

**GEORGIA  
HEALTHCARE  
GROUP**

**TBILISI/GEORGIA  
SUNSTONE HOSPITAL**

**IMPROVEMENT OF FIRE & SMOKE CONFINEMENT FEATURES  
TECHNICAL SPECIFICATION  
EVEX-SUNSTONE-KAR-SPC-012**

**15 June 2021 – Rev.00**

**Employer**

Evex Healthcare Group – TBILISI/GEORGIA

*prepared by*



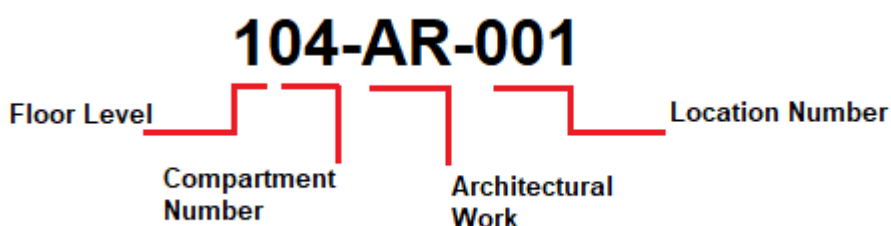
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- 2.6. Works to be done shall comply with international fire protection and fire safety protection rules and standards. Furthermore, all relevant standards incorporated by reference in this standard, shall prevail with the same validity. In this context, the standards to be valid and applicable in design, installation (assembly), commissioning, trial and acceptance process are;

|            |   |
|------------|---|
| EN         | European Norms  |
| NFPA       | National Fire Prevention Association  |
| UL         | Underwriters Laboratories   |
| Local Code | ტექნიკური რეგლამენტის „შენობა-ნაგებობის უსაფრთხოების წესების“ დამტკიცების თაობაზე 41<br>Effective from : 01/01/2017 |

- 2.7. The listing of systems and applications are intended as potential applications that may be reflected by the project's scope of work. The Contractor shall be responsible for reviewing of the appropriate systems required.
- 2.8. No matter which of the above-mentioned certifications the products bear, they shall be submitted to the material approval, notwithstanding the certifications they have, and the administration shall investigate whether they are compliant with where they will be used. Only after the material approval by the employer, supply and installation of such materials shall be permitted.
- 2.9. Even if the changes are highlighted during the proposal phase, and if the Employer does not accept in writing or even if they are accepted and/or installed but deemed to be non-compliant afterwards, such non-compliant material(s) shall not be accepted unless they have the required material certifications.
- 2.10. If any existing detail is not in conformance with the previously tested system by the manufacturer than an Engineering Judgement published and signed by the manufacturer's Registered Professional Fire Protection Engineer or by a NFPA Certified Fire Protection Specialist would be acceptable depending on the 3<sup>rd</sup> Party Reviewer and/or Employer approval.

### **3. Work Program and Duration of the Work**

- 3.1. The Contractor shall make the necessary work planning to do the work on time and submit the work program for the approval of the Employer from the date of contract, considering time duration represented in Gantt Chart. The work program that will be submitted shall contain the following information, in days and each individually, according to the order of priority and sequence basis, shall be specified as the actual calendar date: project, material supply time, unloading the site, power outage, fire protection water mains cutting-off periods, hot-work time.
- 3.2. Because the work will be held in a running facility, place of delivery, making the environment suitable to work etc. shall be considered in the construction period.
- 3.3. Contractor, in order to complete the work within the Construction Period set forth in its proposal, is obliged to provide the necessary work force and installation team.
- 3.4. The Work Program that will be prepared at beginning of the work shall be updated on weekly basis and submitted to the employer. Especially for the "Entry Restricted (e.g. intensive care unit, new born, surgery, post operation, angiography departments)" sections contractor to inform employer and to get related work permission for the subject area.
- 3.5. Following approval of the Work Program, in cases of failing to deliver the work place, to make decisions, to delay the approvals for reasons that may be attributed to the employer and if the contractor is not be able to perform another work due to the delays resulting from employer, those durations will be added to the Work Period. However, contractor may not claim any compensation from the Employer for such extensions.
- 3.6. Work Period shall be deemed to be started after the Provisional Acceptance and by the delivery of the work order.
- 3.7. The Contractor shall clearly state the period required to complete all the work.
- 3.8. The Contractor may ask revision or amendment of the work program content, duration and sequence.

