

AB Apparels Ltd

225, Singair Road, Hemayetpur, Savar, Bangladesh.

(23.791290,90.265415)

9th November, 2016





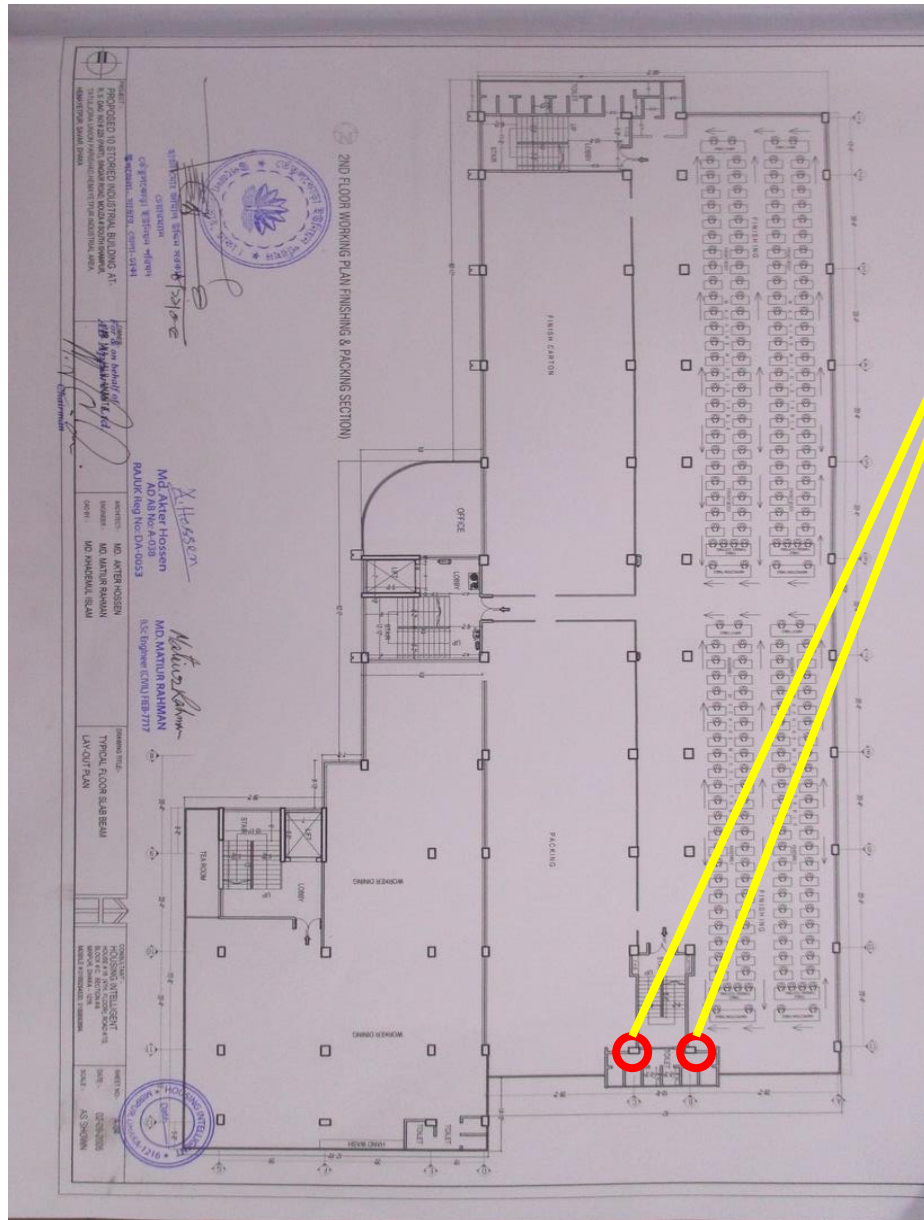
Observations



Main Production Building

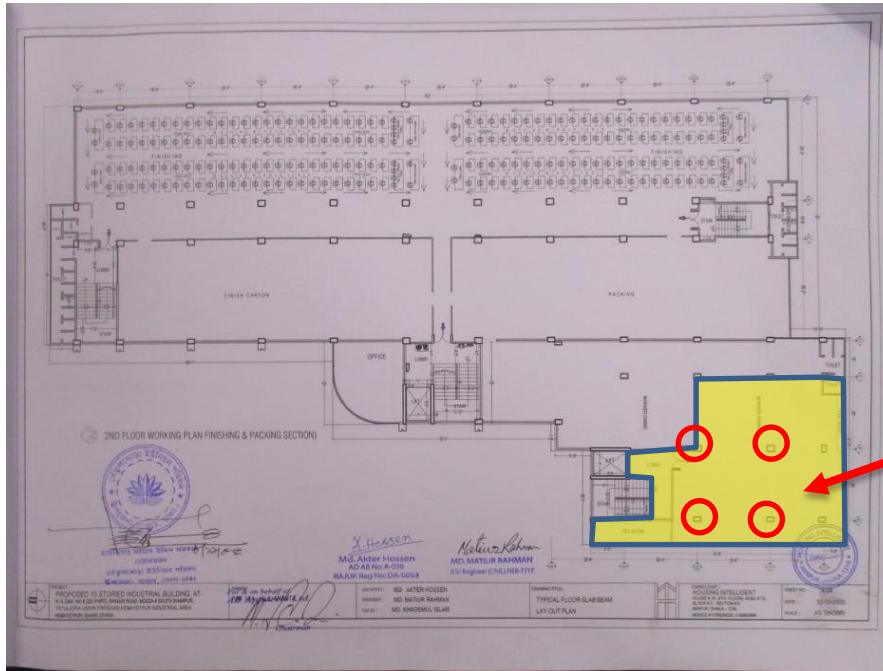


High Stressed Columns in Building.



Based on the load
rundown analysis with
the agreed minimum
design live load
assignment, the column
at the circled area has
been found to possess
very low factor of safety
with respect to its load
carrying capacity, giving
a firm AMBER warning.

High Stressed Columns in Building.



Build up found on the highlighted area of 2nd Floor. High Stack of finished goods have been observed.

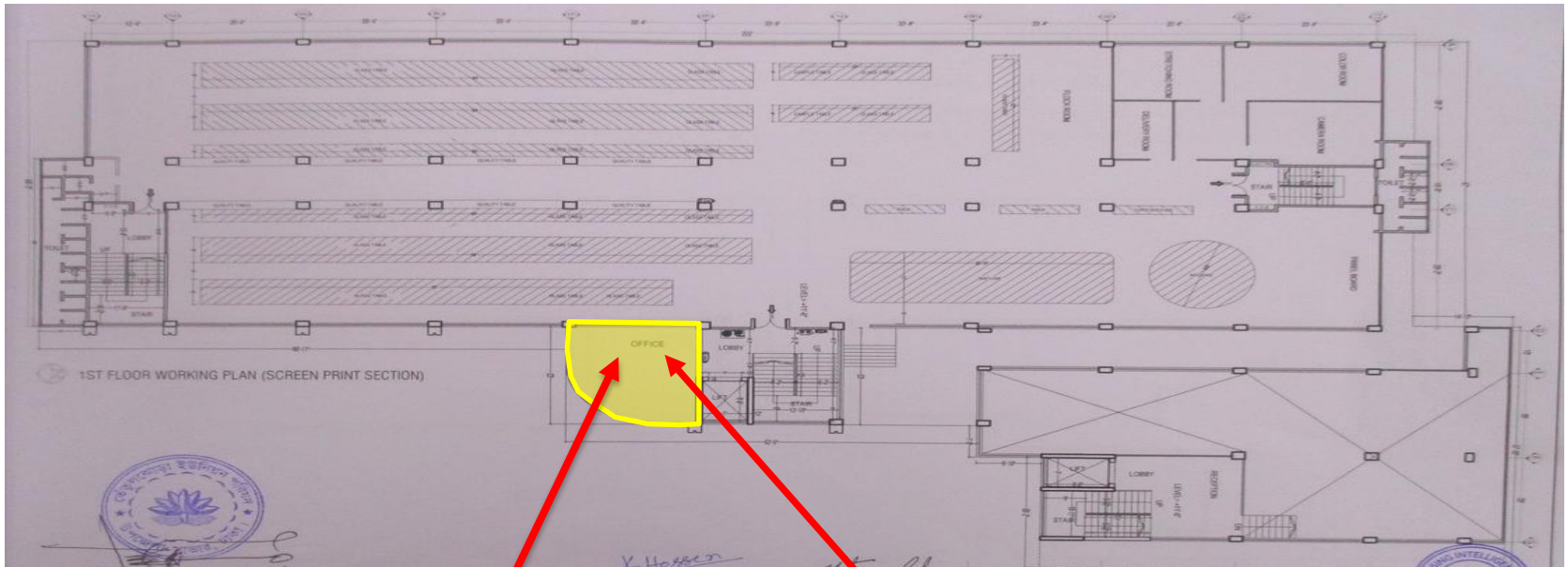
Based on analysis by considering live loads according to load plan and build up loads, highlighted column stresses are found below normal design limit.



