Cotton Clothes (BD) Ltd.

Kazi Tower, 27 Road, Gazipura, Tongi, Gazipur
(23.920254, 90.388785)

8th March 2015

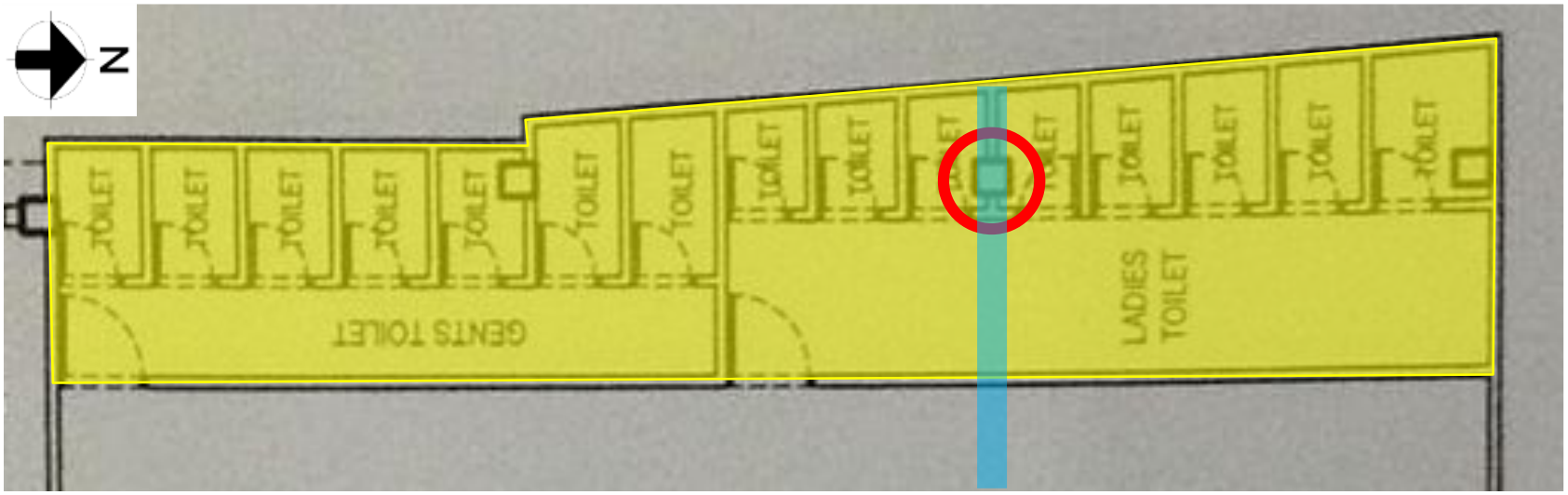
ACCORD on Fire and Building Safety in Bangladesh

ARUP

Observations

Column in toilet area appears overstressed

Observations



Initial calculations indicate that the highlighted column appears to be highly stressed due to façade cantilever and heavy toilet build-up (floor, walls, overhead slab).

Observations

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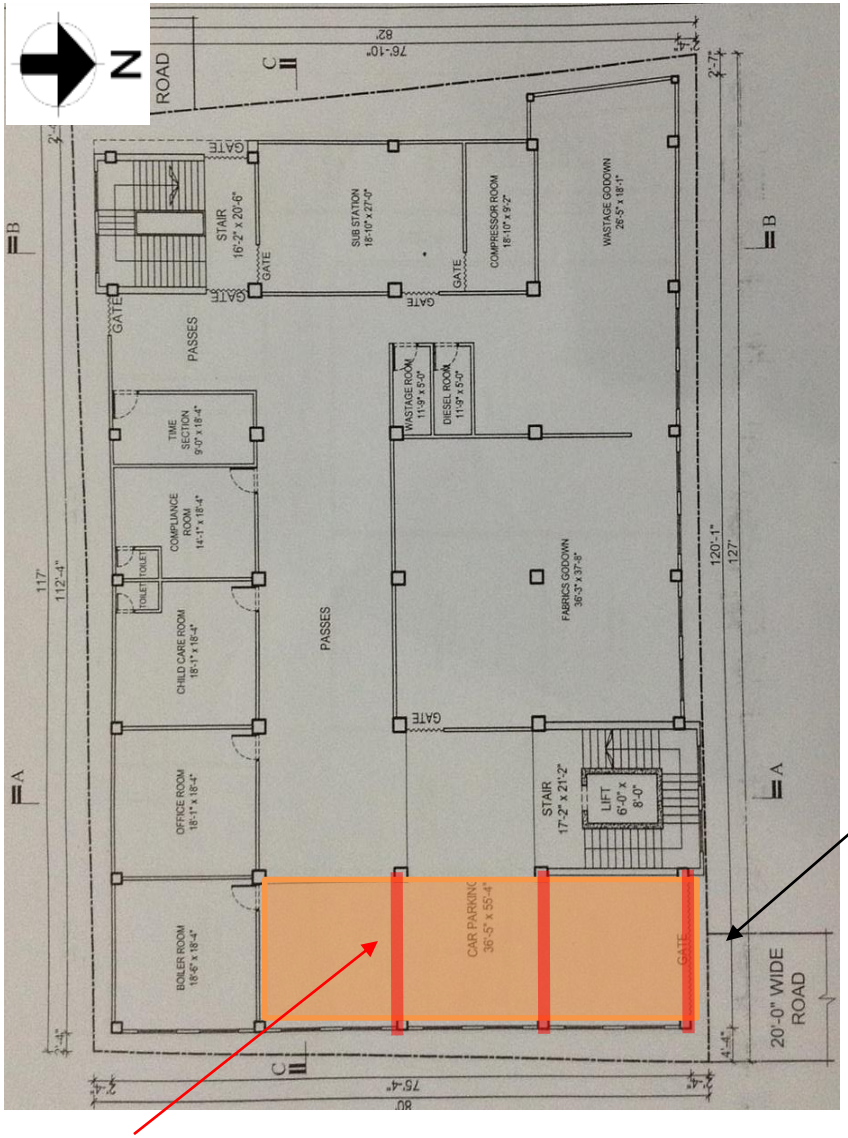
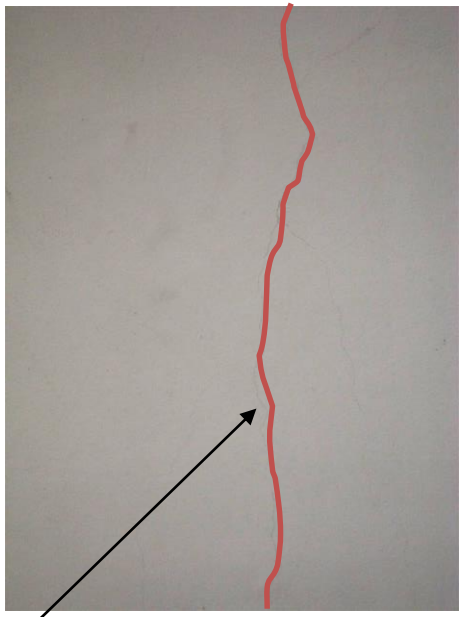
Mid-span crack in slab above loading bay (missing beams)

Observations



Missing beam in 1st floor slab.

Crack in mid-span of slab; appears to be due to deflection/ bending in slab



Observations

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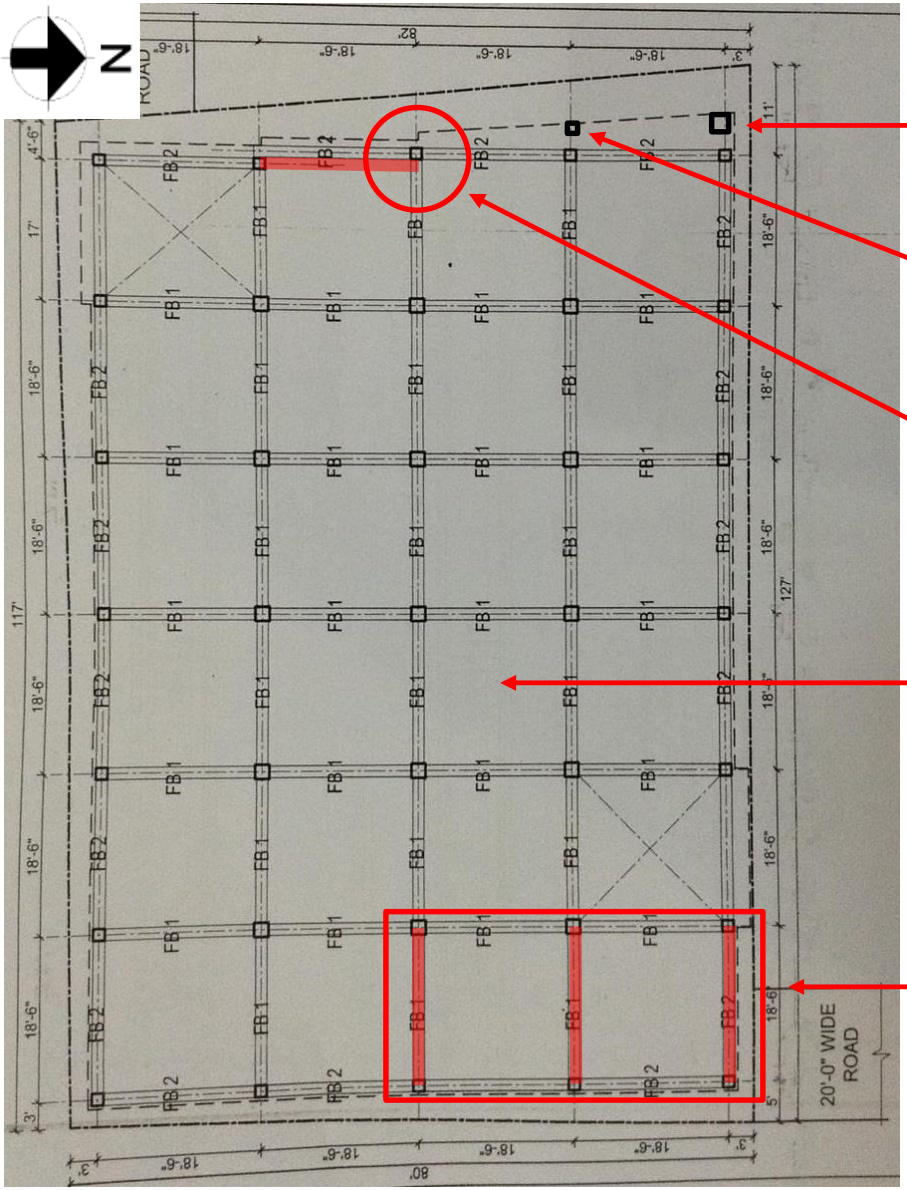
Discrepancies between drawings and on site observations

Observations



Discrepancies:

- Corner column on each level (confirmed on all floors)
- Perimeter column in cantilever area, but only Ground to 1st floor
- As drawn beam framing does not match site observations
- Design drawings show slabs as 150 mm thick but site measurements appear to indicate 120 to 135 mm thick.
- Missing beams in 1st floor slab above ground floor parking area

Observations

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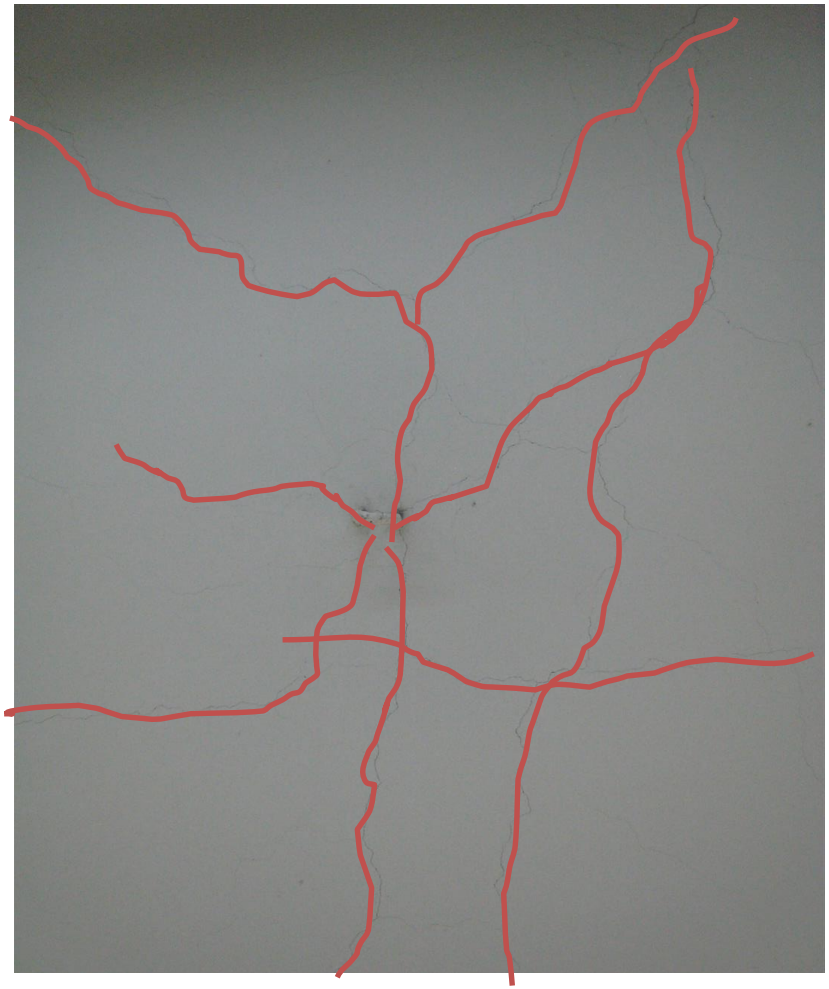
Cracking in Slabs and Beams

Observations

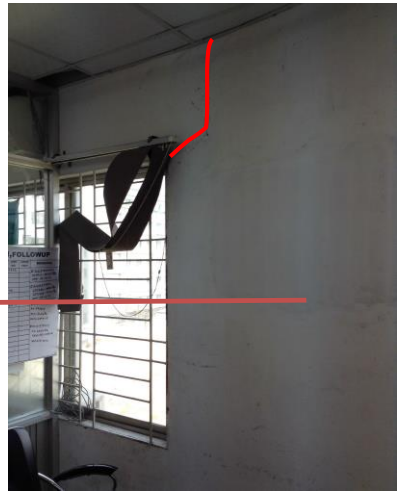


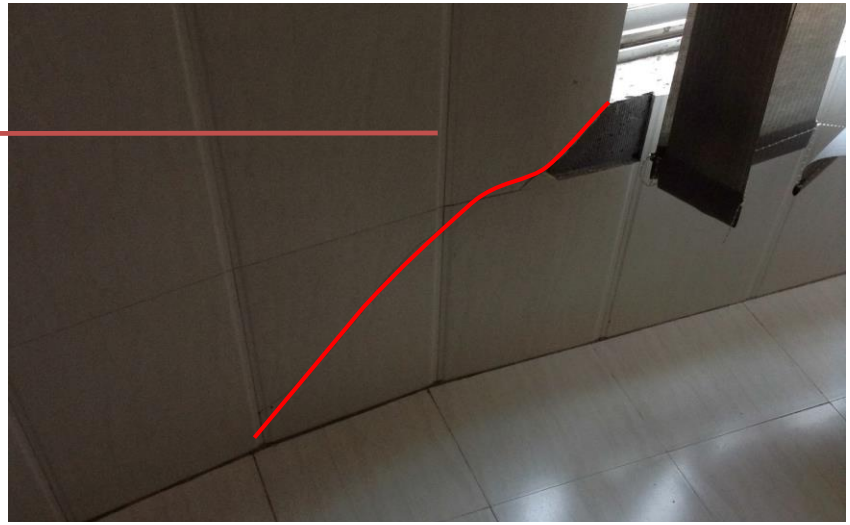
Cracks in slabs and beams on all floors but most prevalent on 3rd, 4th and 5th floor (roof). Appears to be due to deflection/bending - example illustrated with crack patterns on 5th floor.

Observations

Cracks in masonry facade, possibly settlement induced

Observations





Cracks in façade brick work at North Elevation possibly due to settlement of perimeter column (similar orientation of cracks on several panels)

Observations

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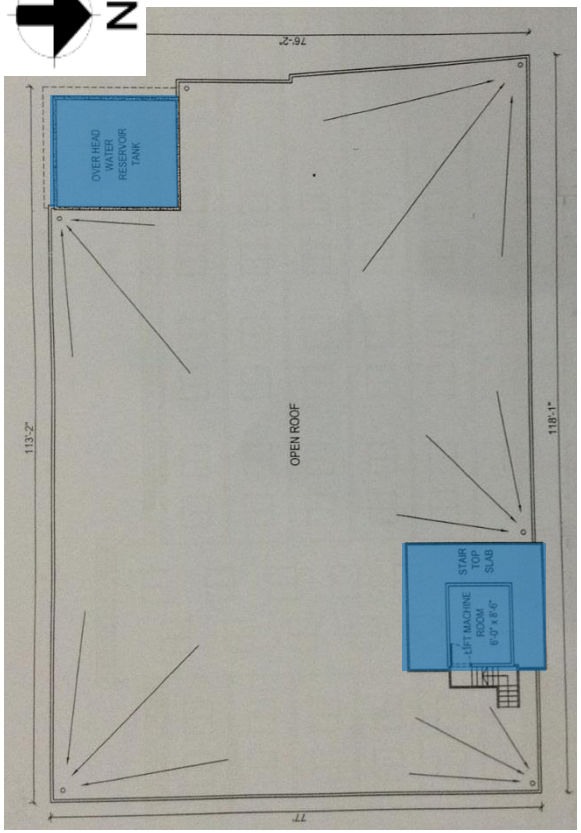
Lightweight roofs with non-engineered connections

Observations



Lightweight roofs appear susceptible to wind uplift, particularly edge overhangs. Some of the details appear non-engineered.

