ज्ञापांक 190/355298 /आपूर्ति
95–1–16–2017

पुलिस महानिदेशक का कार्यालय, बिहार, पटना

पटना,दिनांक–20/02/2018

सेवा में,

निदेशक,
सूचना एवं जनसम्पर्क विभाग,
बिहार, पटना

विषय– **अल्पकालीन पुनर्निविदा आमंत्रण सूचना सं0–64/2017–18 के प्रकाशन के संबंध में।**

निदेशानुसार उपर्युक्त विषय के सबंध में अल्पकालीन पुनर्निविदा आमंत्रण सूचना सं0–64/2017–18 की पॉच प्रतियॉ (सी0डी0 सहित) संलग्न करते हुए अनुरोध है कि इसे राज्य एवं राज्य से बाहर के प्रमुख समाचार पत्रों में (अंग्रेजी एवं हिन्दी) के अगले दो संस्करणों में प्रकाशित कराने की कृपा की जाय साथ ही पी0आर0डी0 वेबसाईट पर भी प्रसारित करने की कृपा की जाय।

इस निविदा आमंत्रण सूचना का प्रकाशन किन–किन समाचार पत्रों में किया गया इसकी सूचना देने की कृपा की जाय।

अनु0–यथोपरि।

पुलिस महानिरीक्षक के सहायक (क्यू0),
बिहार, पटना

प्रतिलिपिः–

1. आई0टी0 मैनेजर, पुलिस महानिदेशक का कार्यालय, बिहार, पटना को कृपया सूचनार्थ। कृपया इसे आज ही वेबसाइट पर अपलोड किया जाय। साथ ही Indian Trade Journal, Kolkata के अंक में प्रकाशन हेतु Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054,(Tel No. 011-23812527, FAX : 011-23817846), Email Id-sk.mondal.dgcis@nic.in के पतेपर भी अनिवार्य रूप से भेजा जाय।

2. Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054,(Tel No. 011-23812527, FAX : 011-23817846), Email Id-sk.mondal.dgcis@nic.in को कृपया सूचनार्थ एवं आवश्यक क्रियार्थ प्रेषित। अनुरोध है कि उक्त निविदा का प्रकाशन Indian Trade Journal, Kolkata के अंक में करने की कृपा की जाय।

पुलिस महानिरीक्षक के सहायक (क्यू0),
बिहार, पटना

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Police Headquarters, Bihar, Patna

Notice Inviting Short Re-Tender No.-64/2017-18

1. Name of the Department: Office of Director General of Police, Bihar, Patna.
2. Last date & time for the acceptance of the short re-tender : 5 / 3 /2018, Till 02:00 PM
3. Date & time fixed for the opening of the short re-tender : 5 / 3 /2018, At 04:00 PM
4. Place fixed for receiving & opening the tender : Office of Director General of Police, Bihar, Patna.
5. Details of Job:

S.N.	Item name	Quantity
1	Integrated Access Control, Security and Surveillance System having folowing components: -	
	a. Turnstiles gate with biometric authentication and visitor management software.	10
	b. Under Vehicle Scanning System with centralized monitoring database.	02
	c. Perimeter Intrusion Detection System with Emergency alarms.	01
	d. Tyre Killer.	02
	e. Blocking Bollards.	10 [5x2 sets]

Specifications and other terms & conditions of the tender may be obtained in person from this office or may be downloaded from the website www.prdbihar.gov.in or www.biharpolice.bih.nic.in.

AIG (Q)
Bihar, Patna

Terms & Conditions of Short Re-Tender No.-64/2017-18

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1. Tender of the firm will be accepted only on the condition that if their tenders are approved, the firm shall get registered with the Commercial Tax Department, Bihar, before the purchase order is issued.
2. The tender should be submitted in two parts: (i) Technical Bid and (ii) Financial Bid, duly sealed in two separate envelopes super-scribed as "Technical Bid" and "Financial Bid".
3. All relevant papers/ E.M.D./certificates/specifications etc. of items should be enclosed in the Technical Bid.
4. The rates of the items shall be quoted in the Financial Bid only.
5. All charges like IGST/CGST/SGST etc. shall be clearly mentioned in the Financial Bid and the net rate (in figures and words) including all taxes and duties must also be quoted. Vague offers like indicating taxes "as applicable" will not be accepted.
6. The rates of the items shall be quoted in the Financial Bid in two parts :
   (i) With AMC (Annual Maintenance Contract) and (ii) Without AMC
7. There should be no cutting, over writing or correction on the rates.
8. The technical and financial bids for each item should be submitted separately in separate envelopes. The technical and financial bids for more than one items submitted together in the same envelope shall not be accepted.
9. If the financial bid is submitted in the same envelope containing the technical bid then also it shall be summarily rejected.
10. The technical and financial bids should be put in two separate sealed envelopes and the envelopes should be marked Short Re-Tender No-64/2017-18 (Technical Bid) and Short Re-Tender No-64/2017-18 (Financial Bid) along with the name and address of the firm. The sealed envelopes containing the technical and the financial bids should be sent in another sealed envelope which should be marked as Short Re-Tender No-64/2017-18. This envelope should not bear the name and address of the firm.
11. Income Tax Returns of last three years, a photocopy of GST registration number of the participating firm and turn-over of any two of the previous three financial years should be submitted with the technical bid. It should be specifically mentioned whether IT return has been filed manually or electronically.
12. The turnover of the firm for the last reported financial year should be at least equal to the amount of the supply order which is being issued. A copy of the profit and loss Account of the firm for any two of the previous three financial years, certified by a Chartered Accountant should be submitted along with the tender. If the tenderer is authorized dealer or authorized supplier of manufacturing firm, then the certified details of the turnover of authorizing firm may be accepted. Tender specific authorization from the OEM must be submitted, but in certain cases where authorization from OEM is not required, the Technical-cum-User committee (T.U.C.) shall decide about exemption (if any) on a case-by-case basis; citing appropriate reasons for the same.
13. If there is some discount in the price of any item, it should be deducted from price itself and such discounts should not be quoted separately.
14. If the product is available on DGS & D rate contract, then a copy of the contract must be attached and pricing be done including all taxes.
15. A copy of the test report for the product issued by any established and recognized private Laboratory or by agency accredited by the Government should be attached with the technical bid. However if required, the Technical-cum-User committee (T.U.C.) can take decision regarding exemptions/relaxations (if any), citing appropriate reasons.

16. In case of Bullet Proof/Bullet Resistant items, test report of TBRL or any Government Approved/Recognized Laboratory is compulsory.
17. Firms participating in this tender shall also submit duly sworn affidavit to the effect that " this firm has not been black listed/debarred by any Government or Semi Government or Private Agency and no sister concern of this firm is participating in this tender."
18. Firms participating in this tender shall also submit the self attested list of users of its equipments.
19. All items shall be received at Central Clothing Store, Patna; therefore price should be quoted FOR Central Clothing Store, Phulwari Sharif, Patna.
20. Firms will have to deposit a sum of Rs.50,000/- (Fifty Thousand) only as an earnest money deposit in the form of Bank Draft duly pledged in favor of the undersigned along with the quotations. The small scale units located in Bihar shall not be liable to deposit earnest money. Exemption from submitting E.M.D. will also be available to those who are registered with the Central Purchase Organization/State Purchase Organization and National Small Industries Corporation (NSIC).
21. Technical Bids will be opened on scheduled date and time in the office chamber of Police Headquarter. Representatives of the firms competing in the tender may remain present at the time of opening of the technical bid.
22. The technical bids will be opened first and placed before the Technical Committee of the Police Headquarters, Bihar. If the technical bids are found satisfactory as per tender conditions, it will be put before Central Purchase Committee of the Police Headquarters, Bihar. The firms may be required to participate in the demonstrations of the quoted product and discussions with this committee.
23. Any paper/document will not be accepted after opening the tender.
24. Successful firm will have to enter into an agreement after depositing a sum of 5% of the total value of the order as security money in the form of Bank Guarantee duly pledged in favor of undersigned.
25. The firm will be required to provide satisfactory after-sales service after the delivery of the product.
26. The firm will be required to supply all the items within the stipulated time frame as mentioned in the purchase order.
27. Payment for the delivered items will be made only after the acceptance report of the Inspection Committee of the Police Headquarters, Bihar.
28. The firm whose quotation is approved by the Central Purchase Committee of the Police Headquarters, Bihar, shall be invited to enter into an agreement with the undersigned.
29. It is expected to submit the duly filled chart attached herewith, along with the technical bid if not the tender shall be summarily rejected.
30. Indexing of the requisite documents must be done and submitted along with the technical bid.
31. Hands on training for 3 weeks of the equipment must be imparted to the user group by the firm after successful installation.
32. Director General of Police Bihar, Patna reserves the right to reject any or all the quotations partially or fully, without assigning any reason thereof.
33. The Quantity indicated may increase or decrease at the time of issuing purchase order.

A I G (Q)
Bihar, Police.

Technical Specifications for Integrated Access Control, Security and Surveillance with Perimeter Intrusion Detection System

Integrated security and access control system is required with following key components/sub-systems :-

1. **FULL HEIGHT TURNSTILES**

Operational parameters and specifications
Height of Turnstile: min 2200 mm
Passage Clearance Height: min 2000 mm
Number of Lane / Passage: Two
Power: 230 V AC +/- 10% Single phase
Corrosion resistance. Power off: free to rotate in either directions or get locked in both directions or either direction
Operation: Bi-Directional
Locking: Mechanism to prevent the Turnstile rotating in the opposite direction once it has traveled 30 degree past the rest position. Self Centering Mechanism: With hydraulic damping to ensure head always rotates quietly and smoothly to the neutral position. Action Lock: Positive action lock to prevent two passage at one time.
Fail safe and Fail lock variants in the event of removal of power supply: If fail lock is specified, then rotor will lock in both directions. If Fail safe is specified then the rotor will be free to rotate in both directions. **Through put:** min 10-12 persons per min per lane. Safety Standard: EN, EMC & ISO Certification Certification: CE Certified
Integration of various turnstiles units: Provision for any access control device like Smart Card reader and Finger print reader/scanner.All Turnstiles should be controlled by a single centralized Biometric authentication system software. Biometric fingerprint scanners to be provided with each lane for all the gates. Access management and visitor management software required to work in conjunction with turnstiles. Should be able to store upto 10,000 visitor profiles and 10,00,000 (1 Million) transaction/visit records. Need suitable daily data backup provision. System should also have at least six hours power backup. Networking of all turnstile units/gates to be done with a central onsite server (to be provided with turnstile) in wired/wireless mode. **Warranty and comprehensive maintenance services needed for 5 years.**

UNDER VEHICLE SCANNING SYSTEM:-

Facility needed to scan moving vehicles, with networked centralized monitoring and database management system, ANPR cameras and automatic classification and alert feature.

Supply & installation of Under Vehicle Scanning System, to enable inspection of any vehicle's underbelly through a composite image of the vehicle, as per the details given below:-

1. The UVSS should be able to capture very high resolution & complete composite COLOR underbelly image of any vehicle passing over it using a single high resolution digital progressive Area-scan GigE camera, without the vehicle being required to be stopped.
2. The UVSS should be able to handle vehicles moving at different speeds ranging from 0 to 30 Km/hr, while the composite image so captured by the system should be automatically and dynamically adjusted according to the speed of the vehicle.
3. The Composite imaging camera should be a high quality, COLOR AREA SCAN, GigE type, with minimum VGA resolution of (1280 x 1024) or above.
4. The UVSS should be capable of producing a clear and undistorted image of the vehicle underbelly, even when a vehicle has completely stopped / halted over the UVSS unit, i.e it must still be able to create a seamless and perfect composite image of the underbelly irrespective of stoppage or non-uniform motion of the vehicle over the scanner.
5. The UVSS should not use either a digital Line-Scan camera based technology or any type of analog cameras to form composite image.
6. The UVSS must have feature to magnify (zoom) the composite images (current and past), up to 4x, in order to facilitate a closer view of any part of the composite image.
7. The underside illumination must be adequate and obtained through any state-of-the-art, long life, LED lighting modules. Halogen or CFL type lighting elements for illumination of the underside will not be accepted.
8. There should be 3 or more additional view cameras for capturing motion video images of the deeper/ hard-to-view areas of the underbelly, e.g. areas around suspensions, below the engine areas, side wall of fuel tanks & exhaust pipes etc.
9. The UVSS should also provide a feature to capture the image of the driver of all RHS driven vehicles, captured through a suitable driver view camera for Entry and Exit lanes.
10. System should have an Automated Number Plate Reading System (ANPRS) for Entry and Exit lanes tuned to the Indian license plates, i.e. it should be able to automatically read and record a wide range of vehicle registration number plates' alpha-numeric characters, written in English. Also, the frontal image view of the vehicle to be provided in the GUI, to facilitate manual viewing of the license plate image.
11. UVSS should give output of all the data simultaneously i.e. the composite image, additional videos of hard-viewing cameras, driver photos, vehicle's frontal image and its number display – all should be displayed on the monitor almost instantaneously after the vehicle cross the unit. Also, the system should have a facility to view the composite image and video images, off-line also, for all vehicles.
12. The UVSS applications & operating software must have a user friendly Graphical User Interface (GUI) with provision for multiple users logging of events and search facility.
13. The UVSS system must have a facility to take back-up of all the transactions to storage media.
14. The UVSS should have an option to control all local UVSS operations from the secondary/supervisory central console on high speed LAN, without any distance constraint between the UVSS unit and the location of the control room where the secondary/supervisory console would be placed.
15. The UVSS should have option for open protocol for integration with other security systems.
16. The overall UVSS should be CE Certified. A certificate to this effect, after duly tested, issued by a competent certifying agency, must be attached with the tender.
17. The underground cameras of UVSS should be enclosed in a suitable all-weather-proof housing of IP 67 equivalent or higher standard. A certificate to this effect, after duly tested, issued by a competent certifying agency, must be attached with the tender.
18. The overall installed unit should be properly designed, and its structure should be able to withstand a total vehicle load up to 40-Tons at any point over the structure, more particularly at the Centre of the unit, so as not to suffer any accidental physical damage to the unit and the components under the pit cover.
19. The bidder should be able to show a live working demo of the system in India.
20. The quoted UVSS make should have references anywhere within India. A list of such references must be furnished.
21. The UVSS should be integrated with the control software for operating blocking bollards (also to be installed as part of this project). For example, if a vehicle's underbelly is detected with an alien object, the bollards should

not go down while in case of a vehicle whose scan matched exactly with the vehicle manufacturer's design should be allowed to go ahead by automatically lowering the bollards.

22. There should be Separate CCTV cameras installed by roadside to capture the photo of vehicle driver and that of the number plate (ANPR).
23. The UVSS should automatically detect and notify any deviation/ suspicious material is found in the underbelly of vehicle.

3. PERIMETER INTRUSION DETECTION AND EMERGENCY ALARM/ALERT SYSTEM

1.01 GENERAL PERFORMANCE REQUIREMENTS

A. SYSTEM DESCRIPTION

1. The system should use a multimode fiber optic sensor with multi-channel DSP processor designed and configured for fence line intrusion detection.
2. The fiber optic intrusion detection system should function as a perimeter intrusion detector. The multimode fiber optic sensor should be designed for encasement in flexible conduit and mounting on a perimeter fence. The basic system should consist of the fiber optic sensor cable, flexible conduit, and a dual-zone processing unit.
3. Software should be provided that reduces nuisance alarms cause by wind, for use in locations that experience windy conditions.
4. The system should provide intruder detection for perimeters with chain link fence.
5. The system should detect vibrations caused by an intruder that is cutting, climbing, or lifting the fence fabric.
6. The system should be capable of stand-alone operation. The system should also be capable of integrating itself into a security management system by providing alarm relay contact outputs, an <RS-232> interface, and an XML interface.
7. The performance criteria required for this project should meet or exceed that of a perimeter intrusion detection system as provided by the original equipment manufacturer.
8. The PIDS should also include CCTV PTZ camera and should focus on the intrusion once detected.

1.02 SUBMITTALS

The Contractor should submit the following documents for review and approval prior to any shipment of components:

A. **Installation/operation manuals and instructions for all equipment furnished under this system.**

B. **An overall perimeter site plan showing the detection zone layout.**

C. **Site-specific layouts should be provided showing major components and interconnections located on the perimeter.**

D. **Standard system and sensor cable layout drawings should be provided.**

4. TYRE KILLER/DEFLATION DEVICE

A. <u>Electro-Hydraulic Tyre Killer.</u>

2.1.0 SCOPE

This defines the specifications for electro hydraulic Tyre killer system consisting of (one, two, three or four) Tyre killer operating (independently or in sets of two three or four), a Hydraulic power system, the controls and logic circuits, and related features. Should be remotely launched and retracted. Should deflate tyres of all vehicles including cars, busses and tractor-trailers. Should deflate tyres without blowout, releasing air at a safe, controlled rate.

2.2.0 SYSTEM CONFIGURATION

2.2.1 Tyre killer(S) for 20 Feet wide road required

2.2.1.1 Tyre Killer Construction: Tyre killer should be a below ground assembly containing a solid blocking spikes capable of being raised to an above ground guard positions. In the lowered position of the system is flushed with road surface. The guard position should present a formidable obstacle to approaching vehicles. The blocking segment should consist of spikes at an angle of 60^0 and should be made up of tampered steel. The gap between the spikes measured from the center of spikes should be between 100mm and 200mm.

2.2.1.2 Tyre killer height: Height of the spikes of the Tyre killer in guard position should be 450mm as measured from the top of the foundation frame to the top of the barrier inclusive of the top road plate.

2.2.1.3 Tyre killer spike width: Tyre killer spike width should be 25 mm thick.

2.2.1.4 Normal Operation: Tyre killer should provide excellent security and positive control of normal traffic in both directions by providing as almost insurmountable obstacle to vehicles. The Tyre killer system should be designed to damage a vehicle by destroying Tyres, axles and suspension of motor vehicles.

2.2.1.5 Operation time: Each Tyre killer (or set) should be capable of being raised or lowered within 2 to 3 seconds.

2.2.1.6 Frequency of operation: The Tyre killer should be capable of performing 200 full cycles per hour.

2.2.1.7 Power Off Operation: The accumulator should be sized to allow minimum three full cycle operations of a single Tyre killer in the event of power interruption.

2.2.1.8 Manual Operation: A hand pump should be furnished to allow the Tyre killer to be raised manually in the event of a prolonged power interruption. (Bidder should specify time taken and number of strokes to raise and lower the spikes as per specifications).

2.2.1.9 Axle load bearing capability: The system should be able to bear axle load of 20 tons of a moving vehicle.

2.2.1.10 Safety Interlock Detector: A Tyre killer vehicle detector safety loop (induction loop) should be supplied to prevent the Tyre killer from being accidentally raised under an authorized vehicle. The detector should utilize digital logic have fully automatic tuning for stable and accurate long-term reliability. The output of the detector should delay any Tyre killer rise signal (except for emergency command) when a vehicle is over the loop.

2.2.1.11 Stop/Go Traffic Lights: Red /Green 20cm diameter. Traffic lights should be supplied to alert vehicle drivers of the Tyre killer position. The green light should indicate that the Tyre killer is fully in down position. All other positions should be indicated by red light.

2.2.1.12 Environmental Data: Tyre killer should operate satisfactorily under the extreme environmental conditions of Patna.

(a) Tyre killer should be operable in -20^0C and $+60^0$C

(b) Rainfall: Maximum expected hourly rate.

2.2.1.13 Sump Pump: A self-priming sump pump should be supplied to drain water collected in the Tyre killer foundation. The pump should have the suitable capacity to remove the rain water up to a distance of 50 feet to the discharge drain location. Pump operating voltage should be 230 volt/ 1ph/ 50 Hz.

2.2.1.14 Finish: The foundation and underside of the Tyre killer should be asbestos free coated for corrosion protection. The spikes should have reflective red color. The roadway plates should have special coating (anti-skid) to merge with road surface.

2.2.2 Hydraulic Power Unit (HPU)

2.2.2.1 Hydraulic Circuit Unit: The unit should consist of an electronically driven hydraulic pump, which should pressurize a high-pressure manifold connected to a hydraulic accumulator. Electrically actuated valves should be installed on the manifold to allow oil to be driven to the up and down side of a double acting hydraulic cylinder to raise and lower the Tyre killer. The hydraulic circuit should include all necessary control logic devices, interconnect lines and valves.

2.2.2.2 Main Power: The electric motor driving the hydraulic pump should operate on power supply 220 volt/ single phase / 50Hz. Motor should be sufficiently sized for continuous rating.

2.2.2.3 Whether Resistant HPU Enclosure: A lockable weather resistant enclosure should be provided for the HPU. The design should provide for easy access to the HPU for maintenance and emergency operation of the hydraulic system. Enclosure should be provided with a corrosion resistant coating.

2.2.2.4 Central Control Panel: A central control panel should be supplied to control Tyre killer function. This panel should have a key lockable main switch with "main power on" and "panel on" lights. Buttons to raise and lower each Tyre killer (or set) should be provided. Tyre killer "up" and "down" indicator lights should be included for each Tyre killer (or set). The central control panel should operate on 24 VAC (optionally 24 VDC).

2.2.2.5 Integration with other system: The system should have the capability of integration with Access control system, CCTV, loop detector and other crash-rated barriers such as, Bollards which will also be installed as part of this project.

5. BLOCKING BOLLARDS

A Electro-hydraulic Bollards System

1.1.0 SCOPE

This defines the specification for electro-hydraulic Bollards, consisting of vertical lift retractable bollards operating independently or in sets 5) a hydraulic power unit , the controls and logic circuits and related features.

1.2.0 SYSTEM CONFIGURATION

1.2.1 BOLLARDS(S)

1.2.1.1 Bollards Construction: Bollards Should be a below ground assembly containing heavy steel cylindrical weldment capable of being raised to an above ground guard position. The guard position should present a formidable obstacle to an approaching vehicle.

1.2.1.2 Bollards Arrangements: The system should have a total bollards as per BOQ arranged in accordance to the operating pattern of the Bollards within the system.

1.2.1.3 Bollards Dimension: Diameter 220 to 275 mm, Height 60 to 80 cm.

1.2.1.4 Normal Operation: Bollard(S) should provide excellent security and positive control of normal traffic in both directions by providing as almost insurmountable obstacle to non-armoured or non-tracked vehicles. The Bollards system should be designed to stop a vehicle attacking from either direction and continue to operate when the vehicle in within the defined weight and velocity characteristics, minor repairs accepted.

1.2.1.5 Bollards should be capable to withstand impact load of minimum upto 900 KN (7500 Kg vehicle at 80 Kmph) as per PAS68 standards.

1.2.1.6 Operation Time: Each Bollards (or set) should be capable of being raised or lowered in 5 to 8 second. Bollards direction should be instantly reversible at any point in its cycle from the control stations. (Bidder should specify the raising and lowering time).

1.2.1.7 Frequency of Operation: Bollards should be capable of performing to 200 full cycles per hour.

1.2.1.8 Power off Operation: The accumulator should be sized to allow minimum three full cycle operations of single Bollards in the event of power breakdown.

1.2.1.9 Manual Operation: A hand pump should be furnished to allow the Bollards to be raised manually in the event of a prolonged power interruption. (Bidder should specify the time and number of strokes required to raise and lower a Bollard).

