

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

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Name of the Factory	: <b>DIP KNITWEAR LTD.</b>
Address of the Factory	: Hamid Plaza-2, Dagerchala Road, National University, Gazipur Sadar, Gazipur
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	: 15 May, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 11 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	: Beam Slab Structure
iii.	Floor System	: Beam slab
iv.	Floor Area	: Unavailable
v.	No. of Stories	: 4 storied
vi.	Construction Year	: 2013
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available (Permit drawing)
ix.	Soil investigation Report	: Available (Dated January 2011)
x.	Construction Materials	: Brick Aggregated
xi.	Generator	: Generator building

**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):

1. A Detail Engineering Assessment (D.E.A.) of Factory to be commenced, see attached Scope
2. Factory Engineer to review design, loads and cantilever stresses in area identified above.
3. Verify insitu concrete strength either by 100mm diameter cores or existing cylinder strength data for cantilever identified above.
4. All loading in excess of 1kN/m<sup>2</sup> on cantilever to be removed immediately.

Mid Term (Within 6 Weeks):

1. Detail Engineering Assessment to be completed.
2. Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity. This should include a safe level to which any water tanks can be filled.
3. This should include a safe level to which any water tanks can be filled.
4. Building Engineer to survey as constructed building and update drawings as required.

Long Term (Within 6 Months):

1. Continue to implement load management plan.

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

Immediate (Within 1 month):

1. Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
2. Remove all storage from exit stairs and egress paths.

Short Term (Within 3 Months):

1. Separate the transformer/substation room by a minimum 2hr 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-rated construction on the ground floor. On the first floor where separate storage rooms may not be feasible, provide defined storage areas and limit the storage arrangement as follows:

-Maximum height of 2.4m and maximum area of 23m<sup>2</sup>.

-If sprinkler protected: maximum height of 3.66m and maximum area of 93m<sup>2</sup>

Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.

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. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.
5. Inspect, test and maintain the fire alarm, fire detection and emergency lighting systems, and keep written records onsite, in accordance with NFPA standards.
6. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.

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. All the cables should be supported properly on cable tray and fixed tightly at a predefined interval.
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. Conduits terminating at panel must be supported in riser and protected throughout its length till the panel base or top plate.

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Short Term (Within 3 Months):

1. The overhead service connection shall be led into buildings via roof poles or service masts made of GI pipe at least 38 mm in diameter having a goose neck bend at the top and installed on the outer wall.
2. All the unused openings must be sealed with suitable fittings to make the panel dust and vermin proof.
3. Check the noted earthing cable and ensure the earth continuity is okay. Periodic earth continuity test should be performed to ensure earth continuity of the installation/equipment.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA