

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: DADA DHAKA LTD.
Address of the Factory	: Holding # 40, Joymot Khan Road, Pagar, Munnu Nagar, Tongi, Gazipur-1710, Bangladesh
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 29 June, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 6 August, 2014

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

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| i. | Building Usage Type | : Garment factory |
| ii. | Structural System | : R.C. Beam and column frame with a 2-way solid slab |
| iii. | Floor System | : Beam slab |
| iv. | Floor Area | : Main building floor has the area of 21,900sq.ft. and another building has the area of 10,000sq.ft. |
| v. | No. of Stories | : 4 & 2 storied |
| vi. | Construction Year | : 2014 |
| vii. | Foundation Type | : Piled foundation |
| viii. | Design Drawings | : Available |
| ix. | Soil investigation Report | : Available (December - January 2013) |
| x. | Construction Materials | : Stone aggregated |
| xi. | Generator | : Separate 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): NA

Mid Term (Within 6 Weeks): NA

Long Term (Within 6 Months):

1. Building Engineer to access connection of roof structure to core walls to transfer vertical and lateral wind loading as per BNBC.
2. Building Engineer to design and detail structural upgrading works, as necessary.

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.
3. 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.

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4. Provide exit signs above all exits to the exterior and all doors to the exit stairs.

Short Term (Within 3 Months):

1. Separate the generator and fire pump 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-rated 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 a minimum 2-hr fire rated shaft to separate the utility risers from each floor level.
5. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.
6. Modify the egress door to swing in the direction of egress travel.
7. Provide handrails and intermediate handrails on at least one side and middle of exit stair.
8. Provide landing on both sides of exit door, and stairs.
9. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
10. Provide the automatic fire alarm and detection systems.
11. Repair or provide the sprinkler system in accordance with NFPA 13.
12. 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): NA

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

1. Cables in trench must be supported & arranged on trays inside trench. Metallic cover (checkered plate) must be installed on cable trench to prevent any damage to cables.
2. Color code should be maintained as per standard i.e. Red, Yellow and Blue Colors for phases; Black color for neutral and green color for earthing. Insulate the live bus bars by using heat shrinkable PVC sleeve.
3. Replace the flexible conduit with PVC or steel conduit and fix with clamped and saddle, at regular interval 600mm.
4. Provide earth connection for transformer body using green cables preferably braid so that the transformer body remains at zero potential all the time.
5. Install batteries on a stand made of such material that resists acid. Ensure individual battery has sufficient space around it for maintenance and inspection.

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6. Install the cables through rigid pipe (metallic) for the protection of the cable laid on floor. The pipe must be fixed/ clamped with saddle on floor at regular interval.

Short Term (Within 3 Months):

1. It must be used cable tray to ensure the mechanical protection of the cables laid in trench otherwise cable insulation may damage due to falling object or stepping of occupants onto it.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA