



UTTAR PRADESH METRO RAIL CORPORATION LIMITED

**GENERAL CONSULTANCY SERVICES
FOR LUCKNOW MRTS PROJECT, PHASE – 1B**

TENDER NO: LKGC (02) - 01

TENDER DOCUMENTS

VOLUME 1

**NOTICE INVITING TENDER (NIT)
INSTRUCTION TO TENDERERS (ITT)
FORM OF TENDER (FOT)**

**UTTAR PRADESH METRO RAIL CORPORATION LTD.
Administrative Building, Vipin Khand, Gomti Nagar
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Lucknow-226010, Uttar Pradesh, India**

CONTENTS

NOTICE INVITING TENDER (NIT)		
Clause	Description	Page Number
1	General	3
1.1	Name of Work	3
1.2	Key Details	3
1.4	Qualification Criteria	5
1.5	Tender Documents	13
Annexures		
1	Work Experience & QCBS	16
1A	Summary of Information Provided in Annexure – 1	18
2	Financial Data (Financial Standing)	20
2A	Affidavit for Unaudited Balance Sheet	21
3	Works in hand	22
4	Available Bid Capacity	23
5	Proforma for Banking Reference for Liquidity	24
A	Instructions for Online Bid Submission	25
INSTRUCTIONS TO THE TENDERER (ITT)		
Clause	Description	Page Number
A	General	29
B	Tender Documents	32
C	Preparation of Tenders	33
D	Submission of Tenders	40
E	Tender Opening and Evaluation	41
F	Award of Contract	46
G	Settlement of Disputes	47
Annexures		
1	Evaluation of Technical Proposal	48
1A	Notes on Evaluation Methodology	51
1B	Maximum Marks under various subheads as per Criterion IV(ii) of Annexure 1A of ITT	58
1C	QCBS & Other positions details	59
2	Financial evaluation of bid on QCBS method	61
3	Combined evaluation of bid on QCBS method	62
4	Form of Bank Guarantee for Tender Security	63
5	Undertaking for Encashment/Forfeiture of Tender Security	65
6	Form Of Performance Security(Guarantee) by bank	66
7	Form of Verification Statement	68
8	Form of Bank Guarantee for Advance Payment	69
9	Contract Agreement	71

FORM OF TENDER

Form of Tender			75
Appendix 1	-	Contract Conditions (Requirement Under GCC)	77
Appendix 2	-	Bill of Quantity/ Pricing Document (To be included in Financial Package ONLY)	79
Appendix 3	-	General Information about the Tenderer	80
Appendix 4	-	Memorandum of Understanding	82
Appendix 5	-	Power of Attorney for lead members in case of JV/Consortium	84
Appendix 5A	-	Power of Attorney	86
Appendix 6	-	Undertaking by JV/Consortium Members	87
Appendix 7	-	Tender Index	88
Appendix 8A	-	Undertaking for Corrupt & Fraudulent Practise	93
Appendix 8B	-	Statement for Covenant of Integrity	94
Appendix 8C	-	Statement for Code of Integrity	97
Appendix 8D	-	Undertaking for Conflict of Interest	99
Appendix 8E	-	Integrity Pact	101
Appendix 9	-	Minor Deviations	104
Appendix 10	-	Undertaking for banned/debarred/blacklisted business	105
Appendix 11	-	Undertaking for on-going consultancy works	106
Appendix 12	-	Undertaking for not being penalised with LD in a contract	108
Appendix 13	-	Undertaking for Financial Stability	109
Appendix 14	-	Pending litigation	110
Appendix 15	-	Understanding on Sub-Contracting	112
Appendix 16	-	Details of bank account for refund of Tender Security/EMD	113
Appendix 17	-	Letter of submission of Technical Proposal format	114
Appendix 18	-	Approach paper on work plan & Methodology proposed	115
Appendix 19	-	Comments/Suggestions of the Consultant	116
Appendix 20	-	Format of CV for proposed key staff of group	117
Appendix 21	-	Summary of proposed key Staff	120
Appendix 22	-	Composition of team personnel & task which would be assigned to each member	121
Appendix 23	-	Proposed Deployment Schedule for each team member	122
Appendix 24	-	Undertaking for Minimum Local Content	123
Appendix 25	-	Performa for Submission of the List of the Goods, Works & Services Tentatively Proposed to be Offered with Local Value Addition	124

NOTICE INVITING TENDER

1. GENERAL

1.1 Name of Work:

Uttar Pradesh Metro Rail Corporation (UPMRC) Ltd., invites an open e-tender for General Consultancy Services **based on Quality cum Cost Based Selection (QCBS) process** from eligible applicants, who fulfil qualification criteria as stipulated in NIT Clause 1.4 for the work, “**LKGC (02) – 01 : GENERAL CONSULTANCY SERVICES FOR LUCKNOW MRTS PROJECT – PHASE 1B**”. The **scope of the work is detailed in Volume 3**

1.2 Key details :

Tender Reference	LKGC (02) - 01
Tender Security /EMD*	<p>Rs 5.25 Crore</p> <p>The instrument type for payment of tender security/ EMD shall be Demand Draft, Bank Guarantee, RTGS, NEFT & IMPS. No other mode of payment will be accepted.</p> <p>(i) Payment of tender Security as per clause C 18.1.2 (i) of ITT is to be made by RTGS, NEFT & IMPS. The details of bank account of UPMRC are mentioned in succeeding para. The bidders are required to upload scanned copies of transaction of payment of tender security including e-receipt (clearly indicating UTR No. & tender reference must be entered in the remarks at the time of online transaction of payment) in online bid submission, failing which payment may not be considered. (Copy of GST registration no. to be provided along with Tender security/EMD)</p> <p>(ii) Payment of tender security as per clause C 18.1.2 (ii) of ITT is to be made by BG/FDR/Demand Draft. BG/FDR/ Demand Draft shall be submitted in original in a sealed envelope in the office of CE/ Contract within due date and time of submission end date of tender.</p> <p>Validity of Tender Security/EMD in case of BG shall remain valid for a period of 45 days beyond the final bid validity period. Further claim period of BG shall be 6 months beyond the expiry.</p>
Completion period of the Work	50 months from the ‘Notice To Proceed’ date specified / mentioned in LOA
Tender documents on sale:	<p>From 09 Jun 2026 (from 11:00 hrs) to 09 Jul 2026 (up to 15:00 hrs) on e-tendering website https://etenders.gov.in/eprocure/app. Tender document can only be obtained on the website https://etenders.gov.in/eprocure/app.</p>

Cost of Tender documents*	<p>INR 23,600 /- (inclusive of 18% GST) Non-Refundable (Payment of tender document cost/ tender fee is to be made only by RTGS, NEFT & IMPS. No other mode of payment will be accepted. The details of bank account of employer are mentioned in succeeding para. The Tenderers are required to upload scanned copies of transaction of payment of tender document cost/tender fee including e-receipt (clearly indicating UTR No. & tender reference must be entered in the remarks at the time of online transaction of payment) failing which payment may not be considered at the time of online bid submission. (Copy of GST registration no. to be provided along with Tender document cost, if applicable)</p>
Details of Bank Account for payment of Tender Security/ EMD and cost of tender document	<p>Name of the Bank - HDFC Bank Banks Address - HDFC Bank Ltd, 6 Sapru Marg Hazratganj Lucknow Account Name - UPMRCL (LUCKNOW Project) Account No. - 50200009236810 IFSC code - HDFC0001267</p>
Last date of Seeking Clarification:	<p>19 Jun 2026 upto 18:00 hrs. Tenderers to note that seeking clarification on the tender shall be done by sending it on e-tendering portal only. Seeking clarification by mail or post will not be considered. Queries/clarifications from Tenderers after due date and time shall not be acknowledged.</p>
Pre-bid Meeting	<p>19 Jun 2026 @ 15:00 Hrs The pre-bid meeting shall be conducted through video conferencing by software apps such as Google Meet, Microsoft Team, etc. All Prospective tenderers who have made online payment towards the cost of tender document shall provide the details of the person(s) (maximum up to two) who will be participating in such virtual meeting at least one day before the meeting to the registered official email of Employer i.e. cecontractlmrc@gmail.com cecontract@upmrc.co.in/ along with scanned copy of transaction of payment of tender cost / tender fee, including e-receipt (clearly indicating UTR No. and tender reference, so that links having details such as software, meeting ID, password etc. can be mailed to these persons at least 12 hours before the scheduled pre-bid meeting</p>
Date & time of Submission of Tender online	<p>Tender submission start date: 03 Jul 2026 (11:00 hrs). Tender submission end date: 09 Jul 2026 (15:00 hrs).</p>
Date & time of opening of Tender	<p>10 Jul 2026 @ 15:00 Hrs.</p>
Authority and place for seeking clarifications etc.	<p>Chief Engineer/ Contract, Uttar Pradesh Metro Rail Corporation, Administrative Building, Vipin Khand, Gomti Nagar, Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal, Lucknow-226010, Uttar Pradesh, India Telephone - 0522-2304015 E-Mail – cecontractlmrc@gmail.com https://etenders.gov.in/eprocure/app</p>

* Cost of Tender Document & Tender Security/EMD shall be submitted by the bidders except Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with Central Purchase Organisation.

- 1.3** Any clarification/corrigendum/addendum to the tender documents shall be uploaded on the official e-portal only, without any obligation of press notification.

For further details, please visit official e-portal <https://etenders.gov.in/eprocure/app>.

For any additional information & help for downloading & uploading, please contact e-tendering service desk at the following ID: support-eproc@nic.in or at Toll Free No.: (91)120-4001002, (91)120-4001005, (91)120-6277787.

1.3.1 SOURCE OF FUNDS:

The project shall be financed partly through equity contribution from Govt. of Uttar Pradesh (UP) and Govt. of India (GOI) and partly may be through loan from external funding agency for which necessary process is on.

1.3.2 THE PROJECT:

The E-W Corridor of Lucknow MRTS Project Phase-1B - Charbagh to Vasantkunj including Depot at Vasantkunj. The Brief of the same is provided in Volume 4. Further, Scope of Work, for the subject tender, is detailed in Volume 3 (Term of Reference).

1.4 QUALIFICATION CRITERIA: -

1.4.1 Eligible Applicants:

- i. The tenders for this contract will be considered only from those tenderers (Single entity, Joint Venture (JV) or a Consortium) who meet requisite eligibility criteria prescribed in the sub-clauses of Clause 1.4.1 of NIT.

In the case of a JV or Consortium, the number of partners shall be limited to 3 (three) and each partner must have minimum 10% partnership. All the members of the Group shall be jointly and severally liable for the performance of whole contract. Also, each member shall be individually responsible for its duties as specified in the MOU/JV agreement submitted by the bidder in terms of clause 1.4.1.vii e.

Performance of each JV/Consortium partner shall also be judged. In case, the performance of the partner(s) is not found satisfactory, actions as deemed appropriate by the Employer may be taken including termination of contract or termination of any of JV/Consortium member(s) from the contract i.e Part Termination of the contract.

In case of part termination of contract, the Performance Security(ies) submitted by the member(s) for their portion of work in contract as per their share in JV/Consortium shall be forfeited and the scope of the work/duties assigned to the defaulting JV/Consortium member(s) as per the MOU/agreement submitted, may be terminated however, same may be done by the Employer only if other member(s) of JV/Consortium are ready to complete the entire scope of work. In such a case, remaining works pertaining to the scope of defaulting member of JV, may be completed by other member(s) of JV in the following manner:

- a) At their own, if they have adequate technical competence to the satisfaction of Employer.
- b) By subcontracting such scope of work of defaulting member(s) to technically competent Agency with the consent of Employer & without any financial implication to the Employer. In such cases, the limit of subcontracting the works up to 50% of total scope of work shall not apply.
- c) By induction of new member having adequate technical competence and meeting the original tender eligibility conditions, acceptable to the Employer in JV/Consortium replacing the defaulting member(s) & without any financial implication to the Employer. The new member(s) shall be jointly & severally liable for the performance of the whole contract and also shall submit the Performance Security from their bank account for an amount equivalent to the amount of forfeited amount of Performance security of defaulting member.

In case of (a) & (b) above, forfeited amount of Performance Security (ies) of the defaulting member(s) shall be submitted by other member(s) of the JV/Consortium. Further, the performance of each of JV/Consortium member may also be specifically stated in the Work

Experience Certificate / performance Certificates which may be issued to the bidder during or after execution of Work for their Business Development purposes.

In this regard, an undertaking by JV/Consortium members is required to be submitted as per the format Appendix-6 of Form of Tender.

ii. (a) **A tenderer shall submit only one bid in the same tendering process either individually as a tenderer or as a partner of a JV/Consortium.** A tenderer who submits or participates in more than one bid will cause all of the proposals in which the tenderer has participated to be disqualified.

(b) The consultant shall not sub contract the whole of the contract except for overheads including travel duty to site. The value of such sub contract shall not exceed 25% of the contract price. The consultant shall solely remain responsible for the sub contract. The procurement of incidental goods, equipment hires or labour engagement shall not be treated as sub-contracting.

iii – Conflict of Interest:

1) Any consultant with a conflict of interest that substantially affects fair competition shall not be eligible to participate in this procurement process. Tenderer found to have a conflict of interest shall be rejected as non-responsive. Tenderer shall be required to declare the absence of such conflict of interest in as per **Appendix 8D of FOT**. A Tenderer in this procurement process shall be considered to have a conflict of interest if the tenderer:

- a) directly or indirectly controls, is controlled by or is under common control with another Consultant; or
- b) receives or has received any direct or indirect subsidy/ financial stake from another consultant; or
- c) has the same correspondence address or same legal representative/ agent as another consultant for purposes of this Tender; or
- d) has a relationship with another consultant, directly or through common third parties, which puts it in a position to have access to information about or influence the Tenderer of another Consultant; or
- e) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services that it provided (or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm) for the procurement planning (inter-alia preparation of feasibility/ cost estimates/ Detailed Project Report (DPR), design/ technical specifications, terms of reference (TOR)/ Activity Schedule/ schedule of requirements or the Tender Document etc) of this procurement process; or
- f) has a close business or family relationship with a staff of the Procuring Organization who:
 - i) are directly or indirectly involved in the preparation of the tender document or Terms of Reference of the procurement process and/or the evaluation; or
 - ii) would be involved in the implementation or supervision of the resulting contract.

Any conflict stemming from such a relationship must be reported and resolved in a manner acceptable to the Procuring Entity throughout the tender processes and execution of the contract.

All necessary care has been taken by the Employer to ensure that the Scope of Works under the DDC Contract (LKDDC-02) and the GC Contract (LKGC (02)-01) are distinctly defined so as to avoid any conflict of interest. Accordingly, the successful bidder of either tender is not barred from participating in the other tender.

However, in the event that a conflict of interest is observed at any stage in the scope of DDC & GC contract, the deliverables under the DDC Contract shall be subject to review, proof-checking, or validation by an independent third party, duly approved by the Employer. The cost of such third-party scrutiny shall be borne entirely by the General Consultant, without any financial implication to the Employer.

Further, any delay, disruption, or additional time arising from such third-party scrutiny shall not entitle the General Consultant to any extension of time, additional payment, or claim whatsoever.

- iv. The payment of the tender cost is acceptable from any account. However, tenderer shall submit such transaction details along with their tender submission on e-portal. If the same transaction reference number has been submitted for more than one bids, all such bids shall be considered ineligible and summarily rejected.
- v (a) UPMRC/ Any Other Metro Organization (100% owned by Govt.)/ Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce/Any other Government organization(applicable for all Ministries)/External funding (bi-lateral or multi-lateral) agency(ies), **must not have banned/debarred/blacklisted business** with the tenderer (including any member in case of JV/consortium) as on the date of tender submission end date. The tenderer should submit undertaking to this effect in **Appendix-10** of Form of Tender.
- (b) Also no contract of the tenderer of the value more than 10% of minimum Bid capacity, executed either individually or in a JV/Consortium, should have been rescinded / terminated by UPMRC/ Any Other Metro Organization (100% owned by Govt.) / Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce/ Any other government organization after award during last 03 years (from the last day of the previous month of tender submission end date) due to non-performance of the tenderer or any of JV/Consortium members. The tenderer should submit undertaking to this effect in **Appendix- 10** of Form of Tender.
- (c) The overall performance of the tenderer (all members in case of JV/consortium separately) shall be examined for all the ongoing consultancy works awarded by UPMRC/ any other Metro Organization (owned by Govt.)/ Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce/ Any other government organization of value more than 40% of minimum Bid capacity and also for all the completed consultancy works awarded by UPMRC/ any other Metro Organization (owned by Govt.)/ Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce/ Any other government organization within last one year (from the last day of the previous month of tender submission end date), of value more than 40% of minimum Bid capacity, executed either individually or in a JV/Consortium. The tenderer shall provide list of all such works in the prescribed Performa given in **Appendix-11** of the Form of Tender. The tenderer (all members in Case of JV/Consortium separately) may either submit satisfactory performance Certificate issued by the Client/ Employer for the works or give an undertaking regarding satisfactory performance of the work with respect to completion of work/execution of work (for ongoing works) failing which their tender submission shall not be evaluated and the tenderer shall be considered non-responsive and non-compliant to the tender conditions. In case of non-submission of either satisfactory performance Certificate from Client /Employer or undertaking of satisfactory performance of any of the above work, the performance of such work shall be treated as unsatisfactory while evaluating the overall performance of tenderer in terms of Note (b) of **Appendix-11**. In case of performance certificate issued by the client, same should not be older than one year (from the last day of the previous month of tender submission) for on-going works. **In case the tenderer does not have any work falling in above criteria, his performance will not be judged unsatisfactory.**
- (d) Bidder (any member in case of JV/consortium) must not have been imposed liquidated damages of 10% (or more) of the contract value in a contract due to delay or penalty of 10% (or more) of the contract value due to any other reason during last five years. The bidder should submit undertaking to this effect in **Appendix-12** of FOT.
- (e)Tenderer (any member in case of JV/Consortium) must not have suffered bankruptcy/insolvency during the last five (5) years (from the last day of previous month of tender submission end date). The tenderer should submit undertaking to this effect in **Appendix – 13** of Form of Tender.
- (f) The tenderer (each individual member separately in case of JV/Consortium) shall not have total amount of dispute in their pending litigation more than Fifty percent (50%) of the tenderer's net worth (each individual member separately in case of JV/Consortium). The tenderer (each individual member separately in case of JV/Consortium) shall be examined for all pending litigation from all contracts completed or all ongoing contracts. The tenderer (each

individual member separately in case of JV/Consortium) shall provide detailed information of all such pending litigations in the prescribed proforma given in **Appendix-14** of Form of Tender. The details of all pending litigation shall comprise of all pending arbitration cases and also all pending court cases irrespective of whether these litigations have been initiated by the tenderer against their employer/client or by the client/employer against the tenderer. The amount of disputes shall also comprise of all the claim amount and also all counter-claim amount in such arbitration/court cases.

- (g) If the Tenderer or any of the constituent JV/Consortium member(s) does not meet the criteria stated in the **Appendix-10 or Appendix-11 or Appendix-12, or Appendix-13 or Appendix-14 (pending litigation criteria as per Clause 1.4.1 v(f))**, the tenderer including the constituent JV/Consortium member(s) shall be considered ineligible for participation in tender process and they shall be considered ineligible applicants in terms of Clause 1.4.1 of NIT.

vi. If there is any misrepresentation of facts with regards to undertaking submitted vide **Appendix- 10**, or performance in any of the works reported in the **Appendix 11**, or undertaking submitted vide **Appendix-12 or Appendix-13** or information submitted in **Appendix-14**, the same will be considered as “fraudulent practice” under Clause 3.12.1 a (ii) of GCC and the tender submission of such tenderers will be rejected besides taking further action as per Clause 3.12.1 (b) & 2.8 of GCC.

vii. LEAD PARTNER/ NON SUBSTANTIAL PARTNERS/ CHANGE IN JV/ CONSORTIUM

- a. Bidder may associate with other firms in the form of Joint Venture or Consortium with not more than 3 members (including lead member). No member should have less than 10% participation
- b. Any members having participation **between 10% and 20%** shall be termed as **non-substantial members**. Members having **more than 20%** participation shall be termed as **substantial members**. **The Lead member must have at least 40% participation. Number of non-substantial members shall not be more than one (01).**
- c. The JV/consortium and its members must jointly satisfy the minimum eligibility criteria i.e. both Technical and Financial eligibility but the members will be jointly and severally responsible. **The technical criteria of all JV/consortium members (Substantial, lead and non-substantial members) shall be evaluated jointly.** However, **for financial criteria the credentials of only substantial and lead member (excluding non-substantial member) shall be considered.**
- d. In case of JV/Consortium, change in constitution or percentage participation shall not be permitted at any stage after their submission of tender otherwise the tender shall be treated as non-responsive.
- e. The tenderer, in case of JV/Consortium, **shall clearly and unambiguously define the role and responsibilities for each substantial/non-substantial partner** particularly with reference to financial, technical and other obligations in the JV agreement/MOU submitted vide **note (d) of Appendix 3 of Form of Tender**, providing clearly that any abrogation /subsequent re-assignment of any responsibility by any substantive /non-substantive partner of JV/Consortium in favour of other JV/Consortium partner or any change in constitution of partners of JV/Consortium (without written approval of Employer) from the one given in JV agreement /MOU at tender stage, will be treated, as ‘breach of contract condition’ and/or ‘concealment of facts’ (as the case may be), and acted accordingly.

Note:- The MOU may stipulates mandatory information to be provided. However, bidder can include additional details/arrangements finalized between the members in this MOU provided, these additional details/arrangements should not be in contravention of Employer's interest as per terms and conditions of Contract. Bidder may further note that no separate MOU/JV agreement should be executed for the sake of working arrangement amongst the partners other than the MOU/JV agreement accepted by the Employer.

MOU/ agreement or made any other arrangement in to a contract without the specific approval of

Employer in writing, it shall be treated as a fraudulent practice under this tender for which every constituent of the JV/Consortia is liable to be debarred for a period upto three years along with such other legal actions as may be permissible under the law. The JV/Consortium members shall submit undertaking to this effect in **Appendix-6 of Form of Tender**.

The Employer in such cases, may in its sole discretion take action under this tender against any member(s) for failure in tenderer's obligation and declare that member(s) of JV/Consortium ineligible for award of any tender in UPMRC or take action to terminate the contract in part or whole under this tender as the situation may demand and recover the cost/damages as provided in contract.

viii. Participation by Subsidiary Company / Parent Company with credential of other Company

- a) Applicant in the capacity of a Subsidiary Company as a single entity is not permitted to use the credential of its Parent Company and/or its Sister Subsidiary Company/ Companies.
- b) Applicant in the capacity of a Parent Company as a single entity is not permitted to use the credential of its Subsidiary Company/ Companies.

ix. Purchase Preference to Local Suppliers/Preference to Make in India: NOT APPLICABLE FOR THE SUBJECT TENDER

x. Restrictions/ Prior Registration on Entities from a Class of Countries (Rule 144 (xi), GFR 2017)

1. Government of India may, by order in writing, impose restrictions, including prior registration and/ or screening, on procurement from bidders from, or bidders having commercial arrangements with an entity from, a country or countries, or a class of countries, on grounds of defence of India, or matters directly or indirectly related thereto including national security; no procurement shall be made in violation of such restrictions.

2. Any bidder will be eligible to bid following the procedure mentioned in Order No. F.7/10/2021-PPD (1) dated 23-02-2023, issued by Ministry of Finance/Department of Expenditure (Public Procurement Division), Govt. of India and as amended from time to time.

1.4.2 Minimum Eligibility Criteria:

A. Work Experience:

The tenderers will be qualified only if they have successfully completed or * substantially completed **similar work(s), as a prime Consultant / member of JV, completion date (s) of which falling during last Seven years ending last day of the month previous to the month of tender submission end date as given below :

At least one "similar work" * of value of **INR 210 Crore** or more.

OR

At least Two "similar works" * each of value of **INR 131 Crore** or more.

OR

At least Three "similar works" * each of value of **INR 105 Crore** or more.

*****"Similar Work(s)" means General Consultancy / Project Management Consultancy / Supervision Consultancy works for Metro Rail System / RRTS/ High Speed Rail projects comprising of Civil, Safety, Quality including installation, testing and commissioning of ***Systems works & Rolling Stock.**

*****"Substantial"** completion shall be based on 90 (ninety) percent (value wise) or more works completed under the contract of the work. Client Certificate for 'substantial completion' of project/work/asset should contain 'financial value of work done' along with financial percentage progress wrt original/revised contract value.

****"System works" shall mean works of Traction, Signalling, Telecommunication and MEP including HVAC, Fire fighting works.

- (i) If the tenderer is a **JV/Consortium having foreign partner(s)** and above work(s) have been executed by the foreign partner of JV and the work(s) were done in the country of the foreign partner, then in addition to this the foreign partner must have executed at least one "similar work" of value of **Rs 105 crore** or more outside the country of the foreign partner.
- (ii) In the **last 07 years** (ending last day of the month previous to the month of tender submission end date), the bidder in a **single contract** of General Consultancy / Project Management Consultancy / Supervision Consultancy works for MRTS projects must fulfill following criteria(s):
 - a) **The Lead Member/Sole entity–**
 - i. must have received consultancy fees / payment (ongoing/completed) of value not less than 50% of the minimum bid capacity specified in clause 1.4.2 B (iv) of NIT.
 - ii. must have successfully completed and commissioned (CMRS approval for public opening) at least one MRTS corridor/line of length not less than 11 km in India as sole entity / Lead partner of JV/Consortium.
 - b) **For Other Constituent Members (except lead member)**
 - i. must have received fees / payment (ongoing/completed) of value not less than 25% of the minimum bid capacity specified in clause 1.4.2 B (iv) of NIT.
 - ii. must have successfully completed and commissioned (CMRS approval for public opening) at least one MRTS corridor/line in India.

Notes :

- (i) The tenderer shall submit details of similar work executed by them in the Performa of Annexure-1 & 1 A of NIT for the works to be considered for qualification of work experience criteria. Documentary proof such as completion certificates from client clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work should be submitted.
- (ii) In case the work is executed for private client, the works executed only for publicly listed companies / private companies/ Trusts with an Annual turnover of Rs 500 crore or above will be considered. For the proof of this, bidders are requested to submit audited balance sheet of the client or certified copy from CA along with their UDIN number. The certificates to be submitted should include copy of work order, bill of quantities, bill wise details of payment received certified by Chartered Accountant (C.A) and Tax Deducted at Source (TDS) certificates/ Form 26 AS for all payments received and copy of final/last bill paid by the client. The offers submitted without this documentary proof shall not be evaluated.
- (iii) For completed works, value of work done shall be updated from date of completion to last day of the month previous to the month of tender submission end date price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year. The exchange rate of foreign currency shall be applicable 28 days before the submission end date of tender.
- (iv) In case of Joint venture / Consortium, full value of the work, if done by the same joint venture shall be considered. If the qualifying work(s) were done by them in JV/Consortium having different constituents, then the value of work as per their percentage participation in such JV/Consortium shall be considered.
- (v) If the above work(s) i.e. "Similar Work" comprise other works, then client's certificate clearly indicating the amount of work done in respect of the "similar work" shall be furnished by the tenderer in support of work experience along-with their tender submissions.
- (vi) Prime Consultant shall mean main consultant hired by the client/employer. Only work executed as Prime Consultant shall be considered for evaluation.
- (vii) After opening of financial bids, the work experience credentials (work experience

certificate along with other documents if any) of L-1 bidder shall be sent for verification and certification to the concerned client(s). **In case of any concealment or misrepresentation of facts, appropriate action(s) in accordance with Tender Conditions shall be taken as deemed fit.**

B. Financial Standing: The tenderers will be qualified only if they have minimum financial capabilities as below:

(i) T1 – Liquidity: The tenderer must have liquidity of at least **INR 9 Crores.**

- a) The liquidity shall be ascertained from Net Working Capital {Current Assets – (current liabilities + provisions)} as per latest audited balance sheet and/or from the Banking reference(s).
- b) Banking reference(s) should contain in clear terms the amount that the Bank will be in a position to lend for this work to the applicant/ member of the Joint Venture/Consortium. In case the Net Working Capital (as seen from the Balance Sheet) is negative, only the Banking reference(s) will be considered, otherwise the aggregate of the Net Working Capital and submitted Banking reference(s) will be considered for working out the Liquidity.
- c) The Banking references should be from a Scheduled Commercial Bank in India or from an International Bank of repute (in case of foreign vendors) acceptable to Employer as per standard performa provided in NIT as **Annexure 5** and it should not be more than 3 months old as on the date of submission of bids.
- d) In Case of JV: - Requirement of working capital is to be distributed between members as per their percentage participation and every member should satisfy the requirement for his portion.
Example: Let member-1 has percentage participation=M and member-2 has percentage participation=N. If minimum working capital required is 'W' then working capital of member-1 $\geq \frac{W \cdot M}{100}$ and working capital of member-2 $\geq \frac{W \cdot N}{100}$
- e) In case the applicant is a Joint Venture/Consortium and if Banking Reference is issued by the bank in favour of the Joint Venture/Consortium for this contract, then it will be considered for the tenderer and if the Banking reference(s) is issued in favour of any member of JV/Consortium it will be considered only for that member.

ii) T2 - Net Worth: Net Worth of tenderer during last audited financial year should be \geq **INR 12.59 Crore.**

In Case of JV/Consortium- Net worth will be based on the percentage participation of each Member.

Example: Let Member-1 has percentage participation = M and Member-2 has percentage participation =N. Let the Net worth of Member-1 is 'A' and that of Member-2 is 'B', then the Net worth of JV/Consortium will be

$$= \frac{AM+BN}{100}$$

Individual JV/Consortium partners must have +ve net worth.

iii) T3 - Annual Turnover: The average annual financial turnover from consulting works of the bidder during the last five years ending 31st March of the previous Financial Years should be \geq **INR 50.33 Crore .**

In Case of JV/Consortium- Average Annual Turnover will be based on the percentage participation of each Member.