High Stressed Columns in Building.



Localized areas of High Loading



High Stack of Fabric Roll has been observed on 1st Floor.

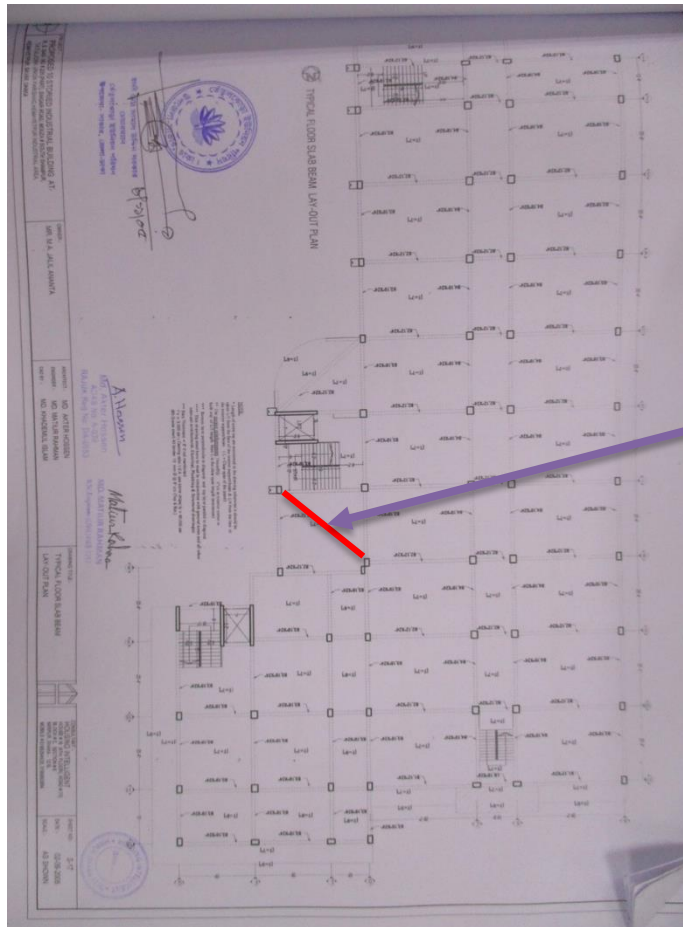


High Stack of finished goods observed on 6th Floor.

