

Scope of works subject to final budget approval IOHC wishes to carry out the following Life safety upgrade works.

Emergency Escape Lighting Additions

1. Supply, install, commission, self-contained, self-test Emergency Luminaires as per drawing no. TFS-IOH-CH-001, TFS-IOH-CH-002 & TFS-IOH-CH-003.
2. Replace all existing din-rail mounted CTU's (Locations indicated on attached drawings)
3. All luminaires, twin spots and exit signage shall be LED type technology.
4. All proposed equipment must have a minimum of 3 years warranty
5. Exit Signage: The final siting and choice of directional arrows on all exit signage blades shall be agreed as part of a walk through with the Designer prior to installation.
6. System Type: Automatic Self-Test (ATS)
7. The tender design drawings are indicative in relation to quantity and siting of luminaires required to achieving the prescribed lux levels for this type of application in accordance with I.S.3217 2023 (Purpose group residential institutional)
8. If the product proposed by Contractors requires a different quantity of luminaires to achieve the prescribed lux levels for a Health Care Building, the Contractor must submit a layout drawing showing the siting of same luminaires, and quantities in the pricing document should reflect same.
9. Provide details regarding the Methodology for the integration of the proposed Emergency Lighting and Exit signposting system with the existing lighting distribution boards to satisfy the requirements of IS: 3218; 2023, whereby sub-circuit monitoring is to present on all individual lighting circuits on escape routes and in anti-panic areas, such that in the event of failure of supply to the normal lighting, or part thereof, the emergency lighting associated with that area shall operate, this includes manually switching off lighting circuit breakers. (Wiring diagram)
10. Duration of operation: The emergency escape lighting system shall operate for a minimum period of 3 hours following failure of the supply to the normal lighting.
11. Batteries for luminaires/signage: Batteries should be rated for at least 4 years of normal operation and should be replaced when the luminaire no longer meets the required duration.

12. The surface temperature of batteries shall always be maintained within the rated operating temperature of the battery as defined by the manufacturer.
13. Mode of operation: Emergency exit signs shall be maintained (should have facility for non-maintained operation) Escape lighting shall be non-maintained.
14. Sub-circuit monitoring: Provide sub-circuit monitoring on all lighting circuits on escape routes and in anti-panic areas such that in the event of failure of supply to the normal lighting, or part thereof, the emergency lighting associated with that area shall operate.

Installation

1. The electrical installation of the emergency escape light system and fire detection and alarm system shall comply with the current edition of the ET 10101
2. The Contractor shall be responsible for the supply and installation of complete cable containment installations to ensure a complete working installation. The Contractor shall determine any cable containment required all ancillary components as well and supports shall be deemed as included.
3. All cable shall be concealed where possible. However, where this is not practical, cables shall be in closed steel conduit including end boxes. Where cable cannot be fixed to the structure cable tray or cable basket may be used on approval by IOHC
4. All cable routes to be approved prior to installation by IOHC
5. By agreement with IOHC Maintenance Staff the existing containment/tray/trunking may be used so long as there is sufficient capacity, and the containment/tray/trunking is suitable for carrying such cable. All such proposals to be submitted to maintenance Dept in writing for prior approval.
6. The methods of cable support shall be non-combustible and such that circuit integrity will not be reduced below that afforded by the cable used. The cable support should withstand a similar temperature and duration to that of the cable, while maintaining adequate support.
7. Cable and means of support can be achieved by direct fixing to the structure using manufacturers' approved method of fixings.

8. Trunking

- a. Trunking shall be of heavy gauge steel construction fitted with overlapping, turned up edge lids. The trunking body shall be provided with turned in edges for rigidity. Trunking shall incorporate fire barriers or seals to preserve the integrity of the slabs between floor levels on vertical runs and at fire walls for horizontal runs. The trunking manufacturer's set pieces shall be used to complete the installation. All sharp edges and burrs on internal surfaces shall be removed or bushed as necessary to provide a smooth passage for the pulling in of the cables. All trunking and fittings shall be manufactured to standards as described in BS EN IEC 61084-1:2024+A11:2024 and manufactured throughout in best quality hot dipped galvanised sheet steel to BS EN 10346:2015

9. Conduit

- a. Conduit and fittings shall be in accordance with IEC 61038. Conduit shall be Heavy gauge, welded, Class 4, hot-dipped galvanised steel, zinc-coated screw threads and zinc bichromate outer coating to comply with BS31. Rigid steel conduit and fittings shall conform to BS4568.

10. Segregation of Services

- a. Cables of various voltages, functions and separate supply sources, shall be segregated from each other and spaced sufficiently far apart to eliminate interference between services.

11. All cabling and Installations must be carried out in strict accordance with I.S.3217

12. Emergency escape lights shall not be sited on ceilings (stairwells) in locations which require specialist equipment (height) is required for maintenance access.