

FIRE SAFETY INSPECTION REPORT

ARTISTIC DESIGN LIMITED
232-233 NARASHINGHPUR, ASHULIA, SAVAR



ACCORD
on Fire and Building Safety in Bangladesh

March 25, 2014

SUMMARY

Artistic Design Limited was surveyed for fire safety on 3/25/2014 by Hughes Associates, Inc. This summary identifies the major deficiencies that were identified during the inspection.

The purpose of this survey was to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the Accord. The scope of this initial fire safety inspection was limited to the review and identification of major fire safety issues. The inspection did not include identification of minor deficiencies, which will be further addressed as part of follow-up inspections.

Tables 1 - 2 summarizes the major fire safety issues identified during the inspection. Recommendations have been provided to address each issue.

An implementation schedule shall be developed by the factory to remediate each of the findings. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the Accord for approval.

Table 1. Findings And Recommendations - 6 Story Building

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	The generator and transformer rooms are not separated by fire-rated construction (openings, non-rated doors, penetrations). The natural gas generator, backup diesel generator, and transformer are located between the 6 story and 2 story buildings, 10-20 feet from each building.	Separate the generator and transformer rooms by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations	Within 3 months





F-2	Fire Rated Construction	The exit stairs are not separated from work areas / other spaces on each floor by fire-rated construction.	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.	Within 3 months
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F-3	Fire Rated Construction	An electrical "shaft" is open to each floor.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level.	Within 3 months
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Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation.



F-4	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level.	Within 3 months
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Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation.



F-5	Fire Rated Construction	Unsealed penetrations and openings are located in exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.	Within 3 months
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F-6	Fire Rated Construction	Areas used for combustible storage are not separated by fire-rated construction. Locations: Multiple floors in factory areas.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.4m and maximum area of 23m² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m² Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.	Within 3 months
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F-7	Egress	Collapsible gates / sliding doors are provided at building exits, exit stairs, along egress routes, and exit discharge. Locations: Collapsible gates and sliding doors on all floors.	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.	Immediate
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F-8 Egress

Storage was located in the exit stair.

Remove all storage from exit stairs and egress paths.

Immediate

Locations:
All exit stairs.



F-9	Egress	Egress doors / gates with locking features are provided at building exits, exit stairs, along egress routes, and exit discharge. Locations: Collapsible gates and sliding doors on all floors. Doors were open and unlocked during the survey.	Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	Within 3 months
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F-10	Fire Protection	The fire alarm system is antiquated, not a listed system, and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
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F-11	Fire Protection	Inspection, testing, and maintenance records for the fire alarm system were not available.	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Within 3 months
F-12	Fire Protection	The fire alarm system does not appear to provide adequate audible notification coverage. Locations: All locations and functional test was performed.	Provide additional notification appliances such that the fire alarm system is audible throughout the building in accordance with NFPA 72.	Within 6 months



F-13	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	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.	Within 6 months
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F-14	Egress Lighting	Exit sign in Dining Hall (separate accessory structure) indicating wrong path of egress.	Remove the exit sign and replace with "not an exit" signage.	Immediate
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F-15	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Locations: All areas.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.	Within 3 months
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Table 2. Findings And Recommendations - 2 Story Building

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Possible hazardous materials area is not separated by fire-rated construction (openings, non-rated doors, penetrations). Masked personnel spraying unknown substance in an unsealed, non-ventilated area on the Ground floor.	Separate the hazardous materials room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.	Within 3 months



F-2	Fire Rated Construction	The generator and transformer rooms are not separated by fire-rated construction (openings, non-rated doors, penetrations). The natural gas generator, backup diesel generator, and transformer are located between the 6 story and 2 story buildings, 10-20 feet from each building.	Separate the generator and transformer rooms by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations	Within 3 months
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F-3	Fire Rated Construction	Areas used for combustible storage are not separated by fire-rated construction. Locations: Multiple floors in factory areas.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.4m and maximum area of 23m² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m² Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.	Within 3 months
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F-4	Fire Rated Construction	The exit stairs are not separated from work areas / other spaces on each floor by fire-rated construction.	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.	Within 3 months
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If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.



F-5	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated ceiling assemblies.	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.	Within 3 months
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F-6	Egress	Exit capacity is not adequate for the occupant load. Occupant load on First floor (947 persons) exceeds the available discharge capacity (816 persons).	Reduce occupant load to not more than available exit capacity.	Immediate
F-7	Egress	Egress doors / gates with locking features are provided at building exits, exit stairs, along egress routes, exit discharge. Locations: Collapsible gates and sliding doors on all floors. Doors were open and unlocked during the survey.	Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	Immediate



F-8	Egress	Storage was located in the exit stair.	Remove all storage from exit stairs and egress paths.	Immediate
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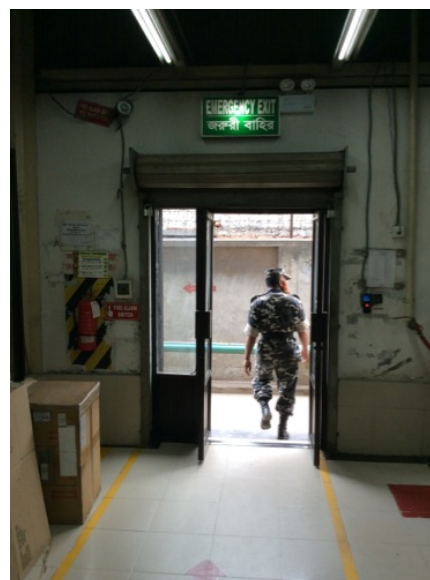
Locations:
All exit stairs.



F-9	Egress	Collapsible gates / sliding doors are provided at building exits, exit stairs, along egress routes, exit discharge. Locations: Collapsible gates and sliding doors on all floors.	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.	Within 1 month
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F-10	Egress	Exit stair doors and egress doors do not swing in the direction of egress travel. Locations: Egress doors in various locations on each floor.	Modify the egress door to swing in the direction of egress travel.	Within 3 months
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F-11	Fire Protection	The fire alarm system is antiquated, not a listed system, and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
F-12	Fire Protection	Inspection, testing, and maintenance records for the fire alarm system were not available.	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Within 3 months
F-13	Fire Protection	The fire alarm system does not appear to provide adequate audible notification coverage. Locations: All locations and functional test was performed.	Provide additional notification appliances such that the fire alarm system is audible throughout the building in accordance with NFPA 72.	Within 6 months



F-14	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	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.	Within 6 months
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F-15	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Locations: All areas.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.	Within 3 months
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