Observations

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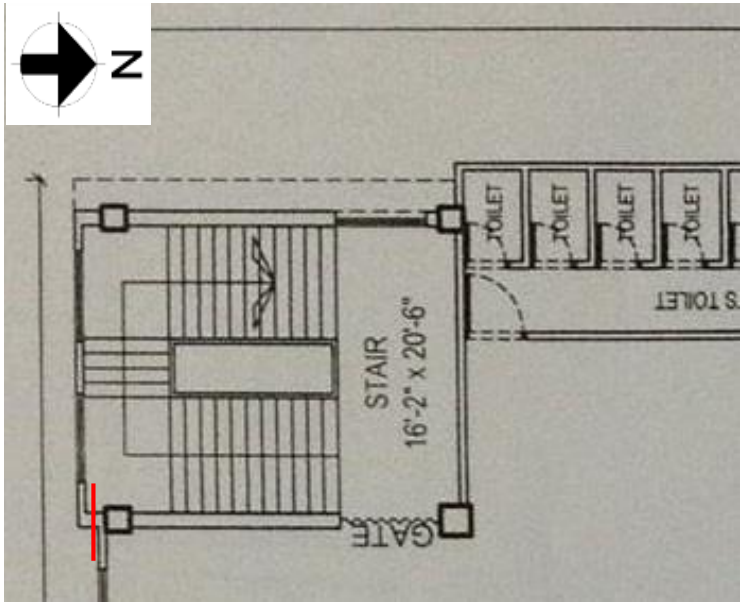
Restraint to brickwork façade at south west core

Observations



Façade brickwork at south west stair core appears unrestrained to RC column. Risk of falling brickwork in strong winds / if problem worsens.

Observations

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Problems Observed

Item 1 - Toilet column appears overstressed

Item 2 - Cracks in slab above loading bay

Item 3 - Discrepancies between drawings and on-site observations

Item 4 - Cracking in slabs and beams

Item 5 - Settlement induced cracks in façade

Item 6 - Lightweight roofs with non-engineered connections

Item 7 - Restraint to brickwork façade at south west core

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Toilet column appears overstressed	Building engineer to review design, loads and column stresses in area identified above.	**6-weeks**
2	Toilet column appears overstressed	Verify in-situ concrete strength either by taking 100mm dia. cores from 4 columns at Ground Floor or by using existing cylinder strength data for the ground floor columns if available.	**6-weeks**
3	Toilet column appears overstressed	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.	**6-months**
4	Toilet column appears overstressed	Any remedial measures recommended by building engineer to be implemented.	**6-months**
5	Mid-span crack in slab above loading bay (missing beams)	Building engineer to review design, loads and slab stresses in area identified above.	**6-weeks**
6	Mid-span crack in slab above loading bay (missing beams)	Avoid increasing live loads in the rooms immediately above the affected slabs pending engineering review (i.e. do not use for storage)	**6-weeks**
7	Mid-span crack in slab above loading bay (missing beams)	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.	**6-months**
8	Mid-span crack in slab above loading bay (missing beams)	Any remedial measures recommended by building engineer to be implemented.	**6-months**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
9	Discrepancies between drawings and on-site observations	Update as-built drawings.	**6-months**
10	Cracking in slabs and beams	Verify slab thickness in the middle of at least one bay at each level, e.g. by drilling a small hole through slab.	**6-months**
11	Cracking in slabs and beams	Building engineer to review design, loads and slab stresses.	**6-months**
12	Cracking in slabs and beams	Conduct regular inspection of cracks.	**6-months**
13	Settlement induced cracks in brickwork façade	Conduct regular inspection of cracks.	**6-months**
14	Settlement induced cracks in brickwork façade	If cracks grow larger engage an engineer to investigate cause and determine if structural remedial works are necessary.	**6-months**
15	Lightweight roofs with non-engineered connections	Building engineer to check the structures with particular reference to wind uplift and connection / anchorage details and make recommendations.	**6-months**
16	Lightweight roofs with non-engineered connections	Implement recommendations of building engineer.	**6-months**
17	Restraint to brickwork façade at south west core	Building engineer to check restraint to brickwork façade and make recommendations.	**6-months**
18	Restraint to brickwork façade at south west core	Implement recommendations of building engineer.	**6-months**