

Dated: _____.

**Sub: TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF ,
INTELLIGENT AUTOMATIC PARKING BARRIER AT STATE LIFE BUILDING NO: 01
KARACHI.**

M/s. _____

Enclosed, please find herewith BOQ for the subject work for quoting your rates. Please return the same duly filled and completed in all respects on the above noted address to reach latest by **18-03-2020 upto 11:00 AM** which shall be opened on same day at **11:30 AM** in presence of tenderers if they wish to be present.

2. You are requested to return the tender documents by the stipulated date whether or not you are interested in this bid. For any further details, you may contact the undersigned before the opening date of the tender.
3. The works under this tender shall be carried out as per the bill of quantities and specification attached. Your rates must be inclusive of all cost of equipment, installation, labor, overheads, profits, taxes surcharges and preparatory works as required and no escalation or extra payment shall be considered on any of these account or reason.
4. The corporation reserves the right to reject any or all the tenders as per PPRA Rules.

Thanking you,

Regards,

Engr. Waleed Nasim
AM (Elect.) RE

Encl: One set Tender documents

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Bill Of Quantities

| # | DESCRIPTION | QTY | UNIT | RATE (Rs) | AMOUNT (Rs) |
|---------------------------|---|-----|------|-----------|-------------|
| 1 | <u>INTELLIGENT AUTOMATIC PARKING BARRIER</u> Supply, installation, testing & commissioning of intelligent, automatic parking barrier of specifications attached with this tender and having following features; <ol style="list-style-type: none"> i. Servomotor ii. Straight boom with 90° folding iii. Boom length 3 to 4 meters iv. Operating temperature range - 20°C TO + 60°C v. Power supply 24VDC, AC 100 ~ 240 V vi. Powder coated steel vii. Controller frequency 50 – 60 Hertz viii. Opening & closing speed of boom - within adjustable range from 03 to 10 seconds. ix. IP Rating IP66 or IP 67 (Water proof) Note : The power supply for equipment may be available within 30 to 50 meters from point of installation of barrier. The rates quoted must include cost of wiring etc as well. | 01 | Each | | |
| 2 | Long distance reader (06 to 10 meters) to match the programming of automatic barrier and E- Tag as per the specification attached | 01 | Each | | |
| 3 | E- Tags to be installed in cars / vehicles to be read by long distance reader for barrier opening & closure as per the specification attached | 213 | Nos. | | |
| 4 | Barrier opening cards for visitor vehicles as per the specification attached | 06 | Nos. | | |
| 5 | E- Cards to be installed in Bike to be read by long distance reader for barrier opening & closure as per the specification attached | 01 | Nos. | Rate Only | |
| 6 | Industrial Computer with RFID Parking Management System/Software to input the vehicle ID | 01 | Nos. | | |
| Total Amount (Rs.) | | | | | |

Amount in words : _____

*All the wiring shall run in conduits, if wiring is done underground it shall be concealed in proper engineered manner.

* Additional Tags for Cars as in item No. 3 if required shall be arranged by the contractor after completion of work at the quoted price.

* E-Tags for Bike as in item No. 4 if required shall be arranged by the contractor after completion of work at the quoted price.

* The quoted product must have manufacturing origin of European Country i-e made in Europe e.g France, Germany, Italy, Spain etc.

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SPECIAL CONDITIONS

| | | | |
|----|--|---|--|
| 1 | Date, Time & Place of opening of tender | : | 18-03-2020 - 11:30 AM Office of REFC Real Estate Division, 5th Floor, Principal Office, State Life Building No.9, Dr.Ziauddin Ahmed Road, Karachi. |
| 2 | Date of Commencement of Work | : | Within 07 days from the date of acceptance of letter of award |
| 3 | Time of completion of work from the date of commencement of work. | : | 30 days - Holidays inclusive |
| 4 | Maintenance Period. | : | 2 years |
| 5 | Warranty of equipment | : | As per manufacturer standard (At least One (01) year after completion of work |
| 6 | Method of Payment | : | 1 st & Final Bill : 10% (Retention money) will be deducted from the bill. |
| 7 | Period of honoring interim bill. | : | As per verification from State Life engineer/ representatives. |
| 8 | Release of retention money. | : | On satisfactory completion of maintenance period. |
| 9 | Bid Security | : | 2% of the tender amount. |
| 10 | Bid security (Bank Draft) in favor of "State Life Insurance Corporation of Pakistan" to be submitted with Tender. <i>Tenders with pay order / bank draft having different names shall be rejected.</i> | : | <ul style="list-style-type: none"> • Shall be released to un-successful bidders on acceptance/scrutiny of the lowest bid. • To the lowest bidder on satisfactory completion of entire works. |
| 11 | Tender fee | : | Rs.500/- to be deposited in Accounts F&A(RE), Real Estate Division, Principal Office Karachi. Original deposit slips to be deposited with RED. |