Example: Let Member-1 has percentage participation = M and Member- 2 has = N. Let the average annual turnover of Member-1 is 'A' and that of Member-2 is 'B', then the average annual turnover of JV will be = (AM+BN)/100

iv) T4 - Bid Capacity Criteria:

Bid Capacity: The tenderers will be qualified only if their Available Bid Capacity (**As per Annexure 4 of NIT**) is more than **262.38 cr.** Available bid capacity will be calculated based on the following formula (Value shall be rounded off to two decimal places):

$$\text{Available Bid Capacity} = 2 * A * N - B$$

Where,

A = Maximum of the value of consultancy work executed in any one year during the last five financial years (updated at current price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year), taking into account the completed as well as works in progress.

N = No. of years prescribed for completion of the work of this NIT.

B = Value (updated at current price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year) of existing commitments for on-going works to be completed in next 'N' years.

In the case of a group, the above formula will be applied to each member to the extent of his proposed participation in the execution of the work. If the proposed % participation is not mentioned, then equal participation will be assumed.

Example for calculation of bid capacity in case of JV / Consortium / Group

Suppose there are 'P' and 'Q' members of the JV / Consortium / Group with their participation in the JV / Consortium / Group as 70% and 30% respectively and available bid capacity of these members as per above formula individually works out 'X' and 'Y' respectively, then Bid Capacity of JV / Consortium / Group shall be as under:

$$\text{Bid Capacity of the JV / Consortium / Group} = 0.7X + 0.3Y$$

Notes :

(a) Financial data for latest last five audited financial years has to be submitted by the tenderer in Annexure-2 of NIT along with audited balance sheets. The financial data in the prescribed format shall be certified by Chartered Accountant with his stamp, signature and UDIN. In case any discrepancy in data is found between the balance sheet and the financial information submitted, the data as available in the balance sheet will be considered.

In case audited balance sheet of the last financial year is not made available by the Tenderer, he has to submit an affidavit (Annexure 2A of NIT) certifying that 'the balance sheet has actually not been audited so far'. In such a case the financial data of previous '4' audited financial years will be taken into consideration for evaluation.

If audited balance sheet of any year other than last year is not submitted, tender may be considered as non- responsive.

(b) However, **the tenderer including all substantial members of JV / Consortium should have been incorporated more than three years earlier** from the last day of the previous month of tender submission end date. In this case, for such tenderer, the average annual turnover shall be arrived considering 'nil' turnover for the financial year(s) for which tenderer was not able to submit audited balance sheet on account of non-incorporation of tenderer. Such data shall be divided by 5 to work out the average annual turnover. In case balance sheet of the last year has not been audited so far, then data shall be divided by 4 to work out the average annual turnover.

(c) **Any certification or document required to be provided by CA, must contain UDIN** thereon and the particulars of certifications must be same as mentioned on document/certification and submitted to ICAI on its website which can be verified online. In case financial statements for any of the financial year is not required to be audited as per any relevant section of the Income Tax Act, then, same should be supported by C.A. (Chartered

Accountant) certificate along with all the GST returns, ITR-3/4 (including all the forms) and form 26AS for each of the financial year not liable to be audited as per relevant section of the income tax Act.

(d) Where the work is undertaken by a group, only that portion of the contract which is undertaken by the concerned applicant/member should be indicated and the remaining done by the other members of the group be excluded. This is to be substantiated with documentary evidence.

(e) Value of existing commitments for on-going works during completion period of this NIT w.e.f from the first day of the month of tender submission end date has to be submitted by the tenderer in **Annexure - 3 of NIT**. These data shall be certified by the Chartered Accountant with his stamp and signature with membership number and **UDIN**.

(f) In case of JV/ Consortium, the Financial standing shall be evaluated only considering the lead and substantial members.

(g) Detailed technical evaluation on QCBS method shall be carried out in accordance of Annexure 1 of ITT only for those bidders who have qualified in Minimum Eligibility Criteria as per para 1.4.2 above.

After shortlisting process, a consultant shall be selected under QCBS (Quality cum Cost Based Selection) process with **70% and 30% weights for Technical Proposal and Financial Proposal respectively**. At this stage (i.e QCBS stage), Proposal shall be rejected if it does not respond to important aspects of the Tender Document, and particularly the Terms of Reference or if it fails to achieve the **minimum technical score of 70%** (i.e 5600 marks out of 8000 marks).

Financial Proposal shall be opened only for bidders whose technical proposal is considered technically acceptable (i.e who have scored minimum technical score of 70% i.e. 5600 marks out of 8000 marks).

(h) The tender submission of tenderers, who do not qualify the minimum eligibility criteria stipulated in the clauses 1.4.2 above, shall not be considered for further evaluation and therefore rejected. If the tenderer fails to meet the eligibility and qualification criteria, then further scrutiny of other technical parameters will not be done and Financial Proposals of such Tenderers shall not be opened. The mere fact that the tenderer is qualified as mentioned in sub clause 1.4.2 shall not imply that his bid shall automatically be accepted. The same should contain all technical data as required for consideration of tender prescribed in the ITT. Technical proposals meeting the Technical requirement and found substantially responsive only will be qualified for opening of their Financial Proposal.

1.5 The Tender documents consist of :

Volume 1

- Notice Inviting Tender (including Annexures)
- Instructions to Tenderers (including Annexures)
- Form of Tender (including Appendices)

Volume 2

- General Conditions of Contract
- Special Conditions of Contract

Volume 3

- Terms of Reference (TOR)

Volume 4

- Institutional Arrangements & Project Information

Volume 5

- Pricing Document/BOQ

1.6 The tender shall be governed by the documents listed in Para 1.5 above. The tenderers may obtain further information/clarification, if any, in respect of these tender documents from the office of Chief Engineer/Contract, Uttar Pradesh Metro Rail Corporation, Administrative Building, Vipin Khand, Gomti Nagar, Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal, Lucknow - 226010

- 1.7 All tenderers are hereby cautioned that tenders containing any material deviation or reservations as described in Clause. E4 of “Instructions to Tenderers” and/or minor deviation without quoting the cost of deviations shall be considered as non-responsive and is liable to be rejected.
- 1.8 The intending tenderers must be registered on e-tendering portal **<https://etenders.gov.in/eprocure/app>**. Those who are not registered on the e-tendering portal shall be required to get registered beforehand. After registration, the tenderer will get user id and password. On login, tenderer can participate in tendering process and can witness various activities of the process. Instructions for online bid submission is attached as **Annexure A to NIT**.
- 1.9 The authorized signatory of intending tenderer, as per Power of Attorney (POA), must have valid **Class-III digital signature**. The tender document can only be downloaded or uploaded using **Class-III** digital signature. However, the tenderer shall upload their tender on <https://etenders.gov.in/eprocure/app> using class-II or class-III digital signature of the authorized signatory only.
- 1.10 Tender submissions shall be done online on **<https://etenders.gov.in/eprocure/app>** after uploading the mandatory scanned documents towards cost of tender documents such as scanned copies of transaction of payment i.e. RTGS, NEFT & IMPS and scanned copy of Tender Security/ EMD and other documents as stated in the tender document. Instructions for on-line bid submission are furnished hereinafter.
- 1.11 Submission of Tenders shall be closed on e-tendering website of Employer at the date & time of submission prescribed in NIT after which no tender shall be accepted. It shall be the responsibility of the Tenderer / tenderer to ensure that his tender is submitted online on e-tendering website **<https://etenders.gov.in/eprocure/app>** before the deadline of submission. The Employer shall not be responsible for any delay, difficulties and/or inaccessibility of the downloading and/or uploading facility from the e-procurement portal for any reason whatsoever.
- 1.12 Tenders shall be valid for a period of **180 days** (both days inclusive i.e. submission end date of tenders and the last date of period of validity of the tender) from the end date of submission of Tenders and shall be accompanied with a valid tender security/ EMD of the requisite amount as per clause C18.1 of ITT.
- 1.13 Employer reserves the right to accept or reject any or all proposals without assigning any reasons. No tenderer shall have any cause of action or claim against the Employer for rejection of his proposal.
- 1.14 Tenderers are requested to visit e-tendering portal <https://etenders.gov.in/eprocure/app> regularly for any Employer’s issued clarifications, addendum, corrigendum and/or due date extensions.
- 1.15 Employer will award the Contract to the Tenderers whose Tender has been determined to be substantially responsive and compliant to the requirements contained in the Tender Documents and who has obtained highest score as per QCBS. Variant bids are not allowed.
- 1.16 Any suit or application, arising out of any dispute or differences on account of this tender shall be filed in a competent court at Lucknow, Uttar Pradesh only and no other court or any other district of the country shall have any jurisdiction in the matter.
- 1.17 For any grievance, tenderers may contact Chief Vigilance Officer/UPMRC at Administrative Building, Vipin Khand, Gomti Nagar, Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal, Lucknow-226010, Uttar Pradesh, India, 0522-2304015 E Mail- cvo-upmrc@upmrcl.co.in.
- 1.18 UPMRC reserves its right to suspend or ban business dealings with any agency/licensee, if such agency/licensee is found to have committed misconduct or fraud or any of its action(s) fall into any such categories as laid out in the policy. Bidders are advised to read detailed banning policy uploaded on UPMRC official website i.e. www.upmetrorail.com.

- 1.19 Code of Integrity (as detailed in Rule 175 and Rule 151 of GFR, 2017 and its amendments) and penalties for violating the Govt of India, Ministry of Finance, Department of Expenditure shall apply to this Tendering Process.**

**Chief Engineer/Contract
Uttar Pradesh Metro Rail Corporation**

ANNEXURE-1 of NIT
FORMAT FOR WORK EXPERIENCE & QCBS
Relevant Services carried out in the last seven years

(To be given for each eligible project)

The following information should be provided in the format below for each 'Eligible Project' for which your firm, either individually as a corporate entity or as one of the major companies within a consortium, was legally contracted by the Employer stated below:

Nature of the Project:		
1	Project Name and Country:	
2	Project Location within the Country:	
3	Scope of the Work:	
4	Client Name & Type (Govt./Private):	
5	Tenderer's Name, Type (Single Entity/JV Consortium) & Other Details: - In case of JV/Consortium, the tenderer was lead member or other constituent member. - % participation of all JV Partners	
6	Project Start Date:	
7	Project End Date:	
8	Project Duration (in months):	
9	Cost of Project (in INR/USD):	
10	Fees Received (in INR/USD):	
11	Present Status of the Project:	Completed/ In Progress/ Not Started
12	% Completion:	Physical: Financial:
13	Project Details: (i) Length of Underground TBM Tunneling Works (kms.) (ii) Length of Elevated works containing Elevated Station (kms.) (iii) Number of Underground Stations (Nos.)	
14	Project Operational Status:	Commissioned/ Not Commissioned

15	Length of commissioned section and the total length of the MRTS Corridor/Line:	
16	Name of Senior Person (Project Director/ Project Co-ordinator/ Project Leader) involved and functions performed:	

Note:

1. Information submitted in this Annexure should be substantiated by the client certificate.
2. The evidence should contain enough details to establish the value of work done by Members of the Bidding Consortium in the relevant period.
3. If the assignment has been carried out as Joint Venture / Consortium, the share of the member(s) of the Bidding Consortium must be brought out in client certificate.
4. In case the work was done as JV/Consortium, only the value of consultancy work done by the applicant as per his Percentage participation in such JV/ Consortium must be given.

**Stamp & Signature of authorized signatory
on behalf of Tender**

ANNEXURE - 1A of NIT
Summary of Information provided in Annexure-1

Summary of Experience:

S.No.	Project Name	Fees received (in INR/USD) & % Completion	Page No. of corresponding Annexure 1
1			
2			
3			
4			
5			
.			
.			
.			
.			
.			
.			
.			
.			
.			
.			

NOTE:-

1. Submission of Annexure 1A for all works, the tenderer intends to be considered for this tender, is mandatory. Any work submitted by bidder which is not mentioned in Annexure 1 A may not be considered for evaluation.

**Stamp & Signature of authorized signatory
on behalf of Tender**

ANNEXURE – 1B of NIT

DELETED

ANNEXURE- 2 of NIT**Financial DATA****(Each Applicant or member of a JV must fill this form separately)**

Tenderer's name

Date.....

S.N.	Description	Financial Data for Latest Last 5 Years (Indian Rupees)				
		2021-22	2022-23	2023-2024	2024-2025	2025-2026
1.	Total Assets					
2.	Current Assets					
3.	Total External Liabilities					
4.	Current Liabilities					
5.	Annual Profits Before Taxes					
6.	Annual Profits After Taxes					
7.	Net Worth [= 1 - 3]					
8.	Working Capital [=2 - 4]					
9.	Return on Equity					
10.	Annual turnover (From Consultancy works)					
11.	Annual turnover					

Note:

Attach copies of the **audited balance sheets**, including all related notes, income statements for the last five audited financial years, as indicated above, complying with the following conditions.

1. Separate Performa shall be used for each member in case of JV/Consortium.
2. All such documents reflect the financial data of the Applicant or member in case of JV, and not sister or Parent Company.
3. Historic financial statements shall be audited by Statutory Auditor of the Company under their seal & stamp and shall be strictly based on Audited Annual Financial results of the relevant period(s). No statements for partial periods will be accepted.
4. Historic financial statements must be complete, including all notes to the financial statements.
5. Foreign applicants, in whose country calendar year is also the financial year, may submit all relevant data for the **last 5 years i.e. 2021, 2022, 2023, 2024,2025**. Selling rate of exchange at the close of business of the State Bank of India on the day twenty-eight days before the latest date of Tender Submittal shall be considered for calculating equivalent value in INR.
6. Return on Equity = Net Income / Shareholders Equity
Return on Equity = Net Income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock).
Shareholders equity does not include preferred shares.
7. The above Annexure shall be duly certified by Chartered Accountant / Company Auditor under his stamp, signature membership no and UDIN.

**Stamp & Signature of authorized signatory
on behalf of Tenderer**

Annexure 2A of NIT

Affidavit for Unaudited Balance Sheet

(On a non-judicial stamp paper of appropriate value)

(To be filled by the bidder' in case their Balance Sheet for **F.Y. 2025-26** has not been audited. If the Balance sheet for **F.Y. 2025-26** has been audited then the bidder need not to fill this form or may simply write "NOT APPLICABLE")

I.....(Name and designation of Authorised signatory)
of.....(Name of Company/ Firm Proprietorship/ Partnership) hereby
confirm that the Balance sheet for Financial year **F.Y. 2025-26** has actually not been audited/ or
under finalisation so far.

**Stamp & Signature of authorized signatory
on behalf of Tenderer**

ANNEXURE- 3 of NIT
WORKS IN HAND

Tenderer's name

Date.....

Name and brief particulars of contract (Clearly indicate the part of the consultancy work assigned to the applicant(s))	Name of client with telephone number and fax number	Contract Value (Give only the value of work assigned to the applicant(s) (in Crore)	Value of balance work yet to be done as on last date of previous month of tender submission end date (in Crore)	Date of Completion as per Contract Agreement	Expected Completion Date	Value of balance consultancy work to be done during completion period of this NIT (From first date of month of tender submission to next N Years where N= number of years prescribed for completion of work in NIT) (B) (in Crore)
1						
2						
3						
<u>Total</u>						

NOTE: The financial data in above prescribed format shall be certified by Chartered Accountant / Company Auditor under his stamp, signature, membership no and UDIN.

**Stamp & Signature of authorized signatory
on behalf of Tenderer**

ANNEXURE-4 of NIT
AVAILABLE BID CAPACITY

(The financial data in this prescribed format shall be certified by Chartered Accountant /Company Auditor under his signature & stamp with UDIN).

Applicant's legal nameDate.....

Financial Year	Annual turnover of Firm from Consultancy works (in Crores)	Escalated value of consultancy work executed by Firm (in Crores) (5% inflation for Indian Rupees every year and 2% for foreign currency portions per year) upto last date of previous month to tender submission end date
2021-22		
2022-23		
2023-24		
2024-25		
2025-26		
Value of consultancy work executed (in Crores)		
Maximum of escalated value of consultancy work executed by Firm (in Crores) (A)		
Value of Balance work in hand for a period of this NIT (in Crores) (B)		
Available Bid Capacity = $2 * A * N - B$ (Rs in Crores) should be more than NIT Value (Where N is number of years prescribed for completion of work in NIT)		

Stamp & Signature of authorized signatory
on behalf of Tenderer

ANNEXURE- 5 of NIT

PROFORMA FOR BANKING REFERENCE FOR LIQUIDITY

BANK CERTIFICATE

(On the letter head of Bank)

This Is to certify that M/s..... is a reputed company with a good financial standing.

If the contract for the work, namely..... is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs..... to meet their working capital requirements for executing the above contract.

-Sd-

Name of Bank _____

Senior Bank Manager _____

Address of the Bank _____

• **Change the text as follows for Joint Venture:**

This is to certify that M/s. who has formed a JV with M/s..... and M/s..... for participating in this bid, is a reputed company with a good financial standing.

If the contract for the work, namely is awarded to the above joint venture, we shall be able to provide overdraft/credit facilities to the extent of Rs..... to M/s..... to meet their working capital requirements for executing the above contract.

(This should be given by the JV members in proportion to their financial participation)

Annexure A

Instructions for Online Bid Submission

The tenderers are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the tenderers in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://etenders.gov.in/eprocure/app>.

REGISTRATION

- 1) Tenderers are required to enrol on the e-Procurement module of the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) by clicking on the link “**Online tenderer Enrolment**” on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the Tenderers will be required to choose a unique username and assign a password for their accounts.
- 3) Tenderers are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the Tenderers will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage with their profile. Digital Signature Certificate (DSC) must be obtained from any Certifying Authority empanelled with the Controller of Certifying Authority of India (e.g. Sify / nCode / eMudhra etc.), details of which are available on e-procurement portal under the link “Information about DSC”. Issuance of Digital Signature Certificate may take at least seven to ten business days, which may extend up to twenty-one business days in case of foreign applicants. Procedure for obtaining Digital Signature Certificate (DSC) by foreign applicants is available on e-procurement portal under the link “Downloads”. Tenderers are advised to plan their time accordingly and the Employer shall bear no responsibility for accepting tenders which are delayed due to non-issuance or delay in issuance of such Digital Signature Certificates.
- 5) Only one valid DSC should be registered by a Tenderer. Please note that the Tenderers are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Tenderer then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.
- 7) The Tenderers may report to the Employer by emailing to cecontract@upmrc.co.in/ cecontractlrmc@gmail.com, if they have problem with in obtaining Digital Signature Certificate or in case of any restrictions related to debarment on the portal
- 8) Instructions for entering complaint/suggestion: The grievances or suggestions can be entered from the Home Page of the Central Public Procurement Portal (<https://etenders.gov.in/eprocure/app>).
- 9) For further information and any assistance in this regard Tenderers are advised to contact e-procurement helpdesk by either:
 - a. emailing to support-eproc@nic.in
 - b. phoning (0120-4200 462, 0120-4001 002/5, 0120-6277787International Tenderers are requested to prefix +91 as country code

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate Tenderers to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the Tenderers may combine a number of search parameters such as Organization Name, Form of

Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.

- 2) Once the Tenderers have selected the tenders they are interested in; they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the Tenderers through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The Tenderer should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Tenderer should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Tenderer, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats.
- 4) Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document. **Tenderer has to ensure that size of each file should not exceed 40 MB before uploading.**
- 5) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the Tenderers. Tenderers can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Tenderer should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Tenderer will be responsible for any delay due to other issues.
- 2) The Tenderer has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Tenderer has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Tenderer should upload the scanned copy of Tender Security as per the instructions specified in the tender document. Otherwise the uploaded bid will be rejected.
- 5) Tenderers are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the tenderers. Tenderers are required to download the BOQ file, open it and complete the coloured (unprotected) cells with their respective financial quotes and other details (such as name of the tenderer). No other cells should be changed. Once the details have been completed, the tenderer should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the Tenderer, the bid will be rejected.
- 6) The server time (which is displayed on the tenderers' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the tenderers, opening of bids etc. The tenderers should follow this time during bid submission.

- 7) All the documents being submitted by the tenderers would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys.
- 8) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 9) Upon the successful and timely submission of bids (i.e. after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.
- 11) The Tenderer whosoever is submitting the tender by his digital signature certificate shall invariably upload the scan copy of the authority letter with the tender submission.

ASSISTANCE TO TENDERERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.
- 3) For any Technical queries related to Operation of the Central Public Procurement Portal Contact at:

Tel: The 24 x 7 Help Desk Number 0120-4200 462, 0120-4001 002/5, 0120-6277 787.

E-Mail: support-eproc@nic.in

International tenderers are requested to prefix +91 as country code.

TENDER NO: LKGC (02)-01

**TENDER
DOCUMENTS**

VOLUME 1

INSTRUCTIONS TO TENDERERS

INSTRUCTIONS TO TENDERERS

A. General

A1. General Description of the work

This tender is for the work LKGC (02)-01: GENERAL CONSULTANCY SERVICES FOR LUCKNOW MRTS PROJECT – PHASE 1B

A1.1 The aim of this tender is to obtain General Consultancy Services for the MRTS Project executed by UPMRC in the city of Lucknow in the state of Uttar Pradesh as per the Scope of work detailed in Volume 3.

A1.2 The Brief of MRTS Projects in the city of Lucknow in the state of Uttar Pradesh is provided in Volume 4.

A2 The Funding details of the project shall be as per Cl: 1.3.1 of NIT

A3 Eligible Tenderers

The tenders for this contract will be considered only from those tenderers (Single entity, Joint Venture (JV) or a Consortium) who meet requisite eligibility criteria prescribed in the sub-clauses of Clause 1.4.1 of NIT. .

A4 Qualification of the Tenderer

A4.1 The Tenderer shall submit a written power of attorney, duly notarized, authorising the signatory (i.e) of the Tender to commit the tenderer along with Board Resolution confirming authority on the persons issuing the Power of Attorney for such actions. In case of partnership, notarized Power of Attorney(s) and Board Resolution(s) for each member of the partnership, shall be submitted. In case of Foreign Partners, Power of Attorney(s) and Board Resolution confirming authority on the persons issuing the Power of Attorney for such actions shall be submitted duly notarized by the notary public of country of origin and should be either stamped by Embassy/High Commission or Member Countries of Hague convention may submit these document with “Apostille” stamp. Also in case the documents are in foreign language the translation of the same shall be authenticated by Embassy/High Commission.

The bidder should clearly state that partners/members in the JV/Consortium will be “jointly and severally” responsible for performance under the consulting services contract. A detailed Memorandum of Understanding (**Format as per Appendix 4 of FOT**) between the partners of such JV/Consortium **stating clearly inter-relationship and division of work/tasks among the associates and the relative financial shares** should be submitted along with the bid for proper examination by UPMRCL. A Power of Attorney (**Format as per Appendix 5 of FOT**) **signed by all members of the JV/Consortium** must accompany the bid, authorizing the lead partner to submit and negotiate the proposal on their behalf.

A4.2. Each Tenderer (each member in the case of joint venture or consortium) is required to confirm and declare with his Tender that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other item or work related to the award and performance of this Contract and declare that no agency commission or any payment which may be construed as an agency commission has been, or will be,

paid and that the tender price will not include any such amount. To fulfil this requirement, the tenderer (each member in case of JV/Consortium) has to sign the declaration given as **Appendix- 8A of FOT**. If the Employer subsequently finds to the contrary, the Employer reserves the right to declare the Tenderer as non-compliant, and declare any Contract if already awarded to the Tenderer to be null and void.

A4.3 Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a Tender will be an offence under laws of India. Such action will result in the rejection of the Tender, in addition to other punitive measures.

A4.4 Standard of Ethics

A4.4.1 Employer requires that Tenderers and Contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, Employer:

- a) will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
- b) will recognize a Tenderer or Contractor as ineligible, for a period determined by Employer, to be awarded a contract if it at any time determines that the Tenderer or the Contractor has engaged in corrupt or fraudulent practices in competing for, or in executing, another contract.
- c) Will reject a proposal for award if it determines that the tenderer has engaged any agent, middleman or any intermediary has been, or will engage to provide any services, or any other item or work related to the award and performance of this Contract and that any agency commission or any payment which may be construed as an agency commission has been, or will be, paid. To fulfil above requirements, the on tenderer (applies to each individual member in case of Joint Venture/Consortium), has to sign the declaration given as **Appendix- 8A of FOT**. If the Employer subsequently finds to the contrary, the Employer reserves the right to declare the Tenderer as non-compliant and declare any Contract if already awarded to the Tenderer to be null and void.
- d) Tenderers are required to sign the statement for Code of Integrity as per Rule 175 (1) Code of Integrity, General Finance Rule in **Annexure 8C of FOT**.

All bidders, contractors and consultants, are obliged under Code of Integrity for Public Procurement to suo-moto proactively declares any conflicts of interest (pre-existing or as soon as these arise at any stage) in any procurement process or execution of contract. Failure to do so would amount to violation of this code of integrity. Further, any bidder must declare, whether asked or not in a bid document, any previous transgressions of such a code of integrity with any entity in any country during the last three years or of being debarred by any other procuring entity. Failure to do so would amount to violation of this code of integrity.

- e) Without prejudice to and in addition to the rights of the Employer to other penal provisions as per the bid documents or contract, if the procuring entity comes to a conclusion that a (prospective) bidder/ contractor directly or through an agent, has violated this code of integrity in competing for the contract or in executing a contract, the Employer may take appropriate measures including one or more of the following:

i) If his bids are under consideration in any procurement:-

- a) Forfeiture or encashment of bid security:
- b) calling off of any pre-contract negotiations; and
- c) rejection and exclusion of the bidder from the procurement process

ii) If a contract has already been awarded:-

- a) Cancellation of the relevant contract and recovery of compensation for loss incurred by the procuring entity:
- b) Forfeiture or encashment of any other security or bond relating to the procurement.
- c) Recovery of payments including advance payments, if any, made by the procuring entity along with interest thereon at the prevailing rate,

ii) Provisions in addition to above:-

- a) Removal from the list of enlisted contractors and banning/ debarment of the bidder from participation in future procurements of the procuring entity for a period not less than one year;
- b) In case of anti-competitive practices, information for further processing may be filed under a signature of the Joint Secretary level officer, with the Competition Commission of India:
- c) Initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.

f) Tenderers are required as a condition of admission to eligibility, to execute and attach a Covenant of Integrity in the form indicated in **Annexure- 8B of FOT**.

g) Tenderers are required to sign an integrity pact in the form indicated in **Annexure- 8E of FOT**.

h) The impartial and objective exercise of the functions of the Employer, or the respect of the principles of competition, non-discrimination or equality of treatment with regard to the procurement procedure or contract, is compromised for reasons involving family, emotional life, political or national affinity, economic interest or any other shared interest. The concept of conflict of interest covers any situation where staff members (or consultants acting on behalf of the Employer who are involved in the conduct of the procurement procedure or may influence the outcome of that procedure have, directly or indirectly, a financial, economic or other personal interest which might be perceived to compromise their impartiality and independence in the context of the procurement procedure or contract execution.

A4.4.2 Furthermore, Tenderers shall be aware of the provision stated in **Clause 13 of the General Conditions of Contract**.

A5 One Tender per Tenderer

A Tenderer shall submit only one tender. If a Tenderer submits or participates in more than one tender, all such tenders shall be considered invalid and disqualified.

A6 Cost of Tendering

The Tenderer shall bear all costs associated with the preparation and submission of his tender and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tender process.

B Tender Documents

B1 Content of Tender Documents

B1.1 The Tender Documents, as listed in **Clause 1.5 of NIT** have been prepared for the purpose of inviting tenders.

B1.2 The Tenderer is expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of the Tender documents will be at the Tenderer's own risk. **Tenders that are not substantially responsive to the requirements of the Tender documents will be rejected.**

B1.3 The Tenderer shall not make or cause to be made any alteration, erasure or obliteration to the text of the Tender Documents.

B2 DELETED

B3 Clarification of Tender Documents

B3.1 The Tenderer shall check the pages of all documents against page numbers given in indexes and summaries and, in the event of discovery of any discrepancy, the Tenderer shall inform the CE/Contracts, UPMRC forthwith.

B3.2 Should the Tenderer for any reason whatsoever, be in doubt about the meaning of anything contained in the Invitation to Tender, Tender Documents, the Tenderer shall seek clarification from Chief Engineer / Contract, UPMRC, through the e-portal only.

The Employer will respond in writing to any Tenderer request for clarification received in writing prior to the last date of receiving clarifications as mentioned in the NIT. All the response(s) will only be uploaded to the e-portal. Communications between the Tenderer and the Employer shall only be in writing.

B3.3 Except for any such written clarification by CE/Contracts, UPMRC which is expressly stated to be by way of an addendum to the documents referred to in paragraphs B1.1 above and/or for any other document issued by the Employer which is similarly described, no written or verbal communication, representation or explanation by any employee of the Employer or the Engineer shall be taken to bind or fetter the Employer or the Engineer under the Contract.

B3.4 Except for Employer issued addendums, corrigendum and clarifications on the e-portal, no written or verbal communication, representation or explanation will be provided by any employee of the Employer or the Engineer.

B4. Amendment to Tender Documents

B4.1 During the tender period, the Employer may issue further instructions to Tenderers or any modifications to existing tender documents in the form of an addendum. Such an amendment in the form of an addendum will be uploaded on the e-tendering portal <https://etenders.gov.in/eprocure/app> within the date given in NIT which shall be available for all the prospective tenderers who have purchased the tender document in

the tender period. In case of delay beyond the last date of issuing addendum given in NIT, the date of submission, at its sole discretion may be extended by UPMRC under **Clause D2.6 of ITT**.

Without prejudice to the order of preference as specified in Clause 1.5 of General Conditions of Contract, the provisions in such addenda shall take priority over the Invitation to Tender and Tender Documents issued previously.

B4.2 The Tenderer should note that there might be aspects of his Tender and/or the evaluation documents submitted with the Tender that will necessitate clarification. It is intended that any aspect of the said evaluation documents and any amendments or clarification which are to have contractual effect will be incorporated into the Contract either:

- (a) by way of Special Conditions of Contract to be prepared by the Employer and agreed in writing by the Tenderer prior to and conditional upon acceptance of the Tender; or
- (b) by the Tenderer submitting, at the written request of the Employer, documents which are expressly stated to form part of the Tender, whether requested before or after submission of the documents forming part of the Tender, identified in paragraphs **C2.3 (i) to C2.3 (viii)** below, and whether as supplements to, or amended versions of such documents.

