

AJ Fashions Ltd

234/4, Kachukhet, Cantonment, Dhaka-126
(23.795079N 90.388263E)

7 May 2014



Observations

Non-engineered steel escape stair



Stair tower is non-engineered and has weak stringers and stringer connections and lack of robust tie back to building



Non-engineered steel structure at roof level

Unclear whether roof is adequately tied down



**Cantilever slab at edges of 1st & 2nd floor has
large deflections**



E

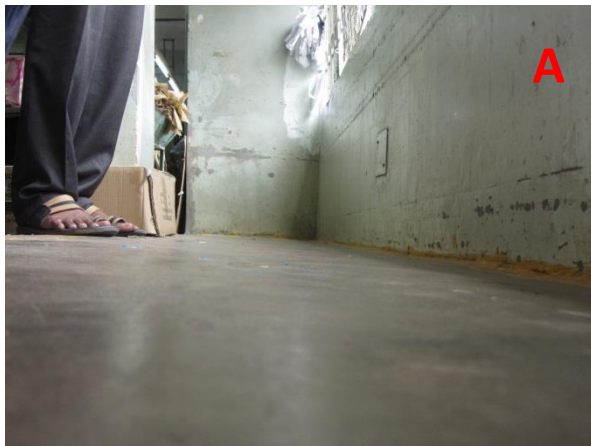


F

35mm deflection of slab edges at 1st and 2nd floor (photos A-C) with consistent cracking in floor finishes (D) and facades (E). No noticeable deflection at upper levels which are supported by cantilevering beam (F).



B



A



D



C

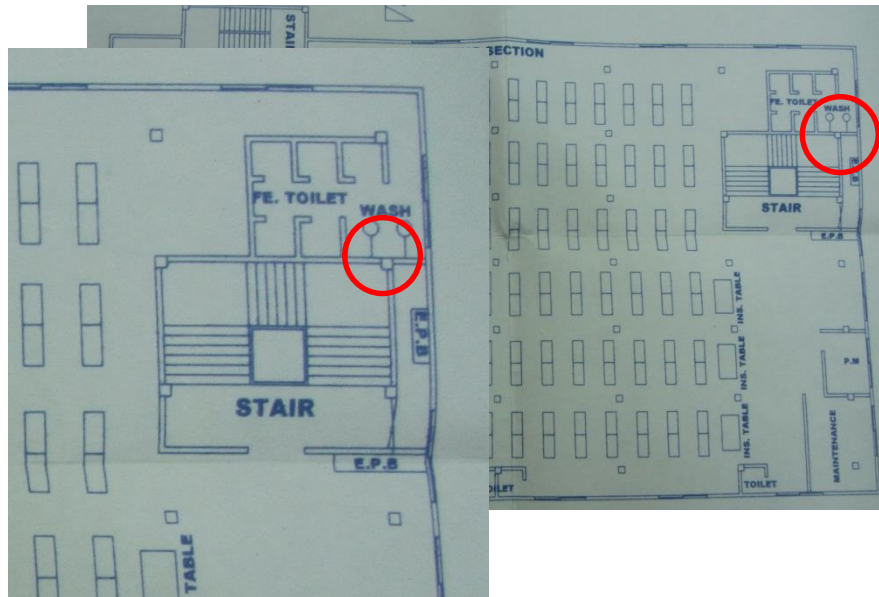
Deflection of slab edges

High loads on column at corner of staircase



Stair corner column supports

- Water tank on roof & 4th floor
- Toilet cubicles
- Facades
- Heavy finishes on stairs



High loads on stair columns

Downstand beam size varies between levels



At 1st floor (left) soffit beams spanning in shorter direction are shallower. At other levels (below) both beams are the same depth.



Downstand beam size varies

Detailed assessment and coring undertaken by BUET in Jan 2014

AJ FASHIONS LIMITED
2, Monipuripara (4th Floor), Tejgaon, Dhaka-1215

REPORT
ON
ASSESSMENT OF STRUCTURAL SAFETY OF
6-STORIED GARMENTS FACTORY BUILDING OF
AJ FASHIONS LTD AT 234/4, KACHUKHET (NIMNI
COMPLEX), DHAKA CANTONMENT, DHAKA



Department of Civil Engineering
Bureau of Research, Testing and Consultation (BRTC)
Bangladesh University of Engineering & Technology (BUET)
Dhaka

JANUARY, 2014

BUET concluded:

- No signs of distress
- Grids, sizes and rebar comply with original dwgs
- Compressive strength lower than design strength meaning that columns have factor of safety under gravity below guidelines for assessment of existing RMG buildings
- Building also inadequate for wind and seismic load

Priority Actions

Problems Observed

ITEM 1 - Non-engineered steel roof and steel escape stair.

ITEM 2 - Sagging slab edge cantilevers at first and second floors.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Non-engineered steel roof and steel escape stair.	Structural engineer to review design and propose remedial actions where required	6-weeks
2	Non-engineered steel roof and steel escape stair.	Carry out remedial actions	6-months
3	Sagging slab edge cantilevers at first and second floors	Structural Engineer to confirm that cantilevers have adequate strength for the applied loads.	6-weeks
4	Sagging slab edge cantilevers at first and second floors	Restrict live loading on cantilevers if required.	6-weeks
5	Sagging slab edge cantilevers at first and second floors	Remedial works if required.	6-months