Localized areas of High Loading

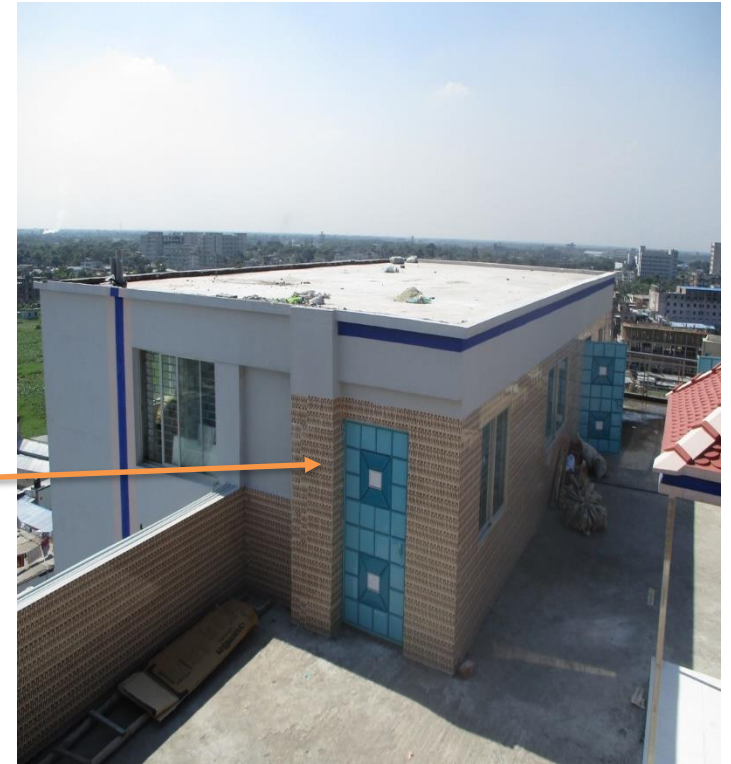
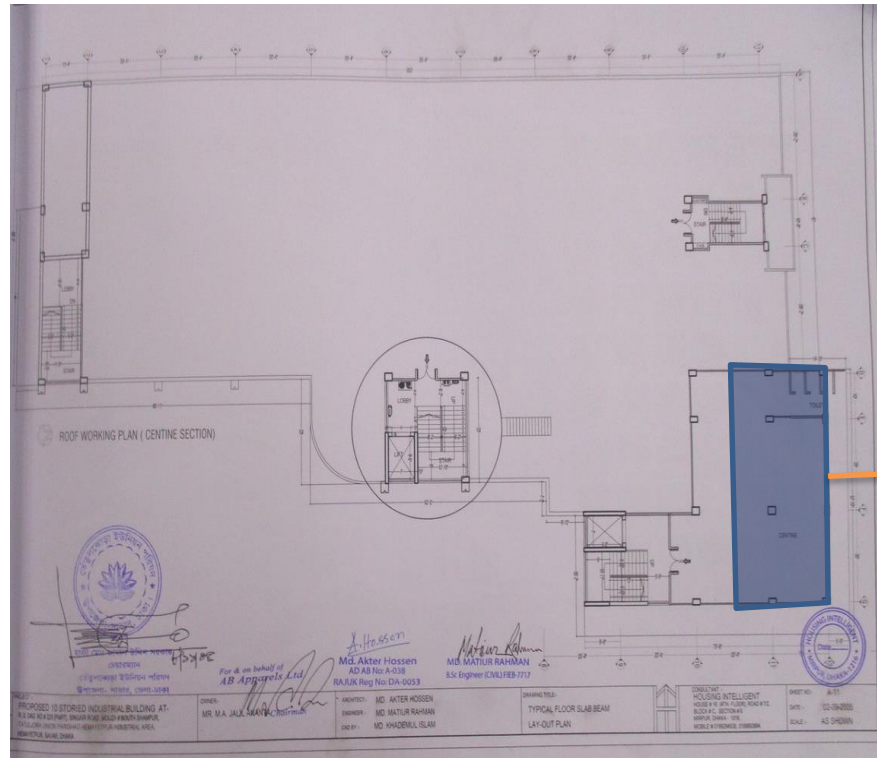


Inconsistencies between permit drawings and as-built structures



A inclined beam was found on 3rd Floor level which was not mentioned on beam layout

Inconsistencies between permit drawings and as-built structures



Mismatch found in As Built Drawing of Roof

Inconsistencies between permit drawings and as-built structures



Hairline cracks on beam



Hairline cracks found in beam and slab soffits in almost every floor. The cause of cracking must be checked and suggested if the slab is adequate to bear loading from upper floor.

Hairline cracks on beam



Utility Building



Exposed Bar on roof



The rebar on roof of the Utility Building found to be exposed which might me corroded in future if not covered



No Edge protection system



No Edge protection system (handrail/ Parapet wall) has been provided on the roof of the Utility Building

No Edge protection system



Problems Observed

Main Production Building :

Item 1: High Stressed Columns in Building.

