

## Annex-C: LRPS-2019-9152755

### General Requirements and Specifications for Firefighting and Security Surveillance System

#### 1.1. Automatic Sprinkler (Water) System for Fire Extinguishing

1.1.1. According to the requirements of the World Health Organization (WHO): "Building safety and fire protection". Supplement 4. Technical Supplement to the WHO Technical Report Series, No. 961, 2011, May 2015, "Guidelines for the storage and transport of temporary and temperature-sensitive pharmaceutical products", Appendix 9, paragraph 2.5. without fail, provide an automatic sprinkler system (water) for fire extinguishing.

1.2. Fire extinguishing system Requirements;

1.2.1 Fire extinguishing systems must meet the regulatory requirements (documents) of the Republic of Uzbekistan.

1.2.2 An automatic fire extinguishing system must be installed in all rooms:

- cold storage;

- dry warehouse;

- service room;

- packing/distribution room

1.2.3. The fire extinguishing system must be completely autonomous and operate on a broken bulb in the sprinkler. The temperature regime for breaking the flask is 68 ° C.

1.2.4. To provide in the system of the sprinkler unit the possibility of filling with compressed air in case of protection against defrosting of the sprinkler pipe at low temperatures.

1.2.5. When designing and calculating, provide for the backup of a working pump, an additional pump and a receiver for compressed air.

1.2.6. To provide automatic relay protection to the building by disconnecting power when the firefighting system is activated and pumping in operation for fire extinguishing.

1.2.7. Design a water storage tank for firefighting needs, taking into account seasonal climatic conditions in the absence of additional heating of the tank.

1.2.8. Provide automatic shutdown of the pumping unit of the fire extinguishing system after a predetermined time.

1.2.9. The capacity of the water tank must provide a sufficient amount of the estimated volume of water required to extinguish the fire.

### 1.3. Initial data for design

1.3.1 Detailed design of the facility, general plan of the adjacent territory, topographic survey of the site.

1.3.2. Requirements for the composition of the developed documentation.

1.3.3. Implement a detailed design, development of design estimates.

### 1.4. Specifications;

1.4.1. The signaling device of a stream of liquid like SPZh stream or surpassing

1.4.2. Sprinkler water sprinkler SVU-12

1.4.3. Centrifugal cantilever pump  $q = 36\text{m}^3 / \text{h}$ ,  $N = 50\text{m}$  with an electric motor  $N = 2.5\text{kW}$   $\text{Trab} = 60 \text{ C}$  or superior in parameters

1.4.4. Pump-jockey  $Q-1,0\text{m}^3 / \text{h}$ ,  $N 50\text{m}$   $N0,37\text{kW}$   $\text{Trab} = 60 \text{ C}$  or exceeding in parameters

1.4.5. Tank according to ShNK

## 2. CCTV System

### 2.1. Purpose of a video surveillance system

2.1.1. The video surveillance system (hereinafter video surveillance) is designed to collect, store and view video information on the state of material assets, as well as on actions at the facility

### 2.2. Video Surveillance Specifications

2.2.1. Elements of a security video surveillance system must be located during their design and installation in such a way that objects and territories that are not of interest for control by the customer are not included in their field of vision.

2.2.2. When designing a security video surveillance system, it is necessary to calculate the required number of installed cameras from the point of view of creating quality control over the protected area.

2.2.3. Provide the ability to enable video recording using the motion sensor, which will allow more rational use of the array for storing video.

2.2.4. It is necessary to provide a video recorder with the possibility of continuous recording and storage of video materials from all CCTV cameras for at least 72 hours.

2.2.5. Video materials must be stored 24 hours a day, after 72 hours the video files can be overwritten, if this is not connected with any ongoing investigations to identify intruders.

2.2.6. External video cameras of security video surveillance systems must be provided with appropriate protection against adverse climatic influences and unauthorized interference by third parties in their work, for possible intentional deactivation of video systems equipment.

2.2.7. In the installed video surveillance system, a sufficiently good recording quality must be provided, which must ensure trouble-free identification of persons illegally entering the guarded object.

2.2.8. Archiving of video data must be reliable, with the possibility of its easy search in the future, and also completely eliminate the possibility of damage or loss of video material captured by installed cameras.

2.2.9. In the video surveillance system, the installation and display of the date and time of the ongoing video recording must be constantly and reliably monitored, and by which video camera it was made.

### 2.3. Initial data for design

2.3.1 Floor plan.

2.3.2. Initial data for the estimated cost of the project

2.3.3. Approved by the customer plan for the placement of surveillance cameras.

2.3.4 Requirements for the composition of the developed documentation

2.3.5 Structure of the project documents must include:

- general information;
- scheme for the placement of surveillance cameras;
- hardware Specification.
- estimated and design documentation for the design, for installed equipment, installation work.

