Department of Mines and Geology, Hyderabad

Government of Telangana

REQUEST FOR PROPOSAL (RFP)

For Empanelment of Agencies for Supply, Installation, Integration and Maintenance of ANPR (Automatic Number Plate Recognition) Systems in Mining Leases, Quarry Leases, and Mineral Dealer Areas in Telangana State

RFP No. 3385773/IT-DMG/2025

11.11.2025

1. Introduction

The Department of Mines and Geology, Government of Telangana (hereinafter referred to as the "Department"), invites proposals from reputed and experienced agencies for empanelment for the supply, installation, integration, and maintenance of IP Camera System which will be referred as ANPR Camera system throughout the document at various mining leases, quarry leases, and mineral dealer premises across Telangana State.

This initiative aims to strengthen the monitoring of vehicle movements involved in mineral transportation, ensure transparency and accountability, and curb illegal mining and transportation activities through vehicle number plate detection and real-time surveillance.

The proposed ANPR system will automatically capture vehicle license plates at strategic locations — such as entry and exit gates and optional internal haul roadsand transmit the recognized plate data to the centralized monitoring system of the Department. The system shall support real-time alerts, video evidence storage, and secure data sharing through an Application Programming Interface (API) for integration with existing departmental surveillance and enforcement platforms.

There are approximately 1500 mining leases, quarry leases, and mineral dealer areas across the State, with new sites being added regularly. The Department intends to create a scalable and standardizedANPR Camera infrastructure, deployable in phases, ensuring that each site is equipped with reliable plate capture technology, secure data transmission, and analytics capabilitiesthrough edge-based Local Processing Units (LPUs),and data sent to centralized server-based processing of bidder and department.

The empanelled agencies will be responsible for the design, supply, installation, integration, testing, commissioning, and maintenance of ANPRstems in compliance with this RFP. The solution shall adhere to national and international standards for camera quality, performance, and data security.

The Department of Mines and Geology, Government of Telangana invites proposals from reputed and experienced agencies for empanelment for the supply, installation, integration, and maintenance of ANPR camera systems.

2. Scope of Work

The selected agency shall be responsible for the design, supply, installation, integration, testing, commissioning, and maintenance of ANPR Camera Systems at designated mining leases, quarry leases, and mineral dealer premises across Telangana.
The scope covers both hardware and software components, including data integration with the Department's centralized monitoring system.

2.1 Site Survey and Design

1. Conduct a comprehensive site survey to assess terrain, lighting, vehicle flow, and network feasibility at each mining lease or dealer location.
2. Identify suitable camera location at:
    - Entry and Exit Gates (for vehicle authentication and compliance checks).
3. Prepare detailed layout drawings showing:
    - Camera positioning, pole height, orientation, and coverage zone.
    - LPU (Local Processing Unit), NVR placement.
    - Power source and network connectivity diagram.
4. Submit a site design report for approval prior to installation.

2.2 Supply of Equipment

The bidder shall supply the following components meeting the minimum specifications. All Camera's should be STQC complaint and made in India.

- **OEM Requirements**

  1. OEM should not be suspended from GeM due to non-compliance with GFR Rule 144(xi).

  2. OEM R&D must be registered with Department of Scientific and Industrial Research (DSIR)- India.

  3. OEM should have been established in India at least for 10 years, its presence should be supported with brand registration certificates like Trade Marks, Certificate of Incorporation, etc.

  4. OEM should have a manufacturing facility in India for 5+ years to support Make in India.

  5. Proposed ANPR Cameras must remain supported for at least 5 years; if End of life, , OEM must provide equivalent/higher models. No near-End-of-Sale products allowed. OEM should mention the same in MAF

  6. A valid STQC certificate (issued under the relevant scheme for CCTV cameras)

  7. Proof of compliance with the Essential Requirements ("ER") standard for those CCTV cameras (i.e., the device meets the ER criteria)

- **Cameras**
    - IP-based cameras (4 – 5 MP resolution) with IR illumination for day/night operation.
    - Frame rate: minimum 25–30 fps for gate and midrange areas cameras.
    - Weatherproof rating: IP66 or higher; vandal resistant (IK10).
    - Lens: motorized varifocal or fixed as per site requirements (2.7–12 mm or better).
    - Minimum 95–98% plate capture accuracy at designed distances.
- **Local Processing Units (LPU)**
    - Compact edge computing units for on-site Number plate processing and temporary data storage.
    - Minimum configuration: should support 2 feeds data at the same time.
    - Capable of running Number plate inference locally and pushing metadata to the central dashboard.
- **NVR**
    - Should be used to store data and for retrieval as and when needed.
    - Should support two cameras data at the same time.
    - Industrial grade embedded NVR is needed
- **Bidder Central Camera Server**
    - Centralized GPU-based processing and data aggregation for multiple sites.
    - Hosting the central database, analytics dashboard, and APIs.
    - Department command control would retrieve data from this server.
- **Networking and Power Accessories**
    - PoE switches, network routers, fiber/CAT6 cabling, junction boxes, UPS, power supplies, and mounting poles.
    - Lightning arrestors, surge protectors, and weatherproof enclosures where required.
- **Power and Internet**

- Mine Owners will provide Power & Internet.

2.3 Installation and Commissioning

1. Install and align cameras at identified gate and road locations to ensure clear visibility of number plates.
2. Configure camera parameters — focus, exposure, shutter speed, IR intensity — for optimal capture under variable lighting conditions.
3. Integrate cameras with NVR and LPUs and be directly connected with the bidder central server as per approved design.
4. Configure and test API communication with the Department's Central Monitoring Platform.
5. Conduct functional testing for:
    - Plate detection and OCR accuracy.
    - Live feed streaming and metadata transmission.
    - Edge buffering and central synchronization.
6. Submit installation and commissioning reports along with photographic evidence.

2.4 Integration and Data Sharing

1. Enable secure API-based data sharing between the central server system and existing Departmental applications or dashboards.
2. Data to be transmitted from each camera via LPU shall include:
    - Vehicle plate number (OCR text)
    - Timestamp (date/time)
    - Site/location ID
    - Cropped plate image and full-frame reference image
3. The system shall support real-time live viewing, metadata and search, via the central dashboard.

4. The system should have an algorithm which should send an alert for unauthorized vehicle entry.
5. All communication shall be encrypted using HTTPS/TLS standards.

2.5 Maintenance and Support

1. The agency shall provide Comprehensive Annual Maintenance Contract (AMC) for a minimum of two years after one year warranty.
2. AMC includes preventive maintenance, firmware/software updates, and replacement of faulty components.
3. Support response time:
    - Critical issues: within 8 hours.
    - Non-critical issues: within 24 hours.
4. Maintain logs of service requests and resolutions.

2.6 Training and Documentation

1. Conduct hands-on training sessions for departmental staff and site operators covering:
    - System operation, monitoring, and troubleshooting.
    - API data usage and report generation.
2. Provide the following documentation:
    - Installation reports, wiring diagrams, and configuration manuals.
    - Warranty details and maintenance schedules.

3. Technical Specifications

The proposed ANPR Camera system shall consist of high-performance IP cameras, edge processing units (LPU), NVR, centralized server, and supporting software for number plate detection, recognition, and data management.

All components shall conform to relevant STQC certification, IS / IEC / ISO standards for quality, safety, and interoperability before the RFP release date.

3.1 Camera Classification and Minimum Specifications

Type	Recommended Location	Minimum Technical Specifications
ANPR CameraSystem	Entry / Exit gates (≤10 m range)	• Image Sensor: 1/2.7″ CMOS or larger, progressive scan • Resolution: 2–4 MP (1920×1080 p or higher) • Frame Rate: 25–30 fps • Lens: 2.8–12 mm motorized varifocal / 6 MP varifocal lens 5- 50M. • IR Illumination: up to 30 m, synchronized with shutter • Shutter Speed: 1/1000 s or faster • Minimum 98 % plate-capture rate at designated distance • IP66 / IK10 housing, WDR ≥ 120 dB

3.2 Common Camera Features

All ANPRcameras shall support the following features:

1. Video Encoding: H.265/H.264 compression; ONVIF Profile S/G compliant.
2. Power & Network: PoE (802.3 at) or 12 V DC; 1 Gb Ethernet port.
3. Local Storage: MicroSD card (≥ 128 GB) for local caching.
4. Dynamic Range: ≥ 120 dB WDR.
5. Low-Light Sensitivity: 0.005 lux (B/W mode).
6. Synchronization: NTP / GPS time sync.
7. Environment Protection: IP66 weatherproof, IK10 vandal resistant.
8. Operating Temperature: –20 °C to +60 °C.
9. Security: HTTPS communication, password-protected firmware access, AES encryption for data transfer.

3.3 Processing and Analytics

Component	Specification / Function
Edge Processing Unit (LPU)	• Handles real-time plate detection and recognition locally • Stores and forwards metadata to central server when network available
Central Server	• Hosts recognition engine, API layer, dashboard UI, and database
Recognition Engine	• Deep-learning based OCR model with ≥ 95 % accuracy • Supports regional plate fonts and reflective/non-reflective plates • Outputs JSON objects containing: plate number, confidence score, timestamp, location ID, vehicle direction • Processes ≥ 25 fps per stream continuously
Database & Analytics	• Stores metadata and images (cropped plate + context frame) • Enables vehicle search by plate, time window, or site • Generates daily and monthly reports • Supports dashboard with real-time map view of sites
API & Integration	• RESTful API with HTTPS and token authentication • Supports push/pull integration with Department systems • Provides vehicle entry/exit event data for compliance and analytics modules

3.4 Performance Benchmarks

Parameter	Required Minimum Value
Plate Capture Rate	≥ 98 % (day/night, clear plates)
OCR Accuracy	≥ 95 %
Response Latency (Edge)	≤ 1 second from detection to output
Data Transfer Security	End-to-end HTTPS / TLS 1.2 or higher
System Uptime	≥ 99 % during AMC period
Storage Retention	≥ 30 days video / 1 year metadata searchable

3.5 Compliance and Certification

- All supplied components shall be OEM-certified and RoHS compliant.
- Cameras,NVR and LPUs must support firmware updates and remote configuration.
- The bidder shall provide OEM Authorization Letters confirming technical support and warranty.
- Equipment shall comply with relevant STQC, BIS / IEC / ISO standards for safety, EMC, and environmental conditions.

3.6 NVR specs

Parameter	**Description**
NVR Type	Industrial-grade embedded NVR with Linux-based OS (non-PC architecture preferred for reliability)
Channel Capacity	8
Video Input	IP video input supporting ONVIF Profile S / T (ensures compatibility with multiple camera brands)
Recording Resolution	Up to 4K (8 MP) per channel
Video Compression	H.265 / H.265+ / H.264+ for bandwidth and storage optimization
Storage	2 internal SATA bays (supporting up to 20 TB per HDD)
External Storage Support	eSATA / NAS / SAN / iSCSI for long-term retention
RAID Support	RAID 5 (for data redundancy and faster recovery)
Power Supply	Redundant / Surge protected (mining-grade environments)
Operating Temperature	–10°C to +60°C (industrial range)
Ingress Protection	Minimum IP50 or placed in IP65-rated enclosure for dusty mining environments

3. 7 System Functionality Overview

The complete ANPR solution shall:

1. Capture and recognize vehicle number plates in real time at designated sites.
2. Generate and transmit metadata (plate text, image crop, timestamp, location ID) via secure API.
3. Support **Edge-based** and integrate with **Centralized** processing architectures.
4. Integrate seamlessly with the Department's **Central Monitoring Dashboard** for visualization, reporting, and enforcement.
5. Support multi-site scalability with centralized configuration management and health monitoring.

4. Deployment Option

To ensure flexible and reliable performance, the ANPR System shall support this deployment architecture:

1. Edge (LPU-Based) Processing
2. Bidder Central Server Processing
3. NVR

4.1 Edge (LPU-Based) Processing

Each site will have an Edge Processing Unit (Local Processing Unit – LPU) that performs real-time image analysis and number-plate recognition locally.

Architecture

- Number plate detection Cameras → LPU → Secure API → Central Monitoring Dashboard
- Video is processed locally; only metadata (plate text, timestamp, confidence, images) is transmitted to the central system.

Key Features

1. Low-latency (< 1 second) recognition suitable for gate control and real-time alerts.
2. System continues operation during network outages and syncs automatically when connectivity is restored.
3. Reduces bandwidth usage by transmitting only essential data.
4. Edge units can integrate with local barriers, weighbridges, or RFID sensors.

4.2 Central Server Processing

The cameras transmit live video streams to your Central Server located at your data centre /cloud infrastructure from where data will be retrieved by department applications.

Architecture

- Number plate recognition Cameras → Network Switch → Department WAN → Central Server → Central Dashboard

Key Features

1. Simplifies maintenance and model updates; cameras act as streaming clients.
2. Supports centralized policy management, monitoring, and report generation.

4.3NVR

Cameras will send live feeds to the unit for storage and retrieval.

4.4 Network and Bandwidth Considerations

- Full Stream Mode (Centralized): 1080p H.265 @ 25 fps ≈ 2–4 Mbps per camera.
- Edge Mode (Metadata only): < 100 kbps per camera.
- Recommended Backbone: 1 Gbps LAN at site, 100 Mbps VPN uplink to HQ (min.).
- All traffic must use secure VPN / TLS 1.2+ encryption.

4.5 Data Flow and Integration

1. Each Number plate recognition event generates a data packet containing:
    - Plate Text (OCR Result)
    - Timestamp (Date & Time in UTC)
    - Site / Camera ID
    - Plate Crop Image and Reference Frame URL
2. Data shall be transmitted via RESTful API to the Department's Central Monitoring Platform, which will aggregate, visualize, and store events for analytics and enforcement.
3. APIs must support both Push (HTTP POST) and Pull (Query) mechanisms.
4. All API endpoints must implement token-based authentication and SSL encryption.

4.6 System Security and Data Protection

- All stored and transmitted data shall be encrypted using AES-256.
- System shall comply with Government of India cyber-security guidelines.
- Role-based access control (RBAC) to be implemented for users and administrators.
- Audit logs must record user logins, configuration changes, and data access events.

4.7 High-Level Responsibilities

Component	**Managed By**	**Responsibility**
Site Survey & Design	Bidder	Layout, camera placement, power / network planning
Installation & Testing	Bidder	Mounting, wiring, alignment, commissioning
Edge Processing (LPU NVR,)	Bidder	Configuration, real-time recognition, data sync
Central Server	Department / System Integrator	Aggregation, storage, analytics
AMC & Support	Bidder	Preventive / corrective maintenance, updates
Data Integration / API	Joint (Department + Bidder)	Secure data exchange and interoperability

5.Cost per Unit

Each bidder shall submit a comprehensive financial proposal covering all components required for the successful supply, installation, commissioning, and maintenance of Number plate recognition systems at designated sites.

The cost must be inclusive of all taxes, duties, installation charges, integration costs, and warranty support.

Bidders shall provide item-wise unit costs in the format specified under Annexure II.

5.1 Costing Methodology

The bidder shall quote **module-wise unit costs** under the following heads:

Module No.	Component / Description	Remarks
1	ANPR Camera	IP-based 2–4 MP camera with IR illumination up to 30 m, 25–30 fps. Should be able to support RFID integration down the road.
2	Bidder Central Server	All the data should be here for the department servers to fetch data instead going to all camera locations.
3	Local Processing Unit (LPU)	LPU runs vehicle detection + OCR on each stream, need to handle upto two cameras efficiently.
4	8CH AI NVR 2SATA	You must store continuous video footage for 30 days (compliance / audit requirement).
5	Network Components	Switches, routers, PoE injectors, cabling, online 2KVA UPS, mounting hardware
6	Installation and Commissioning	Site preparation, camera mounting, focusing, wiring, configuration
7	API Integration and Data Sharing Setup	Secure API configuration with Department monitoring system
8	Annual Maintenance Contract (AMC)	Comprehensive on-site support for 3 years after warranty
9	Training and Documentation	User training, manuals, and configuration documentation
10	Speed barrier	This should be placed before the camera pole to slow down the vehicle with signages.

5.2 General Costing Guidelines

1. **Unit Cost Basis:**
   All costs shall be quoted on a per-unit basis for each module, valid for all subsequent work orders during the empanelment period.

2. **Comprehensive Pricing:**
   Prices must include supply, installation, integration, testing, commissioning, warranty, and delivery to site.

3. **Taxes and Duties:**
   All applicable taxes (GST, duties, etc.) shall be clearly mentioned separately.

4. **Warranty:**
   Minimum three-year comprehensive on-site warranty shall be included in the base price.

5. **AMC:**
   AMC shall begin after the warranty period and cover preventive and corrective maintenance, firmware updates, and part replacements.

6. **Spare Units:**
   The bidder shall maintain adequate spares (minimum 5%) for quick replacement during AMC.

5.3 Financial Proposal Format (Annexure II)

FORMAT (New Installation + API Sharing)

Item Description	Unit	Unit Cost (₹)	GST (%)	Total (₹)
Number plate recognition Camera – Gate Type	1			
Bidder Central server (this is for all camera's installed by the bidder over period of time).	1			
8CH AI NVR 2SATA with 30 day storage capacity for upto 2 cameras.	1			
UPS 2KVA online with 1 hr backup	1			
Local Processing Unit (LPU) with casing	1			
Network Components (Switches, Cables, etc.); 300M distance can be used for cables.	Lot			

Item Description	Unit	Unit Cost (₹)	GST (%)	Total (₹)
Installation & Commissioning (includes civil work, poles etc)	Job			
AI Model Software (Number plate detection) for 3 years.	1			
API Integration & Configuration	Job			
AMC (for 2 years) for all hardware and software components after one year warranty. Onsite visits also included.	(2)Year			
Training & Documentation	Lot			
Total Unit Cost (In Figures and Words)				

5.4 Cost Evaluation Criteria

1. Only technically qualified bidders from Stage 1 (Technical Evaluation) will be considered for financial evaluation.
2. L1 bidder(s) will be determined based on the lowest total cost per complete module (inclusive of all components and services).
3. During empanelment, the Department may issue work orders to one or more empanelled vendors on a rotational or competitive basis depending on site requirements.
4. The quoted unit cost shall remain valid throughout the empanelment period (3 years).

5.5 Payment Terms

1. Payments shall be made by the respective mining lease, quarry lease, or dealer holder upon successful installation and verification at the site by department.
2. Payment milestones:

Stage	Deliverable Milestone	Percentage of Payment
Stage 1	Supply and delivery of hardware to site after inspection by Department officials	40 %
Stage 2	Successful installation and commissioning of cameras and LPUs with network connectivity	40 %
Stage 3	Integration with Central Monitoring System and issuance of Site Acceptance Certificate (SAC)	10 %
Stage 4	Submission of training completion report and handover of O&M documentation	10 %

3. **Performance Bank Guarantee (PBG)** of ₹ 5.00 Lakhs shall be furnished by the empanelled agency, valid through the agreement period plus 15 days.
4. AMC payments shall be made annually on satisfactory performance certification.

5.6 Price Validity

- Quoted prices shall remain firm and valid for **a** minimum of one year from the date of empanelment.
- No escalation in cost shall be allowed during this period except for statutory tax changes.

6. Eligibility Criteria

To ensure technical capability, financial stability, and experience in implementing intelligent camera systems, the bidder shall meet the following minimum eligibility conditions

6.1 Eligibility Criteria

Criterion	Requirement	Supporting Document to be Submitted
Legal Status	The bidder must be a Registered Company / Partnership / LLP / Proprietorship firm incorporated	Copy of Certificate of Incorporation /

Criterion	Requirement	Supporting Document to be Submitted
	in India.	Registration.
Experience	Minimum 3 years of experience in supply, installation, and integration of ANPR / CCTV / Intelligent Surveillance / Traffic Enforcement systems.	Copies of work orders / completion certificates.
Relevant Projects	Executed at least 3 similar projects or 2 similar projects each worth of one crore each or one similar project worth of Three crorefor Government Departments / PSUs / Reputed Private Organizations involving ANPR, vehicle detection, or camera-based analytics.	Work order copies and client references.
Financial Turnover	Average annual turnover ≥ ₹ 1.00 Crore during the last 3 financial years (FY 2022–23, 2023–24, 2024–25).	Audited Balance Sheets / CA certificate.
Technical Manpower	Availability of qualified engineers and technicians trained in camera setup, networking, and AI-based analytics.	List with qualification and experience details.
OEM Authorization	OEM Authorization Letter from the manufacturer of Cameras and/or Software, ensuring support during warranty and AMC.	Original OEM Authorization in Annexure V format.
Certifications	ISO 9001:2015 (Quality Management) mandatory; ISO 27001:2013 (Information Security) preferred.	Copies of valid certificates.
Service Presence	Registered Office or Service Center in Telangana State.	Address proof or service-center registration document.
Compliance	Bidder shall not be blacklisted or debarred by any Government / PSU / Agency.	Self-declaration on company letterhead.

6.2 Disqualification Criteria

Proposals are liable for rejection if the bidder:

- Fails to meet any of the above eligibility requirements.
- Submits incomplete, misleading, or false information.
- Has been blacklisted by any government or public-sector organization.
- Fails to provide documentary proof wherever required.

6.3 Evaluation Process

The evaluation shall be conducted in two stages — *Technical Evaluation* and *Financial Evaluation.*

Stage 1 – Technical Evaluation

1. **Document Verification:**
   The Technical Evaluation Committee (TEC) will examine all submitted documents to verify eligibility criteria.
2. **Technical Proposal Assessment:**
   Proposals will be evaluated based on the following parameters:
   - Compliance with ANPR camera specifications.
   - Demonstration of AI-based plate recognition capability.
   - System architecture (LPU, NVR and Central Server design).
   - Network design, data security, and API integration readiness.
   - Previous relevant deployments and client feedback.
3. **Demonstration / Field Test:**
   Shortlisted bidders shall demonstrate the proposed Number plate reader solution at the Department's premises or a nominated site, showcasing:
   - Plate capture accuracy (day/night).
   - Recognition rate and latency.
   - Dashboard / API integration.

Only bidders achieving ≥ 95% recognition accuracy during demonstration will qualify for financial evaluation.

4. **Technical Scoring (Indicative):**

Evaluation Parameter	Maximum Marks
Camera hardware capability & compliance	25
Number plate detection software accuracy & features	25
Integration & data security readiness	10
Team strength & OEM support	10
Presentation / live demo performance	30
Total	**100 Marks**

- Minimum qualifying score: **70 marks**.

Stage 2 – Financial Evaluation

1. Only technically qualified bidders will be eligible for financial evaluation.
2. Financial proposals will be opened publicly at the Department's office on the scheduled date.
3. The lowest financial quote (L1) will be determined based on the total composite cost per module, inclusive of all applicable taxes and charges.
4. The Department reserves the right to:
    - Empanel multiple agencies if found beneficial.
    - Negotiate rates with L1 bidder(s) for uniform pricing.

6.4 Empanelment and Work Allocation

1. Successful bidders after technical and financial evaluation shall be empanelled for 3 years from the date of notification.
2. Empanelled agencies will receive work orders on a rotational or competitive basis, depending on geographic and operational requirements.
3. Each agency shall execute a formal Agreement / MoU with the Department before commencement of work.

6.5 Performance Bank Guarantee (PBG)

- The empanelled agency shall furnish a Performance Bank Guarantee (PBG) of ₹5.00 Lakhs, valid through the contract period and 15 days beyond.
- The PBG will be released only after successful completion of the empanelment term and submission of all performance reports.

6.6 Termination and Blacklisting

The Department reserves the right to terminate the empanelment or specific work order in the following cases:

- Non-performance or unsatisfactory services.
- Breach of contractual terms or violation of data security policies.
- Failure to adhere to project timelines.
- Repeated complaints or failure to maintain SLA uptime.

In such cases, the Department may forfeit the PBG and blacklist the vendor for a period of up to **1 year**.

6.7 Jurisdiction and Arbitration

- Any dispute arising under this RFP or subsequent agreements shall be subject to the jurisdiction of Hyderabad courts only.
- Arbitration, if required, shall be conducted as per the Arbitration and Conciliation Act, 1996, and its subsequent amendments.

7.Evaluation Process

The empanelled agency shall deliver a fully functional ANPR Camera system that meets all technical, operational, and integration requirements specified in this RFP.
The deliverables shall include all hardware, software, documentation, and after-sales services necessary to ensure uninterrupted performance and data availability.

7.1 Project Deliverables

The following items and activities shall be treated as mandatory deliverables under each work order:

A. Hardware Deliverables

1. Supply and installation of Cameras as per approved design.
2. Supply and configuration of Local Processing Units (LPUs) and Central Server components, as applicable.
3. Installation of network equipment, cabling, poles, mounting brackets, and enclosures.
4. Power infrastructure including PoE switches, UPS units, and protective devices.
5. On-site labeling and tagging of each camera, LPU, and network port for easy identification.

B. Software and Integration Deliverables

1. Configuration of camera parameters and Number plate detection software to achieve required accuracy levels.
2. Integration with the Department's Central Monitoring System via secure API.
3. Setup of data-sharing API and real-time synchronization of event metadata.
4. Web-based dashboard access for authorized users to view live feeds and reports.
5. Configuration of backup and archival policies for metadata and video.

C. Documentation

1. Site survey report, approved layout diagrams, and cable schedules.
2. Installation and commissioning report for each site.
3. Test reports confirming plate capture rate, OCR accuracy, and latency.
4. Operation & Maintenance (O&M) manuals.
5. Warranty certificates and OEM support letters.

D. Training and Capacity Building

1. Minimum one full-day user training session per district for Department staff and site operators.
2. Training to include operation of dashboard, search/report generation, troubleshooting basics, and escalation procedures.
3. Training material (printed + digital) to be supplied in English and Telugu.

E. Acceptance Testing

1. Post-installation validation to verify camera focus, coverage, and data transmission.
2. Verification of minimum 95 % OCR accuracy and 98 % plate capture rate under standard conditions.
3. Demonstration of API integration with Department's dashboard.
4. Written Site Acceptance Certificate (SAC) to be issued by authorized Department official upon successful testing.

F. Maintenance and Support Deliverables

1. Comprehensive AMC for 2 years after warranty.
2. Preventive maintenance visits every quarter and on-call support 24 × 7.
3. Replacement of defective equipment within:
    - Critical issues: 8 hours
    - Non-critical issues: 24 hours
4. Quarterly performance reports including uptime, service tickets, and corrective actions.
5. Maintenance log book to be maintained at each site and shared digitally with the Department.

7.2 Service Level Requirements (SLRs)

Parameter	**Target Level**	**Remarks**
System Uptime	≥ 99 %	Calculated monthly per site
Plate Capture Rate	≥ 98 %	Tested during day & night
OCR Accuracy	≥ 95 %	As per Section 3 specs
Response Time	≤ 8 hours (critical) / ≤ 24 hours (non-critical)	During AMC period
Preventive Maintenance	1 visit per quarter (minimum)	Log to be signed by Department
Data Security	100 % encrypted via HTTPS / TLS 1.2+	Verified through audit

Failure to meet SLRs for two consecutive months may invoke penalty or contract review as per Department policy.

7.3 Payment Terms

1. **Payment Milestones**

Stage	Deliverable Milestone	Percentage of Payment
Stage 1	Supply and delivery of hardware to site after inspection by Department officials	40 %
Stage 2	Successful installation and commissioning of cameras and LPUs with network connectivity	40 %
Stage 3	Integration with Central Monitoring System and issuance of Site Acceptance Certificate (SAC)	10 %
Stage 4	Submission of training completion report and handover of O&M documentation	10 %

2. **AMC Payments**
    - AMC charges shall be paid annually in advance based on satisfactory performance and service uptime.
    - Performance shall be certified by the concerned District Officer or authorized Department representative.
3. **Performance Security**
    - A Performance Bank Guarantee (PBG**)** of ₹ 5.00 Lakhs shall be furnished by each empanelled agency, valid through the contract period plus 15 days.
    - The PBG will be released only after completion of the agreement period and submission of final performance reports.
4. **Deductions and Penalties**
    - Delay in installation beyond approved schedule may attract a penalty of 0.5 % of work order value per week, capped at 10 %.
    - Failure to meet SLA targets for three months may lead to withholding of payments or termination of contract.

7.4 Reporting and Monitoring

1. **Monthly Reports** shall include:
    - Number of cameras operational.
    - Plate recognition statistics.
    - Downtime and rectification details.
    - AMC ticket summary.
    - Data transmission to central server.
2. **Dashboard Monitoring**
   The Department will maintain a central dashboard that receives real-time Number plate and system health status.
   Vendors must ensure continuous connectivity and data availability.
3. **Audit and Inspection**
    - The Department may conduct periodic technical audits and surprise inspections.
    - Vendors shall extend full co-operation and provide required access for inspection and testing.

7.5 Completion and Handover

1. Upon successful completion of the work order, the agency shall submit:
    - Site Acceptance Certificate (SAC) signed by Department.
    - Final as-built drawings and configuration backups.
    - Inventory of installed equipment with serial numbers.
    - Training attendance records and completion certificate.
2. Handover will be considered complete only after all deliverables are verified and accepted by the Department.

7.6 Ownership and Data Rights

- All hardware, software, and data generated under this project shall be the sole property of the Department of Mines & Geology, Government of Telangana.
- Vendors shall not store, replicate, or share data without written authorization.

- Upon contract termination or completion, all credentials and datasets shall be handed over to the Department in encrypted form.

8. Deliverables

All bidders must submit the following annexures along with supporting documents as part of their proposal.
Incomplete or unsigned annexures will result in summary rejection of the bid.