Item 2: Localised area of high loading.

Item 3: Inconsistencies between permit drawings and as-built structures.

Item 4: Hairline cracks on beam.

Utility Building :

Item 5: Exposed Rebar on Roof

Item 6: No Edge protection system



Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	High Stressed Columns in Building.	Verify in-situ concrete strength (using min. 4 nos. 100mm dia. Cores and/or assessment of available concrete strength data) and as constructed reinforcement for all columns from 1st phase of construction (Preferably from Ground Floor) .	Immediate - Now
2	High Stressed Columns in Building.	Factory Engineer to review design, loads and column stresses for all columns. Detail Engineering Assessment of as built structure to be commenced as per attached scope.	6-weeks
3	High Stressed Columns in Building.	Produce and actively manage a loading plan for all floors within the building giving consideration to floor capacity and column capacity.	6-weeks
4	High Stressed Columns in Building.	Continue to implement load plan.	6-months
5	High Stressed Columns in Building.	Implement strengthening measures where required by the DEA.	6-months
6	Localized area of high loading	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.	6-weeks
7	Localized area of high loading	Continue to implement load plan.	6-months



Detail Engineering Assessment

This Schedule develops a minimum level of information, Analysis and testing expected as part of a Detail Engineering Assessment.

The Building(s) have been visually assessed and it is deemed necessary that a detailed engineering assessment be carried out by a competent Engineering Team employed by the factory Owner.

This Request should be read in conjunction with the ACCORD DEA guideline , ACCORD standard for Assessment of Structural Integrity of Existing RMG Factory Buildings in Bangladesh (Tripartite Document), the latest version of these document should be referenced. These document also gives guidance on required competency of Engineering Team.

We expect that the following will be carried out:

1. Development of Full Engineering As-Built Drawings showing Structure, loading, elements, dimensions , levels, foundations and framing on Plan, Section and Elevation drawings .
2. The Engineering team are to carry out supporting calculations with a model based design check to assess the safety and serviceability of the building against loading as set out in BNBC-2006, Lower rate provisions can be applied in accordance with the ACCORD DEA guideline , ACCORD standard following international engineering practice, justification for these lower rate provisions must be made.
3. A geotechnical Report describing ground conditions and commenting on foundation systems used/proposed.
4. A report on Engineering tests carried out to justify material strengths and reinforcement content in all key elements studied see ACCORD DEA guideline & ACCORD standard more details.
5. Detailed load plans shall be prepared for each level showing current and potential future loading with all key equipment items shown with associated loads.
6. The Engineering team will prepare an assessment report that covers the following:
 - As-Built drawings including
 - Plans at each level calling up and dimensioning all structural components
 - Cross sectional drawings showing structural beams, slabs, floor to floor heights, roof build-ups and Basic design information of the structure
 - Highlight any variation between As-built compared to the designed structure
 - Results of testing for strength and materials
 - Results of geotechnical assessment and testing/investigation
 - Details of loading, inputs and results of computer modelling
 - Commentary on adequacy/inadequacy of elements of the structure
 - Schedule of any required retrofitting required for safety or performance of Structure

Any proposals for Retrofitting to follow guidance developed in the ACCORD DEA guideline & ACCORD standard (<http://bangladeshaccord.org/factories/resource-centre/>).

Item No.	Observation	Recommended Action Plan	Recommended Timeline
8	Inconsistencies between permit drawings and as-built structures	As part of the DEA comprehensive As-Built drawings are to be produced.	6-weeks
9	Hairline cracks on beam	Sections of plaster finish to beams and slab to be removed to investigate if cracks penetrate the building structure.	6-weeks
10	Hairline cracks on beam	As part of the Detail Engineering Assessment (see Item 1), Building Engineer to carry out design check on beams and slab taking into account the effect of the cracks on the structure	6-weeks
11	Hairline cracks on beam	Carry out any structural remedial works to cracks as required following assessment.	6-months
12	Exposed Bar on roof	provide proper rust proof material.	6-weeks
13	No Edge protection system	Provide proper edge protection on roof.	6-weeks