### 2.4. Specifications;

2.4.1.16 Channel NVR DVR with PoE

2.4.2. 24 "monitor with HDMI

2.4.3. HDD 8 TB for video recording

2.4.4. UPS uptime of at least 4 hours

2.4.5. IP Cam PoE 4MP -40 ° C ... + 60 ° C 0.01lx 4mm horizontal: 78 ° , vertical: 42 ° IR illumination 30 meters, IP 66 degree of protection, or superior in parameters

2.4.6. IP Camera PoE 4MP -40 ° C ... + 60 ° C 0.01lx Lens 8mm horizontal: 37 ° , vertical: 21 ° IR illumination 30 meters, degree of protection IP 66, or superior in parameters

2.4.7. IP PoE Camcorder -40 ° C ... + 60 ° C 0.01lx Lens 2.8mm horizontal: 82 ° , vertical: 55 ° IR illumination 30 meters, degree of protection IP 66, or superior in parameters

## **3. Fire Alarm and Security System**

### 3.1. Fire alarm systems

3.1.1 Security and fire alarms (hereinafter referred to as OPS) is a set of technical means intended for timely notification of a fire at the protected area/facility and the formation of control signals for fire warning systems and automatic fire extinguishing system.

### 3.2. Technical requirements for the OPS system

#### 3.2.1. The entire OPS system must consist of:

- automatic fire alarm systems;
- backup power systems.
- Ceiling motion sensor
- Motion Sensor
- Magnetic contact sensor
- glass break sensor

3.2.2. The entire system must provide round-the-clock operation of all its systems in all climatic conditions of the facility.

3.2.3. Build an automatic fire alarm system on the basis of modern equipment.

#### 3.2.4. Location of alarm in case of fire:

- premises of a guard post using the control and management panel;
- in the office building and warehouses using light and sound alerts.

#### 3.2.5. Automatic fire alarm system

3.2.6. Equip all rooms with fire alarm systems, regardless of their purpose, ensuring round-the-clock operation.

3.2.7. An automatic fire alarm system (APS) must provide for the early detection of fire, the transfer of information about a fire to the facility's security post to take appropriate measures to eliminate the fire source.

3.2.8. Provide for the installation of fire detectors inside technical and office premises, but not exceeding the sizes of the areas controlled by one detector, indicated in the technical passports for the product and regulatory documents.

3.2.9. APS must have a round-the-clock operating mode "without the right to shut off", and the control panel must distinguish between "Fire" and "Fault" states.

3.2.10. The alarm system must be based on commercially available technical means of protection of local or imported production.

3.2.11. Station equipment must be installed on duty.

3.2.12. The alarm system shall provide:

- fixing the triggering signals of the detection means with the issuance of sound and light alarm, with the determination of the number of objects of blocking and the nature of the trigger.
- the ability to visually monitor the condition.
- monitoring the health and condition of all elements of the system and communication lines.
- saving settings and a database of identification signs during a power outage.

3.2.13. Means of security alarm must be equipped with:

- office space;
- technological premises;
- warehouses;

3.2.14. The warning system must ensure the issuance of light and sound signals in case of violation of the fire alarm loops.

3.2.15. The power supply system must provide uninterrupted (with automatic switching to power from backup batteries) voltage supply to the fire alarm system. The capacity of the backup battery must provide power to the technical equipment for at least 12 (twelve) hours in standby mode and at least 3 (three) hours in "Alarm" mode.

3.2.16. The power supply of the system is carried out from a separate group of the distribution electrical panel through uninterrupted power supplies. Cable lines must be laid in an open way in a cable channel, behind suspended ceilings in a corrugated pipe.

3.2.17. Protective grounding of the fire alarm in accordance with the requirements of documentation for technical means.

3.2.18. Lay wires of security and fire alarm cables along ceilings and walls in cable channels. Fire alarm loops must be carried out by independent wires with copper conductors.

3.2.19. Commissioning is carried out in accordance with the requirements of the statement of work.

3.3. Initial data for design

3.3.1 Floor plan.

3.4. Requirements for the composition of the developed documentation

3.4.1 The project documents must include:

- general information;
- estimated and design documentation for the design, for installed equipment, installation work
- structural diagram of fire alarm;

- wiring diagram;
- plan for the location of security and fire alarm loops;
- hardware specifications.

### 3.5. Specifications;

3.5.1 Device control and reception security and fire Type Grand MAGISTR, BOLID, SAGITTARIUS

3.5.2. Battery 7 Ah 12 V

3.5.3. Manual fire detector type IPR

3.5.4. Optoelectronic smoke detector

3.5.4. Thermal fire device

3.5.5. Ceiling motion sensor

3.5.6. Motion sensor

3.5.7. Magnetic contact sensor

3.5.8. Glass break sensor

3.5.9. The annunciator security and fire and light-sound, level not less than 100 dB

3.5.10. Light and sound annunciator (street version) temperature range -50 +60 C, protection against external factors level at minimum 100 dB

3.5.11. The annunciator security and fire light, constant work at loss of power supply, existence of the accumulator (it is desirable)