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## TECHNICAL SPECIFICATION

**Doc No: DSF-SPC-ELE-023**

**Rev. 1**

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### HIGH PRESSURE (HP) TRANSMISSION SYSTEMS

## SITE SECURITY SYSTEM

**JUNE 2021**

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## 1. GENERAL

The contractor shall provide detail design supply material, installation and startup a complete Site Security System consisting of:

- Movable Camera's and lamp Poles:

- a) The movable Camera's shall be installed in the already existing poles. If this is not available they shall be installed either in new ones or on the buildings. This will be decided during the detail engineering. Cameras shall be powered by telephone cable type A-2Y(L)2Y.
- b) New poles shall be hot deep galvanized with a 4 m height, above ground level. The bottom diameter shall be 3 and 1/2 inches and the top one 3 inches.

Poles must have in an air speed of 60 km/h an oscilation less than +/-2 cm.

- Infrared Lamps will be placed above the camera.

Infrared lamps shall be supplied by a PVC cable 3 x 2,5 mm<sup>2</sup>.

- All equipment and cabling necessary for a complete CCTV system.

The system shall include all connectors, adapters terminators and all other bulk materials, necessary to interconnect all equipment.

All equipment connected to AC power shall be protected from surges. Fuses shall not be used for surge protection.


The cameras and all other field equipment shall be rated for continuous operation under ambient site environment conditions, using no auxiliary heating or cooling equipment.

The contractor shall deliver, in addition to the detail engineering, a data package consisting of:

System Block diagram Wiring diagrams

Camera wiring and installation drawings Surge protection device installation

Details of interconnection with Access Control System Infrared lamps wiring and installation drawings Control Room equipment installation drawings Gate House equipment installation drawings.

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## 2. SOLID STATE CAMERA

All electronic components and circuits shall be solid state, Signal-to-noise ratio shall not be less than 50 dB.

The lens shall be a C-mount. The camera shall have a 1/2 inch format and the picture produced shall be free of blemishes.

The camera shall provide not less than 550 lines of horizontal resolution and full video output at 0,3 lx scene illumination with a scene reflectivity of 50 percent using an f/0,95 lens.

## 3. CAMERA LENSES

The lens mount shall be a C-mount. Camera lenses shall be all glass with coated optics, an auto-iris mechanism, zoom  $\times 8$  and focus function. Lenses shall be supplied with connectors, receiver, driver and controls need to operate the lens functions.

## 4. CAMERA HOUSING

The camera and lens shall be enclosed in an IP65 housing with camera and power supply mounting blocks or supports as needed to position the camera and the lens in the optical centerline.

The housing shall keep the viewing window free of condensation through a heating resistance.

The housing shall be equipped with a sunshield and a mounting bracket to support the same and the pan/tilt head.

## 5. VIDEO MONITOR

The monitor shall, operate on 220VAC, 50 Hz AC power, have stabilized high voltage power supply and regulated low voltage power supply.

The monitor shall have a 1000 lines horizontal resolution at the center of the screen and at least 31 cm screen diagonal.


## 6. CONTROL KEYBOARDS

The control keyboard shall provide the interface between the operator and CCTV system.

An appropriate keyboard shall provide control of the functions needed as pan/tilt/focus control.

## 7. VIDEO SIGNAL EQUIPMENT

All equipment necessary to correct loss in video signal level and distortions in the video monitor shall be provided.

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## 8. PAN/TILT MOUNT

The pan/tilt mount shall be capable of supporting the camera, lens, and housing specified plus infrared lamp and maximum wind loading. The pan/tilt mount shall be weatherproof (IP65) and have heavy duty bearings, hardened steel gears, adjustable limit stops for pan and tilt.

Pan movement shall not be less than 0 to 350 degrees, tilt movement shall not be less than +/- 90 degrees.

Pan speed shall not be less than 6 degrees per second and tilt speed shall not be less than 3 degrees per second.

The pan/tilt shall be supplied complete with wiring, connectors, receiver/driver, pan/tilt control system and pre-position cards for at least 8 positions.

## 9. VIDEO RECORDER

The V/R shall be specifically designed as a time lapse recorder for use in security systems.

Resolution of the V/R in normal play mode shall not be less than 320 horizontal lines.

The V/R shall have a built-in time and date generator, shall impose the time and date on the video during recording and shall have an audible warning alarm that shall annunciate the end of the tape.

The V/R shall be capable of recording for 480 hours or more on a single cassette tape.

The V/R shall have an alarm input which shall automatically switch the recorder into standard play record mode when the operator push an emergency button. Playback functions shall include automatic alarm search.


## 10. CABLES

The contractor shall provide all wire and cable needed for a good performance of the site security system.

All wire and cable components shall be able to withstand the environment, the wire and cable is installed in for a minimum of 20 years.

## 11. INFRARED LIGHTING

A special designed infrared lamp shall provide light energy to ensure a good scene illumination from 0 to 60 meters distance from the camera pole. This lamp shall be weatherproof (IP65) and fixed on the pan/tilt mount in order to ensure the synchronous pan/tilt movement with the camera.

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## 12. COMPONENT COMPATIBILITY

All system components shall be produced by the same manufacturer to ensure component compatibility.

Each major component shall have the manufacturer's name and the model and serial number in a conspicuous place.

The site security system shall consist of the appropriate number of movable cameras to ensure the full optical coverage of the site. Each camera shall have a dedicated monitor.

The camera unit placed in the field shall consist of a CCD camera, zoom, lens, power supply, video signal transmission equipment, heater resistance, housing, infrared lamp, pan, and tilt head, signal receiver unit for the pan and tilt and lens functions.

In the control room the video signal receiving equipment, the monitors and the control keyboard shall be installed.

### Notes:

a) The already contractual existing Intrusion System (Security Alarm System), shall be revised in order to adopt cooperation with the:

- Site security System
- Access control System

Owner also stated that the intrusion system (Security Alarm System) shall include the following:

### System equipment:

- a.1) Infrared motion detectors, 360° range, for all offices except control room and W.C.
- a.2) Infrared motion detectors, beam type for corridors.
- a.3) Magnetic switches for all external doors and C.R. doors.
- a.4) Panic buttons.
- a.5) Alarm sirens and flash lights (orange color).
- a.6) Mimic panel located at Guaid house (the final position should be examined during detail engineering).
- a.7) Safety system control panel (S.S.C.P.) located in the Control Room supported with battery back-up power supply system with 30 hours autonomy time in stand by condition and 30 minutes in alarm condition.
- a.8) The system should be consisted of zones, determined during detail engineering.
- a.9) Energizing and de-energizing key boards: Their location and the quantities is subject of the final design.
- b) Periphon System (sensor cable") optional to be offered.