

## Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

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Name of the Factory	: AJ FASHIONS LTD
Address of the Factory	: 234/4, Kachukhet, Cantonment, Dhaka-126
Dhaka Present Status of the Factory	: <b>Under Operation</b>
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 7 May, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 6 May, 2014

**Basic Information:** The present garment factory is a commercial building with beam-column frame system. The following general information was noted:

i.	Building Usage Type	: Garment factory
ii.	Structural System	: Reinforced concrete frame structure with moment frame action
iii.	Floor System	: Beam slab
iv.	Floor Area	: The factory floor area is 775.09 sq meter per floor
v.	No. of Stories	: 4 storied
vi.	Construction Year	: 1992-1996
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available (Dated 1992)
ix.	Soil investigation Report	: Available (Dated 2007)
x.	Construction Materials	: Stone Aggregated
xi.	Generator	: Ground floor southwest corner

**Recommendations for Corrective Action:** The recommendations of corrective action for both Structural and Fire & Electrical Safety are as follows:

**The recommendations for Structural Safety corrective actions are:**

Immediate (Now): NA

Mid Term (Within 6 Weeks):

1. Structural engineer to review design and propose remedial actions where required.
2. Structural Engineer to confirm that cantilevers have adequate strength for the applied loads.
3. Restrict live loading on cantilevers if required.

Long Term (Within 6 Months):

1. Carry out remedial actions.
2. Remedial works if required.

**The recommendations for Fire Safety corrective actions are:**

Immediate (Within 1 month):

1. Remove locking features from all egress gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.

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2. Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
3. Remove manual on/off switches from [emergency lighting / exit signage] units to prevent them from being switched off.

### Short Term (Within 3 Months):

1. Separate the boiler and generator rooms by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
2. Provide dedicated storage rooms separated by minimum 1-hr fire- construction.
3. Provide minimum 1.5-hr fire rated doors and seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.
4. Provide minimum aisle widths of 36-in.
5. Provide a minimum 2-hr fire-rated exit corridor between the day-care room and exit.
6. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
7. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.
8. Regularly inspect all exit signage and replace/install lights as needed to illuminate signs.

### Mid Term (within 6 Months): NA

### Long Term (More than 6 months):

1. Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.

### **The recommendations for Electrical Safety corrective actions are:**

#### Immediate (Within 1 month):

1. Wiring in PVC flexible conduit entering panels must be firmly fixed at the panel (base / Top) using socket and check nuts.
2. Heat resistant conduits may be used to protect wirings.
3. Motor in boiler must be firmly grouted on the concrete floor or fixed on the foundation structures.
4. Check connections for tightness to prevent heating due to loose connection.
5. Existing communication cables in flexible PVC conduit crossing power cables and wirings must be supported to protect from touching the power cables/wiring.
6. Stacking panels must be avoided and of required must be arranged and installed on racks.
7. Cables installed on outdoor must be supported and protected in cable trays.

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8. Wiring in rigid conduits fixed to ceiling must be supported at regular intervals.
9. Generator must be connected to earth securely at least two points.
10. Existing PVC (large pipes) wiring ducts with ends open must be closed with end cover. Ends may be sealed to prevent ingress of lint and duct.

### Short Term (Within 3 Months):

1. Cables terminating at distribution board and installed between floor and panel base must be protected in rigid conduit or in covered ladder to protect physical damages.
2. Service cables laid on external walls of the building must be supported on ladders and cable trays in complete length of cables.
3. Down conductor connecting the air terminals to the earth electrode must be 10 mm in diameter or 20 x 3 mm strip (Cu., Al.).
4. Cables passing through floor and ceiling must be protected in rigid pipe.
5. Panels must be rearranged such that opening of any one of the panels does not obstruct access to the others in the room.
6. Every wire terminating must be installed using independent lug/terminal.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA