

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

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Name of the Factory	: DESIGN DESTINATION LTD.
Address of the Factory	: Syed M.Hossain Road, West Isdair, Tagarpara, Narayangonj
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	: 2 June, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 18 June, 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	: R.C 2-way flat slab and column frame at the 2 <sup>nd</sup> and 3 <sup>rd</sup> floors. R.C. beam and column with 2-way slab system at the 1st floor
iii.	Floor System	: Beam slab
iv.	Floor Area	: Unavailable
v.	No. of Stories	: 3 storied
vi.	Construction Year	: 2010
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available
ix.	Soil investigation Report	: Available
x.	Construction Materials	: Unavailable
xi.	Generator	: Southwest corner on the ground floor

**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 Designer to produce loading plans based on bearing capacity for each floor.
2. An Engineering Assessment is required for the concrete shelf supporting the water tank to determine its structural adequacy.

Long Term (Within 6 Months):

1. Post loading plans on each floor and manage load.
2. Implement any recommendations from DEA.
3. Or remove the shelf.
4. Produce Architectural drawings with elevation and plan views and re-apply for permit before building any more storeys.

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

Immediate (Within 1 month):

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1. Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
2. Remove or relocate the compressor room from exit stair and egress path.
3. Replace all sliding doors for the dining room with side hinged, swinging egress doors in the direction of egress travel. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.

### Short Term (Within 3 Months):

1. Separate the flammable liquid storage area by a minimum 2hr fire-rated construction.
2. 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.
3. Provide minimum 1.5-hr fire rated doors and seal all unprotected openings to separate the exit stairs from work areas 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. Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation.
5. Remove and relocate the electric appliances to the exterior of the exit stairwell.
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.

### Mid Term (within 6 Months):

1. Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, in accordance with NFPA 72.

### 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. Service cables installed on walls outside building must be supported on ladder/trays firmly fixed at regular intervals. The cable must be weather rated or else must be protected against harsh weather.
2. Provide earth connection for body and doors of metallic distribution boards using green cables preferably braid so that the metallic door remains at zero potential all the time.
3. Install separators between different phases of MCCB to avert flashover. Standard separators provided by the MCCB's manufacturer must be used.
4. Install a vertical cable tray or duct ranging from generator terminal (output) box to cable trench to support the generator output cables.

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5. Cables passing through walls must be protected in rigid conduit and gaps around must be sealed.
6. Cables passing through concrete floors and ceiling must be protected in rigid conduit or cable trays.
7. Remove dust and combustible materials to avoid fire hazards.
8. Wires as per color codes may be used to avoid confusion during maintenance. Colored PVC boots may be used at the terminal ends.

### Short Term (Within 3 Months):

1. Cables (outgoing & incoming) behind the panel must be supported and latched into cable trays or ladders.
2. Enlarge the existing generator room to provide sufficient working clearance around or keep sufficient clearance around the generator (3.5ft preferably).

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA