RFP Volume 2
DRAFT AGREEMENT

Contents

AGREEMENT

The Agreement mutually agreed and entered into on this_____ day of (month), Two thousand and_____at Lucknow.

BETWEEN

Lucknow Municipal Corporation (hereinafter   referred a s " **LMC**"), having i t s p r i n c i p a l office a t Trilok Nath Marg, Lalbagh, Lucknow - 226001 and represented by Shri_____, the   officer at Lucknow Municipal Corporation (hereinafter called the " Officer") in which expression are included unless such inclusion is inconsistent with the context, his successor or successors for the time being holding the office of the Municipal Commissioner and in view of the powers delegated to the   Officer by the Commissioner vide his Order no._____, of ONE PART,

AND

_____, a company [1] incorporated under provisions of the __, having its Registered office at_____, (hereinafter referred to as "**Private Operator**") which expression shall unless repugnant to the context include its successors and permitted assigns, OF THE OTHER PART.

WHEREAS

1. L u c k n o w Municipal Corporation (LMC) is responsible for providing municipal services to 2 8 . 1 6 lakh citizens (2011 census population) within its jurisdiction;
2. The provision of infrastructure services such as   water   supply,   drainage, sewerage, solid waste management and sanitation, roads, traffic, transportation & parking, street lighting, firef ighting, education and primary health etc. in the city of Lucknow is the responsibility of the Authority.
3. L MC has prepared a parking policy, which identifies various underground parking locations across various locations within its jurisdiction. LMC intends the provising of parking spaces and its management on smart concept with use of ICT;

4. For this purpose L MC had invited competitive proposals from eligible Bidders for implementing the Project and in response thereto received proposals from several Bidders including the Private Operator for implementing the Project.

5. L MC, after evaluating the aforesaid Proposals accepted the Proposal submitted by the Private Operator_____and issued Letter of Award (LOA) vide letter No._____ dated_____to the Private Operator for implementing the Project.

6. L MC confirms the receipt of a Performance Security in the form of a Bank Guarantee dated

_____ for an amount of Rs._____(Rupees

_only) as Performance Security, for the performance of the obligations of the Private Operator under this Agreement.

7. T h e P a r t i e s h e r e t o are required to enter into the Agreement being these presents to record the terms, conditions and covenants of the Agreement.

NOW THIS AGREEMENT witness as follows:

1 In case of a Consortium, the Lead member shall sign the Agreement

Definitions and Interpretation

1) **Affected Party** shall mean the party claiming to be affected by a Force Majeure event in accordance with annexure 2.

2) **Agreement** shall mean this Agreement and including schedules hereto. (i) Request for Proposal (RFP) (ii) Bidder's submission to RFP (iii) terms and conditions of Agreement (iv) work specifications (v) offer of the Bidder (vi) schedules to the Agreement (vii) any correspondence exchanged with respect to this Agreement or additional document constituting part of the Agreement.

3) **Applicable Law** shall mean all laws in force and effect, as of date hereof and which may be publicized or brought into force and effect hereinafter in India including judgments, injunctions, writs or orders of any court of record, as may be in force and effect during the subsistence of this Agreement and applicable to the Project.

4) **Applicable permits** shall mean all clearances, permits, authorizations, consents and approvals required to be obtained or maintained by the Private Operator under applicable law, in connection with the project during the subsistence of this Agreement.

5) **Appointed Date** shall mean the date of signing of this Agreement between the Private Operator and LMC.

6) **Authority** Means any agency, legislative, judicial or executive authority, public or statutory person, whether autonomous or not, of the GoI (Government of India) or GoUP (Government of Uttar Pradesh) or any local authority including the LMC, its division or any other sub-division or instrumentality or any thereof.

7) **Bidders** shall mean a Bidding Company or Bidding Consortium, which has submitted a Bid in response to this RFP Document.

8) **deleted**

9) Conditions Precedent shall have meaning

10) **Commercial Operations Date (COD)** shall be the date on which the Project Officer has issued the Readiness Certificate.

11) **Commissioning Period** shall mean the period of 6 (six) months from the Appointed Date to the COD.

12) **Contract Period** shall mean a period of 5 (five) years including construction period from the Appointed Date.

13) **Consortium** shall mean the consortium to which the Project has been awarded, consisting of <<Details of members the Consortium>> and acting pursuant to the Joint   Deed   Agreement.

14) **Emergency** shall mean a condition or situation that is likely to endanger the safety of the individuals on or about the project or which poses an immediate threat of material damage to any of the Project and Project Facilities.

15) **Encumbrance** shall mean any encumbrance such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations and shall include without limitation any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the project, claims for any amounts due on account of taxes, cesses, electricity, water and other utility charges.

16) **Good Industry Practice** shall mean the exercise of that degree of skill, diligence, prudence and foresight in compliance with the undertakings and obligations as under this Agreement, which would reasonably and ordinarily be expected of a skilled and an experienced person engaged in the implementation, operation and maintenance or supervision or monitoring thereof, of any of them of a project similar to that of the project.

17) **Government Agency** shall mean Government of India (GoI), Government of Uttar Pradesh (GoUP), Municipal Corporation of Lucknow or any other state government or central government department, commission, board, body, bureau, agency, authority, instrumentality, court or other judicial or administrative body, central, state or local, having jurisdiction over the Private Operator, or the performance of all or any of the services or obligations of the Private Operator under or pursuant to this Agreement.

18) **Joint Deed Agreement (JDA)** shall mean a duly stamped and registered agreement which was submitted by the Consortium during the Request for Proposal (RFP) stage and annexed with this Agreement.

19) **Lead Member (LM)** shall mean <<name of the LM>> the consortium member authorized by the Consortium to enter into this Agreement on behalf of the Consortium.

20) **Letter of Award** shall mean the letter issued by LSCL/LMC to the successful Bidder, post the successful completion of the bidding process.

21) **Material Adverse Effect** shall mean a material adverse effect on (a) the ability of the Private Operator to exercise any of its rights to perform/discharge any of its duties/obligations under and in accordance with the provisions of this

Agreement and/or (b) the legality, validity, binding nature or enforceability of this Agreement.

22) **Material Breach** shall mean a breach by either party of any of its obligations under this Agreement which has or is likely to have a material adverse effect on the project and which such party shall have failed to cure.

23) **Parties'** means the parties to the agreement and "party" means one of them, as the context may admit or require.

24) **Performance Security** means the deposit provided by the Private Operator as a guarantee for the performance of its obligations and is in accordance as mentioned in the RFP document.

25) **Person** means (unless otherwise specified or required by the context), any individual, company, corporation, partnership, joint venture, trust, unincorporated organization, government or government agency or any other legal entity.

26) **Preliminary Notice** shall mean the notice of intended termination by the party entitled to terminate this Agreement to the other party setting out, inter alia, the underlying event of default.

27) **Project** shall mean design, finance, develop, implement, operate & maintain smart systems for on-street and off-street parking spaces in accordance with the provisions of this Agreement.

28) **Project Agreements** shall mean collectively this Agreement and any other material contract (other than any commercial agreement with the users) entered into or may enter into by the Supplier in connection with the Project.

29) **Project Officer** shall mean a LSCL/LMC official appointed for supervision and monitoring of compliance by the Private Operator with the O&M and commissioning requirements, more particularly to undertake, perform, carry out the duties, responsibilities, services and activities set forth in the work specifications.

30) **Project Area** shall mean jurisdiction of LMC.

31) **Project Facilities** shall mean facilities provided by LMC to Private Operator for undertaking the Project.

32) **Proposal / Request for Proposal (RFP)"** shall mean the 'Request for Proposal Document', issued by Lucknow Smart City Limited (LSCL) to the interested bidders in the proposal stage, as amended and modified from time to time together with all Annexures, Schedules, Maps along with such common set of deviations, corrigendum, addendum, amendments which have been issued from time to time.

33) **Readiness Certificate** shall mean the certificate issued by the Project Officer certifying inter alia, that the Private Operator has implemented smart underground parking spaces and is ready for commercial operations.

34) **Rupees" or "Rs."** refers to the lawful currency of the Republic of India.

35) **Private Operator** means M/s-------, a company having its registered office in ----- who has been appointed as "Private Operator" by LSCL/LMC for the Project, includes the Private Operator's personnel, representatives, successors and permitted assignees.

36) **Standards of Reasonable and Prudent Supplier** means the standards, practices, methods and procedures expected from a person seeking in good faith to perform its contractual obligations and in so doing and in the general conduct of its undertaking, exercising that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced Person engaged in the same type of undertaking under the same or similar circumstances and conditions.

37) **Sub-Contractor** shall mean any person with whom the Private Operator has entered into/may enter into any material contract in relation with the O&M requirements for this project.

38) **Tax** shall mean and include all taxes, fees, cesses, levies that may be payable by the Private Operator under the applicable law.

39) **Termination** shall mean the early termination of this Agreement pursuant to termination notice or otherwise in accordance with the provisions of this Agreement but shall not, unless the context otherwise requires, include expiry of this Agreement due to efflux of time in the normal course.

40) **Termination Date** shall mean the date specified on the termination notice as the date on which the termination occurs.

41) **Termination Notice** shall mean the notice of Termination by either Party to the other Party, in accordance with the applicable provisions of this Agreement.

Interpretations

In this Agreement, unless the context otherwise requires

1) Any reference to a statutory provision shall include such provision as is from time to time modified or re-enacted or consolidated so far as such modification or re-enactment or consolidation applies to, or is capable of being applied to any transaction entered into herein under;

2) References to Applicable Laws shall include the laws, acts, ordinances, rules, regulations, notifications, guidelines or bylaws which have the force of law;

3) The words importing singular shall include plural and vice versa, and words denoting natural persons shall include partnerships, firms, companies, corporations, joint ventures, trusts, associations, organizations or other entities (whether or not having a separate legal entity);

4) The headings are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;

5) The words "include" and "including" are to be construed without limitation;

6) Any reference to day, month or year shall mean a reference to a calendar day, calendar month or calendar year respectively;

7) The schedules to this Agreement form an integral part of this Agreement as though they were expressly set out in the body of this Agreement;

8) Any reference at any time to any Agreement, deed, instrument, license or document of any description shall be construed as reference to that Agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference;

9) Reference to recitals, clause(s), sub-clause(s), or schedule(s) in this Agreement shall, except where the context otherwise requires, be deemed to be references to recitals, clause(s), sub- clause(s), and schedule(s) of or to this Agreement;

10) Any Agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any other party or by Project Officer shall be valid and effectual only if it is in writing under the hands of duly authorised representative of such party or Project Officer in his behalf and not otherwise;

11) Any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days and dates.

The Agreement

1.1 Appointed Date

The Appointed Date shall be the date of signing of this Agreement.

1.2 Grant of Agreement

Subject to and in accordance with the terms and conditions and covenants set forth in this Agreement, L S C L / L MC hereby grants and authorizes the Private Operator to undertake the Project as per the specific instruction by the Project Officer and to exercise and/or enjoy the rights, powers, benefits, privileges, authorizations and entitlements as set forth in this Agreement.

1.3 Acceptance of Agreement

In consideration of the rights, privileges and benefits conferred upon the Private Operator, and other good and valuable consideration expressed herein, the Private Operator hereby accepts the Agreement and agrees and undertakes to perform/discharge all of its obligations in accordance with the provisions hereof.

1.4 Start of Operations

The Private Operator shall commence the operation within 30 (thirty) days from the date of work order subject to the satisfaction or waiver of the Conditions Precedent contained in this Agreement.

1.5 Contract Period

The rights hereby granted is for a period[2] of 5 (five) years commencing from the Appointed Date and ending on the Expiry date during which the Private Operator is authorized to design, finance, procure, operate and maintain the Project in accordance with the provisions hereof. Provided that in the event of termination, the Contract Period shall mean and be limited to the period commencing from the Appointed Date and ending with the Termination Date.

1.6   Exclusivity of the Contract

The Private Operator shall be the sole and exclusive person entitled to undertake the Project in the Project Area in line with the scope of work assigned to the Private Operator in this Agreement and LMC agrees that no agreement or arrangement permitting such activities by any other party shall be entered into by LMC during the Contract Period.

Conditions Precedent

1.7   Responsibilities of the Private Operator

The Private Operator shall fulfill the following conditions precedent within 30 (thirty) days from the Appointed Date:

a. The Private Operator shall have executed a Performance Security in favor of Lucknow Municipal Corporation for a sum of Rs. 10,00000 (Rupees Ten Lakh only) in the form of Bank Guarantee.

b. The Private Operator shall submit a Project implementation and operation & maintenance report to ensure successful implementation and operations of the Project. The Private Operator shall also submit Standard Operating Procedures (SOPs) for control room/helpdesk and various parking services.

c. The Private Operator shall have deployed t h e requisite team for implementation of the Project.

d. The Private Operator shall have received the applicable permits and clearances if any from concerned authorities under relevant laws applicable.

1.8   Responsibilities of LMC

LMC shall fulfill the following conditions precedent within 30 (thirty) days from the Appointed Date:

a. LMC shall handover parking spaces mentioned under this Project to the Private Operator.

b. LMC shall provide support to the Private Operator in obtaining timely approvals, permissions and authorizations for performance of obligations for the project.

c. Submit copies of the council resolution authorizing LMC to execute the Agreement.

1.9 Cost of satisfying the conditions precedent

The cost of satisfying the above conditions precedent shall be borne by the respective Parties responsible for satisfaction of the Conditions Precedent.

1.10 Non- fulfilment of the Conditions Precedent

a.   In case of non-fulfillment of the Conditions Precedent attributable to reasons beyond the control of the Private Operator or L MC, the period for satisfaction of Conditions Precedent may be extended by mutual consent of the Private Operator or LMC.

b.   If any of the conditions precedent contemplated in this agreement has not been satisfied in full or has not been waived, within the time stipulated or such extended time that the Parties may agree upon, then and in such event either party shall have the right to terminate this Agreement by 30 (thirty) days' notice in writing to the other party, given at any time thereafter, but prior to such conditions precedent being satisfied or waived, and if the conditions precedent are not satisfied or waived within such notice period, upon expiry of such notice, this Agreement shall terminate.

c.   If the Agreement is terminated due to non-satisfaction of Conditions Precedent set forth for the Private Operator, the Private Operator shall not be compensated in any manner whatsoever and the Performance Security shall be forfeited and encased.

d.   If the Agreement is terminated due to non-satisfaction of Conditions Precedent set forth for LMC mentioned in this agreement then LMC shall release the Performance Security.

e.   The termination under the above circumstances shall be subject to terms & conditions as mentioned in this agreement

1.11 Rights, Title and Use of Project Facilities

The Private Operator shall use the Project Facilities solely for this Project and shall hand over to LMC free of cost without any encumbrances after the expiry of this Contract or any early Termination.

Project Officer

1.12 Project Officer

LMC shall appoint a L MC official as Project Officer. The Project Officer shall undertake, inter alia, the following activities during the Commissioning Period:

a. Ensure that the commissioning procedure is followed in accordance with the provisions of this Agreement;

b. Designate tests on equipment and machinery;

c. The Project Officer shall, in the ordinary course, maintain a record of the activities undertaken by it in discharge of its functions and responsibilities. This would include records in respect of the following:

    i. Manpower deployed and other organisational arrangements of the Private Operator;

    ii. Reviews of documents submitted to it by the Private Operator to meet the commissioning requirements.

    iii. Inspections undertaken and notices/instructions issued to the Private Operator;

    iv. Review of compliance with the commissioning requirements;

    v. Payments;

    vi. Force majeure events;

    vii. Breaches and defaults by the parties.

Private Operator's obligations

In addition to and not in derogation or substitution of any of its other obligations under this

Agreement, the Private Operator shall have the following obligations:

1.13 Financial Obligations

1.13.1 Performance Security

a. The Private Operator shall, for due and punctual performance of its obligations hereunder relating to the Project, deliver to LMC,

  i. A bank guarantee in favour of Lucknow Municipal Corporation, for a sum of **Rs. 10,00,000/- (Rupees Ten Lakhs only)**, shall be kept valid for the 5 (five) years of the Contract Period and shall deliver this simultaneously with the execution of this Agreement.

  ii. The bank guarantee should be in the format as provided in SCHEDULE A:

b. Provided that if the Agreement is terminated due to any event other than a Private Operator event of default, the Performance Security if subsisting as of the termination date shall, subject to LMC's right to receive amounts, if any, due from the Private Operator under this Agreement, be duly discharged and released to the Private Operator.

c. The Private Operator shall keep the Performance Security replenished at all times at a level as specified in sub clause a (i & ii) above. Such replenishment may be required if the LMC has withdrawn/ deducted from the Performance Security owing to a default/ reimbursement of expenses which was initially borne by LMC and the replenishment shall have to be done by the Private Operator within 5 (five) working days of the withdrawal by LMC from the Performance Security. Failure to do so on part of the Private Operator shall result in an event of default by the Private Operator.

1.14 Project Implementation and Operation & Maintenance (O&M) Obligations

a. The Private Operator shall implement and operate and maintain the Project in accordance with the project implementation milestones and obligations mentioned in **SCHEDULE B** of this Agreement.

b. The Private Operator shall install the equipment's/ machinery/ hardware required for the Project in accordance with the tentative list of equipment/machinery/ hardware and software details provided in in the BOM documents. The Private Operator may provide additional infrastructure over and above the list of items provided at its own cost to meet the objectives of the Project.

c. The Private Operator shall complete the implementation of the Project as per the timelines specified in **SCHEDULE B**. In the event, the Private Operator fails to implement the Project within the stipulated time period, unless, such failure has occurred due to Force Majeure or for reasons solely attributable to the Authority, it shall pay damages in accordance with penalties mentioned in **SCHEDULE C:**of this Agreement**.**

d. The Private Operator shall be responsible for safety of all assets deployed as part of this Project and shall make necessary safety and security arrangements including insurance of such assets.

e. The Private Operator shall commence levy of parking fee from users from signing of this Agreement or handing over of Parking Facilities whichever is earlier. The parking fee shall be levied in a manner as provided in Annexure 3 of this agreement.

f. The Private Operator shall levy parking tariff as stipulated in Annexure 3 of this Agreement.

g. The Private Operator may undertake operations and maintenance of the Project in accordance to obligations mentioned in SCHEDULE B by itself or through a sub-contractor possessing requisite technical, financial and managerial expertise/capability; but in either case, the Private Operator shall remain solely responsible to meet the Project requirements.

h. Private operator shall mark all the boundaries of each parking slot in all the parking lots and shall renew/remark as per the applicable standards.

i. The Private Operator shall have requisite organization and designate and appoint suitable officers/representatives as it may deem appropriate

to supervise the project, to deal with the Project Officer/ LMC and to be responsible for all necessary exchange of information required pursuant to this Agreement.

j. The Private Operator shall suspend forthwith the whole or part of the operations upon receiving a written notice from the Project Officer who may require the Private Operator to suspend the activities in whole or part if in the reasonable opinion of the Project Officer; the operations are being carried on in a manner that is not in conformity with the terms and conditions of this Agreement. Such notice from the Project Officer shall specify the non- conformity of Private Operator's obligations. The Private Operator shall be entitled to continue performance as soon as said non-conformity is remedied.

k. The Private Operator shall be deemed to be in material breach if the Project Officer acting reasonably and in accordance with the provisions of this Agreement, has determined that due to breach of its obligations by the Private Operator:

l. There has been a failure/undue delay in carrying out a scheduled/planned maintenance or the scheduled/planned maintenance has not been carried out in accordance with the terms and conditions of this Agreement.

m. There has been a serious and persistent letup in adhering to the requirements and thereby the Project and Project facilities or any part thereof is not safe for operations.

n. There has been a persistent breach of terms and conditions of this Agreement. For avoidance of doubt, persistent breach shall mean:

   i. Any breach by the Private Operator which has not been remedied by the Private Operator, as required under the provisions of this Agreement despite a notice to remedy in respect thereof issued by the Project Officer / LMC, and/or

   ii. Recurrence of a breach by the Private Operator, during the pendency of notice to remedy by the Project Officer / LMC requiring the Private Operator to remedy a breach, and/or

   iii. Repeated occurrence of a breach notwithstanding that earlier breaches have been remedied pursuant to notice to remedy or otherwise.

Upon occurrence of a material breach, L MC shall, without prejudice to and notwithstanding any other consequences provided thereof under this Agreement, depending upon the nature of obligation in respect of which a material breach has occurred, be entitled to both levy a penalty and thereafter terminate this Agreement if the breach is serious in nature.

1.15 Taxes, Duties and Statutory Levies

The Private Operator shall pay in a timely manner all taxes, duties, levies, cess and charges including but not limited to income tax, sales tax, service tax, excise duty, customs duty, Local Body Tax (LBT) and other rates and taxes that may be levied, claimed or demanded from time to time by any Government Authority including any increase therein effected from time to time from any Government Authority, in respect of the Project.

1.16 Insurance

a. The material procured under this Project shall be fully insured by the Private Operator, against any loss or damage. The Private Operator shall submit to the Purchaser, documentary evidence issued by the insurance company, indicating that such insurance has been taken.

b. The Private Operator during the term of this Contract:

i. shall take out and maintain, at his own cost but on terms and conditions approved by the LMC, insurance with financially sound and reputable insurers against the risks, and for the coverage, as specified below:

> LMC's liability and workers' compensation insurance in respect of the Personnel of the Private Operator / Private Operator's Team, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and

> Insurance against loss of or damage to (i) software developed in whole or in part for fulfillment of obligations under this Contract (ii) the Private Operator's assets and property used in the performance of the Services, (iii) any documents prepared by

the Private Operator in the performance of the Services, and (iv) Insurance coverage for the Parking lots up to Rs.1,00,00,000 (rupees one crore) covering the damage or theft of the vehicle and injury to a personnel in the parking lot.

ii. shall pay all premia in relation thereto and shall ensure that nothing is done to make such insurance policies void or voidable

iii. at the LMC's request, shall provide evidence to the LMC showing that such insurance has been taken out and maintained and that the current premiums therefore have been paid.

1.17 .Limitation of Private Operator's Liability towards the LMC

a. Neither Party shall be liable to the other Party for any indirect or consequential loss or damage (including loss of revenue and profits) arising out of or relating to the Contract.

b. Except in the case of Gross Negligence or Willful Misconduct on the part of the Private Operator / Private Operator 's Team or on the part of any person or firm acting on behalf of the Private Operator executing the work or in carrying out the services, the Private Operator, with respect to damage caused by the Private Operator including to property and/or assets of the L MC or of any of L MC's vendors shall regardless of anything contained herein, not be liable for any direct loss or damage that exceeds (A) the Project Capital Cost or (B) the proceeds the Private Operator may be entitled to receive from any insurance maintained by the Private Operator to cover such a liability, whichever of (A) or (B) is higher.

c. For the purposes of this Clause 6 .5 (b) of this section, "Gross Negligence" means any act or failure to act by a Party which was in reckless disregard of or gross indifference to the obligations of the Party under the Contract and which causes harmful consequences to life, personal safety or real property of the other Party which such Party knew, or would have known if it was acting as a reasonable person, would result from such act or failure to act. Not withstanding the foregoing, Gross Negligence shall not include any action taken in good faith for the safeguard of life or property. "Willful Misconduct" means an intentional disregard of any provision of this Contract which a Party

knew or should have known if it was acting as a reasonable person, would result in harmful consequences to life, personal safety or real property of the other Party but shall not include any error of judgment or mistake made in good faith.

d. This limitation of liability slated in this agreement, shall not affect the Private Operator liability, if any, for direct damage by Private Operator / Private Operator 's Team to a Third Party's real property, tangible personal property or bodily injury or death caused by the Private Operator / Private Operator 's Team or any person or firm/company acting on behalf of the Private Operator in executing the work or in carrying out the Services."

1.18   General obligations

The Private Operator shall at its own cost and expense:

a. Operator shall maintain the amenities for housing his/her team including office space, office furniture, electricity and connectivity infrastructure (adequate Internet and Intranet bandwidth) without any additional cost.

b. Investigate, study, operate and maintain the Project

c. Obtain all applicable permits as required by or under the applicable law and be in compliance thereof at all the times during the Contract Period;

d. Shall indemnify LMC in respect of any claims made against it (LMC) in relation to the use of licenses, permits, and/or any intellectual property, used/required for the Project.

e. Procure and maintain in full force and effect, as necessary appropriate proprietary rights, licenses, agreements and permissions for materials, methods, processes and systems used in or incorporated into the project.

f. Make efforts to maintain harmony and good industrial relations among the personnel employed in connection with the performance of its obligations under this Agreement and shall be solely responsible for compliance with all labour laws and solely liable for all possible claims and employment related liabilities of its staff employed in relation with the project and hereby indemnifies LMC against any claims, damages, expenses or losses in this regard and that in no case and shall for no purpose shall LMC be treated as employer in this regard.

g. Be responsible for all the health, security, environment and safety aspects of the project at all times during the Contract Period.

h. Obtain certificate for successful third party audit of the IT Security of the Project

i. Shall at all times obtain and maintain necessary insurance, workmen compensation insurance policies throughout the Contract Period for the other employees deployed for this Project.

j. Upon receipt of a request thereof, afford access to the Project Facilities to the authorized representatives of LMC for the purpose of ascertaining compliance with the terms, covenants and conditions of this Agreement.

k. Pay all taxes, duties, outgoings relating to the Project.

l. Establish a standard protocol for addressing complaints from persons in the Project Area to the satisfaction of the Project Officer.

m. Operator shall take all approvals, permissions and authorizations which he may require or is obliged to seek from L MC or any other Organization under its Agreement, in connection with implementation of the Project and the performance of its obligations.

n. Operator should make arrangements for connection points and updates (on ERP executions/inclusions, Online payment processes etc.) for facilitating system integration smart parking app and web portal with LMC's App and Web portal on his own cost.

1.19   No breach of obligations

The Private Operator shall not be considered to be in breach of its obligations under this Agreement nor shall it incur or suffer any liability if and to the extent performance of any of its obligations under this Agreement is affected by or on account of any of the following:

a. Force Majeure event,

b. LMC's event of default

c. Compliance with the instructions of the Project Officer /LMC or the directions of any government agency other than instructions issued as a consequence of a breach by the Private Operator of any of its obligations hereunder.

d. Closure of the Project or part thereof with the approval of the Project Officer /LMC.

1.20   Grievance Redressal system

Operator shall provide a helpline number to citizens to report any complaints with respect to the Project. The complaints shall be forwarded to the Private Operator to take necessary actions. In the event, the Private Operator receives any complaints directly from the citizens; the Private Operator shall notify the same to LMC immediately and also maintain a record of the   same.

LMC's Obligations

In addition to and not in derogation or substitution of any of its other obligations under this Agreement, L MC shall have the following obligations:

a. L MC shall undertake civil repair works, cabling works, resurfacing and road marking works, if required, in the parking lots as per LMC requirement from time to time.

b. LMC shall provide parking yard for towed vehicles. The parking yard shall be managed by the Private Operator.

c. LMC shall make available its existing space free of cost to the Private Operator for installation of Gateway, Switches, Routers, Cameras, LED/LCD displays etc. For smart parking services. Any additional form of infrastructure required for installation of such equipment's shall be the responsibility of the Private Operator and its own cost.

d. LMC shall provide built-up space for setting up of Central Control Room/Helpdesk with required power and data points within LMC area, free of cost.

e. Wherever appropriate LMC may provide necessary assistance to the Private Operator in securing applicable permits.

f. Observe and comply with all its obligations set forth in this   Agreement.

Sharing of Parking Revenue

1.21 Sharing of Parking Revenue by Private   Operator

a. The Operator shall pay to LMC every month the Concession Fee as percentage of revenue earned (= Gross Revenue minus service taxes as applicable) as quoted in response to the RFP throughout the concession period based on the parking tariff mentioned at Schedule B (7), subject to minimum concession fee as Rs.40,00,000/- (Rupees 40 Lakh only) per annum to be paid on monthly basis in advance from the date of handing over of parking lots.

b. The minimum concession fee will be changed (increased or decreased), in proportion to the change (increase or decrease) in number of ECS in parking lots given to the Concessionaire.

c. In case of increase in parking fees notified by LSCL/LMC from the parking fees over and above as provided in annexure 3 the 'minimum concession fee' as mentioned in this document will be increased proportionately [weighted increase on the basis of increase in "parking rates x parking capacity (ECS)"] to such increase in parking fees. The 'Concession Fee' will be increased in the following manner in the event of increase in parking fees notified by LSCL/LMC from the parking tariff over and above as provided in annexure 3 of this agreement.

d. In such case, the Concessionaire shall pay to LMC per month, quoted percent of the revenue earned before such increase in parking fees and ninety percent of the incremental revenue earned due to such increase in parking fees.

e. In case of decrease in parking fees by the LSCL/LMC, the Concessionaire may request the LSCL/LMC to rework the minimum concession fee and quoted percentage of revenue earned to be shared with LMC as concession fee through Chairperson, LMC. The Chairperson, LMC with the prior approval of the Council may reduce the minimum concession fee and quoted percentage of revenue earned to be shared with LMC in such cases.

f. The Concessionaire shall pay all duties and taxes in consequence of its obligations under this Concession Agreement, and the Concession Fee shall not be adjusted for such costs.

g. The Concession Fee shall pay LMC on monthly basis by the 7th day of the subsequent month throughout the concession period, along with necessary detailed reports related to the concession fee and proof for submission of taxes and duties, as applicable.

h. The parking revenue share shall be through an escrow account mechanism   as

mentioned in this Agreement. In the event LMC is not able to recover parking revenue share through the escrowed mechanism for whatsoever reason, it shall deduct the same from the Performance Security submitted by the Private Operator.

1.22 Duties, Taxes and Statutory levies

a. The Private Operator shall bear all personnel taxes levied or imposed on its personnel, vendors, consultants, or any other member of Private Operator's Team, etc. on account of payment received under this Contract.

b. The Private Operator shall bear all corporate taxes, levied or imposed on the Private Operator on account of payments received by it from the LMC for the work done under this Agreement.

c. The Private Operator shall bear all taxes and duties etc. levied or imposed on the Private Operator under the Agreement including but not limited to G ST, Sales Tax, Customs duty, Excise duty, LBT, Service Tax, VAT, Works Contracts Tax and all Income Tax levied under Indian Income Tax Act– 1961 or any amendment thereof up to the date for submission of final price bid, i.e., on account of payments received by him from the L MC for work done under the Contract. It shall be the responsibility of the Private Operator to submit to the concerned Indian authorities the returns and all other connected documents required for this purpose. The Private Operator shall also provide the L MC such information, as it may be required in regard to the Private Operator's details of payment made by the LMC under the Agreement for proper assessment of taxes and duties. The amount of tax withheld by the LMC shall at all times be in accordance with Indian Tax Law and the L MC shall promptly furnish to the Private Operator original certificates (Challans) for tax deduction at source and paid to the Tax Authorities.

d. The Private Operator agrees that he and his Team shall comply with the Indian Income Tax act in force from time to time and pay Indian Income Tax, as may be imposed / levied on them, for the payments received by them for the works under the Contract.

e. Should the Private Operator fail to submit returns/ pay taxes in times as stipulated under the Indian Income Tax Act and consequently any interest or penalty is imposed by the Indian Income Tax authority, the

Private Operator shall pay the same. Private Operator shall indemnify LMC against any and all liabilities or claims arising out of this Contract for such taxes including interest and penalty any such Tax Authority may assess or levy against the LMC / Private Operator.

f. LMC shall if so required by applicable laws in force, at the time of payment, deduct income tax payable by the Private Operator at the rates in force, from the amount due to the Private Operator and pay to the concerned tax authority directly.

Accounts and Auditing

a. The Private Operator is required to maintain separate and proper books of accounts for the Project as per the prevalent Indian Companies Act, 1956 and applicable provisions of the relevant acts, laws and rules in India.

b. The Private Operator shall make arrangements for getting these books audited by an independent auditor annually within 60 (sixty) days of close of financial year.

c. The Private Operator shall make available the audit report and the auditor's statement along with copies of the books for inspection by LMC within 10 days of completion of such audit and the accounts audited should be as per the prevalent provisions of the Indian Companies Act, 1956.

Indemnity

a. The Private Operator agrees to indemnify and hold harmless the LMC and its officers and employees (each known as "LMC Indemnified Party") promptly upon demand at any time and from time to time, from and against any and all losses, claims, damages, liabilities, costs (including reasonable attorneys' fees and disbursements) and expenses (collectively known as "Losses") to which L MC Indemnified Party may become subject, insofar as such Losses directly arise out of, in any way relate to, or result from:

　i. any negligence or wrongful act or omission by the Private Operator or the Private Operator's Team or any third party associated with Private Operator in connection with or incidental to this Contract; or

　ii. any breach of any of the terms of the Private Operator's Bid as agreed, the Tender and this Contract by the Private Operator, the Private Operator's Team or any third party.

iii. Any infringement of patent, trademark/copyright or industrial design rights arising from the use of the supplied goods and related services or any part thereof.

iv. against any privilege, claim or assertion made by a third party with respect to right or interest in, ownership, mortgage or disposal of any asset, property, and movable or immovable as mentioned in any Intellectual Property Rights, licenses and permits

b. LMC agrees to indemnify and hold harmless the Private Operator and its officers and employees (each known as "Private Operator Indemnified Party") promptly upon demand at any time and from time to time, from and against any and all losses, claims, damages, liabilities, costs (including reasonable attorneys' fees and disbursements) and expenses (collectively known as "Losses") to which Supplier Indemnified Party may become subject, insofar as such Losses directly arise out of, in any way relate to, or result from:

i. any mis-statement or any breach of any representation or warranty made by LMC or

ii. the failure by LMC to fulfil any agreement, covenant or condition contained in this Agreement, including without limitation the breach of any terms and conditions of this Agreement by any employee of LMC or

iii. any claim or proceeding by any third party against Supplier arising out of any act, deed or omission by the LMC.

For the avoidance of doubt, indemnification of Losses pursuant to this article shall be made in an amount or amounts sufficient to restore each Supplier Indemnified Party to the financial position it would have been in had the Losses not occurred.

c. Any payment made under this Agreement pursuant to an indemnity or claim for breach of any provision of this Agreement shall be net of applicable Taxes.

Events of default and termination

1.23 Events of default

Event of default shall mean either Private Operator event of default or LMC event of default or both as the context may admit or require.

a. Private Operator event of default

Any of the following events shall constitute an event of default by the Private Operator ("Private Operator event of default") unless such event has occurred as a result of one or more reasons:

   i. The Private Operator has failed to replenish the Performance security within 5 (five) working days of the encashment by LMC of the earlier Performance Security;

   ii. The Private Operator has failed to make any payments due to LMC and more than 60 (sixty) days have elapsed since such payment default;

   iii. Any representation made or warranty given by the Private Operator under this Agreement is found to be false or misleading;

   iv. The Private Operator has abandoned the Project;

   v. The Private Operator has unlawfully repudiated this Agreement or has otherwise expressed an intention not to be bound by this Agreement;

   vi. The Private Operator has suffered an attachment levied on any of its assets which has caused or is likely to cause a material adverse affect on the project and such attachment has continued for a period exceeding 90 (ninety) days.

   vii. Any other instance explicitly mentioned in this Agreement as having constituted an event of default.

b. LMC event of default

Any of the following events shall constitute an event of default by LMC ("LMC" event of default), unless caused by a Private Operator event of default or a force majeure event:

   i. LMC has failed to make any payments due to the Private Operator and more than 180 (one eighty) days have elapsed since such default;

   ii. LMC is in material breach of any of its obligations under this Agreement and has failed to cure such breach within 60 (sixty) days of receipt of notice thereof issued by the Private Operator;

   iii. LMC has unlawfully repudiated this Agreement or otherwise expressed its intention not to be bound by this Agreement;

   iv. Any representation made or warranties given by LMC under this Agreement has been found to be false or misleading

Termination due to event of default

a) Termination notice Subject to procedures in this document if a party having become entitled to do so decide to terminate this Agreement pursuant to the preceding, it shall issue termination notice setting out:

    i.   In sufficient detail the underlying event of default;

    ii.   The termination date, which shall be a date occurring not earlier than 60 days from the termination notice;

    iii.   The estimated termination payment including the details of computation thereof; and,

    iv.   Any other relevant information

b) Withdrawal of termination notice

Notwithstanding anything inconsistent contained in this Agreement, if a party who has been served with the termination notice cures the underlying event of default to the satisfaction of the other party at any time before the termination occurs, the termination notice shall be withdrawn by the party which had issued the same. Provided that the party in breach shall compensate the other party for any direct costs/consequences occasioned by the event of default which caused the issue of termination notice.

Termination Payments and Rights of on termination

a. Private Operator event of default

    i.   LMC shall be entitled to appropriate the amounts in the Performance Security

    ii.   Enter upon and take possession and control of the Project forthwith;

    iii.   Prohibit the Private Operator and any person claiming through or under the Private Operator from using/dealing with the Project;

a. LMC event of defualt

    i.   Private Operator shall be entitled to appropriate the amounts in the Performance Security if subsiding,

    ii.   Private Operator shall be entitled to receive all expenses done with respect to the Project as on date of Termination Notice, provided the Private Operator produce proof all such unpaid expenses.

Notwithstanding anything contained in this Agreement, L MC shall not, as a consequence of termination or otherwise, have any obligation whatsoever including but not limited to obligations as to compensation for loss of employment, continuance or regularization of employment, absorption or re-employment on any ground, in relation to any person in the employment of or engaged by the Private Operator in connection with the Project, and the hand over of the Project and Project Facilities by the Private Operator to LMC shall be free from any such obligation.

Hand back and Transfer Requirements

1.24 Ownership

Without prejudice and subject to the Agreement, the ownership of the Project developed by the Private Operator and Project Facilities provided by LMC to the Private Operator, including all modifications, renovations and improvements made therein by the Private Operator, shall at all times remain that of   LMC.

1.25 Private Operator's Obligations

The Private Operator shall at the end of the Contract Period hand back peaceful possession of the Project and Project Facilities including fixed assets, improvements made therein by the Private Operator, to LMC free of cost and in good operable condition.

a. At least 6 (six) months before the expiry of the Contract Period a joint inspection of the Project and Project Facilities shall be undertaken by L MC, Project Officer and the Private Operator. LMC/ Project Officer shall, within 15 (fifteen) days of such inspection prepare and furnish to the Private Operator a list of works/ jobs, if any, to be carried out. The Private Operator shall promptly undertake and complete such works/ jobs at least 3 (three) months prior to the expiry of the Contract Period and ensure that the Project and Project Facilities continue to meet such requirements until the same are handed back to LMC.

b. LMC/ Project Officer shall within 15 (fifteen) days of the joint inspection undertaken under preceding clause (b) prepare and furnish to the Private Operator a list of items, if any, with corresponding distinctive descriptions, which are to be handed back to LMC.

c. The Private Operator hereby acknowledges LMC's rights specified in in this document enforceable against it upon Termination and its corresponding obligations arising thereof. The Private Operator undertakes to comply with and discharge promptly all such obligations.

1.26 LMC's Obligations

LMC shall, subject to LMC's right to deduct amounts from the Performance Security towards:

a. Carrying out works/ jobs listed in this documents which have not been carried out by the Private Operator
b. Purchase of items, which have not been handed back to   LMC.
c. Any outstanding dues, which may have accrued in respect of the Project during the Contract

Period

Duly discharge and release to the Private Operator, the amounts in the Performance Security account or balance therein after deductions in respect to a), b) and c) above, as the case may be, upon issuance of certificate from Project Officer regarding compliance by the Private Operator with the Hand back and Transfer Requirements.

Dispute resolution

a. A Joint Committee of 5 (five) members, comprising of 3 (three) members from LMC and 2 (two) members from Private Operator shall be set up for this Project. The Joint Committee shall be chaired by the Municipal Commissioner of LMC. The objective of Joint Committee shall be to arrive at amicable decisions in case of any disputes or disagreement with respect to this Project and this Agreement.
b. Save where expressly stated to the contrary in this Agreement, any dispute, difference or controversy of whatever nature between the Parties and/or their associates/nominees, howsoever arising under, out of or in relation to this Agreement, at first level shall be referred to the Joint Committee.

ARBITRATION

The LMC and Private Operator shall make every effort to resolve amicably, by direct negotiation, any disagreement or dispute arising between them under or in connection with the any of the or part of the terms and conditions of the contract.

If within 30 (thirty) days from the commencement of such negotiations, the LMC and Private Operator have been unable to resolve dispute amicably, either party may referred it for resolution to the Hon. Municipal Commissioner, L MC, as a sole arbitrator whose decision shall be final and binding on both the parties.

All legal disputes are subject to the jurisdiction of Civil Courts Lucknow only.

Performance during dispute

Pending the resolution of any dispute, the parties shall continue to perform their respective obligations under this Agreement without prejudice to a final adjustment in accordance with such resolution.

Change in Law

Change in law shall mean the occurrence or coming into force of any of the following, after the Appointed Date:

i. The enactment of any new Indian law;
ii. The repeal, modification or re-enactment of any existing Indian law
iii. A change in the interpretation or application of any Indian law by a court of record.

Provided that change in law shall not include

i. Coming into effect, after the Appointed Date, of any provision or statute which is already in place as of the Appointed Date,
ii. Any new law or any change in the existing law under the active consideration of or in the contemplation of any government as of the Appointed Date which is a matter of public knowledge,
iii. Any change in the rates of taxes.

Representations and warranties

1.27 Representations and warranties of the Private Operator

a. The Private Operator represents and warrants to L MC that It is duly organized, validity existing and in good standing under the laws of India;
b. It has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;
c. It has taken all necessary corporate and other action under applicable laws and its constitutional documents to authorize the execution, delivery and performance of this Agreement;
d. It has the financial standing and capacity to undertake the project;
e. This Agreement constitutes its legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
f. The execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under or accelerate performance required by any of the terms of the Private Operator's memorandum and articles of association or any applicable laws or any covenant, Agreement, understanding, decree or order to which it is a party or by which it or any of its properties or assets are bound or affected;
g. There are no actions, suits, proceedings or investigations pending or to the Private Operator's knowledge threatened against it at law or in equity before any court or before any judicial, quasi-judicial or other authority, the

Outcome of which may constitute Private Operator event of default or which individually or in the aggregate may result in material adverse effect;

h. It has complied with all applicable laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have material adverse effect;

i. Subject to the receipt by the Private Operator from L MC of any amount due under any of the provisions of this Agreement, in the manner and to the extent provided for under the applicable provisions of this Agreement all rights and interests of the Private Operator in and to the Project shall pass to and vest in LMC on the termination date free and clear of all encumbrances without any further act or deed on the part of the Private Operator or LMC

j. No representation or warranty by the Private Operator contained herein or in any other document furnished by it to LMC or to any government agency in relation to applicable permits contains or will contain any untrue statement of material fact or omits or will omit to state material fact necessary to make such representation or warranty not misleading.

k. No bribe or illegal gratification has been paid or will be paid in cash or kind by or on behalf of the Private Operator to any person to procure the Contract.

l. Without prejudice to any express provision contained in this Agreement, the Private Operator acknowledges that prior to the execution of this Agreement, the Private Operator has after a complete and careful examination made an independent evaluation of the project requirements and the information provided by LMC, and has determined to its satisfaction the nature and extent of risks and hazards as are likely to arise or may be faced by the Private Operator in the course of performance of its obligations hereunder.

m. The Private Operator also acknowledges and hereby accepts the risk of inadequacy. Mistake or error in or relating to any of the matters set forth above and hereby confirms that LMC shall not be liable for the same in any manner whatsoever to the Private Operator.

Representations and warranties of LMC

LMC represents and warrants to the Private Operator that:

a. LMC has full power and authority to grant the Contract;
b. LMC has taken all necessary action to authorise the execution, delivery and performance of this Agreement;
c. This Agreement constitutes LMC legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
d. There are no legal suits or other legal proceedings pending or threatened against L MC in respect of the Project and Project Facilities.

Obligation to notify change'

In the event that any of the representations or warranties made/given by a party ceases to be true or stands changed, the party who had made such representation or given such warranty shall promptly notify the other of the same.

Miscellaneous

Assignment and charges

a. The Private Operator shall not assign in favour of any person except in case of a sub-contractor for this Agreement or any part of this agreement, the rights, benefits and obligations hereunder save and except with prior consent of LMC

b. The Private Operator shall not create nor permit to subsist any encumbrance over the Project and Project Facilities

Governing law and jurisdiction

This Agreement shall be governed by the laws of India. The courts at Lucknow shall have jurisdiction over all matters arising out of or relating to this Agreement.

Waiver

a. Waiver by either party of any default by the other party in the observance and performance of any provision of or obligations under this Agreement:

  i. Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions or obligations under this Agreement;

  ii. Shall not be effective unless it is in writing and executed by a duly authorised representative of such party; and

  iii. Shall not affect the validity or enforceability of this Agreement in any manner.

b. Neither the failure by either party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation hereunder nor time or other indulgence granted by a party to the other party shall be treated or deemed as waiver/breach of any terms, conditions or provisions of this Agreement.

Survival/Termination of this Agreement

a. Shall not relieve the Private Operator or L MC of any obligations already incurred hereunder which expressly or by implication survives termination hereof, and

b. except as otherwise provided in any provision of this Agreement expressly limiting the liability of the either party, shall not relieve the either party of any obligations or liabilities for loss or damage to the other party arising out of or caused by acts or omissions of such party prior to the effectiveness of such termination or arising out of such termination.

Amendments

This Agreement and the schedules together constitute a complete and exclusive understanding of the terms of the Agreement between the parties on the subject hereof and no amendment or modification hereto will be valid and effective unless agreed to by all the parties hereto and evidenced in writing.

Notices

Unless otherwise stated, notices to be given under this Agreement including but not limited to a notice of waiver of any term, breach of any term of this Agreement and termination of this Agreement, shall be in writing and shall be given by hand delivery, recognized international courier, mail, telex or facsimile transmission and delivered or transmitted to the parties at their respective addresses set forth below:

If to LMC:

The Municipal Commissioner

Lucknow Municipal Corporation
Trilok Nath Marg, Lalbagh
Lucknow 2260011
Uttar Pradesh

If to the Private Operator:

The Chief Executive

---------------------------------- Limited

Or such address, telex number or facsimile number as may be duly notified by the respective parties from time to time, and shall be deemed to have been made or delivered.

In the case of any communication made by letter, when delivered by hand, by recognized international courier or by mail (registered, return receipt requested) at that address, and In the case of any communication made by telex or facsimile, when transmitted properly addressed to such telex number or facsimile number.

Severability

If for any reason whatsoever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the parties shall negotiate in good faith with a view to agreeing upon one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions as nearly as is practicable. Provided that the failure to agree upon any such provisions shall not be subject to dispute resolution under this Agreement or otherwise.

No partnership

Nothing contained in this Agreement shall be construed or interpreted as constituting a partnership between the parties. Neither party shall have any authority to bind the other in any manner whatsoever.

Language

All notices required to be given under this Agreement and all communications, documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

Exclusion of implied warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other Agreement between the parties and any representation by any party not contained in a binding legal Agreement executed by the parties.

Counterparts

This Agreement may be constituted in two counterparts, each of which when executed and delivered shall constitute an original of this Agreement but shall together constitute one and only one Agreement.

Costs

The Private Operator shall bear all the costs related to the signing and registration of this Agreement including but not limited to stamp duties and registration charges.

IN WITNESS WHEREOF THE, PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

SIGNED, SEALED AND DELIVERED

For and on behalf of LMC by: For and on behalf of the Private Operator by:

Signature

Name

Designation

In the presence of:

A. PERFORMA OF PERFORMANCE SECURITY

THIS DEED OF GUARANTEE executed on   this the_____day   of
at

_____ by_____*(Name   of   the   Bank)* having   its
Registered   office   at

_____ and having its branch office at_____, L u c k n o w,
hereinafter referred to as "the Guarantor" which expression shall unless   it   be
repugnant to the subject or context thereof include successors and assigns;

In Favour of

Lucknow Municipal Corporation (hereinafter referred as "Corporation"), having its
principal   office   at   Trilok   Nath   Marg,   Lalbagh,   Lucknow-226001
,which expression shall unless it be repugnant to   the   subject   or context thereof
include its, successors and assigns;

Where as

By the Agreement ("the Agreement") being entered into between Corporation and
_, a company incorporated under the Companies Act, 1956, having its registered
office at_____, ("the Private   Operator"),   the   Private   Operator   has
been granted the Rights to undertake the _____
project (hereinafter referred to as "the Project").

A. In terms of clause 5.1.1 of the Agreement, the   Private   Operator   is
required to furnish to Corporation, an unconditional and irrevocable bank guarantee
for   an   amount   of   Rs.
_____ (Rupees_____Only)   as   security   for   due   and
                                              punctual
performance / discharge of its obligations under the
Agreement.

B. At the request of the Private Operator, the Guarantor has agreed to provide bank
guarantee, being these presents guaranteeing the due and punctual performance
/ discharge by the Private Operator of its obligations relating to the   Project.

NOW THEREFORE THIS DEED WITNESSETH AS FOLLOWS:

Capitalized terms used herein but not defined shall have the meaning assigned to them respectively in the Agreement.

1. The Guarantor hereby irrevocably guarantees the due and punctual performance by M/s_____(hereinafter called "the Private Operator") of all its obligations relating to the Project and in connection with achievement of obligations of the Private Operator in accordance with the Agreement.

2. The Guarantor shall, without demur, pay to Corporation sums not exceeding in aggregate Rs. _____ /- (Rupees_____only), within five (5) calendar days of receipt of a written demand thereof from Corporation stating that the Private Operator has failed to meet

its obligations under the Agreement. The Guarantor shall not go into the veracity of any breach or failure on the part of the Private Operator or validity of demand so made by Corporation and shall pay the amount specified in the demand notwithstanding any direction to the contrary given or any dispute whatsoever raised by the Private Operator or any other Person. The Guarantor's obligations hereunder shall subsist until all such demands are duly met and discharged in accordance with the provisions hereof.

3. In order to give effect to this Guarantee, Corporation shall be entitled to treat the Guarantor as the principal debtor. The obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Agreement or other documents or by the extension of time for performance granted to the Private Operator or postponement/non exercise / delayed exercise of any of its rights by Corporation or any indulgence shown by Corporation to the Private Operator and the Guarantor shall not be relieved from its obligations under this Guarantee on account of any such variation, extension, postponement, non-exercise, delayed exercise of any of its rights by Corporation or any indulgence shown by Corporation,   provided   nothing contained herein shall enlarge the Guarantor's obligation hereunder.

4. This Guarantee shall be irrevocable and shall remain in full force and effect until _____unless discharged / released earlier by Corporation in accordance with the provisions of the Agreement. The Guarantor's liability in aggregate be limited to a sum of Rs._____   /- (Rupees_____ _____Only).

5. This Guarantee shall not be affected by any change in the constitution or winding up of the Developer / the Guarantor or any absorption, merger or amalgamation of the Private Operator /   the Guarantor with any other Person.

6. The Guarantor has power to issue this guarantee and discharge the obligations contemplated herein, and the undersigned is duly authorized to execute this Guarantee pursuant to the power granted under   .

IN WITNESS WHEREOF THE GUARANTOR HAS SET ITS HANDS HEREUNTO ON THE DAY, MONTH AND YEAR FIRST HEREINABOVE WRITTEN.SIGNED AND DELIVERED

   by

   Bank by the hand of Shri _____

   its_____and authorized official.

B.	OBLIGATIONS DURING IMPLEMENTATION AND O&M PERIOD

❖ The detailed scope of work alongwith implementation schedule and O & M period is defined in Annexure 1.

C.   Penalties for Non-Compliance of Obligations.

❖ The detailed penalty clause is defined in Annexure 2

D.   ESCROW ACCOUNT AGREEMENT

This Escrow Account Agreement is made at_____on this_____th day of_____, 20_____
("**Escrow Agreement**")

BETWEEN

1. Luck now Municipal Corporation (hereinafter referred to as the "L**MC**"), having its Registered Office at Trilok Nath Marg, Lalbagh, Lucknow - 226001, and represented by Shri_____, the_____officer at Lucknow Municipal Corporation, which expression shall, unless repugnant to the context or meaning thereof, to mean and include its successors-in-interest, nominee (s) and permitted assigns, of the **First Part**

AND

2 M/s_____, a company[4] incorporated under provisions of the_____, having its Registered office at_____, (hereinafter referred to as "**Private Operator**") which expression shall unless repugnant to the context include its successors and permitted assigns, of the **Second Part**.

AND

3. **<<Name of the bank >>** a Bank constituted and functioning under the Indian Companies Act, 1956 and having its head office at _ (hereinafter referred to as the "**Escrow Agent**"), which expression shall, unless repugnant to the subject or context thereof, mean and include its successors and assigns of the **Third Part**.

WHEREAS

1. The Private Operator has been granted right by LMC to design, finance, develop, implement, operate & maintain smart systems for underground parking spaces (hereinafter referred to as "**Project**").

   The Private Operator has agreed to undertake the Project, vide Agreement dtd.

   _____between L MC and Private Operator (hereinafter referred to as "**Principal**

Agreement") on terms and condition enumerated therein.

2.   As per one of the conditions stipulated in the Principal Agreement a Joint Escrow Current Bank Account shall be opened jointly by both the Parties for the purpose of receiving the Parking Revenue proceeds from the users of the parking facility in the Project. The title of the

account shall be _____

Parties and the same shall be operated under joint signatures of authorized signatories of both the Parties.

_____

4 In case of a Consortium, the Lead member shall sign the Agreement

NOW, THEREFORE, IN CONSIDERATION OF THE PREMISES IT IS AGREED BY THE PARTIES AS FOLLOWS:

1. **APPOINTMENT OF ESCROW AGENT**.

   a) Subject to the provisions hereof, the Parties do hereby irrevocably appoint **<<name of the bank>>** with its branch situated at _____ as the Escrow Agent and the Escrow Agent hereby accepts its appointment as an Escrow Agent on the terms and conditions appearing hereinafter.

   b) The parties hereby agree that the sole obligation of the Escrow Agent shall be to act in accordance with the provisions of this Agreement and to do, perform and exercise the acts, deeds and powers which the Escrow Agent is hereby authorized and instructed to do, perform and exercise under this Agreement.

2. **ESTABLISHMENT OF ESCROW ACCOUNT**

   a) The_____, the L MC and M/s
   , the

   Private Operator shall jointly open an irrevocable Escrow Account Bearing Account
   No._____designated as "
   ESCROW

A/C ," with the Escrow Agent at its Branch at —

_____, in form and manner satisfactory to the Parties ("**Escrow Account**"), and it shall be maintained at all times until termination of this Escrow Agreement/ Principal Agreement.

b) To facilitate easy transfer of funds from/to the above said joint escrow account, each party shall also open and maintain a Current A/c in its own name with the Escrow Agent and the monies received in the Escrow A/c shall be transferred into these Current Accounts by the Escrow Agent as per terms enumerated hereinafter.

3. **RIGHTS AND OBLIGATIONS OF THE**

PARTIES. a) The Parties hereby agree and

undertake:

(i) That the L MC and / or Private Operator shall not create any charge, lien or any encumbrance whatsoever, in favour of any person on the amount lying to the credit of the Escrow Account, except with joint written consent of both the Parties and prior written joint instruction / information to the Escrow Agent.

(ii) That the Parties shall not do or cause to be done any acts, deed or things which may prejudicially affect the interest of the Escrow Agent.

(iii) That both the Parties shall have full authority to monitor all transactions of the Escrow Account including conducting of audits.

(iv) That the Escrow Agent shall not take cognizance in case of any instruction given by the L MC and / or the Private Operator, unilaterally or any contradictory instructions given by the other party.

b) The Escrow Agent hereby agree and undertake as under:

i. That the Escrow Agent shall furnish statements in respect of the Escrow Account to the Parties at such intervals as may be required by them.
ii. That the Escrow Agent shall act only on the instructions which are given in writing jointly by both the Parties.

iii. The Parties hereby irrevocably authorize the Escrow Agent to pay and to transfer the funds from the Escrow Account as per Fund Distribution & Transfer Schedule given in clause 4 below subject to any variations / revisions given jointly by both the Parties in writing from time to time.

4. DEPOSITS INTO THE ESCROW ACCOUNT AND DISTRIBUTION & TRANSFER THEREOF

(a)   The parties have decided to distribute the parking fee proceeds received in Escrow

A/c in the manner as follows :

S. No.	Share of LMC	Share of Private Operator
1	40,00,000 or % quoted whichever is higher	

(b)   The Parties have decided to keep an amount of Rs. (Rupees _____

_____ only) as balance in the Escrow Account, and all the amount surplus to the Rs. _____ /- will be transferred to the account of the LMC i.e

_____ A/C bearing account no. _____ and the Private Operator i.e. _____ Bearing account no. as per the schedule given in the clause (a) above on monthly basis.

5.   REPRESENTATIONS AND WARRANTIES:

a)   The Parties hereby represent and warrant that:

i)   The Parties have all requisite legal power and authority to execute this Escrow Agreement and to carry out the terms, conditions and provisions, hereof.

ii)   This Escrow Agreement constitutes valid, legal and binding obligations on the Parties enforceable in accordance with the terms hereof.

b)   The Escrow Agent warrants with the Parties that the Escrow Agent is licensed under the Banking Regulations Act, 1949 and validly existing under the laws of India and has all requisite legal powers, authority and

resources to enter into this Escrow Agreement and to perform its duties and obligations there under.

c) Each of this Escrow Agreement and the Principal Agreement constitutes the valid, legal and binding obligations of the Parties enforceable in accordance with terms of the Escrow Agreement and the Principal Agreement respectively.

d) There are no action, suit or proceedings pending or threatened, against or affecting the Escrow Agent before any court or administrative body or arbitral tribunal that could reasonably be expected to affect adversely or/ and materially the ability of the Escrow Agent to perform its duties and obligations under this   Escrow Agreement.

6. INDEMNITY

(a) The Parties hereby agree to indemnify and keep indemnified and hold harmless the Escrow Agent from and against any and all claims and from and against any damages, penalties, judgments, liabilities, losses or expenses (including reasonable attorney's fees and disbursements) incurred as a result of the assertion of any claim, by any person or entity, arising out of, the operation of the Escrow Account to the terms and conditions contemplated by this Escrow Agreement.

(b) The Parties hereby agree that the Escrow Agent shall have no liability towards the Parties for any loss or damage that the Parties may claim to have suffered or incurred, either directly or indirectly, by reason of this Escrow Agreement or any transaction contemplated by the provisions hereof, unless occasioned by the gross negligence   or willful misconduct of the Escrow Agent. In no event shall the Escrow Agent be liable for losses or delays   resulting   from   computer malfunction,   interruption   of

communication facilities, labour difficulties or other causes beyond the Escrow

Agent's reasonable control or for indirect, special or consequential damages.

7. MISCELLANEOUS

(a) The Parties agree to pay or reimburse fee of the Escrow Agent. Such fee shall be shared by the LMC and Private Operator in the ratio of **50:50** respectively.

(b) All notices or other communications to or upon the parties hereto shall be given or made by registered post or recognized courier service (or, in case of urgency only by email, facsimile, promptly confirmed) to the respective registered/ dealing addresses of the parties.

(c) All notices or communications made as aforesaid by registered post shall be deemed to have been duly given or made within 3 working days (excluding bank holidays & sundays) after being deposited in the post office provided that those given or made by email, facsimile, as aforesaid shall be deemed to be duly given or made one (1) day (excluding bank holidays & sundays) after such email, facsimile, is sent.

(d) Any party may by notice change the address to which such notices and communications are to be delivered or mailed.

(e) This Escrow Agreement shall be binding upon and shall ensure to the benefit of the parties hereto and their respective successors and assigns,

(f) This Escrow Agreement has been executed in 3 (three) copies, each of which shall be deemed as original and each Party will keep one original copy of the same.

8. TERMINATION

(a) This Escrow Agreement cannot be terminated unilaterally by the LMC or Private Operator under any circumstances.It can only be terminated by joint written instructions of the LMC and Private Operator.

IN WITNESS WHEREOF, each of the parties hereto have hereunto set and subscribed their respective hands and seals on the day and year first hereinabove written

SIGNED, SEALED AND DELIVERED

	For and on behalf of the by:		
	LMC	**Private**	**Escrow Agent**
Signature			

Name			
Designation			
In the presence of:			

Annexure 1

1) Scope of work for implementing smart solutions in three parking locations:

1.1. SCOPE OF WORK

The envisaged solution should be automated, cost effective, scalable, secure, environment friendly, energy efficient and must entail minimum human intervention for day-to-day parking management. The following scope of work has been envisaged for this project:

i. To provide and install magnetic-cum-optical/magnetic-cum-IR/sensors at each of the parking slot for all surface parking lots. All parking slots should be individually and clearly marked, mapped with parking sensors, and appropriate camera coverage. All sensors, devices and equipment should have the capability to communicate back and forth with the central control centre for information and feedback through a RF/ Wi-Fi/ GPS/ any combination of them enabled system.

ii. Installation of CCTV based surveillance solution for parking lots for monitoring of infrastructure, assests inside the parking and quick response to incidents in all parking lots.

iii. To provide and install necessary complete hardware and software solutions, such as but not limited to boom barriers, handheld devices, porta-cabin/workstation, switches, gateway, and guidance system, for parking system.

iv. Provide Parking Management and Parking Guidance System to direct drivers to available parking slots through LED signage and through mobile app. Provide and install necessary LED signage for guidance to public regarding availability of parking spaces and other necessary information.

v. Setup and maintenance of Central Control Room/helpdesk including Data Centre (preferably on cloud) with appropriate hardware and software for viewing, analysing, storing and retrieval of the CCTV feed and monitoring and managing of Smart Parking.

vi. Mobile App for parking services. App shall show the available slot on real time basis, booking of parking space, payment mechanism through various modes of payment, facility for extension of pre-booked parking space.

vii. Comprehensive operation and maintenance of all hardware and software installed for this project throughout Developer period. To manage and collect revenue as per tariff fixed by LMC for all the parking lots defined in this RFP.

viii. Unique identification of each vehicle entering any of the parking lots through bar coded tickets/ magnetic strip cards/ RFID/ Smart Cards/ QR Coded entry etc as applicable.

ix. To provide recognition of each parking slot (ECS) with LED indicators for Indoor parking showing availability of parking slot. Maintenance and up gradation of Parking Guidance & Management Infrastructure at mentioned Parking locations.

Using the data generated through the parking solution software for analytics purposes, such as time based (hourly/ daily/weekly/monthly/ annually) trends, area specific trends, vehicle (car – suv/sedan/hatchback, scooter, etc.) specific trends, usage and vacancy periods, parking demand etc. for the purpose of better management of parking.

1.2. Project Engagement Model

The Engagement model is bifurcated into following two stages-

1.2.1. Implementation Stage:

(a) Parking charges are to be collected by the developer by using any mechanism from the date of handing over of the parking lots by LMC to the developer on as and where basis.

(b) Implementation of smart parking solution in Phases.

i. Within 30 days from the date of handing over of parking lots, the Developer shall implement and operationalize centralized online payment system at all parking lots for all parking slots.

ii. Within three months from the date of handing over of parking lots, complete smart parking solution is to be implemented and operationalize as per scope defined in this RFP document.

1.2.2. Operation and Maintenance Stage:

(a) Total Concession period is five years from the date of handing over. This includes three months implementation period.

(b) The Developer will start operation and maintenance of all parking lots from the date of handing over of parking lots by LMC to the developer. The Developer shall operate, maintain and manage the complete parking solution as designed and built under this RFP document, throughout the concession period in accordance with this RFP document.

1.3. LMC Responsibilities

1.3.1. LMC will provide permission in writing, for use of right of way (ROW), electric poles or any other place/structure for installation of CCTVs, sensors, gateways, cables, signage or any other equipment for exclusive usage for any work covered under this RFP document. This would be provided free of cost in LMC area throughout the Developer period, subject to the conditions that the Developer shall do restoration simultaneously with materials of same specifications. In case, such restoration is not possible simultaneously, then such restoration shall be done within 10 days.

1.3.2. Minimum space required for installation of Gateway, Switches, Routers, Cameras, LED/LCD signage's etc. for smart parking services will be provided free of cost by LMC. However, any Civil/Electrical work required will be the responsibility of the Developer at his cost.

1.3.3. At the end of the concession period, all rights given to the Developer shall be terminated automatically.

1.3.4. LMC shall provide single window clearance, where LMC has full control and jurisdiction, to the Developer for the purpose of this RFP document.

1.3.5. LMC shall undertake civil repair works and resurfacing works, if required, in the parking lots as per LMC requirement from time to time.

1.4. Developer Responsibilities

The Responsibilities of the Developer throughout the concession period shall be as indicated under this RFP document, including:

1.4.1. Design, develop, provide, install, manage, operate and maintain the smart parking system as defined under RFP document as per the Service Level Agreement (SLA) throughout the concession period. Penalty will be imposed as per SLA in the Penalty Clause of this RFP document for non-adherence of the terms and conditions of the RFP. If the service level dips below the minimum benchmark, LMC may terminate the agreement as defined in RFP document.

1.4.2. Operate, maintain and manage all hardware, software and services covered in this RFP document throughout the concession period.

1.4.3. The Developer shall provide connectivity (electrical, network, etc.) to all devices / equipment, such as LED signage including, sensors, boom barriers, handheld device, manual pay station, CCTVs, built / installed under this RFP document, and running, maintenance, operation & management cost of these devices/equipment throughout the concession period. The Developer will be responsible for all civil and installation work related to network connectivity, power supply extensions to devices, installation of devices and equipment, and any other networking, communication and infrastructure requirements related to any work under this RFP document.

1.4.4. Watch and ward of the assets/ services created in this project. The Developer has to replace the material(s) / equipment(s) /device(s) in case of any theft or loss due to any other reasons, which affects the services/ assets under this project.

1.4.5. To provide FTTH / broadband connection at each of the parking lot to bring (i) parking related data on real-time basis; and (ii) CCTV data on demand basis, online to the Central Control Room throughout the concession period of project, at his cost.

1.4.6. Erect suitable steel structures i f r e q u i r e d at its own cost for installation of LED signage for smart parking system. These structures/ poles shall be of stainless steel, and aesthetically designed and structurally stable and as per LMC specifications. The developer shall also indemnify L MC for any damage due to such structures.

1.4.7. LMC will be the owner of all dismantled existing equipment from the parking lots and all such equipment shall be handed over to LMC, not later than a fortnight from date of such dismantling.

1.4.8. Provide adequate power back up to ensure uninterrupted power supply to all hardware (equipment, devices, etc.) covered under this RFP document.

1.4.9. All physical assets created under this RFP will become the property of LMC at the end of Concession period or at termination of the concession, whichever is earlier, and the Developer will not have any legal right on these assets.

1.4.10. At the end of the concession period, the Developer has to hand over all physical assets belonging to the LMC in proper working condition. In case of any deficiency noticed at the time of such handing over, the Developer has to get it rectified at his own cost within 15 days of such handing-over, otherwise, LMC will get it rectified at the risk and cost of the Developer. Performance guarantee of Developer will be released only after successful handing over of the all physical assets in working condition to LMC.

1.4.11. Any damage to other services arising due to installation or execution or repair or maintenance work by the Developer, shall have to be made good by the Developer within 72 hours of such damage, failing which L MC has right to g et it done at the risk and cost of the Developer and in such case, LMC will charge double of the cost incurred on making it good from the Developer.

1.4.12. The developer shall pay Concession Fee to LMC as mentioned in the RFP document.

1.4.13. Developer to deposit BG of Rs.10 lakhs (Rs. Ten Lakhs) as a refundable performance security deposit with the LMC, which will be released within six months from the date of end of concession period, only upon successful completion of the work and settlement of all dues (unless the said amount is forfeited for any breach of contract) and that the said Security Deposit shall not carry any interest.

1.4.14. For any complaint registration by users, provisions shall be made by the developer in Mobile App and web portal. The developer shall provide a weekly report to the LMC, every Monday on the number of complaints received during the previous week (Monday to Sunday) and the number of replies furnished by it to the complainants along with number of complaints on which no response has been made by the developer.

1.4.15. If the Developer allows and charge or do parking, except the parking lots defined in the map which is provided as **Annexure- 2 in the RFP document**, a penalty as provided under Penalty Clause shall be imposed on the developer. Traffic Police may also impose penalty on the developer, if applicable. Traffic Police/LMC reserves the right to tow away vehicles parked at such unauthorized places at the cost of the Developer.

1.4.16. The developer shall honour the 'Parking Passes/Stickers' issued by LMC and will not charge any parking fees from the user of such vehicles having 'Parking Passes/ Stickers' issued by LMC. Such non-charging of parking fees by the developer shall have no interference on concession fees to be paid by the developer to the L MC, and the developer cannot make any claim on the account of non-charging of parking fees from such vehicles. Such 'Parking Passes/Stickers' shall be valid on calendar year basis, LMC shall provide the database of Vehicles (vehicle Number, pass/sticker no., Type of Vehicle – Car, Scooter, Motorcycle etc.) issued by it to the developer for this   purpose.

1.4.17. Apply for road cutting permission to LMC, in one-month   advance,   showing   its requirements, layout plan for services to be laid, plan for restoration with   timelines. LMC will get it approved as per feasibility at site. The final route will be decided/ approved by LMC keeping in view the requirements of the Developer and the site conditions. As such, any instructions/policy of LMC, Government of Uttar Pradesh and Government of India issued from time to time will be applicable on the   Developer.

1.4.18. Restoration of roads, footpath, green portion etc. will be done by the Developer at its own cost as per plan approved by L MC or within 15 days from the date of road cutting, whichever is earlier. Restoration has to be done with equivalent specifications provided by LMC so that after restoration the aesthetics and purpose of use will not compromise. Restoration work shall be carried out as per CPWD/ State PWD specifications.

1.4.19. In case, the Developer fails to restore the roads/footpath/ green portion etc. within the stipulated time than LMC has right to get it restored at the risk and cost of the Developer, and in such case, LMC will charge 1.5 times of the cost incurred on making it good from the Developer.

1.4.20. The Developer shall take metered electricity   for   parking   sensors,   gateway, router/switches, LED signage/displays, parking guidance system   and   all   systems   for indoor parking equipment etc. and for all equipment installed in Central Control Centre. The Developer will bear the cost of electricity consumed for all such devices as per tariff applicable from time to time.

1.4.21. The Developer shall integrate the parking mobile app and the web portal with the L S C L App, and migrate the whole content/database of app and portal o n t h e L SCL Command & Control Centre, as and when such Command and Control Centre will be

set-up by the L SCL by itself or through any other developer.

1.4.22. At the time of completion of implementation period (i.e. three months from the date of handover of the parking lots to the developer by LMC), the Developer shall inform the L MC in writing for the same along with a list of all the assets (details of equipment, software's, services etc.) deployed during the implementation period under this RFP document, including their costs. The developer shall update such assets list on yearly basis throughout the concession period.

1.4.23. Ensure that all the vehicles will be parked in the space defined for each vehicle in the parking lot. The parking attendant will ensure proper parking of vehicles in each slot.

1.4.24. Ensure that the number of vehicles parked shall not exceed the designated capacity of each parking lot.

1.4.25. Mark all the boundaries of each parking slot in all the parking lots under this RFP document with thermoplastic paint of 2.5 mm thickness and 100mm width as per CPWD specifications and renew/remark the same after every 2 years, or earlier as per site requirement.

1.4.26. The developer shall be responsible for any theft/damage/loss of vehicles parked in parking lots and shall be responsible for settlement of the dispute, if any, including under the Court of Law, and also follow all instructions and guidelines issued by U . P . Police / statutory rules & regulations/L MC for prevention of misuse of parking lots, including usage by anti-social elements, terrorist(s) etc.

1.4.27. For installation of CCTV(s) and /or LED signage(s), if there is any requirement of additional poles, the same will be provided and installed by the Developer with prior approval of design from LMC.

1.4.28. Undertake all measures for Cyber security, protection of information and communication technology systems of this project from cyber-attacks that are purposeful attempts by unauthorized persons to access ICT systems in order to achieve the target of theft, disturbance, damage, or other illegal actions. The Developer will detect analysis and do mitigation of vulnerabilities and protect Central Control Centre room including Data Centre from cyber-attacks throughout the concession period.

1.4.29. Propose additional measures to increase occupancy of parking lots. However, the Developer will be required to take approval from LMC before implementation of any measures to improve the parking efficiency.

1.4.30. Ensure at all times that the parking lots are utilized by cars, cabs, two- wheelers, and other small vehicles, but no heavy or medium commercial vehicles are parked in specified

parking lots.

1.4.31. The Developer will provide necessary support, data and other required information for integration of smart parking solution with Central Command and Control Centre of LSCL, as and when such Command and Control Centre will be set-up by the LMC by itself or through any other developer.

1.4.32. Responsible for and provide security at the parking lots, and shall report crimes in parking lots to U.P. Police and LSCL/LMC without fail.

1.4.33. The Developer is not allowed to sublet/outsource the parking lots under this RFP. However, the developer can arrange manpower from any source.

1.5. Concession Fee:

1.5.1. The applicant shall quote the 'Concession Fee' as percentage of revenue earned (= Gross Revenue minus service taxes as applicable) which will be provided to L MC and in the prescribed format given at **Annexure 5 in the RFP Document**. The Developer would pay to LMC every month the Concession Fee as quoted above throughout the concession period based on the parking rates mentioned at **Annexure-3 in the RFP Document**, subject to minimum concession fee as Rs.40 Lakh/-P . A (Rupees F o r t y L a k h P . A only) per month from the date of handing over of parking lots.

1.5.2. The minimum concession fee will be changed (increased or decreased), in proportion to the change (increase or decrease) in number of ECS in parking lots given to the Developer.

1.5.3. In case of increase in parking fees notified by LMC from the parking fees over and above as provided in **Annexure-3 in the RFP Document.,** the **'minimum concession fee'** above will be increased proportionately [weighted increase on the basis of increase in "parking rates x parking capacity (ECS)"] to such increase in parking fees. The **'Concession Fee'** will be increased in the following manner in the event of increase in parking fees notified by L MC from the parking fees over and above as provided in **Annexure-3 in the RFP Document**.

(i) In such case, the Developer shall pay to LMC per month, quoted percent of the revenue earned before such increase in parking fees and ninety percent of the incremental revenue earned due to such increase in parking fees.

1.5.4. In case of decrease in parking fees by the L MC, the Developer may request the LMC to rework the minimum concession fee and quoted percentage of revenue earned to be shared with LMC as concession fee through Chairperson, L MC. The Chairperson, L MC with the prior approval of the Council may reduce the minimum concession fee and quoted percentage of revenue earned to be shared with LMC in such cases.

1.5.5. Revenue received from parking will be kept within a separate account for the purpose of this project to be maintained by the developer. LMC shall have the liberty to independently audit the revenue collection any time during the concession period. LMC will reconcile the account statements on quarterly basis. If any irregularity is found, the same shall be treated as breach of this agreement and L MC shall have all rights to take necessary action against the Developer, including action such as termination of this agreement for breach of terms and conditions by the developer.

1.5.6. The Developer shall pay all duties and taxes in consequence of its obligations under this Concession Agreement, and the Concession Fee shall not be adjusted for such costs.

1.5.7. The Concession Fee shall pay L MC on monthly basis by the 7th day of the subsequent month throughout the concession period, along with necessary detailed reports related to the concession fee and proof for submission of taxes and duties, as applicable.

1.5.8. Failure to pay the Concession Fee in time will attract an interest of 18% per annum compounded quarterly on the entire amount of unpaid Concession Fee payable for the entire period starting from the date on which such payment was due till the date of actual payment. In case of non-payment of Concession fee for a period of two subsequent months, L MC will encash the Performance Bank Guarantee equivalent to the outstanding Concession fee. Thereafter, the Developer will have to resubmit the PBG of full amount within fifteen days from the date of such encashment. If the Developer fails to resubmit the PBG of full amount within the said fifteen days, then LMC shall terminate the agreement and no compensation would be paid for the investment undertaken by the Developer.

1.5.9. Parking Rates: Parking rates for parking lots in LMC area has been defined in **Annexure '3' in the RFP Document**. The developer shall charge rates for parking as approved by LMC from time to time.

1.5.10. In the event of implementation of Goods and Services Tax (**GST**), the service taxes as mentioned in the RFP document will be calculated based on the provisions of GST as applicable in Uttar Pradesh.

1.6. Detailed Scope of Work

Parking Management and Guidance System (PMGS): The PMGS internally comprises of two subsystems, namely Parking Management System and Parking Guidance System. The Parking Management System consists of the access control system for tracking vehicles in and out of the parking lot, real time information about availability of parking slots, extension of parking time by users, acceptance of payment through various mode like cash, e-wallet, smart card, NFC, Debit/Credit card etc. and billing information. The Parking Management System comprises of components like sensors, entry devices, barriers, exit devices, payment device, payment mechanism, wireless handheld device, etc.

The Parking Management System components should communicate back and forth with the Central Control Centre and LSCL command & control centre. The Parking Guidance System will guide the motorist to appropriate parking slots using a combination of digital signs and indicators in the parking lot or through Mobile App.

The Parking Guidance System shall comprise of components such as magnetic cum optical/magnetic cum Infrared, magnetic loop sensors for vehicle detection, level/ zone display, bay finders, light indicators, electronic directional displays, map based guidance system, etc. The system should cater to all types of parking lots envisaged.

Smart Parking Management System (Functional &Technical Requirements): The detailed functional and Technical requirements of the proposed parking management system are described below:

1.6.1. Functional Requirements of Smart Parking Solutions

Parking Management System
Parking Location
❖   Parking Management System must geo-reference all the parking lots and shall have the ability to add more locations in future.
❖   All parking lots must have one-to-one mapping of all the sensors and POS/Payment systems in that location.
❖   Each parking lot can have a local server for storage and hosting the local parking management application or it can connect via Wi-Fi or other Communication network to central server for exchange of data/information.
Parking Information/Guidance
❖   Parking Management System should enable stakeholders/users to obtain real time information about the availability of the parking lot by location based on the occupancy of parking lot. Also, shall have facility to user to be able to view availability by proximity and cost.
❖   The total number of slots and free slots for parking must be displayed on a digital signboard near the entrance of the parking lots. The Parking Management System's integration with other elements within the tender scope must facilitate display of parking information at variable messaging displays deployed at key points of interest in the lucknow city.
❖   Entry to any parking space should have outdoor displays/screens showing overall availability of parking slots on real time basis in that particular parking space

❖	Every parking space shall be fitted with occupancy sensors for vehicle detection. Sensor should be intelligent and accurately detect if the vehicles space is vacant or occupied. • Appropriate sensors should be chosen based on the type of the parking spot and its external conditions. • The sensor should be able to detect a vehicle irrespective of the depth or height of sensor installation. Each sensor should have its own unique identification in order to be accurately tracked by the Parking Guidance System. • Each sensor should have an accurate and real time feedback mechanism to be detected automatically by the system in case of faults.
❖	Each of the Parking shall be fitted with an aisle light indicators for informing users on their availability on-site: • Light indicators should be installed for all parking lots for motorist to see the available and occupied spaces from the parking lane easily. • Once a parking spot is occupied the total parking slots should automatically get updated. • The fixation of the light indicators to the ceiling should be easy and fast, and should use a quick fastening clips to easy the installation.
❖	Informative Display Panels should be installed at all entry points of the parking lot indicating available spaces for each parking aisle, bay/zone/level, total parking and should be able to be customized by software. The display panel should be easy to understand and must have graphical directional and zone status indication (as red crosses for zone full or green directional arrows to guide drivers to zones with available spaces).
❖	Entry to any parking space should have outdoor displays/screens showing overall availability of parking slots in that particular parking space.
❖	All the Parking Information/guidance system hardware like Sensors, display will be integrated with Parking Guidance Controller which monitors the status of occupancy and controls guidance signs appropriately.

Parking Access Control / Management	
❖	Each parking shall have parking ticket dispenser machine at the entrance where the ticket can be issued by the machine on pressing the button by the user/ operator.
❖	Each entry lane should be equipped with one Entry Device with the following capabilities: • Ticket Dispenser • Touch screen for motorist to enter Unique Booking Number • EMV compliant CPC reader
❖	The ticket, QR Code and CPC or any other technology used by Developer should be capable of capturing data that is easily retrievable at the exit.
❖	Every vehicle entering the parking space should be stopped by barrier. The barrier is raised when the motorist is issued a ticket or has been identified as a legitimate user.
❖	In case the parking lot is already occupied to its capacity, the ticket issuing should automatically be blocked and therefore, the barrier should not open.
❖	A message should also be displayed on the outdoor screen stating the same.
❖	The Entry Device should be able to detect and report: • Anti-pass back • Back-out ticket • Low ticket stock
❖	The display on Entry Device should have capability to display messages in English, Hindi and other Regional languages
❖	Any vehicle, before leaving the parking area, should be stopped by a barrier system at the point of exit from the parking.
❖	The solution should also include provision to capture the image of the vehicle including license plate view exiting any of the parking spaces and the all the information related to the same should be stored at a central server.

❖	Exit of every parking should be equipped with a manned Pay station (booth).
	• For motorists who enter the parking lot using CPC, the same shall be recorded in the system and while exiting, the payment shall be deducted from that card. If the user fails to show up same CPC which was used while entering, the system should not allow the exit and the user must pay the amount as per business rules as specified by Client.
	• If any discounting is allowed for parking, the business rules for the same shall be handled with prior approval from LSCL/LMC
	• The personnel monitoring the exit Pay Station is also required to manually enter the License number details in the system so that the license number, along with date and time of exit, is stored in the database.
	• The payment for parking should be collected based on entry time stamp by any personnel stationed at the Pay Station.
	• The system will calculate the fee automatically and indicate this on the screen clearly visible to the motorist. No manual intervention should be necessary to compute the fee.
	• The Pay Station should be capable of charging devices.
❖	Once the vehicle exits a parking slot, the total parking slots available in that parking space should automatically get updated.
❖	Only after completing the full cycle correctly the transaction will be considered as valid within the car park. However, audit trail of each Complete, incomplete and cancelled transaction should be available in the system.
❖	The solution should be equipped with Anti-pass back technology and be able to detect and report any instance pass back.
❖	The barrier should remain in closed position for optimal period of time for the vehicle to pass at entrance and exit.

❖	Barrier Arms should have the following options:
	• In closed position the full arm should be illuminated red.
	• During movement the full arm should be illuminated yellow.
	• Once reached open position the full arm should be illuminated Green.
❖	Upon horizontal impact by a vehicle, the barrier arm should get detached from the barrier unit with minimal damage to the vehicle and the barrier motor mechanism. An alarm should also be raised and sent to the server
❖	Upon impact during closure, the arm will stop and stay in the same position. Under no circumstances should the arm re-open upon impact. This is to prevent keeping the arm open for illegal entries or exits.
	• The barrier arm should be easy to refit with barrier unit in a short duration (within one minute).
	• If for any reason and external override (fire system) needs to be connected, then this should only be possible over the Entry/exit Device and the switch should be permanently monitored by the Parking Management System.
❖	The solution should have capability to capture image of the license plates of the vehicles at every entry and exit of each parking lot. The image should be clicked at the entry point when the ticket is issued and at the exit point during payment. The image of the license plate should be linked to the details of the corresponding ticket issued in real- time and stored in the database for one month. This information will be stored in the server.
❖	Parking Management System shall track vehicles entering and exiting parking lots. The Parking Management System should do so at each floor, in case of multilevel parking and communicate the data.
❖	The Parking Management System should retain videos of car entering /exiting the parking zone.
Parking Pricing and Payment	

❖	The Parking Management System should facilitate real time revision of parking fees and should enable real time communication of rules to handheld terminal and parking booths/kiosks from Central facility/Control Centre.
❖	Payment sub system shall have the capability of processing and reporting separately numerous transactions including, but not limited to, the following: - Normal transaction - Lost ticket transaction - Insufficient funds transaction - Mutilated or unreadable ticket transaction - Non-revenue (no charge) transaction - Blank or used ticket transaction - Validation transaction
❖	Parking Management System should enable LSCL/LMC or any other appointed third party to facilitate generation of parking receipts and tickets based on occupancy of parking lots and business rules to be amended from time to time.
❖	User shall have the multiple payment options as given below. - Primary mode of payment for parking will be by cash at the Pay Station - Common Payment Card (CPC) - For bookings through Citizen App or Smart Web portal application, payment will be made using e-Wallet, net banking, credit card, debit card etc. - Additionally, the developer can implement innovative and cost effective payment methods (such as e-vouchers) for customers opting for monthly reserved parking passes.
Audit, Performance MIS Reports and Alerts	
❖	PMS should track each and every revenue source and should ensure no leakages due to manual intervention.
❖	All vehicular passages during the time that the barrier is not functional/down should be recorded and displayed in the reports separately in order to audit the necessary revenue transactions during that time.

❖	System shall daily check whether the vehicles that have entered the premises and are yet to leave. Thereby it should be able to generate alert if any vehicle is overstaying in the parking lot over 24 hrs.
❖	In case of any sensor or barrier non-functional, an alert should be sent to the console and server to ensure that the administrator is informed that the device is not working.
❖	Parking Management System should: • Report occupancy of parking lots to a central software application deployed at the control room. • Include central reporting system establishing the connection between the devices and sensors, and the centralized control room. • Include reporting dashboards with location specific thresholds to be set for generating customized reports • be capable of monitoring the number of vehicles that entered or exited the parking premises during any given time. • Generate reports for each parking spot, in each of the parking lots capturing utilization, cost, and revenue details, and details of assets, people and etc. These reports should be available in all standard acceptable formats like .csv, .pdf, .txt, etc.
Standby or Breakdown/ Off-Line / Manual mode	
❖	PMS should include the use of wireless handheld device for parking. This device shall be used as a fallback mechanism. However, this device must track every transaction limiting any manual transaction to zero.

❖	In case of high traffic at any of the parking lots or during peak hours, it should be possible for the wireless handheld device to be used as central cashiering device (i.e. it should be possible to scan the QR Code on tickets issued by the entry device and issue receipts post payment, so that the motorists could pay for the parking and then drive out quickly), without any time consumed for payment transactions at the exit. • The device should have capability to print parking receipts and bar coded tickets in real time. • Both the functionality of ticket dispensing & cash register should be possible to be combined in one device. • This wireless handheld device should be an online unit, however, in case of network failure, the device should have capability to transact offline and sync with the server as and when connection is restored.

Maintenance Mode

❖	The central system and all the equipment (barrier gates, ticket dispenser, POS units etc.) shall support maintenance mode during repair, replacement and testing of equipment.
❖	All transactions done during the maintenance mode on a ticket dispenser or a handheld ticketing machine shall be possible only using a special maintenance smart card issued specifically for the purpose.
❖	All such maintenance media shall be deposited with the Client and written requests shall be raised by the developer if they have to be issued to them.
❖	All transactions carried out in the maintenance mode shall be reported separately similar to exception transactions.
❖	The maintenance mode shall be possible only by using a dedicated maintenance "user privilege login" specially created for this purpose.

Central System

❖	Uploaded data shall not be deleted from system readers or workstations until the central system has provided confirmation that the transactions have been successfully received.
❖	The central system shall be able to update its date and time applying time synchronization to servers and using this to in turn update the date and time on all system devices and workstations.

❖	All active equipment shall have an internally maintained date and time clock synchronized at a time interval via the communications controller with the Central System date and time clock.
❖	The time synchronization application in the device shall have the capability to adjust the minimum time interval for updating itself with the central system time and date, and shall be capable to update time as often as every minute (configurable) with the central system.
❖	The central system shall manage all device activity and maintain their logs including at a minimum: • Data storage and processing systems • Financial systems • Customer databases • Sales and transaction systems
❖	All equipment shall operate with a real-time data connection to the central system via the communications network for that equipment.
❖	If the data connection to the central system is temporarily lost, all equipment shall seamlessly switch to an offline mode in which all data is temporarily stored in internal memory and transmitted to the central system as soon as the data connection is re-established.
❖	All equipment shall have sufficient memory to operate in offline mode, with no loss of data, for no less than 168 hours.
❖	The central software shall support managing parking fare tables.
❖	It shall be possible to "future-date" pending fare tables so that they can be uploaded ahead-of-time and automatically activated at the planned date and time.
❖	All ticket dispensers and handheld ticketing machines shall store the current valid fare-set as well as a future "pending" fare-set with activation date and time in order to allow downloads to the device to occur in advance.
❖	When the activation date and time passes, the ticket dispenser and the handheld ticketing device shall automatically replace the existing fare table with the "pending" fare table.
❖	Updated fare-sets shall be downloaded as soon as the central system publishes notice that they have become available.

❖	The central software shall be capable of providing over-the-air fare table updates & firmware updates to the handheld ticketing devices apart from other immediate critical updates.
❖	The systems should be driven by configurable parameters and should provide the flexibility for maximum configuration. The configurations shall be for, but not limited to: • Time based Fare table etc. • User Groups and users privileges • Time validity of ticket • Time validity of CPC • Penalties associated with the CPC misuse • Pass back time on CPC use • Addition & deletion of equipment, nodes, parking lots, handhelds, user groups, users etc. • Reports access
❖	The system shall handle all exceptions. Exceptions can be, but not limited to: • CPC not being read • QR coded ticket not being read • Low balance on CPC • Manual opening of the barrier gate • Paper ticket lost • QR coded paper ticket not readable after entry • CPC lost after entry • CPC damaged after entry • Any other exception as reported.
❖	Any exception in the normal process shall be flagged separately for auditing and reports should reflect this condition. Mechanisms should be provided to help audit such exceptions.

❖	The system shall handle all degraded conditions which can be, but are not limited to, the following: • Ticket Dispenser is not functional • Power failures • Data Connection lost • Particular node down • Central Server down • Any other conditions as reported
❖	Alterative mechanisms and all required systems shall be provided for the system in case system is in degraded state as specified but not limited to the above by the developer.
❖	There should be provision in the system to enter degraded transactions, in case they are not registered because of degraded operations.
❖	There shall be back-up handheld machines capable of performing all the functions of the Parking Station if ever the system is down for some reason.
❖	The back-up handhelds shall be a miniature of the capabilities of the Ticket Dispenser and POS units in all respects such as transaction times, issuing of various fare media etc.
❖	There shall be provision for data transfer from the back-up hand-held machines to the central system once the system is "UP" and running, preferably using wired transfer authenticated by a registered user. In no case there should be any duplicity and missing transactions/data in the central database.
❖	The developer should provide an automated Fault Monitoring Module to generate reports identifying the faults of the equipment if any on a daily basis. The fault monitoring system shall have as a minimum the following capabilities: • Setting up of automatic and manual alerts • Automatic fault detection & reporting • Fault Status reports • Fault Closure reports
❖	The reports shall be non-editable and the Client and/or its representatives shall have real time access to the Fault Monitoring Module with user privileges of the highest level.

❖	Automatic Backup/Archiving Software shall provide automatic back-up of the entire database. The software shall allow taking complete back up or incremental back as per the desired archival policy.
Monitoring & Control Dashboard	
❖	The parking control centre operator shall be provided with a dashboard and monitoring system that is completely independent from the revenue transaction system and shall be displayed and monitored at the parking facility and in the central control room. This system shall record the following information: • The total number of vehicles crossing the gate loop in each controlled entrance and exit lane (count to be obtained regardless of status of equipment components e.g., gate arm raised). • The total numbers of valid card access vehicles for each controlled entrance and exit lane. • The total numbers of valid daily vehicles for each controlled entrance and exit lane. • The number of violation vehicles for each controlled access lane. A violation vehicle is defined as a forced or un-authorized passage of vehicle over the detection area.
❖	On this dashboard there shall be a schematic layout showing all the connected parking nodes on the GUI.
❖	The various nodes when connected & disconnected shall be represented in different colour schema on the GUI of the control centre operator.
❖	If any particular node is disconnected from the control room, the same shall raise an alarm appropriate action shall be taken to rectify the same.
❖	The monitoring dashboard shall allow the operator to click on any node & view the details of the "operator" logged in, time duration since logged in, summary of transaction performed, disable/enable Entry/Exit Station or POS terminal, other components of parking system.
❖	The monitoring dashboard shall show the status (connected/disconnected, faulty/working) of all logical devices (barrier gate, ticket dispenser, camera, CPC reader, receipt printer, QR code reader and other equipment) connected to a particular node when clicking on a node from the monitoring dashboard GUI.

❖	In case of any fault in the devices connected to a node, or connectivity failure with a node, a pop-up message shall appear on the monitoring dashboard workstation. The operator has to acknowledge the pop-up message & report the type of fault to the maintenance team & shall record the details to the assigned team/individual into the system.
❖	Fault assignment to the maintenance team shall be managed and controlled by the system software only. Once a fault is assigned by the control room operator or authorized user to the maintenance team, the same shall be displayed in the maintenance module and once fault is closed/resolved by the maintenance team it shall be updated automatically (in case of active devices) or else updated manually in the software application/maintenance module promptly.
System Data Requirements	
❖	Client shall own all system data and be able to use the central system to export transactions data for processing/analysis using other software.
❖	Data shall be retained in the database for at least the financial year previous to the current financial year.
❖	Data received from system devices shall be maintained at the original level of transactions and not be aggregated, consolidated, or combined within the database.
❖	Sufficient data storage capacity shall be provided in the central system to store online a minimum of one years of activity with full transactional data.
❖	All data shall be automatically backed-up daily without human intervention, using the backup devices and media.
❖	Means shall be provided to automatically archive data older than one year along with the archiving media to store the data.
❖	The functional capability shall be provided to use such archived data to process comparative type reports, such as but not limited to reports utilizing and comparing data from non-consecutive month periods in two different years, or day-of-week comparisons over multiple month or annual periods.
❖	The transactional database shall store the date/ time stamped details of each transaction including all information transmitted to the central system from the system devices.

❖	Client shall own all system data and be able to use the central system to export transactions data for processing/analysis using other software.
❖	Data shall be retained in the database for at least the financial year previous to the current financial year.

Citizen/ Operator / Authority Interface

❖	The Parking Management System should have a mobile and a web delivery channel for citizens to get real time parking availability and pre book parking lots using online payment of parking charges facilitated through a payment gateway.
❖	A mobile application and web based user interface should be provided with the following features: • The application should have citizen module and officer module. • Through the citizen module, the user should be able to locate nearest parking lot and also pre-book based on his geographical coordinates. The same information must be made available on map with routing information. • The citizen should be able to see all the parking lots with exact available space in a real time mode. • While locating nearest parking lot, the latest parking slot availability should be given to the user. • The application should have an Authority/Operator module where PMC designated inspector / operator will be able to check compliance of slot occupancy against the fees paid by the citizen.

Integration with other Systems

❖	Integration with Smart City Command Centre and Mobile Applications - Integration of various components provides seamless access of various data across the departments which help in operation. So the developer shall provide complete support for any third party integration required to integrate parking with Smart City Platform of LSCL and mobile applications to get real time data.

❖	Integration with Common Payment Card - A Common Payment Card (CPC) is being envisaged as part of Smart City Initiatives which shall be used for making payments at multiple merchandises across Lucknow. The CPC shall be issued by Banks and will be accepted at most of the facilities in lucknow including utility payments, transit, parking etc. The developer shall work in close coordination with the CPC and other related agencies to make it workable.
❖	The system shall integrate with 3rd Party / Private parking Systems deployed across the City and provide the information to Citizens

Variable Message Display Board	
❖	The VMS board will be deployed at nearby circles to the parking locations for ease of public to know the availability and direction of the parking locations.
❖	The Variable Message Display Board Should Consist of Variable Message Sign Board With Local Controller.
❖	A VMD software system shall be provided to the central control Room and / or Command & Control centre for message preparation monitoring and control of the variable message signs. IP based Network equipment shall be provided to connect the VMD with the VMD software system.
❖	The VMD software application will allow user to publish specific messages for managing traffic and also general informative messages
❖	VMD software application will allow an operator to seamlessly toggle between multiple VMS points at each workstation in order to send specific messages to specific locations, as well as sending common message to all VMDs. VMD software application will accommodate different access rights to various control unit functionalities depending on operator status and as agreed with the client. Software should be GUI based, and capable to handle 100 VMS signage, user can select desired location in Map, by selecting the location live status of VMS should be displayed.
❖	The minimum size of the VMS will be 3mx2m.

1.6.2. Technical Requirements of Smart Parking Solutions:

Ticket Dispenser	
❖	The Ticket Dispenser shall have functionality of issuing/reading a QR coded parking ticket with entry record at entrance.

❖	Dispenser shall be intelligent controller that can run in stand-alone or on-line mode.
❖	Dispenser shall have LCD display to give guidance to driver during transaction time. Display shall be LCD colour graphics user definable display 320 x 240 pixels type with damage resistant lens capable of displaying graphics and images.
❖	Dispenser paper roll capacity shall be at least 5,000 tickets per roll.
❖	Dispenser shall have built-in photo sensor to give paper roll low level indication.
❖	The Dispenser shall have built-in high speed ticket printer based on thermal technology.
❖	The built-in printer shall be a compact thermal printer able to print, as a minimum, tickets (text and graphics), QR ode and system status information.
❖	The print speed shall not be less than 150 mm/s for both text and graphic and at a minimum resolution of 203 dpi (8 dots/mm).

❖	The Dispenser shall have built-in Common Payment Card (CPC) reader to read/write information from CPC. • The Common Payment Card (CPC) reader shall be EMV compliant. • The CPC reader shall have operating temperature range of 0 to +70 °C.
❖	Dispenser controller device shall communicate with Ethernet and a minimum CAT5e to the system. No proprietary RS485 cabling or other proprietary system allowed for communication to lane devices.
❖	Dispenser controller shall support USB, Serial, and RS-232 communication mediums to add on devices.
❖	Dispenser controller shall have additional inputs and outputs assignable to functions like open/closed sign relays for barrier gates and indication lights operation.
❖	Front/Rear door shall provide easy access for ticket loading and logic board access.
❖	The Control unit shall include CPU, input/output terminals, and power supply and logic board for display.
❖	Lower cabinet shall come complete with pedestal, floor stand, column door low ticket sensors, and power supply board.
❖	Tickets issued shall be cut with a self-sharpening ticket cutter.
❖	The Dispenser shall have an easy jam removal mechanism that requires no tools, takes minimal time and training for the operator to clear.
❖	It shall generate appropriate jam error and alarm codes to the system.
❖	All dispensers shall come with standard equipment such as heater and cooling fan using a thermostatic controller to ensure a reasonable operating temperature for components in various weather conditions. Humidity range is up to 90% non-condensing.
❖	The Dispenser housing shall be at least IP54.
❖	Dispensers shall have the capability to be remotely monitored by LAN, WAN or remote web access.
❖	Dispensers shall have an on-board perpetual calendar clock device to maintain time & date with network (LAN) for updating and configuration.

❖	Dispensers shall have the functionality of stolen ticket detection on-line, that polls ticket validation from the system. System alarm code shall be generated to the log file.
❖	Dispensers shall have feature to read tickets inserted in any direction i.e. backwards, forwards, and right side up and upside down.

Parking Controller	
❖	All occupancy sensors shall be integrated to the Parking Controller to give real time status of parking lot occupancy.
❖	The parking controller shall be rugged and shall have sufficient no. of I/O terminals to take feed from occupancy sensors. If multiple controllers are required to cater to occupancy sensors, the same shall be provided.
❖	Based on the feedback from the occupancy sensors and Parking System, the controller shall be able to control the parking guidance signals based on their location to guide users accordingly to nearest vacant slot.
❖	The Parking Controller shall have operating temperature range of 0 to +70 °C.

Barrier Gate	
❖	The Barrier gate shall have the access control mechanism to enable entry to the passengers with a valid fare media to enter the Parking slots.
❖	The height of the Barrier gate shall be not less than 1000 mm form the floor.
❖	The Barrier gate shall have barrier arm with the width of maximum 3 meters in length with collapsible arm mechanism.
❖	The Barrier gate Cabinet shall have fully lockable doors to the front of the cabinet for ease of access.
❖	The access controllers for each gate should be independent.
❖	The Barrier gate shall be capable for working in an off-line mode in case of communication network failure.
❖	The natural position of the Barrier gate should be the closed position and the drive mechanism will open/close the gate.
❖	The Barrier gate Arm will be able to operate in auto-reverse mode when hitting an obstacle during closing.
❖	The Barrier gate Arm should have functionality of self-locked in any position to avoid unauthorized person to manually open/close arm.

❖	All mechanism parts of the gate shall have a MTBF of at least 10 million cycles.
❖	The Barrier gate opening time should not be more than 1.5 secs at 90° opening angle.
❖	The Barrier Gate housing shall be at least IP44.
❖	The mounting of the gates and its assembly shall be firm with the floor of the Parking stations as to resist possible vibration due to the operation of the motor.
❖	The operations of the gate will not make noise beyond 55 decibel (daytime commercial noise limit as per BIS standards) under closed housing condition measured as a time weighted average.
❖	The Drive mechanism shall be electric and adequate to actuate the barrier and meet all opening parameters.
❖	The Barrier gate steel cabinet should have shot blasted, primed and powder coated. Barrier gate Arms shall be of rectangular extruded aluminum 76 x 38mm white powder coated.
❖	The Barrier Cabinet and Boom should have finished with an anti-corrosion paint system.
❖	The Barrier gate control system will be located inside the main Barrier Cabinet and should give easy access to all electrical components for connection, maintenance and programming, including the power isolation switches.
❖	When a Barrier gate is not working properly and is in out of servicing mode, a visual indication shall be displayed preferably with colour distinction using LED symbols.
❖	The Barrier gate should have infrared sensors to detect the presence of human, vehicle and other object for extra safety.
Parking Occupancy Sensors	
❖	The ultrasonic sensor shall be used to detect occupancy status of the parking lot/bay.
❖	The sensor should transmit this signal in real time to the Parking System to evaluate occupancy and count.
❖	The Ultrasonic sensor shall have 2-colour built-in LED indicator, wherein Red colour LED indicates parking bay is occupied and Green colour indicates vacant.

❖	The sensor have feature of control LED indicator which should be clearly visible under all light conditions and from a minimum distance of 100 meters.
❖	The sensor shall have self-diagnostic functionality to identify any defects and report it to the parking system.
❖	The detection range of the sensor should be at least 3 meters.
❖	The sensors shall be housed in an aesthetically good casing and should have mounting provisions suitable for roof mounting and pipe mounting.
❖	The Ultrasonic sensor shall have built-in auto temperature compensation mechanism.
❖	The sensor shall work in the frequency range in between 40KHZ to 50KHZ.
❖	The sensor Protection shall be IP 65.
Public Information Signs (PIS)	
❖	The PIS shall be used to display information to users at each parking station for the vacant slots.
❖	The PIS display board shall be industrial grade flat panels that can withstand the environmental and working conditions found in Lucknow. The panels shall allow for 24x7 operations.
❖	The display systems shall have built-in test facility, able to carry out self-check at periodic intervals as well as exchange of diagnostic information from the parking management central system including power availability, and its current status.
❖	The display units shall support multi-lingual fonts in English & Hindi for easy reading.
❖	The signs shall include on-going self-diagnostics and shall send an alarm message to the central system in the event that a diagnostic fault is detected.
❖	The signs shall be based on LED technology with wide viewing angle suitable for viewing from varied angles and should have been of Amber colour.
❖	The PIS shall be able to display a message composed of any combination of alphanumeric character fonts, punctuation symbols and full graphics.
❖	When messages are displayed in multiple languages, each language shall be rotated through in turn.

❖	Time for which information is displayed in each language shall be configurable.
❖	Only outdoor rated UTP CAT6 cable shall be used to connect the device to the respective switch port. If for any case, the distance between the switch port and device exceeds 90 m, use outdoor rated multi-mode fibre cable with environmentally rugged media converters.

Parking Guidance Signal

❖	The Parking Guidance Signal shall be used to display information to users at each parking station for the vacant slots.
❖	The Parking Guidance Signal display board shall be industrial grade flat panels that can withstand the environmental and working conditions found in lucknow. The panels shall allow for 24x7 operations.
❖	The Parking Guidance Signal shall be of full matrix type with provisions to show Parking availability (in numeric format) and guided with arrow.
❖	The Parking Guidance Signal systems shall have built-in test facility, able to carry out self-check at periodic intervals as well as exchange of diagnostic information from the parking management central system
❖	The display units shall support multi-lingual fonts in English, Hindi for easy reading.
❖	The signs shall include on-going self-diagnostics and shall send an alarm message to the central system in the event that a diagnostic fault is detected.
❖	The signs shall be based on LED technology with wide viewing angle suitable for viewing from varied angles and should have been of Amber colour.
❖	The PIS shall be able to display a message composed of any combination of alphanumeric character fonts, punctuation symbols and full graphics.
❖	When messages are displayed in multiple languages, each language shall be rotated through in turn.
❖	Time for which information is displayed in each language shall be configurable.
❖	Only outdoor rated UTP CAT6 cable shall be used to connect the device to the respective switch port. If for any case, the distance between the switch port and device exceeds 90 m, use outdoor rated multi-mode fibre cable with environmentally rugged media converters.

QR Code Reader

❖	The QR Code reader shall be of omnidirectional type which shall be used to scan & process the tickets with QR Codes printed on them.
❖	The QR Code reader shall be able to read thermal, laser and colour barcodes and decode all standard bar codes, including at least Code 128 and QR codes.
❖	The QR Code reader shall be equipped with easily visible LEDs that indicate the scanner's state and the status (e.g. "Good Read") of the current scan when the unit is in operation.
❖	The QR Code reader shall have an audible beep that indicates the status of the current scan when the unit is in operation.
❖	The reader required for POS terminals shall be provided with fixed mount stand for hands-free operations.
❖	The reader shall support print contrast with minimum 35% reflective difference.
❖	The reader shall have at minimum 20 scan-line in 2D omnidirectional pattern
❖	The QR Code reader scan rate shall be at least 1100 scans per second.
❖	The QR Code reader at minimum shall have ambient light immunity of 4,842 lux.
❖	The QR Code reader Mean Time between Failure (MTBF) shall not be less than 100,000 hours.
❖	The QR Code reader Mean Time to Replace shall not be more than 15 minutes
Fixed CCTV Camera	
❖	The camera control shall comply with the latest release of Open Network Video Interface Forum (ONVIF) standards.
❖	The camera shall include an integral receiver/driver. The receiver/driver shall be capable of controlling pan-tilt, zoom and focus locally and remotely from the control room
❖	The camera shall incorporate AGC circuitry to provide for compensation at low light levels.
❖	The lens shall be integrated with the camera.
❖	Video output resolution shall not be less than 1920x1080 pixels.
❖	The camera shall be capable to produce minimum 30 frames per second (fps).

❖	The camera shall provide automatic white balance, automatic exposure, automatic gain control, electronic shutter, and backlight compensation.
❖	The camera shall be a true day/night cameras with mechanical IR cut filter.
❖	The camera shall be capable of providing a high contrast colour picture with a full video output at a minimum illumination as mentioned in the specifications.

Thermal Receipt Printer	
❖	The ticket printer shall be a compact thermal printer able to print, as a minimum, tickets (text and graphics), barcodes, and system status information.
❖	The print speed shall not be less than 150 mm/s for both text and graphic and at a minimum resolution of 203 dpi (8 dots/mm).
❖	The ticket printer shall use readily available paper rolls of standard size.
❖	The ticket printer shall provide low paper and out of paper indication.
❖	The ticket printer shall have an automatic cutter with a self-sharpening ceramic rotary knife.
❖	The auto-cutter shall have a reliability of at least 1.5 million cuts.
❖	The ticket printer head shall have a Mean Cycle between Failure (MCBF) of at least 50 million print lines.
❖	The ticket printer shall have a Mean Time between Failure (MTBF) of at least 360,000 hours.

Handheld Terminal (POS)	
❖	The handheld machine shall have an integrated display and thermal printer that can be easily read under all conditions of ambient light throughout the day and night.
❖	It shall be possible to upgrade the firmware/software from the central server, configuration list such as routes along with fare and other related details, etc., using the 3G/4G technology of the cellular operator installed on the device remotely or using wired communication.
❖	If for any reason the fare media cannot be read automatically using the readers on the handheld, there shall be an arrangement to manually enter the CPC ID and validate it.

❖	The handheld machine shall store all required transaction data on-board, including: - Parking Location - Parking Operator Name and ID - Date and time of transaction - Device ID - Employee ID Operator - Tariff Tables - Ticket serial number - Period of Parking / Applicable Slab - Transaction Value - Method of Payment – CASH/CPC/Mobile Wallet/Pre-Paid - Action taken (e.g. ticket sold/adjusted/checked) - CPC serial number (if applicable)
❖	The handheld machine shall have sufficient memory to store a minimum of one week worth of transaction records apart from mandatory software/ firmware etc.
❖	Only successfully transmitted transaction data records shall be overwritten by new transaction data records.
❖	The handheld machine shall provide a warning when the amount of on-board storage occupied by "not successfully transmitted" transaction data records exceeds a Client specified threshold.
❖	The handheld machine shall store the current valid fare-set as well as a future "pending" fare-set with activation date and time (if applicable), to allow downloads to the handheld machine to occur in advance.
❖	Upon successful completion of the transaction the handheld machine shall indicate successful completion via the interface, using both the display and a distinct configurable audio message.

❖	Upon successful completion of the transaction the handheld machine shall transmit transaction data to the central system, including:
	
	      • Date and Time of Transaction
	
	      • Device Identification Number
	
	      • Ticket Serial Number
	
	      • Ticket Origin
	
	      • Ticket Destination
	
	      • CPC Serial Number

❖	The device shall have balance check functionality whereby when a CPC is tapped to the reader, the balance is displayed (if applicable) on the handheld machine display.
❖	Handheld shall be capable of reading and issuing QR-coded Paper Tickets and EMV compliant CPC.
❖	Handheld shall have an arrangement to hang over the neck of the operator and also a fastening arrangement to the palm for prolonged usage. Both the arrangements shall ensure that the operator doesn't feel uncomfortable under long duration usage.
❖	Handheld shall have a standard serial communications ports, and a USB for external connectivity.
❖	The handheld machine shall be appropriately ruggedized so as to provide a service life of at least five years (excluding batteries)
❖	The handheld machine shall be preferably of a one-piece unit or maximum two-piece configuration (e.g. with separate printing unit).
❖	The weight of each unit (including battery) shall not exceed 0.5 kg.

❖	User Interface
	
	      • The handheld machine shall utilize (1) a touch screen, or (2) physical buttons, or (3) a combination thereof.
	
	      • The handheld machine shall provide distinct audible and visual feedback for actions such as validating existing CPC, detection of blocked CPC, occurrence of card reading error, and successful/unsuccessful reading of CPC.

❖	On-board Storage	• The handheld machine shall have sufficient memory to store a minimum of one week worth of transaction records (at least 10,000 records) apart from mandatory firmware etc. • The handheld should be able to store information for at least 100,000 blocked CPC.
❖		• The handheld shall have internal and external (SD Card) memory. • The external memory card shall back-up the internal memory for every 8 hours of operation and be capable to hold 168 hrs of transaction data.
❖	Battery	• The handheld machines shall be designed to operate from an internal, battery source which can be charged and re-charged. • The handheld machine battery shall utilize "no memory" battery technology which is state-of-the-art, commercially available and common for use with such equipment. • The handheld shall operate continuously for minimum 8 (eight) hours without any disruption to the operations at any given instance during the shifts. The developer shall ensure that appropriate back-up arrangements are made for the handhelds to cover the entire operating shift without disrupting normal operations. • The battery shall be field replaceable without any loss of data, with field replacement time (from end of operation with previous battery to beginning of operation with new battery) not to exceed three minutes. • A specialized tool shall be provided to prevent unauthorized persons from removing the battery. • The battery shall be recharged to a full charge from a completely discharged state in less than four hours. • The handheld shall have a battery stand-by time of at least 5 days without the requirement of intermittent charging.
Antivirus		

❖	Antivirus shall be able to detect and block malicious software in real time, including viruses, worms, spyware, Trojan horses, adware, and Rootkit etc. It shall provide zero-day detection technology.
❖	Antivirus shall protect the system from multiple forms of anomalous network behavior that is designed to disrupt system availability and stability.
❖	Antivirus shall be able to identify infections by name, category, severity, hosts and user etc.
❖	Antivirus shall be able to report Bot incidents by specific malicious activity (spyware, IP scanning, spam etc.). The antivirus shall have built in intelligence and co-relation capability to inspect, detect and block active and dormant bots.

❖	Antivirus shall be able to block devices based on Windows Class ID. Devices shall include USB, Infrared, Bluetooth, Serial Port, Parallel Port, Fire Wire etc. Antivirus shall block or give permissions for such devices.
❖	Antivirus shall protect transmission of data being sent to hacker system who has spoofed their IP or MAC address.
❖	Antivirus shall scan email traffic including email client like Outlook.
❖	Antivirus shall include content filtering and data loss prevention.
❖	Antivirus shall have features to prevent peer to peer sharing, streaming media, games and other applications from internet.
❖	Antivirus shall have built in URL filtering.
❖	Antivirus shall provide standard and customized reports.
Firewall	
❖	Firewall shall have the capability for proactive network attack detection.
❖	Firewall shall prevent replay attack.
❖	Firewall shall have a unified access control with functionalities such as: • Brute force attack mitigation • SyN cookie protection • Zone based IP spoofing • Malformed packet protection
❖	Firewall shall have an Intrusion Prevention System (IPS) with following features: • Stateful Operation: ➢ IP Defragmentation ➢ Bi-directional Inspection ➢ Access Lists • Alerts and updates: ➢ Alerting SNMP ➢ Log File ➢ Syslog ➢ E-mail ➢ Daily and emergency updates • Security Maintenance: ➢ 24/7 Security Update Service ➢ Real-time and History reports of Bandwidth usage per policy

	➢ Protocol anomaly detection ➢ IPS attack pattern obfuscation ➢ User role based policies ➢ User based application policy enforcement ➢ Provision for external bypass switch
❖	Firewall shall have a file-based antivirus with following feature: • Antispyware • Anti-adware • Anti-key logger • Anti-malware • Antivirus • Anti-spam • Scanning of HTTP, SMTP, IMAP, FTP protocols • Signature database • Integrated enhanced web filtering • Redirect web filtering

1.6.3.   Online Web-based Portal and Mobile App:

The Online Web-based Portal and Mobile App are aimed at providing on-the-go access to various services and facilities available in LMC. Both will serve as windows of information about Parking Infrastructure at LMC and as a platform to deliver services online while providing an avenue to disseminate information on Parking facilities and present status to citizens.

1.6.4. Mobile App - Functional & Technical Requirements (To be linked with Lucknow Smart City website/portal):

Functional Requirements	Technical Requirements
i. All applications, content, data, and information related to the App and users should be securely hosted and saved in the Data Centre.	i. Shall be developed in an open platform
	ii. Should be scalable and technically adaptable to future enhancements
ii. Free to download and use for all citizens, guests and visitors.	iii. Should be published and released in all the major platforms including iOS, Android, Blackberry, Symbian and Windows.
iii. Should be light, intuitive, easy to use, responsive, secure and easy to maintain.	
	iv. Should support Unicode and be multilingual in at least English and Hindi
iv. Compatible with and responsive to all leading smart phones on Wi-Fi, GSM and CDMA networks.	v. Should be easy to update as some data will be updated daily. Ability to collect data with high volume, velocity, and variety.

v. Should be Operating System (OS) independent and available on all major OS platforms including iOS, Android, Windows, Symbian and Blackberry.	vi. Should track GPS location of the user device.
	vii. Should provide accurate mapping and navigation services.
vi. Development of the app to be undertaken on Open Platform, if new mobile OS is introduced in future.	viii. Collect data categorically without impacting citizen's privacy issues
	ix. live feed of parking lots and number of free spaces should be provided to app.
vii. As and when required, up gradation of the App, in line with the evolvement of mobile OS.	x. App should confirm acceptance of payment and reserve/cancel the parking lots accordingly.
viii. Appropriate tags should be built-in the introduction text and content of the Smart App and Portal so that they are displayed in the top search results.	xi. Shall be SSL (Secured Socket Layer) compliant.
ix. Updation and management of information and content, including information related to Smart Parking initiatives, on the Mobile App throughout the concession period.	

1.6.5. Online Portal – Functional & T ec hnic a l Requirements (To be linked with Lucknow Smart City website/portal):

Functional Requirements	**Technical Requirements**

i. Create and manage up-to-date information and content, including information related to all Smart Parking initiatives, on the Online Web – based Portal throughout the project duration.

ii. All applications, content, data, and information related to the Online Web- based Portal as well as its users should be securely hosted and saved in the Data Centre.

iii. Should be light, intuitive, easy to use, responsive, modular, secure, and easy to maintain.

iv. Should support customization of Look and feel to LSCL/LMC's requirements.

v. Developer should ensure submission of security audit certificate and security audit reports for the developed portal and the audit has to be carried out by any one of the agencies listed at http://www.cert-in.org.in/

i. Should be based on Open Standards.

ii. Should integrate with any other portal products through open standards such as HTML, XML, RSS, web services, and WSRP

iii. Should support encryption and compression features

iv. Shall be OS independent. It must run on Windows, UNIX, Apple and Linux operating systems.

v. Site must be "responsively designed" to accommodate mobile users. This must include accommodations for slower, cellular internet connections

vi. Portal must be secure in all the way and all the latest security implementations like https, xss, sql injection, etc should be implemented to avoid any hacking.

vii. The new site must be designed for continuous operation, 24 hours a day, 7 days a week with maintenance window clearly defined.

vi. Should be built on industry leading framework and support seamless integration with the backend systems, to easily retrieve and save data.	**viii.** Shall be browser independent and responsive to run in the same manner on leading browsers like Google Chrome, Mozilla Firefox, Safari, Internet Explorer, etc.
vii. Portal must be Omni channel i.e. its design should be such that it can be viewed easily on laptops, tablets and mobiles.	**ix.** Shall support Unicode and be multilingual in at least English and Hindi.
viii. Should be browser independent and work seamlessly on all leading browsers.	**x.** Shall have provision for patches, hotfixes and bug fixing solutions.
ix. Should have workflow capabilities with regard to the content approval and publishing process.	**xi.** Shall adhere to the best possible security standards in the industry.
x. Provisions to track and generate web traffic reports for Portal administrators.	**xii.** Shall support broad range of standards as applicable
	xiii. Shall support minimum Web 2.0 capabilities
	xiv. Shall be SSL (Secured Socket Layer) compliant and the Developer has to provide appropriate SSL certificate before the portal is made available on public domain.
	xv. Shall adhere to W3CAG, GIGW, and G.O.I guidelines

1.6.6. Mobile App and Web Portal – Required Features and Functionalities

All the requirements, features, and functionalities listed below, but not limited to, should be available by the Developer on both the app and the web portal.

a) Citizen registration

  i. One-time online registration to be done and stored in the data center.

  ii. Terms of service to be accepted by the user prior to log-in

b) Parking Guidance System

  i. Current GPS location determined.

  ii. User enters final destination.

  iii. Nearest available parking spaces are shown using maps in decreasing order of distance, the rates of each parking applicable at that time shall also be displayed and if user decides to reserve it, reservation is done with payment done from e-wallet/ payment gateway or any other method defined in the RFP.

iv. Number of vacant parking slots in a particular parking on map should also be shown to user.

v. User should be able to locate alternate route and parking lot after seeing the traffic congestion either by Online Web-based Portal or third party portal.

vi. Limit set on the advance time for online reservation of parking slot (24 hrs).

vii. User can take monthly pass for indoor parking only.

viii. Online cancellation for the spot should also be provided in case of online reservation.

c) Integration with Third Party Services and Apps:

i. The Developer has to ensure that the App can integrate and interface with popular and established third party services and applications (private or public) that wish to integrate with Mobile App, upon approval from LMC.

ii. The App should integrate with and allow payments through the selected third part shared services for Payment Gateway and e-Wallet.

iii. The App should have provisions to integrate with Emergency Response services.

iv. The parking application should be integrated with the smart city/nagar nigam app in near future by the approval of Lucknow Smart City Limited.

d) Frequently Asked Questions (FAQs) and Contact Details of different offices of LMC:

i. The App should have a section detailing frequently Asked Questions (FAQs) related to Smart initiatives and their related responses.

ii. The section should also provide contact information of Helpdesk Customer Service for parking problems, if any.

e) Settings:

i. User should view version and details of the App

ii. User should have the option to toggle between sending current GPS data to server or not.

iii. User should have the option to select a specific button on their cell phone to set as SOS short-cut, when pressed and help continuously for a certain amount of time.

iv. User should be able to toggle whether or not to send anonymous user data that can be helpful in fixing bugs or solving crashes.

v. User should be able to select notification settings.

vi. User should be able to select app notifications to be displayed on the home/locked screen.

vii. User should have ability to enable/disable sound alerts

f) Feedback/Complaint/Suggestion:

i. User should able to give their suggestions/feedback/complaint through the portal/app

ii. User should Able to track their complaint status

iii. Generation of reports on various types of complaints.

g) Officers Login

i. User should be able to search the vehicle on real time basis.

h) Booking/Payment of Parking Lot

      i. Users should be able to book the ticket through the app.

     ii. Pre-booking of the vacant slot should also be made available for the citizens

1.6.7.   Real-time Monitoring and Dynamic MIS Reporting:

i. Parking Management System shall include central reporting system establishing the connection between the devices and sensors and the Central Control Center.

ii. Solution shall include reporting dashboards with location specific thresholds to be set for generating customized reports

iii. Shall be capable of monitoring the number of vehicles entering/ exiting the parking premises during any given time

iv. Shall generate real time reports for each parking spot, in each of the parking lots capturing utilization, revenues, status of assets and personnel. These reports should be available in all standard acceptable formats like .csv,.pdf, .txt, .xlxs etc.

v. Ensure analytics on the following thematic areas:

- Enforcement – Daily report on violations
- Peak parking demand on hourly basis at each parking lot;
- Daily, weekly, monthly, quarterly and yearly average occupancy at each parking lot;
- Average time of occupancy;
- Revenue trends daily, weekly, monthly, quarterly and   annual

1.6.8.   IT Security:

Developer shall Undertake all measures for Cyber security, protection of information and communication technology systems of this Project from cyber-attacks that are purposeful attempts by unauthorized persons to access ICT systems in order to   achieve   the target of theft, disturbance, damage, or other illegal actions. The Private Operator shall detect, analysis and do mitigation of vulnerabilities and protect Central   Control   Centre including Data Centre from cyber-attacks throughout the Contract Period. The developer should have to include the latest gen firewall, IPS/IDS etc as safety measure to ensure the proper security of the data centre and all associated   software's.

1.6.9. Parking Software Supply, Installation, and Testing & Commissioning of parking management system–Centralized Reporting & Management software with following features:

i.   Shift reports including Operator name, Shift number and Shift wise traffic & transaction details

ii.   Traffic Report both in summary and detailed formats

iii.   Transaction details, time wise, period wise and shift wise

iv.   Systems Reports including Gate Statistics, System Runtime, and System Reboot.

v.   Daily & Monthly Summaries

vi.   Other reports as per requirement of LMC for efficient management.

