

Jaroms Industries Ltd. (11719)

13/2 Abdus Satter Master Road, Gazipura

(+ 23.924937N, 90.390430E)

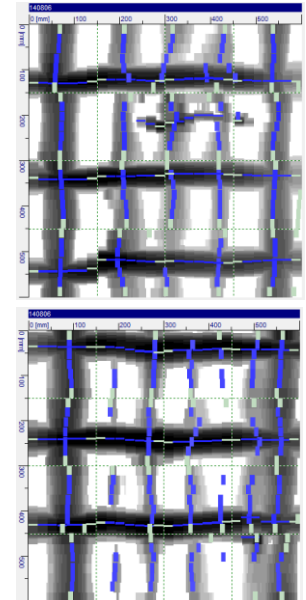
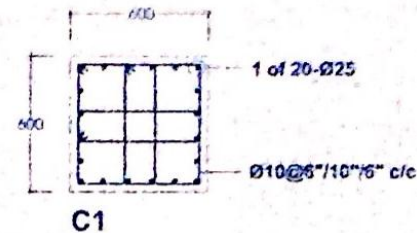
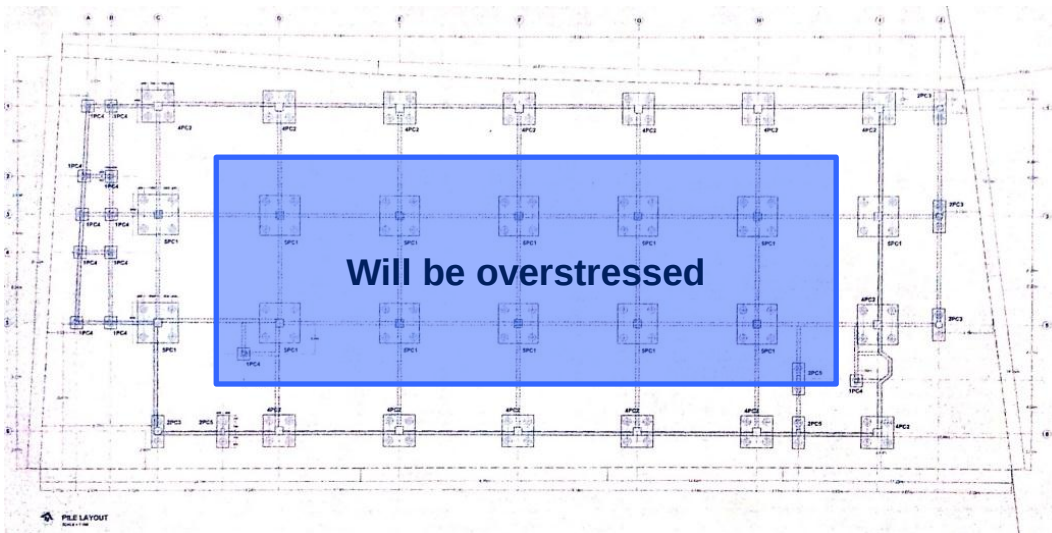
06.AUGUST.2014



Identified Priority 1 Concerns

- If the full construction of 10 storeys takes place, the internal columns at basement level will be overstressed.

If the full construction of the 10 storeys is completed, the internal columns at basement level shown below will be overstressed. The size of these column is 600 x 600 mm at basement level and will carry a full 10 storeys of building with spans of 9.14 m and 8.23 m.



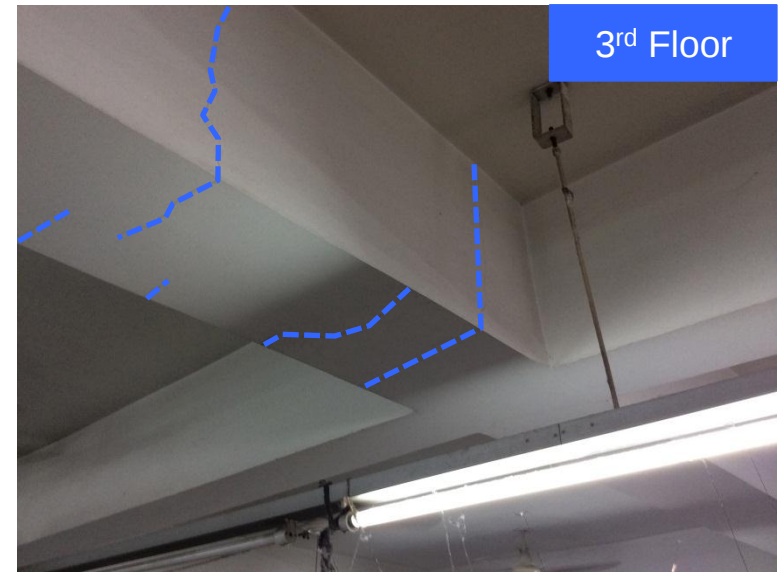
From the information above, for full construction, 10 storeys, the calculation check of these columns show that they will be overstressed (FoS = **1.18**).

Remark: The sizes of the column's rebar are assessed to be the same as those specified on the structural drawings.

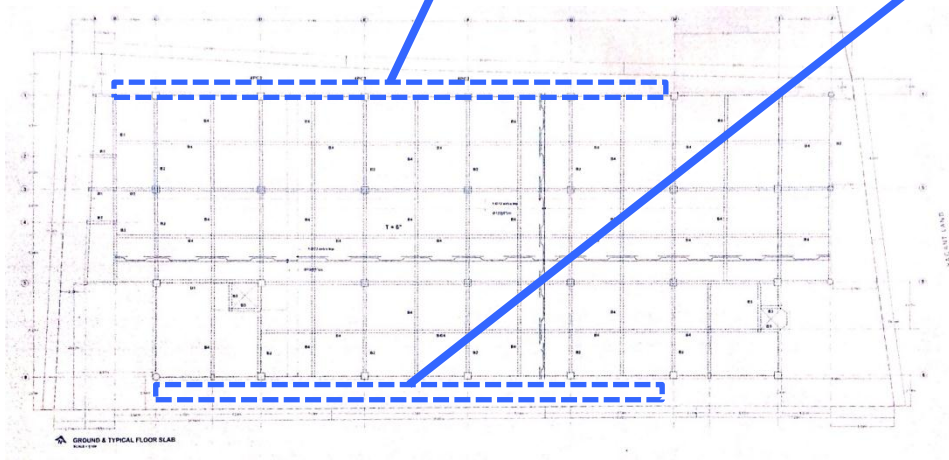
	In situ	Drawing
Size	600 x 600 mm	600 x 600 mm
Vertical rebar	20-Ø25mm (2.73%)	20-Ø25mm (2.73%)
Aggregate	Stone	Stone

Identified Priority 2 Concerns

- Cracks on ground floor, 1st floor, 2nd floor and 3rd floor beams and slab soffits.
- Inadequacies between the drawings and the actual as-built conditions.
- Capacity check of 3rd floor slab supporting water tanks.



Cracks on ground floor, 1st floor, 2nd floor and 3rd floor beams and slab soffits. The cause of cracks should be investigated as part of a DEA, a Detailed Engineering Assessment.



There are cantilevered slabs on 1st floor, 2nd floor and 3rd floor in areas as shown above. However, these cantilevers are not shown on the structural drawings. We recommend a survey of the actual conditions and revise the as-built drawings.



Concerns on the 3rd floor slab supporting water tanks. A capacity check of this slab and related elements needs to be carried out.

Identified Priority 3 Concerns

- Reinforcement left exposed at top level.



Reinforcement is left exposed at top level.

Water Ingress



Water distress was noted on slabs, beams, columns and walls. Water ponding was found on the roof slab.

Priority Actions

Problems Observed Summary

- | | | |
|---------|--------------|--|
| ITEM 1: | (Priority 1) | If the full construction of 10 storeys takes place, the internal columns at basement level will be overstressed. |
| ITEM 2: | (Priority 2) | Cracks on ground floor, 1 st floor, 2 nd floor and 3 rd floor beams and slab soffits. |
| ITEM 3: | (Priority 2) | Inadequacies between the drawings and the actual as-built conditions. |
| ITEM 4: | (Priority 2) | Capacity check of 3 rd floor slab supporting water tanks. |
| ITEM 5: | (Priority 3) | Reinforcement left exposed at top level. |
| ITEM 6: | (Priority 3) | Distress due to water ingress. |

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Priority 1 - If the full construction of 10 storeys takes place, the internal columns at basement level will be overstressed.	Factory Engineer to review design, loads and columns stresses in area identified above. Verify in-situ concrete stresses either by cores or existing cylinder strength data for [the identified columns / cores from 4 columns]. A Detailed Engineering Assessment of Factory to be commenced immediately.	Immediate - Now
2	Priority 1 - If the full construction of 10 storeys takes place, the internal columns at basement level will be overstressed.	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity. The Detailed Engineering Assessment to be completed and any recommended actions completed.	6-weeks
3	Priority 1 - If the full construction of 10 storeys takes place, the internal columns at basement level will be overstressed.	Maintain and continue to implement floor load plans. If the main DEA recommendation is not to complete the full 10 storeys then this is to be followed.	6-months
4	Priority 2 - Cracks on ground floor, 1st floor, 2nd floor and 3rd floor beams and slab soffits.	Investigate the cause of cracks as part of a Detailed Engineering Assessment. The distress found is to be suitably rectified and then repaired.	6-weeks
5	Priority 2 - Cracks on ground floor, 1st floor, 2nd floor and 3rd floor beams and slab soffits.	Create loading plans for each floor level. Maintain standards of quality control to ensure that loading plan is correctly followed so that problems do not arise in the future. Maintain and enforce the loading plans.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
6	Priority 2 - Inadequacies between the drawings and the actual as-built conditions.	Factory Engineer to survey the actual conditions and revise the drawings. Any results of the Detailed Engineering Assessment which affect the structure should be taken on board.	6-weeks
7	Priority 2 - Inadequacies between the drawings and the actual as-built conditions.	Continue to implement load plan.	6-months
8	Priority 2 - Capacity check of 3rd floor slab supporting water tanks.	Factory Engineer to review design, loads and related elements in area identified above to confirm capacity for this item.	6-weeks
9	Priority 3 - Reinforcement left exposed at top level.	Clean rebar before further construction. For both durability and serviceability, rust proof paint or any appropriate methods is recommended.	6-months
10	Priority 3 - Distress due to water ingress.	Factory Engineer to inspect water damaged structures and repair with a suitable methods. Waterproofing on the roof slab is to be applied. Moreover the roof slab drainage system should be investigated and improved.	6-months