

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: CHERRY INTIMATE LTD
Address of the Factory	: Plot No 105, Dhaka Export Processing Zone, Ganakbari, Ashulia, Savar, Dhaka
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 4 May, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 8 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	: Ground Floor: Earth bearing slab. 1 st to 4 th Floor: RC Beam-Column Frame System
iii.	Floor System	: Beam slab
iv.	Floor Area	: Total floor area of the building is 60,761 square feet
v.	No. of Stories	: 4 storied
vi.	Construction Year	: 2011-2012
vii.	Foundation Type	: Isolated pad foundation
viii.	Design Drawings	: Available (Approved by DEPZ in 2012)
ix.	Soil investigation Report	: Unavailable
x.	Construction Materials	: Stone chips as a course aggregate. Tested Column showing brick aggregate
xi.	Generator	: Separated shed

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. Factory Engineer to review design, loads and columns stresses in all columns.
2. Verify insitu concrete strength either by 100mm diameter cores from 4 columns or existing cylinder strength data. Verify grade of steel reinforcement used.
3. A Detailed Engineering Assessment of Factory to be commenced, see attached Scope.

Mid Term (Within 6 Weeks):

1. Detailed Engineering Assessment to be completed.
2. Make structural alterations as advised by Engineer.
3. Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.
4. Building Engineer to investigate if the cracking is structural or exists only in the render and to carry out flexural and shear checks on the beams, as part of the Detailed Engineering Assessment.
5. Engage an Engineer to prepare full "as built" engineering drawings, as part of the Detailed Engineering Assessment (refer to Priority Action 1 above).

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6. Building Engineer to investigate if the applied loading can be safely carried by the foundations as constructed, as part of the Detailed Engineering Assessment.

Long Term (Within 6 Months):

1. Continue to implement load plan.
2. Carry out any remedial work as directed by the Building Engineer.
3. Building engineer to check the capacity and stability system of the lightweight roofs and stairs and make any necessary alterations.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

1. Reduce occupant load to not more than available exit capacity (281).
2. Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.

Short Term (Within 3 Months):

1. Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.
2. 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.
3. Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level.
4. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.
5. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
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):

1. Replace the single-station smoke alarms. Provide automatic smoke detectors throughout the building in accordance with NFPA72.

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. Three of arcing horns must be installed.

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2. Rear of the panel(s), installed close to wall must be moved forward to provide the working space (3.5Ft).
3. Panel base plates must be installed and cable(s) entering panel must be firmly fixed with cable glands.
4. Cables and wires terminating without terminal lugs must be installed with lugs of proper size and rating, and check the connected load and diversity factor.
5. Provide earth connection for body and door(s) of metallic panel using green cable preferably braid.
6. Large exhaust fans must be connected through control device such that it will not restart automatically when power is restored.

Short Term (Within 3 Months): NA

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA