

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: CROSSLINE FACTORY (PVT) LTD
Address of the Factory	: 25 Vadam, Uttar Para, Tongi, Gazipur
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 29 March, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 11 April, 2014 & 13 April, 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. Beam and column frame with a 2-way solid slab
iii.	Floor System	: Beam slab
iv.	Floor Area	: Total floor area is 91297 sqft
v.	No. of Stories	: 7 and 8 storied
vi.	Construction Year	: 2009
vii.	Foundation Type	: Pad foundation
viii.	Design Drawings	: Available
ix.	Soil investigation Report	: Available (2003 & 2008)
x.	Construction Materials	: Stone aggregated
xi.	Generator	: Ground Floor Stairwell Landing

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. Locations of loading noted to be surveyed and capacity of floor and roof structures to be assessed by the Building Engineer to confirm that the floor and roof structures are designed to carry these loads.
2. Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor and column structural capacity.
3. Building Engineer to confirm the capacity of the slab to support the combination of the floor loading and the façade loading.
4. Steel and bamboo roofed structures should be reviewed by the Building Engineer for wind loading forces and any strengthening works deemed necessary should be implemented.
5. Building Engineer to do a design check and produce calculations on the stairs to confirm their structural adequacy.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

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1. 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.
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 a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level. Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation.
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. Separate the boiler room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
5. Separate the generator outbuilding by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
6. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
7. Regularly test the emergency lighting system on each floor and replace/repair lights as needed.
8. 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 with automatic smoke detectors tied into the fire alarm system. Configure the fire alarm system to initiate occupant notification upon activation of any two smoke detectors in addition to the manual fire alarm stations.

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.
2. Provide automatic sprinkler protection throughout the building in accordance with NFPA 13.

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

1. Phase barriers between different phases must be installed to avoid arc flashing.
2. Check the connection or reconnect the earthing cable.
3. Ceiling rose should be provided for light point connection.
4. Joints must be avoided. Use healthy cables.

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Short Term (Within 3 Months):

1. Base plate may be provided and the holes opening after cable passage has to be sealed with non-inflammable material.
2. Use proper conduit and conduit gland for protection.
3. Relocate the SDB to a suitable location.
4. Provide panel door earth wire.
5. Provide cable gland in the panel hole to fix the cable firmly.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA