

**Subhead -20.2
Car Parking Management System**

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

20.2.1 SECURITY PART

20.2.1.1 BARRIER GATE

Supply, installation, testing and commissioning of 2mm thickness industrial grade steel Barrier Gate with remote control and manual switch for automated and manual release device to operate the barrier gate when power turns off, automatic reversing when the barrier boom meets the obstruction, auto closing realization through menu setting on the control panel, with available interfaces for infrared photocells, loop detectors, card readers, ticket dispensers, manual switch (wire control), traffic light, compatible to any communication complete as per following specification of working voltage: AC 110V- 220V AC 50Hz, Motor Power: 80W-200W, Working Temperature: -40°C to 75°C, Protection level: IP65, Barrier arm size: 3 to 6 m, Arm opening and closing time: 1 to 6 sec, copper coil motor within net weight of 50-60Kg including the safety surge protection device. Brand and model of mentioned item will be approved by the Engineer-in-charge.

Each 126,693.00 126,693.00 126,693.00 126,693.00

20.2.1.2 LOOP DETECTOR

[Handwritten signatures and scribbles in black and blue ink are present below the text, including a large signature in blue ink and several smaller ones in black ink.]

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
	<p>Supply, installation, testing and commissioning of loop detector with induction coil which is based on advanced microprocessor technology and can work in diverse environments with two way output relays. output signals can be used for controlling door and gate drive mechanisms, operating barriers, controlling traffic light systems or activating card dispensers in parking lots to detect, monitor and safe-guard access ways or for counting vehicles. It should be compatible with following technical specification of supply voltage AC 110 V / 220V / DC12~24V, environmental compensation, automatic drift compensation, output method: Relay, relative humidity <90%, working temperature 40°C to +80°C., frequency range 20 kHz to 170 kHz, coil inductance recommended 100 μH ~ 300 μH (including cable) with three levels of adjustable sensitivity levels.</p>		11,522.00	11,522.00	11,522.00	11,522.00

20.2.1.3 **RADIO FREQUENCY IDENTIFICATION CARD DISPENSER/ COLLECTOR**

Supply, installation, testing and commissioning of industrial grade design, adapt to various working temperature range and dustproof, automatic card dispenser(for entry point)/collector point (for exit point) including collection capacity of 40 cartridges with full capacity alarm function, pre-carding function, power supply unit equipped with compatible circuit breaker, LED Display, RFID Card reader and writer using the time waiting for the customer to use the pre-carding setting to ensure that the user can get the card without fail, supports I/O port and RS232 control, auto alarm of fault with patented sensing technology. Brand and model of mentioned item will be approved by the Engineer-in-charge

Each	149,724.00	149,724.00	149,724.00	149,724.00
------	------------	------------	------------	------------

20.2.1.4 **RADIO FREQUENCY IDENTIFICATION CARD**

[Handwritten signatures and scribbles are present below the section header, including a large blue scribble and several illegible signatures.]

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Supply, installation, testing and commissioning of RFID Card consists of a chip , memory card and an antenna made of PVC or PET compatible to frequency range minimum 125 KHz and chip set.

Each 43.00 43.00 43.00 43.00

20.2.1.5 **LONG RANGE READER**

Supply, installation, testing and commissioning of ultra high frequency long range reader within frequency range 865-868 MHz (EU Standard), 902-928MHz (US Standard) maintaining ISO18000-6B/6C(EPC GEN2), 9-12 dbi built in linear antenna, functional to active/trigger/answer any working mode, compatible to any communication system such as RS232/RS485/WG26/TCP/IP with 9V power supply and working temperature -10 ~ 55 degree celcius and storage temp should exceed 75 degree celcius.

20.2.1.5. 1 5-6 meter

Each 42,947.00 42,947.00 42,947.00 42,947.00

20.2.1.5. 2 10-15 meter

Each 67,488.00 67,488.00 67,488.00 67,488.00

20.2.1.6 **LONG RANGE STICKER**

Supply, installation, testing and commissioning of Ultra High Frequency sticker maintaining ISO 18000-6C(EPC GEN2),IP 68 protocol which can read distance upto 15 meter according to tag size and reader and chip lifetime shouldn't less than 100000 times, data saving for 50 years. The sticker size can be 44*18mm/73.5*21.2mm/100*25mm/100*50mm where base material can be coated paper/PP synthetic paper and antenna material should be aluminium compatible to working temperature -40 degree celcius to 70 degree celcius.

Each 147.00 147.00 147.00 147.00

20.2.1.7 **LONG RANGE METAL TAG**

[Handwritten signatures and scribbles in blue and black ink are present below the text for item 20.2.1.7.]

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Supply, installation, testing and commissioning of long range ultra high frequency metal tag which has an operating frequency of either 902-928 MHz (US) or 865-868 MHz (EU) or equivalent and is based on the Alien Higgs-3 IC or equivalent micro processor control, which provides industry-leading performance and up to maximum 30 meters read range. The UHF tag should be IP68-rated, making it suitable for harsh outdoor environments as well as exposure to water and contaminants and should have an operating temperature range of -20°C to +80°C that can be attached using high-performance adhesives, via a rivet hole, or using a cable tie. The data retention Up to 50 Years, weight should be minimum 40 gm with approximate dimension of 130x42x10.5mm (LxWxT) with 2 holes.

Each 184.00 184.00 184.00 184.00

20.2.1.8 **RFID DESKTOP CARD ISSUER**

Supply, installation, testing and commissioning of RFID desktop card issuer for card reading and writing with minimum frequency of 125 KHz and reading Range from 1-10 cm (depending on the card) and approximate Size of 130*90*50 mm and compatible to any communication system such as RS232/RS485/WG26/TCP/IP.

Each 12,270.00 12,270.00 12,270.00 12,270.00

20.2.1.9 **LONG RANGE RFID DESKTOP CARD ISSUER**

Supply, installation, testing and commissioning of RFID desktop card issuer for card reading and writing with frequency 865-868 MHz (EU), 902-928 MHz (US) and reading Range from 1-20 cm (depending on the card) and approximate Size of 105*70*10 mm and compatible to any communication system such as RS232/RS485/WG26/TCP/IP with minimum RF power 13 dBm(decibels relative to one milliwatt) and as per approved by Engineer in charge.

Each 24,541.00 24,541.00 24,541.00 24,541.00

[Handwritten signatures and initials in blue and black ink are present below the table, including a circled '1' and various scribbles.]

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

20.2.1.10 ANPR CAMERA

Supply, installation, testing and commissioning of smooth video streaming at a minimum resolution of 4 Mega Pixel with 1/3" Progressive Scan CMOS sensor, minimum 8 mm lens, minimum Video Resolution of 2560 x 1440 Pixel resolution including IR Cut Filter(Day/night), Up to 50 m IR Range, Connectivity to IP Camera with ingress protection IP67, bullet type CCTV Housing compatible to Power Supply: 12 VDC \pm 25%, 5.5 mm Coaxial Power Plug including the mounting accessories.

Each	24,541.00	24,541.00	24,541.00	24,541.00
------	-----------	-----------	-----------	-----------

20.2.1.11 SOFTWARE FOR ANPR

Supply, installation, testing and commissioning of synchronizing software embedded with LPR algorithm for image to text conversion which should support plate cutout, overview picture snapshot, and video recording embedded with white list database and capable to generate report according to the direction of Engineer-in-charge.

Each	306,762.00	306,762.00	306,762.00	306,762.00
------	------------	------------	------------	------------

20.2.2 GUIDANCE PART

20.2.2.1 PARKING SENSOR WITH INDICATOR LIGHT

Supply, installation, testing and commissioning of integrated ultrasonic sensor with built-in LED light compatible in working voltage: 12 ~ 28V (rated 24V) with following specification:

Shell material: ABS plastic

Color: red/green (build-in LED)

Communication: Any appropriate system TCP/IP/UDP/RS485 selected by Engineer-in-charge

Installation height may vary from 1.8m ~ 3.0m. But in general, recommended height for installation is 2.5m.

Each	5,522.00	5,522.00	5,522.00	5,522.00
------	----------	----------	----------	----------

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

20.2.2.2 ZONAL CONTROLLER

Supply, installation, testing and commissioning of zonal controller box which can connect up to 120 ultrasonic detector lamps, gathers and forwards vacancy information from all the detectors to the Central Control Unit, and also forwards commands from the Central Control Unit to the LED information panels connected to it for displaying proper vacant information with approximate dimension of

320 × 260 × 90mm including power adapter working in AC220V voltage, compatible to any communication system such as RS232/RS485/WG26/TCP/IP covering distance of minimum 300m.. The capacity of zonal controller can be maximum 120 while recommended no of sensors and LED displays may vary from 60~80 nos.

Each 149,724.00 149,724.00 149,724.00 149,724.00

20.2.2.3 CENTRAL COLLECTOR

Supplying, installing, testing and commissioning of central controller with power adapter box compatible to work in AC220V 2.5A and any communication system such as RS232/RS485/WG26/TCP/IP. The dimension of the controller box should be approved by the Engineer-in-charge and nodal communication distance should be minimum 1000m. Capacity of the central controller box should not less than 62 node controllers.

The Central Control Unit gathers and forwards information from all the Zone Controllers to the parking guidance server for management operation. It can also provide vacancy information to additional level or area vacancy LED display boards connected. The working temperature should be in the range of -20+80°C, rate voltage should be AC 220V with frequency ranging from 50~60Hz.

Each 44,800.00 44,800.00 44,800.00 44,800.00

20.2.2.4 ONE DIRECTIONAL DISPLAY

[Handwritten signatures and scribbles are present below the section header, including names like 'RAS', 'S', 'AA', and 'Ruhel'.]

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Supply, installation, testing and commissioning of one directional arrow indoor LED with IP 54 ingress protocol, 5 digit display with dimension of approximately 735x250x90 (mm), compatible to any communication system such as TCP/IP/UDP/RS485, supports web update, Aluminium frame housing, black color painted acrylic panel, white words with back light, display colors should be in red and green, aluminium frame housing and all necessary civil works for installation.

Each 67,488.00 67,488.00 67,488.00 67,488.00

20.2.2.5 TWO DIRECTIONAL DISPLAY

Supply, installation, testing and commissioning of two directional arrow marked Indoor Single LED display with IP 54 ingress protocol, marked, 12-digit number with dimension of approximately 1342x250x90(mm), compatible to communication system such as TCP/IP/UDP/RS485 with surface paste bright, red and green color, Aluminium frame housing and all necessary civil works for installation.

Each 58,039.00 58,039.00 58,039.00 58,039.00

20.2.2.6 THREE DIRECTIONAL DISPLAY

Supply, installation, testing and commissioning of three directional arrow marked Indoor Single LED display with IP 54 ingress protocol, marked, 12-digit number with dimension of approximately 2010x250x90(mm), compatible to communication system such as TCP/IP/UDP/RS485 with surface paste bright, red and green color, Aluminium frame housing and all necessary civil works for installation.

Each 60,935.00 60,935.00 60,935.00 60,935.00

20.2.2.7 MAIN DISPLAY

[Handwritten signatures and scribbles are present in this section, including a large blue scribble and several illegible signatures.]

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Supply, installation, testing and commissioning of main display with approximate dimension of Housing 2200*750*200mm (L*W*T) for the LED module with approximate dimension 640*160mm (L*H) with IP65 ingress protocol. Display color of LED monitor may be LED red or Green color.

Each 122,705.00 122,705.00 122,705.00 122,705.00

20.2.2.8 **SERVER PC**

Supply and installation of server pc with following configuration:

- Motherboard: Intel Chipset
- CPU: Intel Core i7 3.6 GHz or equivalent
- RAM: 8GB DDR4 minimum
- HDD: 2 TB SATA+ 240GB SSD minimum
- Casing: ATX Handle
- Monitor: 21.5" LED minimum
- Keyboard: A4 Tech or equivalent
- USB Mouse: A4 Tech USB or equivalent
- UPS: Offline 1200 VA minimum

Brand and model of mentioned item will be approved by the Engineer-in-charge.

Each 122,705.00 122,705.00 122,705.00 122,705.00

20.2.2.9 **PARKING GUIDANCE SOFTWARE WITH LICENSE**

[Handwritten signatures and initials in various colors (black, blue, red) are present below the section header, including names like 'AB', 'AA', and others.]

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
----------	----------------------	------	---	--	--	--------------------------------------

Supply, installing, testing and commissioning of Linux/Windows or any other compatible operating system based level counting and parking guidance system software which should provide centralized count management, monitoring and guidance control for parking facilities that have multiple entry and exit points and/or several individual levels or nested parking areas. It should facilitate the benefits to small car parks as well as large, multi-level car parks.

Key occupancy information and alarm indications need to be displayed on graphical user interface. The counting modules are needed to monitor all entry lanes, exit lanes and access points between levels and areas and store counts locally on physical counters. These features need to be ensured to the software through a network connection.

The software should maintain a database of all physical counters and their values, and processes the count information as necessary. It needs to calculate and maintain values such as available spaces on individual levels, overall occupancy levels etc which can be used for on-screen displays of important summary information and for driving message signs that are strategically placed around the car parking facility. This will guide the drivers to those areas where there are more parking spaces, avoiding delays. In addition, the parking facility administrator should have access to a wealth of useful information including real-time occupancy data, early indications of potential problems and a continuous count log to facilitate the statistical analysis of daily occupancy patterns, space utilization.

[Handwritten signatures and initials in black and blue ink, including 'AS', 'P', 'R', 'AA', and 'N']

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
	<p>Features:</p> <ul style="list-style-type: none"> -Client/Server structure supports multiple control/monitoring stations -Supports Counting Modules (128 physical counters) -Supports up to Variable Message Signs -Compatible to RS232/RS485/WG26/TCP/IP -Graphical views with floor plans -Flexible counting and response action settings <ul style="list-style-type: none"> -Comprehensive range of display options -Audible alarms -Fully centralized count management -Count logging and Reporting -Scalable license facilitates cost-effective solutions for all sizes of car park <p>Any change in parking guidance</p>	Each	245,410.00	245,410.00	245,410.00	245,410.00

20.2.3 SAFETY PART

20.2.3.1 RUBBER/PLASTIC SPEED BREAKER

Supply and installation of high grade pvc plastic or rubber speed breaker with approximate dimension of 500*350*50 mm with load capacity of minimum 30 tons, black and yellow color, anti-slip, anti-crash & anti-UV materials which slow down the speed of the vehicles.

Each	1,963.00	1,963.00	1,963.00	1,963.00
------	----------	----------	----------	----------

20.2.3.2 RUBBER/PLASTIC COLUMN GUARD

Supply and installation of high grade PVC plastic or rubber speed breaker with approximate dimension size: 800*100*10 mm, material should be soft rubber/plastic with safety traffic red/green/white/yellow reflector.

Per Meter	1,227.00	1,227.00	1,227.00	1,227.00
-----------	----------	----------	----------	----------

20.2.3.3 RUBBER/PLASTIC WHEEL STOPPER

Supply and installation of high grade pvc plastic or rubber speed breaker with approximate dimension of 500*350*50 mm with load capacity of minimum 30 tons, black and yellow color, anti-slip, anti-crash & anti-UV materials which slow down the speed of the vehicles.

Per Meter	1,227.00	1,227.00	1,227.00	1,227.00
-----------	----------	----------	----------	----------

Item No.	Description of Items	Unit	Unit Rate in Dhaka & Mymensingh Zone (Tk)	Unit Rate in Chattogram & Sylhet Zone (Tk)	Unit Rate in Khulna, Barishal & Gopalganj (Tk)	Unit Rate in Rajshahi & Rangpur (Tk)
	Supply and installation of high grade PVC plastic or rubber speed breaker with approximate dimension size of 560*150*100 mm, material should be soft rubber/plastic with safety traffic yellow reflector.	Each	920.00	920.00	920.00	920.00
20.2.3.4	PLASTIC METAL ROAD STUD Supply and installation of plastic road stud to raise pavement mark with minimum flexural Strength of 9300N and made of PMMA+ABS material or equivalent material.	Each	920.00	920.00	920.00	920.00
20.2.3.5	PARKING SAFETY MIRROR Supply and installation of PMMA Convex safety mirror in the parking area for proper guidance of the vehicles with acrylic mirror face and PP mirror back with wide viewing angle of minimum 130 degree.					
20.2.3.5.1	Size: 600mm	Each	11,657.00	11,657.00	11,657.00	11,657.00
20.2.3.5.2	Size: 800mm	Each	12,884.00	12,884.00	12,884.00	12,884.00
20.2.3.5.3	Size: 1000mm	Each	14,111.00	14,111.00	14,111.00	14,111.00