1.2.1.10 Axel Load bearing capability: The system should be able to bear axle load of 20 tons of a moving vehicle.

1.2.1.11 Safety Interlock Detector: A Bollards vehicle detector safety loop (induction loop) should be supplied to prevent the Bollards from being accidentally raised under an authorized vehicle. The detector should utilise digital logic have fully automatic tuning for stable and accurate long-term reliability. The output of the detector should delay any Bollards rise signal (except for emergency command) when a vehicle is over the loop.

1.2.1.12 Environmental Data: Bollards should operate satisfactorily under the extreme environmental conditions.

(a)Extremes in temperature (-20 C to +60 C) (b)Rainfall : Maximum expected hourly rate.

1.2.1.13 Finish : The foundation and underside of the bollards should have asbestos free coating for corrosion protection .The roadway plates should have a non-skid surface. Bollards should be of stainless steel furnish with reflective strips and opening closing buzzer . There should be circular illuminating unit (LED based) on the top of the Bollards

1.2.2 HYDRAULIC POWER UNIT (HPU)

1.2.2.1 Hydraulic Circuit: Circuit unit should consist of an electronically driven hydraulic pump, which should pressurize a high – pressure manifold connected to a hydraulic accumulator . Electrically actuated valves should be installed on the manifold to allow oil to be driven to the up and / or down side of a double acting hydraulic cylinder to raise and lower the Bollards. The hydraulic circuit should included all necessary control logic , interconnect line and valves. Electric motor driving the hydraulic pump should be fed from 220 volt (+/-10%) / single phase / 550Hz . Motor should be sufficiently sized for the continuous Bollards operations.

1.2.2.2 Weather Resistant HPU Enclosure : A lockable weather resistant enclosure should be provided for the HPU . The design should provide for easy access to the HPU for maintenance and emergency operation of the hydraulic system. Enclosure should be provided with a corrosion resistant coating.

1.2.3 CONTROL AND LOGIC Circuits.

1.2.3.1 Control Circuit : the controls will be PLC based . A control Circuit should be provided to interface between all Bollards control stations. The circuit should contain all relays , timers and other devices necessary for the Bollards operation. The control circuit should operate on 230 volts , single phase , 50 Hz . An internally mounted transformer should reduce this to 24 Vac (optionally 24 VDC) for all external control stations.

1.2.3.2 Construction : The control circuit should be mounted in a general - purpose enclosure . All device interconnect lines should be run to terminal strips . The following control station (s) should be provided .

1.2.3.3 Central Control Panels : A central control panel should be supplied to control Bolllards function . This panel should have a key lockable main switch with "main power on" and "panel on" lights. Push Buttons for "UP", " DOWN " , "STOP" and "MIDDLE STOP" positions for each Bollards (or set) should be provided . Bollards positions indicator light should be included for each Bollards (or set) . The central control panel should have a key lockable switch to arm or disarm the local control panel(s). All indicator light should show if the local control panel is armed . The central control panel should operate on 24 VAC optically 24 VDC.

1.2.4 Integration with other system : The system should have the capability of integration with Biometric visitor management system and Access Control systems including perimeter intrusion detection system, Under vehicle scanning system (UVSS) and Tyre killers etc.

SYSTEM INTEGRATION REQUIREMENTS FOR INTEGRATED ACCESS CONTROL AND SECURITY /SURVEILLANCE SYSTEM

Integration of all components/sub-systems mentioned above is the most important part of the execution process. There should be mutual connectivity at software level among different units e.g.- UVSS, X-Ray baggage scanner, Turnstiles, Blocking bollards and the Tyre killer machines; using a bridge software for seamless integration with each other, so as to facilitate integrated command and security/access control of the entire premises of C. M. House at Patna.

NOTE: THE INTEGRATED ACCESS CONTROL SYSTEM WITH ALL ITS COMPONENTS SHOULD HAVE WARRANTY AND COMPREHENSIVE MAINTENANCE SERVICE OF ATLEAST 5 YEARS. THE ONSITE TRAINING FOR OPERATION TO THE SECURITY PERSONNEL BE PROVIDED AND LOCAL TECHNICAL SUPPORT SHOULD BE PROVIDED DURING THE SERVICE PERIOD (I.E. FIVE YEARS).