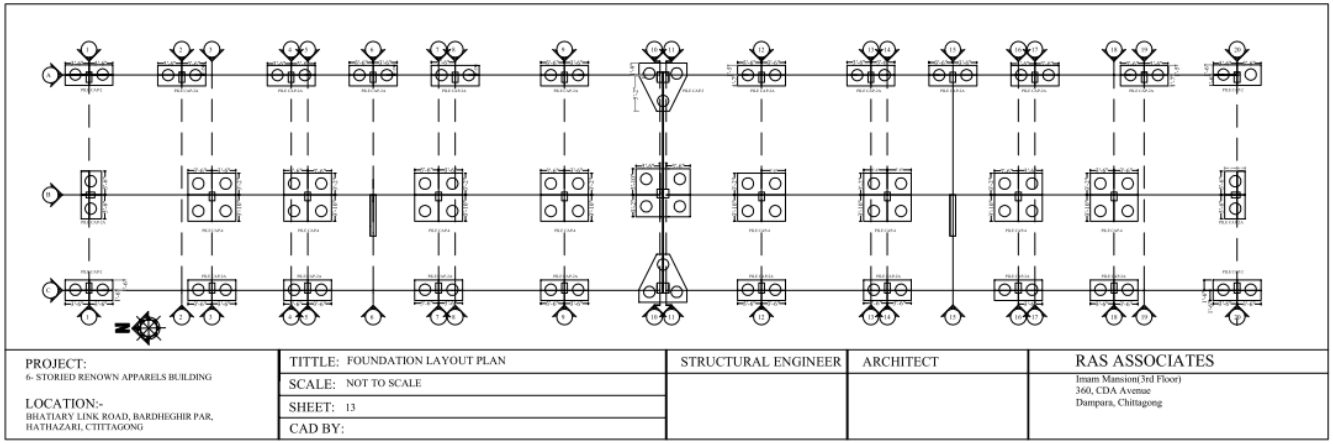

PROJECT: 6- STORIED RENOWN APPARELS BUILDING LOCATION:- BHATIARY LINK ROAD, BARDHEGHIR PAR, HATHAZARI, CTITTAGONG	TITTLE: FOUNDATION LAYOUT PLAN SCALE: NOT TO SCALE SHEET: 13 CAD BY:	STRUCTURAL ENGINEER	ARCHITECT	RAS ASSOCIATES Imam Mansion(3rd Floor) 360, CDA Avenue Dampara, Chittagong

The building appeared to feature two shear walls between basement and ground floors, however, these did not correspond with foundations and do not run the height of the building. Therefore will have no discernable contribution towards overall stability. Stability was achieved through sway action between beams and columns and masonry infill walls.

We require that these items be investigated in a Detailed Engineering Assessment.

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Water Ingress at Roof Level

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No waterproofing membrane was visible on the roof of the building. This means that any cracks in the surface finishes on the roof will allow water to seep into the concrete slab beneath the finishes, and cause corrosion of the reinforcing steel.

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Priority Actions

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Problems Observed Summary

ITEM 1:	**(Priority 1)**	**High stresses to internal columns, factor of safety between 1.5 & 1.86 based on current loading.**
ITEM 2:	**(Priority 2)**	**Shear cracking observed at beam – beam connections.**
ITEM 3	**(Priority 2)**	**Plinths have been constructed on the slab around wash room areas & cracks were observed in the beams below.**
ITEM 4:	**(Priority 2)**	**There is no obvious stability system for the building.**
ITEM 5:	**(Priority 2)**	**Loading plans exist for the structure, but are not displayed.**
ITEM 6:	**(Priority 3)**	**The 30,000 litre water tank on the roof is leaking or overflowing.**
ITEM 7:	**(Priority 3)**	**There is no waterproof membrane on the roof.**

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Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Priority 1 - High stresses to internal columns, factor of safety between 1.5 & 1.86 based on current loading.	Ensure that the slabs are not loaded above 2.0kPa (40psf).	Immediate - Now
2	Priority 1 - High stresses to internal columns, factor of safety between 1.5 & 1.86 based on current loading.	Carry out a Detailed Engineering Assessment on the columns, taking 100mm core samples where necessary to establish the strength.	6-weeks
3	Priority 1 - High stresses to internal columns, factor of safety between 1.5 & 1.86 based on current loading.	Carry out any recommendations highlighted in the Detailed Engineering Assessment.	6-months
4	Priority 2 - Shear cracking observed at beam - beam connections.	Carry out a Detailed Engineering Assessment on the beams, removing plaster, to establish the extent of the cracks in the beams and what load they can safely support.	6-weeks
5	Priority 2 - Shear cracking observed at beam - beam connections.	Carry out actions from the Detailed Engineering Assessment.	6-months
6	Priority 2 - Plinths have been constructed on the slab around wash room areas & cracks were observed in the beams below.	Carry out a Detailed Engineering Assessment to determine if the slab is adequate to support the higher dead load of the plinth.	6-weeks
7	Priority 2 - Plinths have been constructed on the slab around wash room areas & cracks were observed in the beams below.	Carry out actions highlighted in the Detailed Engineering Assessment, removing or lowering the heights of the plinths as required.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
8	Priority 2 - There is no obvious stability system for the building.	Carry out a Detailed Engineering Assessment on the building to verify that it is stable under lateral loading.	6-weeks
9	Priority 2 - There is no obvious stability system for the building.	Carry out all recommendations of the Detailed Engineering Assessment.	6-months
10	Priority 2 - Loading plans exist for the structure, but are not displayed.	Ensure loading plans are displayed and actively managed at each level.	6-weeks
11	Priority 3 - The 30,000 litre water tank on the roof is leaking or overflowing.	If the tank is to remain repair the tank appropriately, draining the tank if necessary to facilitate the repair.	6-months
12	Priority 3 - There is no waterproof membrane on the roof.	Cover the concrete roofs with a suitable waterproofing membrane, e.g. waterproof screed.	6-months