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GENERAL CONDITIONS

Note:

- a. ***All the rates quoted should be inclusive of all prevailing government taxes, cost of equipment, installation, testing, commissioning, labor, duties, surcharges, as per Govt: rules and profit etc.***
- b. *State Life reserves the right to ADD/DELETE including varying the quantities of item no. 03 & 04 as per requirement.*
- c. *Contractors are advised to visit the site before quoting their rates.*
- d. *After completion of maintenance period, SLIC may enter into service & maintenance contract as per rules, the Contractor must confirm that, they can provide service, maintenance & software update for equipment beyond maintenance period up- to minimum 05 years.*
- e. *The work will be inspected/checked/verified by the SLIC representative for quality control and if found any non-conformity then contractor has to rectify and do the corrective actions at no extra charges.*
- f. *All the work shall be carried out/executed in accordance with the bill of quantities and specifications.*
- g. *All the equipment / material to be installed shall be of the specifications given in B.O.Q. Any variation in specifications will only be considered if that are above the minimum standard given in B.O.Q.*
- h. *The contractor / firm shall be responsible for maintenance and update of software of equipment for two year from date of completion of project. No extra cost will be paid for this. The warranty of equipment shall cover entire replacement of defective parts and making the equipment good in running order. During maintenance period the service shall be provided within 24 hours of complaint.*
- i. *Retention money (10%) will only be released after satisfactory completion of maintenance period of 2 years. In case maintenance of equipment is not done satisfactory, SLIC may deduct the amount for non-operation of equipment on prorata basis.*
- j. *Contractor will be responsible for installation of tags in the cars and its programming before commissioning. He will also train minimum 02 employees nominated by SLIC for training of operation of equipment, installation / removal of tags and minor maintenance. The employees shall be trained in such a manner so that they are able to operate the equipment, install / remove the tags and do the minor maintenance.*

SPECIFICATION OF AUTOMATED BARRIER

1. DESCRIPTION.

This Item governs for the furnishing and installation of automated barrier operated through E tag installed on vehicle with the help of RFID reader which generate signal for the boom to operate. The reader will not allow entering of the vehicle if it was not exit previously.

A windshield tag (RFID) is stuck on the windscreen of the vehicle and on approach to the barrier, the UHF reader picks up the id from range of more than 10 meters for validation, on local validation, the controller sends the signal to the Boom Barrier to open and the complete transaction

2. MATERIALS.

A. General Requirements.

All materials furnished, assembled, fabricated, or installed under this Item must be new, corrosion resistant, weather proof and water proof (Since be installed open to sky space) and in strict accordance with the details shown in the Specifications.

The automated barrier includes, but is not limited to the following:

- i.** Foundation and pedestal
- ii.** Vertical swing barrier:
 - Barrier operator housing for the control components
 - Motor and the associated mechanical equipment
 - Electrical components and associated equipment
 - Control relays and limit switches (If required)
 - Local Control Switches and push buttons
- iii.** Pushbutton Control Panel for manual operations
- iv.** E-tag for Cars and E-cards for Bikes and the product has a user accessible memory of 512 Bit Memory. for input of vehicle ID through software. (Alien In-lay; Paper Laminated ISO 18000C n EPC Gen 2).
- v.** RIFD reader (for both Day and night operations)
- vi.** RFID Parking Management System to input the vehicle ID

B. Functional Requirements.

The barrier is vertical swing type, motor-operated and gear driven. The length of the must be sufficient to span in the range of about 3 to 4 meters.

The barrier must withstand a wind speed of 80 MPH.

The design of the entire barrier assembly and the driving mechanism must meet the requirements of all codes applicable to this type of equipment.

The barrier must have a travel range of 90. The entire 90 degree travel of the barrier is accomplished in an adjustable range of 3 to 10 seconds.

Motor burn- out protection is provided to protect the motor when the Barrier meets an obstruction.

Operations Mode select switches are provided for field personnel to override the automatic control function and to operate the barrier with pushbuttons.

Boom will be automatically raised when power off.

A hand crank is furnished for each barrier for manual operation. Insertion of the hand crank automatically disables the control circuit to the motor-reversing contactor and releases the magnetic brake. Manual operation may be accomplished from outside of the housing by inserting the hand crank through the top.