1.6.10. Centralized Reporting & Management software: Supply, Installation, Testing & Commissioning of Parking revenue control / Billing & payment collection software:

    i.   Automatic Fee Computation based on either Fixed or Hourly plans.Provision for different tariff plan for different parking lots.

    ii.   Provision for user name and Passwords to restrict use to authorized persons only. Separate provisioning for Administrator and   for General User

    iii.   Flexibility of Housekeeping within the software, which shall include Re-indexing, Deleting, Backup & Restoration of Data

    iv.   There shall be a provision that new entries to the car park are not permitted in case of the full occupancy of the Car Park

    v.   Unique Identity for each transaction shall be created

    vi.   There shall be a provision to auto-capture images of cars at entry. Further there shall be a provision of storing such images with the unique identity, within the system and to recall the same at exit.

    vii.   Provision for pre-booking of parking space with flexibility of different or same charges for pre-booking, provision for cancellation of pre-booking, some percentage of charges for previous hours before actual booking hours.

1.6.11. Software for implementation of PMS:

    i.   Shall be implemented in the Integrated Industry Standard Open Platform to manage, monitor and control the Smart parking initiative.

    ii.   Shall monitor and configure all devices with respect to parking (sensors, displays etc.)

    iii.   Shall control the system functionality and enable remote monitoring from other computers.

    iv.   Shall provide capability to create full report of exact location with respect to floors, areas, levels, etc. Shall be customizable and able to update the parking lot occupancy and entry/ exit of vehicles in real time.

    v.   Shall provide real time status of all system components.

    vi.   Shall report alarms/ notifications when devices are un-connected; in the case of any equipment failure, on-screen alarm is displayed/ notified at the central control centre.

    vii.   Should issue notifications if a car is abandoned after the requisite period of time.

    viii.   Shall provide full graphical plan information of the car park with exact locations.

    ix.   Shall allow download of the information and configuration of fields for maintenance purpose.

    x.   Shall have built in tools for third party integration to obtain real time information.

    xi.   Shall provide access at user levels with passwords.

    xii.   Shall have historic log for available spaces, period of time.

    xiii.   The software should be able to handle manual overriding of available spaces, special parking requirements for reserved spaces and handicapped lots.

    xiv.   Shall manage energy saving of the car parks according to car park occupation.

    xv.   Shall reduce brightness of light indicators manually or automatically according to

occupation.

xvi.   Shall monitor any CCTV camera with IP connection.

xvii.   Shall monitor electricity consumption, voltage, energy and harmonics.

1.6.12. Central Control Room/Helpdesk

1.6.12.1.   The central control room/helpdesk will be the nodal point of availability of all online data and information related to smart sensors based Parking solution and connected to LMC network of services. It shall consist of the following:

   i.   Centralized System with video wall f o r live monitoring.

   ii.   Equipment health monitoring and generates alerts.

   iii. Centralized data storage and its management.

   iv.   Integration with Third Party Shared Services.

   v.   Online backup of all data in.

   vi.   Public Complaint Handling (non-working of app, portal, transaction failure etc.)

1.6.12.2.   Central Control Centre shall be established with all hardware, software and network infrastructure including switches, firewall, routers, storage servers, application servers, video-wall and other necessary equipment. The same shall be operated & maintained by the Developer throughout the concession period.

1.6.13. CCTV Based Surveillance solution for all Parking lots:

CCTV based surveillance solution enable LMC to plan events, monitoring of Infrastructure, encroachments etc. It helps in enforcement of law, monitoring of public areas, analyse patterns, and track incidents enabling quicker response and other following attributes:

- Help for more effective operations
- Quicker response to incidents
- Increased situational awareness
- Increased attractiveness to businesses and workers
- Improved planning and resource allocation
- Improved communications about incidents

CCTV based Surveillance Cameras should cover areas of all parking lots given in RFP document. CCTV feed for 30 days will be kept in a local server in individual parking lots or combination of two or more parking lots. FTTH, MPLS based network with suitable bandwidth shall be provided at each parking lots to view the online CCTV footage from the central control room. Applicants will be responsible for design and engineering of all the network components for the live CCTV feed and analytics to the central control centre, to meet functional requirement of project with suitable software interface both at back end and front end and facility for storage of Camera feed up to 30 days. Number of cameras to be installed shall be as per site requirement so that complete area of all parking lots shall be covered by these CCTV cameras and all parking slots shall be separately identifiable through

these CCTV cameras. Additionally one lane all-around parking lot beyond parking area shall also be covered so that unauthorized parking near parking lot can be identified.

1.6.14. Two Wheelers parking:

Camera-sensor based identification can also be proposed for two wheeler parking in the mentioned parking locations the camera having features for identification of two wheelers will be installed by the Developer. The online Updation shall be available at the central server, CCC of LMC and Mobile App.

  i. Camera based parking occupancy detection system with capability of outdoor and indoor based two wheeler occupancy detection.
  ii. Shall provide reliable detection within 20 seconds of two wheeler parking/ un-parking event occurrence.
  iii. Shall support all weather operations – day/ night/ rain/ fog with reliable detection better than 80% (clear weather 90% reliability).
  iv. Shall be connected online with central control centre.

1.7. Training & Capacity Building:

1.7.1. Training & Capacity Building –Scope of Work

The purpose of this section is to define the scope of work for training and capacity building to be implemented at various levels namely:

  a) Employees of Smart cities
  b) Municipal Corporations' employees of Lucknow City
  c) The developer's scope of work also includes preparing the necessary documentation and aids required for successful delivery of such trainings.
  d) The details provided in this section are indicative and due to the complex nature of the project the number of training sessions may increase. Over and above the team considered for performing the training as detailed in subsequent sections,
  e) Developer will develop a training and capacity building strategy that will also include a detailed plan of implementation.
  f) Developer will get the Training and capacity building strategy including training material finalized with City SPV before starting the training programs.
  g) Developer will prepare all the requisite audio/visual training aids that are required for successful completion of the training for all stakeholders.

1.8. Maintain and Handover System Documentation

1.8.1. Maintain and Handover System Documentation to the LSCL/LMC: Developer shall maintain at least the following minimum documents with respect to the Smart Parking Management System:

i. High level/ Low Level design of whole system
ii. System requirements Specifications (SRS)
iii. Any other explanatory notes about system
iv. Traceability matrix
v. Compilation environment

Developer shall also ensure Updation of documentation of software system ensuring that:

i. Source code is documented and provided to LMC/LSCL
ii. Functional specifications are documented
iii. Application documentation is updated to reflect on-going maintenance and enhancements including FRS and SRS, in accordance with the defined standards
iv. User manuals and training manuals are updated to reflect on-going changes/enhancements

Annexure 2

2) PUNITIVE CLAUSE

LMC will impose a fine on the Developer for not meeting the Implementation SLAs as detailed below:

2.1. Post-Implementation SLAs

These SLAs shall be used to evaluate the performance of the services on weekly basis but penalties would be levied for cumulative performance for the quarter basis.

(A) if any complaint of over-charging or collecting parking charges outside the parking area defined in RFP document or subsequently allotted is received from the complainant or any violation is noticed, the same shall be investigated by the LMC and if found true, then a penalty of minimum amount mentioned in the RFP document charged for each such incident shall be imposed on the Developer and for repeated violation, action shall be taken against the Developer

(B) The Developer has to ensure that all the vehicles will be parked in the space defined for each vehicle in the parking lot. The parking attendant will ensure proper parking of vehicles in each slot. For each such violation a penalty as mentioned in the RFP document per incident will be imposed.

(C) The Developer has to ensure that the number of vehicles parked shall not exceed the designated capacity of each parking lot as mentioned in the RFP document, per

incident will be imposed.

(D) For non-operation of database on any of the days, LMC will charge the concession fee of that day equal to the highest collection of parking charges for a day in year. The uptime commitment of all the parking sensors, LED display, or any other equipment/communication devices used for real-time availability of parking spaces and its billing is 99%. The uptime commitment of all the CCTV and related equipment and its communication devices is 99%.For uptime below the limits defined above the following penalties will be imposed:

 (i) Parking sensor: Rs. Two Hundred fifty per day per sensor
 (ii) Boom Barrier: Rs. Five Thousand per day per Boom Barrier
 (iii) Hand held device: Rs. One Thousand per day per Hand held device
 (iv) CCTV camera: Rs. One Thousand per day per CCTV camera
 (v) LED Display: Rs. One Thousand per day per LED display

(E) If the online information of parked vehicles/availability of parking is not matching with the actual position (99% accuracy) as mentioned in the RFP document, per incident will be imposed.

(F) The Developer has to take standby arrangement of the internet/network connectivity so that in case the online system is down at any time. The Developer has to keep the spare hand held device, computers, network equipment and other equipment so that the system will be operational all the time.

(G) Penalty levied for non-performance as per SLA requirements shall have to be deposited monthly by the Developer at the completion of each month on7th day of every month along with concession fee otherwise interest will be charged@18% per year from the date of non-payment of these penalties. If the penalties amount along with interest exceeds Rs.1 crores in a year then LMC will have the right to terminate the agreement.

(H) The SLA parameters shall be measured for each of the sub systems' SLA parameter requirements and measurement methods, through appropriate SLA Measurement tools to be provided by the Developer and audited by LMC/LSCL for accuracy and reliability. The Developer would need to configure the SLA Measurement Tools such that all the parameters as defined under SLA. Post-implementation SLAs, should be measured and appropriate reports be generated for monitoring the compliance.

(I) In the event of non-compliance to this condition, LMC reserves the right to invoke the termination clause. All the activities and obligations pursuant to the termination, shall be as per Termination Clause as provided in this RFP document.

2.2. Penalty Chart during Operation & Mentainence Period

S. No.	Nature of breach	Penalty
1	Complaint received or any violation noticed of over-charging or collecting parking charges outside the	Rs.10,000/-per incident

2	Vehicles not parked in the space defined for each vehicle	Rs500/-per vehicle per incident
3	Number of vehicles parked exceeding the designated capacity of each parking lot	Rs 500/- per vehicle per incident
5	Non-operation of database on any of the day	Parking fee of the respective day
6	Offline billing of parking charges/ penalties to users by the Private Operator	Rs. 500/- per incidence
7	Online information of parked vehicles/ availability of parking is not matching with the actual position (99% accuracy)	Rs.5000/per parking lot per day

For repeated violation of any of the cause in the table above, LMC shall reserve the right to invoke the termination clause.

2.3. Other Penalties

It is expected that the Developer should comply with all the Policy/ Procedural / Regulatory Guidelines enforced by Government of India/ Government of Uttar Pradesh, and other statutory and related bodies, as amended from time to time. The Developer should also safeguard the Application Security and Application Integrity. Penalty would be applicable for non-compliance of relevant security certifications. There would be Zero Tolerance policy against such breaches. The penalties across various breaches could be categorized as follows (this includes but not limited to the following):

- Information Security Breach: Any data leakage, information sharing, reports sharing without the consent of LMC.
- Network & System Security Breach: Any instance of hacking, information /data compromise, unauthorized access to public Wi-Fi.
- Guidelines Breach: Non-compliance to guidelines shared by various government agencies complying with standards for website/mobile app development etc.

For any of the breach for above-mentioned category, a penalty would be levied on the Developer for every instance of occurrence if not responded as per the timelines mentioned in the table below:

Type	Measurement (Unit)	Response Time (in unit)	Penalty on response w.r.t. delay /Unit
Information Security Breach	Hours	1	Rs100000/-
Network & System Security Breach	Hours	2	Rs50000/-

Guidelines Breach	Days	7	Rs 100000/-

The response time refers to immediate remedial action taken and preventive measures updated by the Developer on occurrence of the event. In case the breaches are not responded to in the time frame as specified, penalties would be levied as per the table above and failing to address the breach in desired timeline, recurring penalties would be levied w.r.t. to delay in units as mentioned. For example, in case of an Information Security Breach, the Developer has to respond within one (1) hour of the event occurrence. If the Developer responds in 02 hours 15 minutes, a penalty on pro-rata basis equivalent to Rs.1,25,000/- would be imposed on the Developer. In case of more than three (3) instances of breach within a single calendar year, LMC reserves the right to invoke the termination clause along with legal action would be initiated for serious offence as decided by LMC. Guidelines Breach includes non-compliance to certain guidelines as set by agencies like Ministry of Communications and Information Technology, Department of Science and Technology, or other statutory Authorities etc. In such cases, resolution of the issue is mandatory. The Developer would be required to respond with the action plan / change request, as applicable, in order to resolve the guidelines breach within the specified response time.

2.4. Manpower Availability

- The Developer needs to provide the on-site manpower as per the defined scope of work to manage all parking lots. In case any person remains absent the Developer has to arrange alternate for this.

- The Developer needs to submit attendance report on daily basis.

Penalties shall not be levied on the Developer in the following cases:

- In case of a force majeure event affecting the SLA which is beyond the control of the Developer. Force Majeure events shall be considered in line with the Force Majeure clause mentioned in this RFP document.

- Theft cases by default/ vandalism would not be considered as "beyond the control of Developer". Hence, the Developer should be taking adequate anti-theft measures, spares strategy, Insurance as required to maintain the desired required SLA.

Guidelines Breach includes non-compliance to certain guidelines as set by various agencies like Ministry of Communications and Information Technology, Department of Science and Technology, or other statutory Authorities etc. In such cases, resolution of the issue is mandatory. The Developer would be required to respond with the action plan /change request, as applicable, in order to resolve the guidelines breach within the specified response time.

2.5. Manpower Availability

2.5.1 The Developer needs to provide the on-site manpower as per the defined scope of work to manage all parking lots. In case any person remains absent the Developer has to arrange alternate for this.

2.5.2 The Developer needs to submit online attendance report on daily basis.

3) **FORCEMAJEURE**

3.1. Definition of Force Majeure

The Developer or the LMC, as the case may be, shall be entitled to suspend or excuse performance of its respective obligations under this RFP document to the extent that such performance is impeded by an event of force majeure ('Force Majeure').

3.2. Force Majeure events

A Force Majeure event means any event or circumstance or a combination of events and circumstances referred to in this Clause, which may be classified as all or any of the following events:

(i) Act of God, including earth quake, flood, inundation, landslide, exceptionally adverse weather conditions, storm, tempest, hurricane, cyclone, lightning, thunder, volcanic eruption, fire or other extreme atmospheric conditions;

(ii) Radioactive contamination or ionizing radiation or biological contamination;

(iii) A strike or strikes or other industrial action or blockade or embargo or any other form of civil disturbance (whether lawful or not), in each case affecting on a general basis the industry related to the affected Services and which is not attribute able to any unreasonable action or inaction on the part of the Developer or any

of its Sub Developers or suppliers and the settlement of which is beyond the reasonable control of all such persons;

(iv) general strikes, lockouts, boycotts, labour disruptions or any other industrial disturbances as the case may be not arising on account of the acts or omissions of the Developer and which affect the timely implementation and continued operation of the Project;

(v) An act of war (whether declared or undeclared), hostilities, invasion, armed conflict or act of foreign enemy, blockade, embargo, prolonged riot, insurrection, terrorist or military action, civil commotion or politically motivated sabotage, for a continuous period exceeding seven(7)days.

For the avoidance of doubt, it is clarified that any negligence in performance of Services which directly causes any breach of security like hacking aren't the forces of nature and hence

wouldn't be qualified under the definition of "Force Majeure". In so far as applicable to the performance of Services, Service Provider will be solely responsible to complete the risk assessment and ensure implementation of adequate security hygiene, best practices, processes and technology to prevent any breach of security and any resulting liability there from(wherever applicable).

3.3. Notification procedure for Force Majeure

- The affected Party shall notify the other Party of a Force Majeure event within seven (7) days of occurrence of such event. If the other Party disputes the claim for relief under Force Majeure it shall give the claiming Party written notice of such dispute within thirty (30) days of such notice. Such dispute shall be dealt within accordance with the dispute resolution mechanism in accordance with Clause.

- Upon cessation of the situation which led the Party claiming Force Majeure, the claiming Party shall within seven (7) days here of notify the other Party in writing of the cessation and the Parties shall as soon as practicable thereafter continue performance of all obligations under this RFP document.

3.4. Allocation of costs arising out of Force Majeure

- Upon the occurrence of any Force Majeure Event, the Parties shall bear their respective costs and no Party shall be required to pay to the other Party any costs thereof.

- For the avoidance of doubt, Force Majeure Costs may include interest payments on debt, operation and maintenance expenses, any increase in the cost of the Services on account of inflation and all other costs directly attributable to the Force Majeure Event.

- Save and except as expressly provided in this Clause, neither Party shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, costs, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant hereof.

3.5. Consultation and duty to mitigate

Except as otherwise provided in this Clause, the affected Party shall, at its own cost, take all steps reasonably required to remedy and mitigate the effects of the Force Majeure event and restore its ability to perform its obligations under this RFP document as soon as reasonably practicable. The Parties shall consult with each other to determine the reasonable measures to be implemented to minimize the oases of each Party resulting from the Force Majeure event. The affected Party shall keep the other Parties informed of its efforts to remedy the effect of the Force Majeure event and shall make reasonable efforts to mitigate such event on a continuous basis and shall provide written notice of the resumption of

performance hereunder.

Annexure 3

Proposed Parking Fee / Parking Spaces in LMC area

S. No.	Type of Vehicle	Type of Parking Lot	Proposed Rate of Parking
1	Car/four wheelers	(i) Underground parking at Jhandi Park, Dayanidhan Park, Jhandewala Park Aminabad	Rs.25/- per Four Hour. After 4/hr in Multiple of Rs 25
		(ii) Underground parking at Jhandi Park, Dayanidhan Park, Jhandewala Park Aminabad–Monthly Parking Charges	Car 12 hrs – Rs 600/- PM
			Car 24 hrs – Rs 1200/- PM
2	Scooter / two wheeler	(i) Underground parking at Jhandi Park, Dayanidhan Park, Jhandewala Park Aminabad	Rs.10/- per Four Hour. After 4 hr in Multiple of Rs 10/-
		(ii) Underground parking at Jhandi Park, Dayanidhan Park, Jhandewala Park Aminabad	2 Wheelers 12 hrs- 400/- PM
			2 Wheelers 24 hrs- 800/- PM