### **4. Material Supply**

- 4.1. All materials, equipment and tools to be used during construction shall be provided by the Contractor.
- 4.2. All materials shall be new, unused, made with first-class workmanship, in accordance with the specifications in the Technical Specifications and shall deliver the required performance.
- 4.3. All material to be used shall be submitted to the employer for approval. During the bidding, mentioning any brand and model, even if they fit in with the Technical Specifications does not mean that they may be used. Also, since installation of the equipment will be realized under the responsibility of the contractor, it shall be essential that the material is received as mounted and operational.
- 4.4. Before starting work, The Contractor shall, give a collective Application List for all the construction points versus materials to be used. This list shall also indicate the appropriate listing (approval) number of the system and drawing of

the system. Following the approval of Application List, in accordance with the order and install (assembly) program, all materials shall be submitted for approval separately. Applications shall start when the Application List and Materials are found to be compliant. Employer shall evaluate and answer the material applications for approval, within a maximum of two week, using the Approval / Conditional Approval / Rejection form. Employer may require more details related to the material which is submitted for approval at the approval stage as well as seeing the sample of the material and ensuring the trial.

- 4.5. Employer shall have the right to reject the materials at any time, if such materials are found non-compliant with all kinds of technical requirements and required performance, regardless of whether it was previously deemed compliant.
- 4.6. The Contractor shall submit those who are authorized representative of the provided materials in Georgia with their contact information at the approval process. If the employer needs these materials in the future, it shall have the direct power to procure them from this company. The contractor may not impose any restriction for sales related to the companies in this regard.
- 4.7. Provide materials classified by UL, ULC, FM, Warrington Fire, LPCB or VDS to provide equal rating of Fire Resistance at minimum hourly stated in Improvement of Fire & Smoke Confinement Features Drawings.
- 4.8. Provide asbestos free materials that comply with applicable codes and have been tested in accordance with UL 1479 or ASTM E-814.

## **5. Quality Assurance**

- 5.1. Applicator Qualifications: Three (3) years of experience on installing classified fire compartment/wall systems.
- 5.2. Electrician: For the reinstallation of the electrical equipment on ceiling and walls, a 4 four years experienced electrical technician with an electrical technician diploma is required.
- 5.3. Suspended Ceiling Installer: For the reinstatement of the suspended ceiling 2 years experienced installer is required.
- 5.4. Mason: For the demolition and construction of the walls 2 years experienced workman is required.
- 5.5. Gypsum Plaster Master: For the installation of plasterboard and the finishing of the walls 2 years experienced workman is required.
- 5.6. Performance: Materials shall have been tested to provide fire rating equal to that of the construction fire barrier. Any fire barrier not designated on drawings deemed to be having rating of one –hour as a minimum.
- 5.7. List past projects indicating required experience.

## **6. Submittals**

- 6.1. Submit shop drawings showing each point of application, indicating proposed listed system materials, methods of installation, and actual adjacent construction.
- 6.2. Submit a copy of UL/ULC or EN 1366-4 testing illustration of each proposed system indicating manufacturer approved modifications.
- 6.3. Submit copies of manufacturer's specifications, recommendations, installation instructions, and maintenance data for each type of material required. Include letter indicating that each material complies with the requirements and is recommended for the applications shown.

## **7. Delivery, Storage and Handling**

- 7.1. Deliver materials undamaged in manufacturers clearly labelled, unopened containers, identified with brand, type, grade and UL/ULC/CE label where applicable.
- 7.2. Coordinate delivery with scheduled installation date to allow minimum storage time at site.
- 7.3. Store materials in clean, dry, ventilated location. Protect from soiling, abuse and moisture. Follow manufacturer's instructions.
- 7.4. After demolition of walls/ceilings/doors etc., materials which will not be used again shall be stored in a defined area and then shall be removed.

## **8. Project Conditions**

- 8.1. Verify existing conditions and accessibility options before starting work. Correct unsatisfactory conditions before proceeding.

## **9. Environmental Requirements**

- 9.1. Furnish adequate ventilation if using solvent.
- 9.2. Furnish forced air ventilation during installation if required by manufacturer.
- 9.3. Keep flammable materials away from sparks or flame.
- 9.4. Provide masking and drop cloths to prevent contamination of adjacent surfaces by fire stopping materials.
- 9.5. For the rooms or areas that are subject to "High Security" free personnel circulation is prohibited. Contractor is to get approval and subject to concomitance of an employer assigned escort only.

## **10. Acceptable Manufacturers**

- 10.1. Subject to compliance with requirements, provide products of one of the following manufacturers as further defined in the Improvement of Fire & Smoke Confinement Features Drawings of this specification.
- 10.2. Knauf, Rigips, Dalsan are some of the acceptable manufacturers for gypsum boards and drywall systems.
- 10.3. Feza, Berk Endüstriyel, TVM, Dierre, Kale, Ninz are some of the acceptable manufacturers for fire doors.
- 10.4. Assan Aluminum, Schueco are some of the acceptable manufacturers for aluminum fenestration for glass wall.
- 10.5. Catalogues of products shall be supplied from manufacturers before application and they shall be approved from the Project Management Company (PMC)

## **11. Preparation and Installation**

- 11.1. Dismantle -if necessary- suspended ceilings and related appurtenances (speakers, lighting fixtures, detectors, switches etc.) gently and store them temporarily at the locations indicated by employer.
- 11.2. Clean surfaces to be reconstructed, of dirt, grease, oil, loose materials, rust, or other substances that may affect proper fitting, adhesion, or the required fire resistance.
- 11.3. Install materials in accordance with printed instructions of the UL Building Materials Directory and in accordance with manufacturer's instruction, for each new application areas; new rated hall construction and vertical shaft areas.
- 11.4. Protect materials from damage on surfaces subject to traffic or physical contact by occupants or construction personnel.
- 11.5. Fix -if necessary- or replace the broken damaged ceiling and floor elements with the new ones but compatible with the previous application.
- 11.6. Reinstall -if necessary- suspended ceilings and related appurtenances (speakers, lighting fixtures, detectors etc.).
- 11.7. For the construction and installation features comply with the notes below in the Appendix Part

## **12. Field Quality Control**

- 12.1. Examine walls to ensure proper installation that do not have any holes before concealing or enclosing areas.
- 12.2. Keep areas of work accessible until inspection by applicable 3<sup>rd</sup> Party Reviewer.
- 12.3. Clean up spills of liquid components.
- 12.4. Neatly cut and trim materials as required.
- 12.5. Remove equipment, materials and debris, leaving area in undamaged, clean condition.

## **13. Inspection (Test) Operations**

- 13.1. System, during and after manufacturing and assembly shall be subject to further trial processing.
- 13.2. After independent inspection of each element, the problems encountered during this test shall be eliminated. Any problems of the sub-systems, shall be deemed as if seen in all sub-systems, and all of them shall be examined and eliminated, then inspections shall be done again.
- 13.3. For conducting inspections on the systems which are brought into operation faultlessly, under the 3<sup>rd</sup> Party Firm's supervision, the Contractor shall contact with the Employer in writing. In this report;
  - a) Description of the inspection to be performed,
  - b) The purpose of the inspection,
  - c) The items which will be observed for performance, and the necessary measurements.
  - d) Values to be accepted for the events which will be observed for performance
  - e) Methods and equipment to be used for measuring,

shall be specified clearly and detailed. The test, in which the 3<sup>rd</sup> Party Firm will participate as an observer, shall be made after this report is found compliant.

- 13.4. All kinds of Fire Compartment Systems that are designated as faulty during the inspection shall be replaced with new ones.
- 13.5. Inspections are not a part of the temporary admission procedure, but they are an integral part of the direct contracting work.
- 13.6. All measurements shall be made according to a form and procedure which will be submitted to Employer for approval by Contractor.
- 13.7. Inspections shall be made according to the material manufacturer's requirements as well.
- 13.8. All necessary test equipment, workmanship, testing and measuring equipment, engineering services, and so on shall be provided by the Contractor for delivering the fire stopping system in working condition.

#### **14. Documents (Documentation)**

- 14.1. The contractor shall present all kinds of certifications, system detail drawings prepared as a result of the testing process, engineering judgement reports, suggestions and so on, to the Employer. See Specification [EVEX-SUNSTONE-KAR-SPC-001] for further requirements on submittal.
- 14.2. In order to get approval of the material and system that will be used while the works are going on, the contractor shall present to the Employer approval of the following documents as 3 sets.
- Catalog pages of the products to be used (English)
  - Technical datasheet of each item.
  - Fire resistance rating certificates
  - Application List for all system (as stated in section 5.4)
  - Listing/Approval/Certification and/or Declaration of Performance of the System Detail.
  - Labeling sample to be attached near the construction point.
- 14.3. After completion of all works and operations, to be done in a healthy way of the operation and maintenance of each of the materials and components, related to the used material for the maintenance and use, detailed and complete documentation shall be provided. Document package in English includes the following;
- As-built data, (as stated in section 7.1)
  - Guarantee certificates of the products (taken from the manufacturer)
  - Guarantee certificates for the entire system (arranged by the contractor)
  - Maintenance and operating instructions
- 14.4. Binded documentation package shall be delivered as 3 sets. Also, the information shall be exported to a USB flash drive and burned on a CD as 2 sets.