Save as aforesaid, all such amendments or clarifications shall have contractual effect.

C. Preparation of Tenders

C1 Language

Tenders and all accompanying documents shall be in English. In case any accompanying printed literature is in other languages, it shall be accompanied by an English translation. The English version shall prevail in matters of interpretation.

C2. Documents Comprising the Tender

C2.1 The Tenderer shall, on or before the date and time given in the Notice of Invitation to Tender, upload his Tender on e-tendering portal <https://etenders.gov.in/eprocure/app> in accordance with the provision in **Clause D1 of ITT**.

- Technical Package
- Financial Package, as per the provisions given in **Clause C15 below**.

Technical Package of this submission shall contain the documents referred to in the subsequent paragraphs C2.2 and C2.3 including all Annexures & Appendices of NIT, ITT and FOT respectively except pricing document as per Clause C2.2 (c).

Financial Package shall contain Bill of Quantity(BOQ) / Pricing Document of the tender documents duly filled in and complete in all respect as per **Clause C2.2 (c) (see paragraph C10 and C15)**.

In submission of the Tender (Tender Security, Technical Package and Financial Package), Tenderer(s) shall assign person(s) in writing to submit the tender accompanied by the original of the Tender Security (if Tender Security is to be submitted in form of BG/ FDR/ DD which shall be submitted in a separate envelope).

Should any further documents be required pursuant to paragraphs **C2.2 (s) and C2.3 (x)** below, the Tenderer will be instructed by the Employer which Package of the Tenderer's submission is to contain such documents.

The Tenderer shall ensure that a receipt/acknowledgement is obtained for the submission of his Tender at e-tendering portal <https://etenders.gov.in/eprocure/app>. Such receipt/ acknowledgement shall be generated by the system after successful uploading of tender submission.

C2.2 The Tenderer shall submit, as his Tender, the following documents, duly completed which in the event of acceptance of the Tender, shall form part of the Contract:

- (a) Form of Tender (Without appendices);
- (b) Appendix 1 to the Form of Tender: Requirements under General Conditions of Contract
- (c) Appendix 2 to the Form of Tender: (see paragraph C10, C15 and C23);
- (d) Appendix 3 to the Form of Tender: General Information About the Tenderer;
- (e) Appendix 4 to the Form of Tender: Memorandum of understanding;
- (f) Appendix 5 & 5A to the Form of Tender : Power of Attorney
- (g) Appendix 6 to the Form of Tender: Undertaking by JV/Consortium
- (h) Appendix 8A,8B,8C, 8D & 8E to the Form of Tender: Undertakings
- (i) Appendix 9 to the Form of Tender : Minor Deviations
- (j) Appendix 10 to the Form of Tender : Undertaking for banned/debarred/blacklisted business
- (k) Appendix 11 to the Form of Tender : Undertaking for on-going consultancy works
- (l) Appendix 12 to the Form of Tender : Undertaking for not being penalised with LD in a contract
- (m) Appendix 13 to the Form of Tender : Undertaking for Financial Stability
- (n) Appendix 14 to the Form of Tender : Pending litigation
- (o) Appendix 15 to the Form of Tender : Understanding on Sub-Contracting
- (p) Appendix 16 to the Form of Tender : Details of bank account for refund of Tender Security/EMD
- (q) Appendix 17 to the Form of Tender : Letter of submission of Technical Proposal format
- (r) Appendix 24 to the Form of Tender : Undertaking for Minimum Local Content
- (s) Appendix 25 to the Form of Tender : Performa for submission of the list of the goods, works & services tentatively proposed to be offered with local value addition.
- (t) Annexure 1 to the Instruction to tenderer: Evaluation of Technical Proposal
- (u) Annexure 1A to the Instruction to tenderer : Notes on Evaluation Methodology
- (v) Annexure 1B to the Instruction to tenderer : Summary of Technical Evaluation
- (w) Annexure 2 to the Instruction to tenderer : Financial evaluation on QCBS method
- (x) Annexure 3 to the Instruction to tenderer : Combined evaluation on QCBS method
- (y) Annexure 4 to the Instruction to tenderer : Form of Bank Guarantee for Tender

Security.

- (z) Annexure 5 to the Instructions to the tenderer: Undertaking for encashment / forfeiture of tender security
- (aa) Annexure 6 to the Instruction to tenderer : Form of Bank Guarantee for Performance Security
- (bb) Annexure 7 to the Instruction to tenderer : Verification Statement
- (cc) Annexure 8 to the Instruction to tenderer : Form of Bank Guarantee for Advance Payment
- (dd) Any further documents which have been requested in accordance with paragraph B4.2 above.

All the Annexures & Appendices of tender document downloaded from e-portal are part of Technical Package except the volume containing the Bill of Quantities (BOQ/Pricing Document) which shall be filled and submitted in Financial Package.

Tenderers should carefully read and note all the conditions and provisions mentioned in original tender documents issued by UPMRC and it shall be deemed that all the conditions and provisions of these documents have been included in their tender submission and accepted to them. The tender shall be submitted online by using class-II/III digital signature of the authorised signatory of the tenderer.

C2.3 The Tenderer shall submit with his Tender the documents that are identified in paragraphs C2.3 (i) to C2.3 (viii) inclusive. Such documents will be used for the purposes of evaluating and analyzing the Tender but will not form part of the Contract unless the same shall have been expressly incorporated into the Contract in accordance with paragraphs B 4.1 or B 4.2 above.

- (i). Letter for submission of Technical Proposal (Appendix-17 of Form of Tender)
- (ii). Firm's Experience (Annexure 1 & 1A of Notice Inviting Tender)
- (iii). Firm's Financial capabilities (Annexure 2 to 5 of Notice Inviting Tender)
- (iv). Approach Paper On Work Plan And Methodology Proposed For Performing the Assignment (Network Diagram of Activity also to Be Submitted) (Appendix-18 of Form of Tender).
- (v). Comments/Suggestions of Consultant.(Appendix-19 of Form of Tender)
- (vi). Format of Curriculum Vitae (CV) for Proposed Key Staff of the Group.(Appendix-20 of Form of Tender)
- (vii). Summary of Proposed Key Staff. (Appendix-21 of Form of Tender)
- (viii). Composition of the Team Personnel and the Task which would be assigned to each Team Member. (Appendix-22 of Form of Tender)
- (ix). Proposed Deployment Schedule for each Team Member. (Appendix-23 of Form of Tender)
- (x). Any further documents which are requested in writing by Employer before submission of the Tender by way of evaluation documents but which are not to form part of the Contract;

C2.4 Deleted

C2.5 Tenderers shall quote all prices as per Tender Conditions.

C2.6 Deleted

C3 Form of Tender

The Form of Tender shall be completed and signed by a duly authorised and empowered representative of the Tenderer. Signatures on the Form of Tender shall be witnessed and dated. Copies of relevant powers of attorney shall be attached.

C4 Deleted

C5 Deleted

C6 Tenderer's Technical Proposals

C 6.1 The Tenderer shall submit form part of its Tender, the Tenderer's Technical Proposals as described in Clause C2.

C 6.2 The Tenderer may be required to amplify, explain and develop the Contractor's Technical Proposals in substantially greater detail during the tender evaluation period such that they may be confirmed as complying clearly with the Employer's Requirements and, in accordance with paragraph B4.2 herein, can be incorporated into the Contract. Only those aspects of the Contractor's Technical Proposal that the Employer (at his sole discretion) considers clearly conforming, will form part of the Contract. All this correspondence shall be in writing.

C7. Deleted

C8. Deleted

C9 Deleted.

C10. Payment Schedule:

The payment schedule is given in Bill of Quantities/Pricing document according to which the interim on account Payment shall be made to the consultant. Payment for schedules as given in BOQ shall be made on the basis of respective BOQ payment terms and as per **GCC/SCC**.

C11. Deleted

C12.1 Staffing Schedule and Related Details

Bidders are required to provide proposed deployment schedule, for each of the Team Member (month wise and package wise), for Lucknow Metro Rail Project (**Appendix 23 of FOT**).

C12.2 The Project Director must be involved actively in the project execution. He will be required to attend all meetings/inspections conducted by UPMRC officials. He must take prior permission from UPMRC for obtaining leaves during his tenure as Project Director.

In case the JV do not follow these instructions, action shall be initiated under the conditions of contract to impose penalty or to terminate the contract.

In case, the successful tenderer is a JV/Consortium having a foreign partner and if the experience of similar works for the purpose of qualifying the minimum eligibility criteria is fulfilled by the foreign partner then the foreign partner shall submit an additional BG (In addition of performance security) of an amount equal to 1% of the contract value as per LOA for the fulfillment of the condition of deployment of key staff for the project.

The foreign partner shall submit BG from their respective bank account. BG executed from

the bank accounts of JV/Consortium or any other bank account shall not be accepted. This BG shall be valid up to the completion period of contract (claim period shall be 6 months beyond expiry date) and shall be from Scheduled Commercial Bank (including Scheduled Commercial Foreign Banks) in India in the currency in which the contract price is payable. This Bank Guarantee shall be furnished to the employer within 30 (thirty) days of receipt of the LOA.

C13 Reciprocity Clause

Entities* of countries that have been identified by the nodal Ministry/Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry/Department, except for the list of items published by the Ministry/ Department permitting their participation.

**The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.*

C14 Deleted

C15. Pricing Document

C15.1 The Pricing Document is included in Bill of Quantities (BOQ). The Tenderer shall complete the Pricing Document in accordance with the instructions given in Bill of Quantity/Pricing Document.

C16. Currencies of Tender and Payment

C16.1 **The Tenderer shall give his priced offer for BOQ in Indian Rupees only.**

C16.2 In case of JV, payment will be made to JV account and in case of Consortium, payment will be made to each member in proportion to their share in the consortium.

C17. Tender Validity

The Tender shall be valid for a period of **180 days** from Submission end date of Tenders (both days inclusive i.e. submission end date of tenders and the last date of period of validity of the tender). In exceptional circumstances, prior to expiry of the original tender validity period, the Employer may request that the Tenderers extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or by facsimile. A Tenderer may refuse the request without forfeiting his Tender Security. A Tenderer agreeing to the request will not be required or permitted to modify his tender, but will be required to extend the validity of his Tender Security for the period of extension.

C18. Tender Fee/ Tender document cost and Tender Security/ Earnest Money Deposit (EMD)

C18.1.1 Tender fee/ tender document cost:

The instrument type for payment of tender fee/ tender document cost is to be done only by RTGS, NEFT & IMPS. No other mode of payment will be accepted. The detail of Bank account of UPMRC to facilitate the payment is mentioned in key details of NIT. The bidders will be required to upload scanned copies of transaction of payment of tender fee/tender document cost including e-receipt (clearly indicating UTR No. and tender reference must be entered in remarks at the time of online transaction of payment), failing which payment may not be considered to be uploaded in online bid

submission. No copies of transaction of payment are required to be sent to the office of CE/Contracts.

Note: The payment of the tender cost is acceptable from any account. However, tenderer shall submit such transaction details along with their tender submission on e-portal. If the same transaction reference number has been submitted for more than one bids, all such bids shall be considered ineligible and summarily rejected.

C18.1.2 Tender security/ EMD

The instrument type for payment of tender security / EMD for tenders can be done by Demand Draft, Fixed Deposit Receipt (FDR), Bank Guarantee, RTGS, NEFT or IMPS.

- (a) **In case of RTGS/NEFT & IMPS transactions:** The detail of Bank account of UPMRC to facilitate the payment is mentioned in **Clause 1.2 (key details) of NIT**. Bidders shall upload the scanned copies of transaction of payment of tender security / EMD at the time of online bid submission including e-receipt (clearly indicating UTR No. and tender reference no. must be entered in remarks at the time of online transaction of payment, failing which payment may not be considered) to be uploaded in online bid submission. No copies of transaction of payment are required to be sent to the office of CE /Contracts.
- (ii) **In case of submission of tender security/EMD in one of the following forms,** “Original” is to be submitted in the office of CE/Contracts within due date and time of submission as mentioned in key details of NIT.
 - (a) Irrevocable bank guarantee issued by a Scheduled Commercial bank based in India or from a branch in India of a scheduled foreign bank in the form given in **Annexure-6 of ITT**.
 - (b) Demand Draft / Pay Order / Bank Draft in favour of “**Uttar Pradesh Metro Rail Corporation Ltd.**” payable at Lucknow from a Scheduled Commercial bank based in India,
 - (c) Fixed Deposit Receipt (FDR) of a Scheduled Commercial bank / Post office based in India duly pledged/lien in favour of “**Uttar Pradesh Rail Metro Corporation Ltd.**”
 - (d) The Tender Security shall remain valid up to the date specified in key details of NIT.

C18.1.3 To facilitate payment of Tender Fee and Tender Security through RTGS, NEFT & IMPS, the details of bank account of UPMRC is mentioned in **Clause 1.2 of NIT**. Offers submitted without the Tender Security or with invalid Tender Security shall be rejected outright.

C18.2 Any Tender not accompanied by an acceptable & valid Tender Security and Tender cost shall be rejected by the Employer considering it as non-responsive and their Technical package shall not be opened and if opened then it will NOT be evaluated. **In case validity of tender security/EMD submitted by any bidder is not as per requirement, the employer may ask from concerned bidder to extend the validity of tender security/EMD. If bidder fails to extend the validity of tender security/EMD within 15 days from date of receipt of letter from the employer, then their offer shall be rejected.**

C18.3 The Tender Security of the successful Tenderer shall be returned after receipt of

confirmation of the Performance Security submitted by the Employer in accordance with tender conditions.

C18.4 The Tender Security of tenderers who fail in technical evaluation shall be returned after opening of financial package. Tender security of the unsuccessful tenderers in financial opening shall be released after issue of the Letter of Acceptance (LOA) by the successful tenderer or finalization of tender.

C18.5 The Tender Security shall be forfeited:

- (a) if the Tenderer withdraws his Tender during the period of Tender validity; or
- (b) if the Tenderer does not accept the correction of his Tender price, pursuant to Sub-paragraph E 5.2 below;
- (c) if the successful Tenderer refuses or neglects to execute the Contract or fails to furnish the required Performance Security within the time specified by the Employer.
- (d) However, if the Tenderer withdraws his tender after opening of his financial package (in two package system) during the period of validity of his tender or in case of (c) above, beside forfeiture of tender security, the tenderer shall not only be debarred from participating in the re- tender of same work but also will be debarred from participating in any tender of UPMRC for a period of one year from the date of withdrawal of his tender or from date of issue of LOA, as the case may be.

C19. Performance Guarantee, Undertaking and Warranties

Please refer **Clause 5 of GCC/ SCC**.

C20. Labour

The Tenderer's attention is especially drawn to **Clause 10 of the GCC** in relation to the responsibility of the Consultant for obtaining an adequate supply of labour, their Rates, Wages and Conditions.

C21. Deleted

C22 Deleted

C23 Tender Index

The Tenderer shall include with his Tender an index which cross refers all of the Employer's tender requirements elaborated in these documents to all the individual sections within Technical Package and Financial Package which the Tenderer intends to be the responses to each and every one of those requirements.

C24 Pre-Tender Meeting

C24.1 A Pre-Tender meeting shall be held on the date and location given in the Key details of NIT.

C24.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

C24.3 The tenderer is requested to submit any question in writing through e-Procurement portal only before the last date of seeking clarification stated in the NIT. The Tenderers are advised to submit a copy of the queries in soft copy [word/ excel format] also in the following format

S No	Reference Clause/ Page no of tender documents	Volume/ no of	Reference to tender document clause	Queries

C24.4 The text of the questions raised by all the tenderer and the responses given will be transmitted without delay to all purchasers of the Tender Documents. Any modification of the Tender Documents listed in paragraph B1 which may become necessary as a result of the Pre-Tender meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to paragraph B4.

C25 Format and Signing of Tender

C25.1 The Tenderer shall prepare and submit their tender comprising of (but not limited to) documents described in paragraph C2 of these Instructions.

C25.2 All documents which are to be submitted as scanned documents shall be typed or written in indelible ink (in the case of copies, legible photocopies are also acceptable and all the pages shall be signed by a person or persons duly authorised to sign on behalf of the Tenderer before scanning and uploading (in .pdf / .jpg / .jpeg format), pursuant to sub-paragraphs A4.1, as the case may be. All pages of the Tender, where entries or amendments have been made, shall be initialed and dated by the person or persons signing the Tender.

C26 Deleted

D. Submission of Tenders

D1 Online Submission: Tender submissions will be made online only. The bid shall be submitted online via the e-tendering portal under “Two Cover Bid System” within the prescribed schedule specified under the **Clause 1.2 (key details) of NIT**.

D1.1 The tenderers will be required to upload scanned copies of transaction of payment of tender document cost at the time of online bid submission and No copies of transaction of payment are required to send to the office of **CE/Contract**.

D1.2 The Employer may, at his discretion, extend the deadline for submission of tenders by issuing an amendment, in which case all rights and obligations of the Employer and the Tenderer previously subject to the original deadline will thereafter be subject to the deadline as extended.

D1.3 The tenderer shall seal the “Tender Security/EMD” of format stated in **Clause C 18.1.2 (ii)** in an envelope, bearing the identification for Tender Security:

D2 Late or Delayed Tenders

D2.1 Tenders have to be uploaded on e-tendering portal <https://etenders.gov.in/eprocure/app> before the due date and time of tender submission.

D2.2 Submission of Tenders shall be closed on e-tendering website at the date & time of submission prescribed in NIT after which no tender shall be accepted. The server time

of the e-procurement portal will be considered as the standard time for referencing the deadlines for submission of the Tenders, opening of Tenders etc.

- D2.3 Employer will not be responsible for any delay, internet connection failure or any error in uploading the tender submission. The tenderers are advised to upload their submissions well before the due date and time of tender submission to avoid any problems and last minute rush. It shall be the responsibility of the Tenderer to ensure that their tender is submitted online on website procurement portal <https://etenders.gov.in/eprocure/app> before the deadline of submission.

D3 Modification, Substitution and Withdrawal of Tenders

- D3.1 No Tender shall be allowed to be modified by the Tenderer after the deadline for submission of Tenders.

- D3.2 The Tender submitted online will be taken as a final bid.

E. Tender Opening and Evaluation

E1 Tender Opening

- E1.1 Envelopes containing “Tender Security” of format stated in **Clause C 18.1.2 (ii)** will be opened first. Tenders of those tenderers who have not submitted valid “Tender Security” shall be considered as non-responsive and liable to be rejected summarily.
- E1.2 The tenders shall be opened online by the opening committee on due date and time of tender opening. On opening of the Tender, UPMRC will first check the tender cost and tender security through online mode by cross verifying with the hard copy submitted or with the details of online transaction.
- E1.3 The Technical Package of all tenderers who have submitted a valid tender security in prescribed format and cost of tender document shall be opened in the presence of representatives of tenderers who choose to attend on date & time as mentioned in tender document in the office of the CE /Contracts, UPMRC. Tenderers may visit UPMRC e-procurement web-site to know latest Technical Opening information after completion of opening process. If such nominated date for opening of Tender is subsequently declared as a Public Holiday by the Employer, the next official working day shall be deemed as the date of opening of Technical Package. The Tender of any tenderer who has not complied with one or more of the foregoing instructions may not be considered.
- E1.4 The tenderers name, details of the tender security and such other details as the Employer or his authorized representative, at his discretion, may consider appropriate will be announced at the time of tender opening.
- E1.5 The Financial Package(s) which tenderer(s) have uploaded online will be opened on a subsequent date after evaluation of technical packages. Financial packages of only those tenderers whose submissions are found substantially responsive and technically compliant as per **Clause E4 of ITT** will be opened. The time of opening of financial package shall be informed through website only. Tenderer can visit to UPMRC e-procurement website for further information.

E2. Confidentiality of Tender Information and Copyright

- E2.1 The Tender Invitation Documents, as listed in paragraph B1 above, and any addenda thereto, together with any further communications, are issued for the purpose of inviting

tenders only. The Tenderer shall not disclose any information contained in the documents or otherwise supplied in connection with this tender invitation to any third party except for the purpose of preparing its Tender. The Tenderer shall maintain complete confidentiality till the Contract is awarded. In the event that such confidentiality is breached, the Employer may reject the Tender. The tender drawings and documentation prepared by the Employer shall be used solely for the design of the works. They shall not be used in part, whole or altered form for any other purpose without the express permission in writing of the Employer. Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to tenderers or any other persons not officially concerned with such process until the award to the successful bidder has been announced.

E2.2 Any effort by a tenderer to influence the Employer/Engineer in the process of examination, clarification, evaluation and comparison of tenders and in decisions concerning award of contract, may result in the rejection of the tenderer's bid.

E2.3 Notwithstanding above, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it may do so in writing to CE Contract.

E3 Clarification of Tenders

To assist in the examination, evaluation and comparison of tenders, the Employer may, at his discretion, ask any tenderer for clarification of his tender, including breakdown of unit rates. The request for clarification and the response shall be in writing or by facsimile, but no change in the price or substance of the tender shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the tenders in accordance with paragraph E5.

Technical evaluation of technical proposals submitted by Tenderers shall be undertaken based on details submitted in the technical proposal only. Employer may at his discretion ask any tenderer for clarification on his submittals. The tenderer in response to the clarification is not permitted to submit additional information not pertaining to the clarification sought. The request for clarification and the response shall be in writing and no response leading to material change in the submittals will be permitted.

E4 Evaluation of Tenders

Tender Security and Technical packages will first be evaluated which will cover following items:

E4.1 General Evaluation: First of all it will be determined whether each tender is accompanied with the valid tender security i.e. the required amount and in an acceptable form. Tenders not accompanied with the valid tender security shall be rejected and may not be evaluated further. Other aspects of general evaluation will be done as per **Clause 1.4.2 of NIT and clauses A4.1, A4.2, A4.3 and A5 of ITT**.

E4.2 Evaluation of minimum eligibility criteria – This evaluation will be done to check if the tenderer qualifies the minimum eligibility criteria of "Work Experience", "Financial Standing" as laid down in **Clause 1.4.2 of NIT**. Tenderers, which do not qualify in any of the minimum eligibility criteria shall not be considered for further evaluation and shall be rejected.

In case of mismatch in financial data in the submitted documents i.e. in Chartered Accountant certified documents and data in audited balance sheet, the data from the audited balance sheets shall prevail. Financial Data should be given in INR only. In case,

the Financial data is any other currency, the same should be converted in INR and certified by the CA with their signature, stamp and UDIN.

Further, detailed technical evaluation on QCBS method shall be carried out in accordance of Clause E4.6 of ITT only for those bidders who have qualified in Minimum Eligibility Criteria as per para 1.4.2 of NIT.

E4.3 Evaluation of Responsiveness

The employer will determine whether each tender is substantially responsive to the requirements of the Tender Documents i.e. it conforms to all terms, conditions and specifications of the tender document. In case of any inconformity, the tender shall be disqualified and rejected.

For the purpose of this clause, a responsive tender is one, which conforms to all the terms, conditions and specifications of the tender documents without material deviation or reservation which include exceptions, exclusions & qualifications. A material deviation or reservation is one which affects in any substantial way the scope, quality, performance or administration of the works to be undertaken by the Tenderer under the Contract, or which limits in any substantial way, the Employer's rights or the Tenderers obligations under the Contract as provided for in the Tender documents and/or is of an essential condition, the rectification of which would affect unfairly the competitive position of other Tenderers presenting substantially responsive tenders at reasonable price. Statement of deviation may be brought out as per Appendix 9 of Form of Tender (FOT). If a tender is not substantially responsive to the requirements as stipulated in tender documents, it will be rejected by the Employer, and will not subsequently be permitted to be made responsive by the Tenderer by correction or withdrawal of the non-conformity or infirmity.

E4.4 Evaluation of Material deviation or reservation

Each tender shall be evaluated for any material deviation or reservation. Material deviation or reservation is one:

- which contains unauthorized changes to the Memorandum of Understanding from the Memorandum of Understanding accepted for Pre-qualification (Applicable in case of Pre-qualified tenders only); or
- which contains any deviation in tender security with regards to amount, validity, form and format; or
- which affects in any substantial way, the scope, quality or performance of the works; or
- which limits in any substantial way, is inconsistent with the Tender Documents, the Employer's right or the Tenderer's obligations under the Contract; or
- whose rectification would affect unfairly the competitive position of other tenderers presenting responsive tenders; or

Tender having any material deviation or reservation shall be disqualified and rejected.

E4.5 Evaluation of qualifying conditions

A tender containing any qualification which

- seek to shift to the Employer, another Government Agency or another contractor all or part of the risk and/or liability allocated to the contractor in the Tender Documents; or.
- include a deviation from the Tender Documents which would render the Works, or any part thereof, unfit for their intended purpose; or
- fail to submit a workable methodology and programme to suit the local conditions; or
- fail to commit to the date specified for the completion of the Works, will be deemed non- conforming and shall be rejected.

E4.6 Evaluation of Technical Proposal & other technical data:

Detailed technical evaluation on QCBS method shall be carried out in accordance of Annexure 1 of ITT only for those bidders who have qualified in Minimum Eligibility Criteria as per para 1.4.2 of NIT.

E5. Evaluation of Financial Proposals

E5.1.1 All technically acceptable tenders will be eligible for opening of their financial proposals in accordance with para 1.4.2 & 1.4.3 of NIT. The Employer shall notify all technically qualified Tenderers regarding opening of the financial proposal, such tenderers may witness the financial opening. The financial proposal(s) will then be opened online through website. Tenderers can also check financial proposal of other tenderers online.

Financial evaluation on QCBS method shall be carried out in accordance of Annexure 2 of ITT. The Combined Score of the Tenderers (Technical score and financial score in accordance with Annexure 3 of ITT) would be calculated and the Tenderer with the highest “Os” (H1) will be declared as successful Tenderer subject to approval by competent authority.

E5.1.2 The evaluation of Financial Proposals by the Employer will take into account, in addition to the tender amounts, the following factors:

- a) Arithmetical errors corrected by the Employer
- b) Such other factors of administrative nature as the Employer may consider to have potentially significant impact on contract execution, price and payments, including the effect of items or unit rates that are unbalanced or unrealistically priced.

E5.1.3 Offers, deviations and other factors, which are in excess of the requirements of the tender documents or otherwise will result in the accrual of unsolicited benefits to the Employer, shall not be taken into account in tender evaluation.

E5.1.4 Price adjustment provisions applicable during the period of execution of the contract shall not be taken into account in tender evaluation.

E5.1.5 Evaluation of financial offer will be based on quantities in Bill of quantities (BOQ) and rates quoted. Any alteration in BOQ will not be given any cognizance.

E5.1.6: Deleted

E5.2 Correction of Errors

E5.2.1 Tenders determined to be technically acceptable after technical evaluation will be checked by the Employer for any arithmetical errors in computation and summation during financial evaluation. Errors will be corrected by the Employer as follows:

- a) Where there is a discrepancy between amounts in figures and in words, the amount in words will govern in case of physical form of tendering. However, in case of e-tendering, amount in figures will govern; and
- b) Where there is a discrepancy between the unit price and the total amount derived from the multiplication of the unit price and the quantity, the unit price as quoted will normally govern unless in the opinion of the Employer there is an obviously gross misplacement of the decimal point in the unit price, in which event, the total amount as quoted will govern.

E5.2.2 If a Tenderer does not accept the correction of errors as outlined above, his tender will be rejected and the tender security forfeited.

E5.3 Comparison of Tenders

Tenders will be compared in Indian Rupees only.

E6 Negotiations

E 6.1 Negotiation with bidders after bid opening are discouraged.

E 6.2 However, if in Employer's opinion negotiations are necessary to conduct discussions and freeze technical aspects of the bid viz. ToR, methodology, staffing etc., negotiations **will be conducted with the highest ranking bidder.**

E 6.3 Negotiations will commence with a discussion of the Technical proposal, the proposed methodology (work plan), staffing and any suggestions the bidder may have made to improve the TOR. Agreement must then be reached on the final TOR, the staff and bar charts, which will indicate activities, staff, periods in the field and in the Office, staff months, logistics and reporting. Special attention will be paid to optimize the required outputs from the Consultant within the available budget and to define clearly and, if necessary, modify the inputs required from the Employer to ensure satisfactory implementation of the Assignment.

E 6.4 These discussions shall not substantially alter (or dilute) the original ToR or terms of the offer, lest the quality of the final product, its cost, and the initial evaluation be vitiated. The final ToR and the agreed methodology shall form part of the contract

E 6.5 Financial negotiations shall only be carried out if, due to technical negotiations, there is any change in the scope of work which has a financial bearing on the final prices or if the costs/cost elements quoted are not found to be reasonable. In such negotiations, the selected firm may also be asked to justify and demonstrate that the prices proposed in the contract are not out of line with the rates being charged by the consultant for other similar assignments.

E 6.6 However, in no case such financial negotiation should result in an increase in the financial cost as originally quoted by the consultant and on which basis the consultant has been called for the negotiations. If the negotiations with the selected consultant fail, the Employer shall cancel the bidding procedure and re-invite the bids.

E7 Indigenisation

E7.1 Tenderers are encouraged to involve domestic firms in the Contract organization and procurement processes. Local experts for all the disciplines are encouraged. Even in the areas suggested for foreign experts, Indian experts with proven expertise in the relevant field are encouraged.

E7.2 Substitution of Expatriate Positions - During the execution of the Contract, and subject to prior written approval of the Employer, position(s) proposed for **Expatriate professionals** may be substituted with **Local professional(s)**.

In such cases, the 'Remuneration and Associated Costs' for the Local professional shall not exceed **1.2 times the 'Remuneration and Associated Costs' applicable to the similar local position.**

For Example – If 'Expatriate PD' is substituted by 'Local PD' then the 'Remuneration and Associated Costs' for the local PD shall not exceed 1.2 times the 'Remuneration and Associated Costs' for DPD.

F Award of Contract

F1 Award

- F1.1 Subject to paragraph F2, the Employer will award the Contract to the Tenderer whose Tender has been determined to be substantially responsive and compliant to the requirements contained in the Tender Documents as per paragraph E4 and who has obtained highest combined score (Technical score & Financial Score) as per QCBS.
- F1.2 The Employer shall inform all the Tenderers regarding the contract award when publishing the evaluation results of the Financial Bids through the eProcurement portal.

F2 Employer's Right to Accept any Tender and to Reject any or all Tenders

- F2.1 The Employer is not bound to accept the successful or any tender and may at any time by notice in writing to the Tenderers terminate the tendering process. In case of termination, all tenders submitted and specifically, tender securities, shall be promptly returned to the Tenderers.
- F2.2 The Tenderer should note in particular that without prejudice to the Employer's other rights under the Contract and the Tender Security, the Employer may terminate the Contract under **Clause 12.1 of the GCC** in the event that the Tender is accepted but the Tenderer fails to supply the Performance Security or other specified documents or fails to execute the Contract Agreement as per **Clause F5**.

F3 Notification of Award

- F3.1 Prior to the expiry of the period of tender validity prescribed by the Employer, the Employer will notify the successful Tenderer online that his tender has been accepted. The letter (hereinafter and in the Conditions of Contract called 'the Letter of Acceptance') shall name the sum which the Employer will pay to the Consultant in consideration of the execution, completion, maintenance and guarantee of the services by the Consultant as prescribed by the Contract (hereinafter and in the conditions of Contract called 'the Contract Price'). The "Letter of acceptance" will be sent in duplicate to the successful Tenderer, who will return one copy to the Employer duly acknowledged and signed by the authorized signatory, within one week of receipt of the same by him. No correspondence will be entertained by the employer from the unsuccessful tenderers.
- F3.2 **The Letter of Acceptance will constitute a part of the contract.**
- F3.3 Upon "Letter of acceptance" being signed and returned by the successful Tenderer as per **Clause F3.1**, the employer will discharge / return tender securities of the unsuccessful Tenderers.
- F3.4 After notification of award, unsuccessful Tenderers may request in writing to the Employer a debriefing seeking explanations on the grounds on which their bids were not selected. The Employer shall promptly respond, in writing, to any unsuccessful Tenderers who, after the notification of award, request a debriefing.

F4 Performance Security

- F4.1 The Performance Security shall be required in accordance with **Clause 5.8 of GCC/ SCC** from the Scheduled Commercial Bank (including Scheduled Commercial Foreign Banks) in India in the currency in which the Contract Price is payable. The Performance Security shall be furnished to the Employer within 30 (thirty) days of issue of the Letter of Acceptance. The form of Performance Security is provided in **Annexure-6 of ITT**.

The Performance Guarantee should be valid for a period of 12 (Twelve) months beyond the contract completion date. Further, claim period of BG shall be 6 months beyond that expiry date of BG.

The required Performance Security for the sum mentioned above may be submitted in any one of the following forms:

- (a) Irrevocable bank guarantee in the prescribed format, given in **Annexure-6 of ITT**, issued by a Scheduled Commercial Bank based in India or from a branch in India of a Scheduled foreign bank. The bank guarantee must be issued on the Structured Financial Messaging System (SFMS) platform. A separate invoice of the BG will invariably be sent by the issuing bank to the Employer's bank through SFMS. The details of Employer's bank are given in key details of NIT. The bank guarantee issued on the SFMS platform shall only be acceptable to the Employer.
- (b) RTGS/NEFT should be in favour of Uttar Pradesh Metro Rail Corporation Ltd. payable at Lucknow from a Scheduled Commercial Bank based in India.

In case of joint venture/consortium, the Performance Security is to be submitted in the name of the JV / Consortium. Also the requirement of Performance Security shall be distributed between/among the members of JV/Consortium as per their percentage participation while ensuring the security is in the name of JV / Consortium. The constituent members shall submit Performance Security (as per their % participation in JV / consortium) from their respective bank accounts. Performance Security executed from the bank accounts of JV/Consortium or any other bank account shall not be accepted.

F5 Signing of Agreement

- F 5.1 The Employer shall prepare the Contract Agreement in the form as prescribed in Annexure 9 of ITT, with such modifications/notifications as may be necessary for duly incorporating all the terms of agreement between the two parties within 30 days of confirmation of BG towards Performance Security, but no sooner than 10 days from the date of issue of Letter of Acceptance the successful tenderer will be required to execute the Contract agreement.
- F 5.2 Failure of the successful Tenderer to comply with the requirements of paragraphs F4 and F5 shall constitute sufficient grounds for the annulment of the award and action shall be taken as per tender conditions and tender security shall be forfeited.

G Settlement of Disputes of the Tender Process

Any suit or application, arising out of any dispute or differences on account of this tender shall be filed in a competent court at Lucknow, Uttar Pradesh only and no other court or any other district of the country shall have any jurisdiction in the matter.

Instruction To Tenderers

Annexure 1 Evaluation of Technical Proposal

Technical proposal submitted along with letter (Appendix-17 of FOT) should cover in detail the following:

- a) The background and experience of the bidder firm including a list of past and present work of a nature similar to this project in the last seven years (**Annexure 1 & 1A of NIT**).
- b) The general Approach and Methodology proposed for carrying out the services covered in the Terms of Reference, including such detailed information as deemed relevant, together with:
 - i. A detailed overall work programme and a bar chart indicating the duration and the timing of the assignment of each expert or other staff member assigned to the project.
 - ii. Estimate of the total number of man-months required, both expatriate and local, with expertise break up thereof; and
 - iii. A clear description of the responsibilities of each expert staff member within the overall work programme.
- c) The name, background and professional experience of each key staff member to be assigned to the project, with particular reference to his experience of work of a nature similar to that of the proposed assignment. (**See Appendix-22 of FOT**).
- d) Entire scope of work as mentioned in the Terms of Reference appended to this letter is required to be covered.

To enable Technical Evaluation to be done precisely, the bidder should give full details with particular reference to the following:

- A) Relevant services carried out in the “Eligible Projects” (Annexure 1 of NIT), completion date(s) of which falling during last Seven years ending last day of the month previous to the month of tender submission end date shall be evaluated under QCBS method. The evaluation methodology is mentioned in Annexure 1A of ITT.
 - ☐ “**Eligible Projects**” means “Similar works” as specified in clause 1.4.2 of NIT, in which received fees/ payment should **not be less than INR 105 crore (including all taxes except GST)**. Amounts relating will be escalated at 5% per annum (simple interest) (for rupee costs) and 2% per annum (simple interest) (for foreign currency costs) up to last day of the month previous to the month of tender submission end date. Selling rate of exchange at the close of business of the State Bank of India on the day twenty-eight days before the latest date of Tender Submission end date shall be considered for calculating equivalent INR.
- B) DELETED
- C) The nature of services to be carried out by each JV/Consortium Member should be clearly spelt out in the MOU (**Appendix- 4 of FOT**).
- D) All **K1 & K2 level positions** under this tender shall be treated as **Key Staff (Positions)**. The positions to be considered under the QCBS process are listed in **Annexure 1C of the ITT**, and the **CVs for these positions must be submitted along with the bid**.

- i. The marks allotted to each such position are indicated in Annexure 1C and will be evaluated as per **Criteria IV(ii) of Annexure 1A of the ITT**, based on the details furnished in the submitted CVs.
- ii. CVs shall be submitted strictly in the format prescribed in **Appendix-20 of the Form of Tender (FOT)**.
- iii. Further, Post award of contract also all the CVs are required to be submitted as per format prescribed in **Appendix-20 of the Form of Tender (FOT) along with Appendix-21 of FOT**.

E) Bidders may note the same while giving details in Appendix-21 and Appendix-22 of FOT.

Category K1 = Chief of the respective task/position. (The ' K1 (E)' positions are to be manned by Expatriates.)

Category K2 = Deputy/assisting position. He is next in hierarchy in that tasks/positions and will deputize for K1 whenever required

F) CVs of the Key Staff (which are to be technically evaluated) (**Appendix- 20 of FOT**).

G) Network diagram of Activity in the Work plan and Methodology proposed for performing the assignment. (**Appendix- 18 of FOT**)

- The Employer will carry out technical evaluation of proposals on the basis of their responsiveness to the tender document in particular the Terms of Reference, applying the evaluation criteria, sub-criteria, and weightages/ point system specified in the Tender document. Each responsive Proposal will be given a technical score (Ts). **A Proposal shall be rejected at this stage if it does not respond to important aspects of the Tender Document**, and particularly the Terms of Reference or if it fails to achieve the minimum technical score of 70% (i.e. 5600 marks out of 8000marks).

Following criterion/weightages shall be used for carrying out Technical evaluation:

Criterion No	Criterion	Weightage (%)
I	Specific experience of the Tenderer	40
II	Financial Strength of the Tenderer	15
III	Proposed Methodology & work plan in responding to the TOR	05
IV	Manpower Strength & Competency of Key Staff (CVs)	40
TOTAL		100

(I) There will be total 8000 marks distributed as per the %age given for four criterion in the above table.

(II) Evaluation for these four criterion (viz. Criterion I, II, III & IV) will be based on methodology explained below under Annexure 1A (Notes on Evaluation Methodology).

(III) The evaluation committee appointed by employer will carry out technical evaluation. Each technical proposal will be attributed a technical Score (Ts). There will be 8000 marks for technical proposal. The highest Technical Proposal will receive the maximum score of

8000 marks. The score for (each) other Technical Proposal is inversely proportional to its score and will be computed as follows:

$$T_s = 8000 \times T / T_H \text{ where:}$$

T_s is the technical score of the technical Proposal being evaluated, T_H is the marks of the highest Technical Proposal, & T is the Score of the Technical Proposal under consideration.

Instruction to Tenderers**Annexure 1A****Notes on Evaluation Methodology****A. Criterion I - Specific experience of the Tenderer (40% of total marks i.e. 3200 marks) :**

- (i) For “**Number of Years of Experience in Consultancy services for infrastructure works**” (25% of marks under criterion I i.e. 800 marks):

S.No.	Criteria	% Marks	Marks	Document
1	Experience \geq 30 years	100 %	800/800	Copy of First work order & completion certificate issued by client as per cl 1.4.2 of NIT
2	$20 \leq$ Experience < 30 years	75%	600/800	
3	$10 \leq$ Experience < 20 years	50%	400/800	
4	Experience < 10 years	0%	0/800	

For JV/Consortium each firm shall be evaluated separately and arithmetic average of those marks shall be awarded to JV/Consortium. Example – A JV/Consortium having three members – ‘A’, ‘B’ and ‘C’ and each getting ‘x’, ‘y’ and ‘z’ marks respectively on individual evaluation. Then JV/Consortium shall be awarded $\{(x+y+z)/3\}$ marks.

- (ii) For “**Number of Years of Experience in Consultancy services for infrastructure works in India**” (25% of marks under criterion I i.e. 800 marks):

S.No.	Criteria	% Marks	Marks	Document
1	Experience \geq 15 years	100 %	800/800	Copy of incorporation (Registration) certificate in India
2	$10 \leq$ Experience < 15 years	75%	600/800	
3	$05 \leq$ Experience < 10 years	50%	400/800	
4	Experience < 05 years	0%	0/800	

For JV/Consortium each firm shall be evaluated separately and arithmetic average of those marks shall be awarded to JV/Consortium. Example – A JV/Consortium having three members – ‘A’, ‘B’ and ‘C’ and each getting ‘x’, ‘y’ and ‘z’ marks respectively on individual evaluation. Then JV/Consortium shall be awarded $\{(x+y+z)/3\}$ marks.

- (iii) “**Experience on eligible projects**” (25% of marks under criterion I i.e. 800 marks):
The bidder having completed 5 or more number of eligible projects will get 100% of the maximum marks for this sub-criterion. Other bidders having done lesser number of eligible projects will be awarded proportioned marks based on proportion of number of eligible projects carried out/being carried out by them.

For example if bidder A, B & C have done 7, 5 and 4 nos of eligible projects respectively, then they will be awarded marks under this sub criteria as under-

Bidder A= 100% Marks (since no. of projects done >5)

Bidder B = 100% Marks (Since no. of projects done=5)

Bidder C = $\frac{4}{5} \times 100 = 80\%$ Marks (Proportion= $\frac{\text{No. of eligible projects done}}{5} \times 100$)

Evaluation shall be based on details provided in Annexure 1 & 1A of NIT along with necessary certificates.

- (iv) Quantity of project delivered** (25% of marks under Criterion-I i.e. 800 marks): For the works undertaken under “categories” specified below, the bidder having executed/provided services in maximum 5 eligible projects shall be evaluated. For this purpose, out of the list of eligible projects submitted by the bidders (in Annexure 1A), in case it consists of more than 5 eligible Projects, cumulative value of first 5 such projects in the list shall be considered for working out the cumulative quantity of project delivered and other shall not be considered for evaluation.

“Categories” of work undertaken:

(A) Underground TBM tunneling works (300 marks):-

S.No.	Criteria	% Marks	Marks	Document
1	Cumulative Length ≥ 15 km	100 %	300/300	Copy of performance certificates issued by client as per cl 1.4.2 of NIT
2	$10 \leq$ Cumulative Length < 15 km	75%	225/300	
3	$05 \leq$ Cumulative Length < 10 km	50%	150/300	
4	Cumulative Length < 05 km	0%	0/300	

(B) Elevated works containing Elevated Stations (300 marks):-

S.No.	Criteria	% Marks	Marks	Document
1	Cumulative Length ≥ 15 km	100 %	300/300	Copy of performance certificates issued by client as per cl 1.4.2 of NIT
2	$10 \leq$ Cumulative Length < 15 km	75%	225/300	
3	$05 \leq$ Cumulative Length < 10 km	50%	150/300	
4	Cumulative Length < 05 km	0%	0/300	

(C) Underground Stations(200 marks):-

S.No.	Criteria	% Marks	Marks	Document
1	Cumulative numbers ≥ 15 nos.	100 %	200/200	Copy of performance certificates issued by client as per cl 1.4.2 of NIT
2	$10 \leq$ Cumulative numbers < 15 nos.	75%	150/200	
3	$05 \leq$ Cumulative numbers < 10 nos.	50%	100/200	
4	Cumulative numbers < 05 nos.	0%	0/200	

Evaluation shall be based on details provided in Annexure 1 & 1A of NIT. The details should be substantiated with necessary certificates from Client clearly highlighting the project records claimed.

B. Criterion II - Financial Strength of the Tenderer (15%of total marks i.e. 1200 marks) :

- (i) For '**Average Annual turnover**' (35% of marks under criterion I i.e. 420 marks):

The turnover shall be calculated as per the provision of 1.4.2 B (iii) of NIT for the last five years.