9. Key Dates

S.No	Event	Date
1	NIT	11.11.2025
2	Publication of RFP	11.11.2025
3	Pre Bid Meeting	17.11.2025
4	Last Date for Submission	24.11.2025
5	Technical Bid Opening	26.11.2025
6	Financial Bid Opening	27.11.2025
7	Notification of Empanelment	29.11.2025

Sd/-
Director of Mines and Geology (FAC)

Annexure – I: Technical Proposal Format

A. Bidder Information

Particulars	Details
Name of the Agency	
Registered Address	
Contact Person Name & Designation	
Email ID	
Mobile Number	
Year of Establishment	
Type of Organization	
GST Registration No.	
PAN No.	
ISO / Other Certifications	

B. Technical Capability

1. **Experience in ANPR / Surveillance Projects (Govt. / PSU / Private)**
    - Project Name
    - Client Name
    - Year of Completion
    - Project Value (₹)
    - Description of Work
2. **Details of Technical Staff**
    - Engineers / Technicians / Supervisors (Name, Qualification, Years of Experience)
3. **OEM Authorization Certificate** (Attach Copy)
4. **List of Equipment Proposed**

- Camera Make & Model
- Resolution
- Lens Type
- IR Range
- Processing Method (LPU / Central)
- Quantity

Annexure – II: Financial Proposal Format

FORMAT – (New Installation + API Sharing)

Item Description	**Unit**	**Unit Cost (₹)**	**GST (%)**	**Total (₹)**
Number plate recognition Camera – Gate Type	1			
Bidder Central server (this is for all camera's installed by the bidder over period of time).	1			
8CH AI NVR 2SATA with30 day storage capacity for upto 2 cameras.	1			
UPS 2KVA online with 1 hr backup	1			
Local Processing Unit (LPU) with casing	1			
Network Components (Switches, Cables, etc.); 300M distance can be used for cables.	Lot			
Installation & Commissioning (includes civil work, poles etc)	Job			
AI Model Software (Number plate detection) for 3 years.	1			
API Integration & Configuration	Job			
AMC (for 2 years) for all hardware and software components after one year warranty. Onsite visits also included.	(2)Year			
Training & Documentation	Lot			
Total Unit Cost (In Figures and Words)				

Authorized Signatory:
Name: _____
Designation: _____
Date: _____
Seal & Signature

Annexure – III: Declaration by Bidder

(To be printed on company letterhead)

I/We hereby declare that:

1. All information provided in this proposal is true and correct to the best of my/our knowledge.
2. I/We have read and understood all terms and conditions of this RFP and agree to abide by them.
3. I/We have not been blacklisted or debarred by any Government or Public Sector Organization.
4. In case any information provided is found false or misleading, the Department reserves the right to terminate empanelment and forfeit the Performance Guarantee.

Authorized Signatory:
Name: _____
Designation: _____
Date: _____
Seal & Signature

Annexure – IV: Project Experience Details

Sl. No.	Client Name	Project Description	Value (₹)	Year	Status (Completed / Ongoing)	Contact Person & Phone
1						
2						
3						

(Attach work orders / completion certificates for proof.)

Annexure – V: OEM Authorization Form

(To be obtained from OEM on their letterhead)

To,
The Director,
Department of Mines and Geology,
Government of Telangana.

We, M/s _____ (OEM Name), having our registered office at _____, hereby authorize M/s _____ (Bidder Name) to supply, install, and support our IP Cameras and Software under this RFP.

We assure full technical support and service backup during the warranty and AMC period.

Authorized Signatory (OEM):
Name: _____
Designation: _____
Date: _____
Seal & Signature

Annexure – VI: Checklist for Submission

Sl. No.	Particulars	Enclosed (Yes/No)
1	Covering Letter	
2	Company Registration Certificate	
3	GST & PAN Copies	
4	Proof of Experience (Work Orders / Completion Certificates)	
5	Audited Financial Statements (Last 3 Years)	
6	OEM Authorization (Annexure V)	
7	Technical Proposal (Annexure I)	
8	Financial Proposal (Annexure II)	
9	Declaration by Bidder (Annexure III)	
10	Signed RFP Document	

Submission Instructions

1. Proposals must be submitted in **two sealed covers**:
    - **Cover I:** Technical Proposal
    - **Cover II:** Financial Proposal
2. Both covers should be properly sealed and superscribed with RFP number and title.
3. All documents must be **signed and stamped on each page** by the authorized signatory.
4. The complete proposal must be submitted on or before the due date mentioned in the RFP.
5. Late or incomplete proposals shall be rejected without further consideration.

Submission Address

The Director of Mines & Geology
Government of Telangana
My Home Sarover Plaza, Flat No. 203 & 204,
2nd Floor, House No. 5-9-22, Shapurwadi,
Adarshnagar, Secretariat Road, Hyderabad – 500063
Email: **dmgtg-mines@telangana.gov.in**
Website: https://mines.telangana.gov.in
Telephone No:040-23221766/9866633414