C. Electrical Requirements.

1. Drive Motor.

The motor must be totally enclosed, non-ventilated, ball-bearing, and instant-reversing type. It operates from single phase 240 VAC, 50 Hz or 100- 240 VDC (depending upon the manufacturer design) and the power rating is sized according to the manufacturer recommend for the barrier arm length and the requirements specified. The motor has following features also:

- Low noise
- No oil leaking
- Regular maintenance-free, long product lifespan
- High transmission efficiency and control precision
- Low motor heating, and less likely to trigger
- Heating protection under continuous working conditions.

2. Motor Control Circuits and Accessories.

A NEMA I electrical compartment is provided to contain the following electrical components, which is provided as part of this bid items (If required):

- Reversing motor starter with thermal overloads
- Breaker for motor disconnect
- Breaker for control and accessories
- Panel for local circuits
- Terminal blocks with identification strips
- Thermostat and heater mounted in bottom
- Dual receptacle
- Lamp outlet
- Limit switches

3. Control Panel.

A control panel is provided and installed in the barrier operator housing (Guard Room). The control panel cabinet is equipped with a number 2 Corbin lock and is accessible without accessing the barrier operating mechanisms. The front panel of Lane Control Panel has the following clearly labeled waterproof switches:

- ❖ Barrier Open - Push button switch to control opening of the barrier.
- ❖ Barrier Close - Push button switch to control closing of the barrier.
- ❖ Operation Mode Select – To select the automatic and manual operations

4. Wiring.

Wires exiting and entering the barrier housing is via terminal blocks in the housing and through openings in the foundation or pedestal. Barrier and all the body shall be properly grounded.

All wiring must meet the requirements of the National Electric Code. All wires are cut to proper length before assembled. No wire is be doubled back to take up slack. Wires are neatly laced into cables with nylon lacing or plastic straps. Cables are secured with clamps.

5. Power Requirements.

The automated barrier and the associated equipment operate from 240 plus or minus 40 VAC, 50 Hz plus or minus 3 Hz or 100- 240 VDC (depending upon the manufacturer design)

The equipment operation is not affected by transient voltages, surges, and sags normally experienced on commercial power lines. The UPS backup as per the

standard must be included. The Contractor must check the local power service to determine if any special design is needed for the equipment. The extra cost, if required, is included in the bid price of the automatic barrier.

6. Transient Suppression.

All DC relays, solenoids and holding coils have diodes across the coils for transient suppression. All AC contactors have snubbers.

7. Protection.

The equipment contains readily accessible, manually resettable, or replaceable circuit protection devices (such as circuit breakers or fuses) for equipment and power source protection.

Circuit breakers or fuses are provided and sized such that no wire, component, connector, PC board or assembly is subject to sustained current in excess of their respective design limits upon the failure of any single circuit element or wiring.

8. Fail Safe.

The equipment is designed such that the failure of the equipment does not cause the failure of any other unit of equipment

D. Mechanical Requirements.

Barrier Construction.

Anti-smash rubber material of boom must be used to protect vehicle from damage.

Boom connection should be capable for Impact protection when vehicle collides into the product; boom will be automatically detached to prevent damage on vehicle and product's body.

Boom will be automatically raised when power off, no need for manual operation

E. Environmental Design Requirements.

The barrier gate and its associated equipment must meet all of its specified requirements during and after subjecting to any combination of the following conditions:

- Ambient temperature range of 0 F to 140 F.
- Temperature shock not to exceed 30 F per hour, during which the relative humidity shall not exceed 95%.

- Relative humidity range not to exceed 95% over the temperature range of 40 F to 110 F.
- Moisture condensation on all surfaces caused by temperature changes.

3. CONSTRUCTION.

A. General.

The Automated Barrier design and construction must utilize the latest available techniques with a minimum number of parts, subassemblies, circuits, cards, and modules to maximize standardization and commonality.

The equipment are designed for ease of maintenance. All component parts are readily accessible for inspection and maintenance. Test points are provided for checking essential voltages and waveforms.

B. Electronic Components.

All electronic components must comply with Special Specification Item, "Electronic Components" included.

C. Mechanical Components.

All external screws, nuts, and locking washers are stainless steel; no self-tapping screws are used unless specifically approved by the Engineer. Contractor must include all the pertinent mechanical material required for installation in their bid.

All parts are made of corrosion resistant material, such as plastic, stainless steel, anodized aluminum or brass.

All materials used in construction are protected from fungus growth and moisture deterioration.

Dissimilar metals are separated by an inert dielectric material.

D. Testing, Training, Documentation, Final Acceptance and Warranty.

Testing will be done in presence of SLIC representative and the training to the operator along with the Technician will also be given by the contractor. The warranty of the product must be given for the period of 02 years from the date of installation of automatic gate barrier.

4. **MEASUREMENT.**

This Item will be measured as each unit furnished, installed, made fully operational and tested in accordance with these Special Specifications.