#### **15. Warranty Commitment**

- 15.1. The system shall be under warranty commitment of the Contractor for 2 (two) years after the date of Temporary Admission. During the warranty period, all kinds of workmanship that may be required, materials, spare parts, etc. shall be paid by the Contractor.
- 15.2. The contractor, if any problems arise in the Warranty Period, after the written notification sent by the employer, shall send his competent and expert staff, necessary materials and hardware, not later than 48 (forty-eight) hours.
- 15.3. If the Contractor doesn't come on time or not to give a satisfying response for the Employer, until making the necessary transactions, penalties will be applied as 0.5% (five thousandth) of the daily work cost and this amount shall be collected from the Letter of Guarantee by dissolving.
- 15.4. After having received the materials in the operating condition provided by the contractor, as individually and the system as a whole, during the Warranty Period, against manufacturing and assembly faults, they shall be under warranty of the contractor and material manufacturers and suppliers. For all warranty transactions, the Employer shall accept the Contractor as its answerer.
- 15.5. The contractor shall not be responsible of the Maintenance and Warranty related to the materials to be supplied by the employer.
- 15.6. Submit a letter of bank guarantee not less than 25% of the total contract amount which is valid for one year after completion of the work.

#### **16. Application Rules**

- 16.1. The contractor is obligated to maintain manufacturing and work with safety in all kinds of productions and operating.
- 16.2. During installation and field work, it always keeps a Responsible technical man in the field. Responsible technical man may be a technician or an engineer. He shall be responsible from controlling the environment and provide all kinds of work security. He also shall be responsible to ensure continuous works, in contact with the relevant departments in the workplace and thus the coordination.
- 16.3. The Contractor in the manufacturing of all kinds, placement of the device shall seek the Employer's comment and approval.
- 16.4. The Contractor during the work period, shall not give any damage to the pipes, cables, structure, hardware and installation. If damaged, the Contractor will fulfill all kinds of material supply, manufacturing, installation, also he will perform all corrupted hardware or installation works as free of charge.
- 16.5. The work to be performed under the project, integrity of the premises shall be kept under constant and reliable protection. "Continuity of Fire Safety" principle shall always follow in every stage of the work.
- 16.6. Due to "Continuity of Fire Safety" being an integral part of the work, the Contractor is obliged to take on all kind off delays and changes in the Schedule. Therefore, he cannot make a formal request regarding additional time and cost.



- 16.7. Temporary or partial work shall only be made in specified areas for carrying out the defined work. Prior to application permission for the area shall be taken. Without the written permission, even if the works are described in the design and specifications, they shall not be performed.
- 16.8. Contractor and subcontractor -without permission- cannot exceed prescribed workspaces and any image capture device (camera, video camera, usb flash disk, mobile phones, laptop computers etc.) cannot be used.
- 16.9. It is prohibited to smoke, to carry lighter or matches in the facility. However, smoking may be permitted in break rooms or designated smoking areas during break time.
- 16.10. Contractor will perform the connections, infrastructures with continued coordination and cooperation of the Employer's competent engineers.
- 16.11. The Contractor shall not make any works creating fire hazard in the building such as cutting, grinding, drilling, welding, etc. which are considered as "hot work". After making manufacturing in the workshop or safe areas, only assembly takes place in the building.
- 16.12. The Contractor shall comply with the Employer's quality control, occupational health and safety, environmental protection, work permits, etc. and generally accepted rules and the procedures. There will be no additional cost for this prompt.
- 16.13. The works will start after delivery the location to the Contractor.
- 16.14. The construction of the system's installation, assembly and all necessary workmanship for delivery in an operational mode, including the cost of construction work, as nonprivileged will be provided by the Contractor.
- 16.15. The connections will be performed with continued coordination and cooperation between the 3rd Party Firm, the Employer and the Contractor. The property shall not be subject to power outages, necessary measures will be taken to avoid such outages. If the power outage is scheduled and unavoidable, the Employer shall be notified in advance.
- 16.16. The Contractor during the work period, is obliged to respect the Employer's "Hygiene and Sanitation" rules. He shall seek the Employer's opinion regarding equipment cleaning and equipment without permission to use prior to manufacture and implement such opinions.

## **17. Works and Occupational Safety Rules**

- 17.1. In all the works to be done on site, Georgia's "Occupational Health and Safety Regulation in Construction Works" strictly followed.
- 17.2. "Occupational Safety" is an integral part of the work. Contractor, because of this principle, is obliged to take into consideration of the changes at the work program and delays that may arise. Due to such a reason, the contractor cannot request any cost or additional time.
- 17.3. "Hot Work", "Work at height" "Working in the Closed Area" are subject to permission in the frame of "Occupational Safety". The contractor is obliged to take into consideration the changes in the work program due to permissions and delays. Due to such a reason, the contractor cannot request any cost or additional time.
- 17.4. Those who will work at the facility must take "Occupational Safety Compliance Training". The contractor is obliged to take into consideration the changes in the work program due to annual leaves or national holidays and regular working days of the employer. Due to such a reason, the contractor cannot request any cost or additional time.

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