S.No.	Criteria	% Marks	Marks
1	Turnover \geq 250 cr	100 %	420/420
2	100 cr \leq Turnover < 250 cr	75%	315/420
3	50.33 cr \leq Turnover < 100 cr	50%	210/420
4	Turnover < 50.33 cr	0%	0/420

- (ii) For '**BID Capacity**' (35% of marks under criterion I i.e. 420 marks)

The Bid Capacity shall be calculated as per the provision of 1.4.2 B (iv) of NIT

S.No.	Criteria	% Marks	Marks
1	Bid Capacity \geq 650 cr	100 %	420/420
2	450 \leq Bid Capacity < 650 cr	75%	315/420
3	262.38 \leq Bid Capacity < 450 cr	50%	210/420
4	Bid Capacity < 262.38 cr	0%	0/420

- (iii) For '**Project Size**' (30% of marks under criterion I i.e. 360 marks)

S.No.	Criteria	% Marks	Marks
1	Consultancy project of value \geq 650 cr	100 %	360/360
2	450 \leq Consultancy project of value < 650 cr	75%	270/360
3	262.38 \leq Consultancy projects of value < 450 cr	50%	180/360
4	Consultancy projects of value < 262.38 cr	0%	0/360

For this purpose, out of the list of eligible projects submitted by the bidders (Annexure 1 & 1A), in case it consists of more than 5 eligible Projects, cumulative billed (payment received) value of first 5 such projects in the list shall be-considered for working out the cumulative project size and other shall not be considered for evaluation.

C. Criterion III-- Proposed Methodology & work plan responding to the TOR:- (05% of total marks i.e. 400 marks)

- (i) **TOR Understanding & Methodology** (50% of marks under Criterion III i.e. 200 marks):

Performance Level	Description	% of Max Marks
Excellent	Fully meets or exceeds requirements with clarity, integration, and logic: This includes the following points:- - Provides a tailored methodology backed by practical tools and innovative practices. - Presents logical sequencing of activities with well-justified timelines. - Uses diagrams, schedules, flowcharts and relevant Indian/International benchmarks.	100%
Very Good	Covers all required aspects in detail, with good alignment and structure: This includes the following points:- - Provides a tailored methodology backed by practical tools and innovative practices. - Presents logical sequencing of activities with well-justified timelines.	75%
Good	Covers minimum requirements adequately and logically: This includes the following points:- - Basic scope of work - Generic template - Little or no project specific tailoring	50%
Average	Incomplete, inconsistent, generic, or poorly aligned with work plan	0%

(ii) **Work Plan** (50% of marks under Criterion II i.e. 200 marks) :

Sub-Criterion	Max Marks
A. Project Organization Setup	100
(i) Organization Chart (roles- clearly showing reporting lines)	20
(ii) Schedule with Staff Deployment Plan (table with names, roles, responsibilities, location, durations)	30
(ii) Milestone and Deliverables.	50
B. Head Office Support System (Details of Head Office Support Plan)	100
Total	200

Each sub-criterion shall be scored using the following **grading bands**:

Performance Level	Description	% of Max Marks
Excellent	Fully meets or exceeds requirements with clarity, integration, and logic - Presents logical sequencing of activities with well-justified timelines.	100%

Performance Level	Description	% of Max Marks
	- Uses diagrams, schedules, flowcharts and relevant Indian/International benchmarks.	
Very Good	Covers all required aspects in detail, with good alignment and structure: - Presents logical sequencing of activities with well-justified timelines.	75%
Good	Covers minimum requirements adequately and logically: - Generic template - Little or no project specific tailoring	50%
Average	Incomplete, inconsistent, generic, or poorly aligned with work plan	0%

D. Criterion IV – Manpower Strength & Competency of Key Staff (CVs) (40% of the total marks i.e. 3200 marks):

(i) **Regular Employee Strength** (25% of marks under Criterion IV i.e. 800 marks):-

S.No.	Criteria	% Marks	Marks	Document
1	Regular Employee \geq 500 nos	100 %	800/800	Certificate from Auditor with UDIN.
2	300 nos \leq Regular Employee < 500 nos	75%	600/800	
3	150 nos \leq Regular Employee < 300 nos	50%	400/800	
4	Regular Employee < 150 nos	0%	0/800	

Regular Employee shall mean technical staff holding a permanent position with the firm with no defined end date.

For JV/Consortium cumulative employee strength of all partners shall be considered. Example – A JV/Consortium having three members – ‘A’, ‘B’ and ‘C’ and each having Regular Employee as ‘x’, ‘y’ and ‘z’ respectively. Then Regular Employee considered shall be (x+y+z).

(ii) **Competency of Key Staff (CVs)** (75% of marks under Criterion IV i.e. 2400 marks):-

All positions considered under QCBS process as listed in **Annexure 1C of ITT** shall be evaluated under following subheads. An indicative marks distribution for this criterion is placed in Annexure 1B of ITT.

a) Professional Qualification:

i. **Educational Qualifications** (Weightage: 20%.)

Following criteria will be used for awarding rating/marks:

Post-Graduation in Engineering/MBA/PGDMA after Engineering Graduation degree in respective field	100%
Engineering Graduates in respective field	75%

ii. **Professional Training/ Membership of Professional organization**
(Weightage: 5%)

- Short term training courses not less than a week (1 mark per course)
- Membership of Professional organization (1 mark per membership)

b) Experience in the assigned task (Weightage: 50%)

S.N	Minimum requirement	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	Additional marks in case of more qualification / experience than minimum requirement
1	Cumulative Experience in the same rank or equivalent for at least 1 year in relevant MRTS/RRTS/High Speed Rail Projects.	50%	60%	5% of maximum marks for every additional 6 months post minimum requirement.

- Experience at rank one rank below will be given marks at half of above
- Experience(s) at further below rank will not be evaluated.

(Only the continuous experiences not less than 06 months shall be added together to arrive at cumulative experience. Cumulative value of Experiences in years shall be rounded off to lower 0.5)

c) Language proficiency in English (Weightage: 5%)

- Full marks if the candidate can speak English.

d) Country experience (Weightage: 20%)

- (i) **For positions to be filled by foreign/expatriate experts** [see Annexure 1C of the ITT):

S.N	Minimum requirement	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	Additional marks in case of more qualification / experience than minimum requirement
1	Cumulative Experience in Developed country (economies) for at least 2 years in relevant MRTS/RRTS/High Speed Rail Projects	60%	60%	5% of maximum marks for every additional 6 months post minimum requirement..
2	Cumulative Experience in India for at least 01 year in relevant MRTS/RRTS/High Speed Rail Projects	30%	70%	5% of maximum marks for every additional 6 months post minimum requirement.
3	Cumulative Experience in other developing countries for at least 01 year in relevant MRTS/RRTS/High Speed Rail Projects	10%	100%	

For this purpose all relevant experience (not necessarily in the position concerned) will be counted. However, **only the continuous experiences not less than 01 year in a country shall be added together to arrive at cumulative experience. Cumulative value of Experiences in years shall be rounded off to lower 0.5.**

(ii) **For all other positions:**

S.N	Minimum requirement	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	Additional marks in case of more qualification / experience than minimum requirement
1	Cumulative Experience in other countries except India for at least 01 year in relevant MRTS/RRTS/High Speed Rail Projects	50%	50%	5% of maximum marks for every additional 6 months post minimum requirement.
2	Cumulative Experience in India for at least 01 years in relevant MRTS/RRTS/High Speed Rail Projects	50%	50%	5% of maximum marks for every additional 6 months post minimum requirement.

For this purpose all relevant experience (not necessarily in the position concerned) will be counted. However, **only the continuous experiences not less than 01 year in a country shall be added together to arrive at cumulative experience. Cumulative value of Experiences in years shall be rounded off to lower 0.5.**

- (iii) In view of physically and mentally demanding nature of work requiring continuous involvement of key staff and strict project targets, it would be desirable that experts having age less than 65 years be deputed as key staff.

The various positions under clause D of Annexure 1 of ITT and which are required to be evaluated in QCBS carry different weights. The Distribution of marks for each position is shown in **Annexure 1C of ITT**.

Bidders should note that if they do not provide required details or required documentary evidence or provide it in incomplete form or provide it late, UPMRC based upon its own interpretation and judgement of the available information / evidence, and best interest of the assignment may either award no marks or award such marks as it may deem appropriate.

Note to Bidders:

- i) All the client certificates or Documents submitted by tenderer from member countries of Hague Convention shall be duly apostilled. For other countries, same shall be submitted duly notarized by the notary public of origin & stamped by Embassy/High Commissioner These to be submitted in original along with the bid.
- ii) For the professionals (key staff and others), the minimum eligibility viz. educations qualification, experience etc. is detailed in Annexure 1 of Pricing Document.

Instruction to Tenderers

Annexure 1B

Maximum Marks under various subheads as per Criterion IV(ii) of Annexure 1A of ITT																													
Sr.No	Category	Description	Total Maximum Marks for individual position	(a) Professional Qualification		(b) Experience in the assigned task			(C) Language Proficiency in English	(D) Country Experience																			
				(i) Educational Qualifications			(ii) Professional Training/Membe rship of Professional Organization			Cumulative Experience in the same rank or equivalent for at least 1 year in relevant MRTS/RTTS/High Speed Rail Project			(i) For Expat Positions Only						(ii) For all other positions										
													Minimum Requirement						Minimum Requirement										
													(i) Cumulative Experience in Developed country (economies) for at least 2 years in relevant MRTS/RTTS/High Speed Rail Projects			(ii) Cumulative Experience in India for at least 01 year in relevant MRTS/RTTS/High Speed Rail Projects			(iii) Cumulative Experience in other developing countries for at least 01 year in relevant MRTS/RTTS/High Speed Rail Projects			(i) Cumulative Experience in other countries except India for at least 01 year in relevant MRTS/RTTS/High Speed Rail Projects			(ii) Cumulative Experience in India for at least 01 years in relevant MRTS/RTTS/High Speed Rail Projects				
													Post Graduation in Engineering/ MBA/PGDMA after Engineering Graduation degree in respective field	Engineering Graduate in respective field	Short term traning courses not less than a week (1 mark per course) or Membership of Professional organization (1 mark per membership)	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement -	Additional marks in case of more qualification / experience than minimum requirement	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	Additional marks in case of more qualification / experience than minimum requirement	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	Additional marks in case of more qualification / experience than minimum requirement	Maximum Marks	% Marks (of maximum marks) for fulfillment of minimum requirement	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	Additional marks in case of more qualification / experience than minimum requirement
									Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	5% of maximum marks for every additional 6 months post minimum requirement.	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	5% of maximum marks for every additional 6 months post minimum requirement.	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	5% of maximum marks for every additional 6 months post minimum requirement.	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	5% of maximum marks for every additional 6 months post minimum requirement.	Maximum marks	% Marks (of maximum marks) for fulfillment of minimum requirement	5% of maximum marks for every additional 6 months post minimum requirement.						
1	K1E	Project Director	250	50	37.5	12.5	125	75	6.25 marks for every additional 6 months subject to maximum of 50 marks	12.5	30	18	1.5 marks for every additional 6 months subject to maximum of 12 marks	15	10.5	0.75 marks for every additional 6 months subject to maximum of 4.5 marks	5	5	NA	NA	NA	NA	NA	NA					
2	K1D	Deputy Project Director	200	40	30	10	100	60	5 marks for every additional 6 months subject to maximum of 40 marks	10	NA	NA	NA	NA	NA	NA	NA	NA	20	10	1 marks for every additional 6 months subject to maximum of 10 marks	20	10	1 marks for every additional 6 months subject to maximum of 10 marks					
3	K1		175	35	26.25	8.75	87.5	52.5	4.375 marks for every additional 6 months subject to maximum of 35 marks	8.75	NA	NA	NA	NA	NA	NA	NA	NA	17.5	8.75	0.875 marks for every additional 6 months subject to maximum of 8.75 marks	17.5	8.75	0.875 marks for every additional 6 months subject to maximum of 8.75 marks					
4	K2		140	28	21	7	70	42	3.5 marks for every additional 6 months subject to maximum of 28 marks	7	NA	NA	NA	NA	NA	NA	NA	NA	14	7	0.7 marks for every additional 6 months subject to maximum of 7 marks	14	7	0.7 marks for every additional 6 months subject to maximum of 7 marks					

Instruction to Tenderers**Annexure 1C**

A. QCBS & other Positions Details				
SN	Position	Department	Designation	Lucknow MRTS
# - CV to be submitted with bid and shall be part of QCBS process.				
#(maximum marks) – Maximum Marks for such positions, considered for QCBS process, are shown within Brackets				
© - Positions Part of Project Management Committee (PMC)				
Ω – GC Personnels to be mobilized within 30 days (only after the approval from UPMRC) from NTP.				
1. PROJECT MANAGEMENT				
(A) PD & DPD's				
1.A.1	K1 E ©	Management	Project Director - EXPAT	Ω 1 # (250)
1.A.2	K1D ©	Management	Dy. Project Director (Civil)	Ω 1 # (200)
1.A.3	K1D©	Management	Dy. Project Director (Systems)	Ω 1 # (200)
1.A.4	K3 ©	Management	Project Management Officer	Ω 1
1.A.5	K4	Management	Alignment Engineer	Ω 1
(B) Planning and Co-ordination (Interface) Department				
1.B.1	K1©	Planning & Co-ordination (Interface)	Chief Planning & Co-ordination (Interface) Expert	Ω 1 # (175)
1.B.2	K2	Planning	Senior Program Expert	Ω 1
1.B.3	K2	System Interface	Senior System Interface Expert	Ω 1
1.B.4	K4	Planning	Senior Program Engineer	Ω 1
1.B.5	K4	Planning	Senior Program Engineer (Systems)	Ω 1
(C) Contract, Cost and Finance Department				
1.C.1	K1 ©	Contract, Cost & Finance	Chief Contract, Cost & Finance Expert	Ω 1 # (175)
1.C.2	K2	Contract	Senior Contract Expert	Ω 1 # (140)
1.C.3	K2	Cost & Finance	Senior Cost Control Expert	Ω 1
2. CIVIL DEPARTMENT				

(A) Project Execution (C&C) Department				
2.A.1	K2	Execution-UG	Senior Project Manager C&C	1 #(140)
(B) Project Execution- Tunnel Department				
2.B.1	K2	Execution-Tunnel	Senior Project Manager (Tunnel)	1 #(140)
(C) Quality Department				
2.C.1	K2	Quality	Senior QA Expert	1 #(140)
(D) Safety Department				
2.D.1	K2	Safety	Senior Safety Expert	1 #(140)
3. SYSTEMS DEPARTMENT				
(A) Traction Department				
3.A.1	K2	Traction	Senior Traction Power Expert	1 #(140)
(B) Signalling Department				
3.B.1	K2	Signalling	Senior Signalling Expert	1 #(140)
(C) Telecom Department				
3.C.1	K2	Telecom	Senior Telecom Expert	1 #(140)
(D) Rolling Stock Department				
3.D.1	K2	Rolling Stock	Senior Rolling Stock Expert- Electrical & Mechanical	2 #(280)

* Total Marks = 2400 as per Criterion IV (ii) of Annexure 1A of ITT.

Instructions to Tenderers
Annexure –2

Financial evaluation of bid on QCBS Method

The evaluation committee appointed by employer will carry out financial evaluation. Each financial proposal will be attributed a Financial Score (F_s). There will be 2000 marks for financial proposal. The lowest Financial Proposal will receive the maximum score of 2000 marks. The score for each other Financial Proposal is inversely proportional to its price and will be computed as follows:

$$F_s = 2000 \times F_L / F \text{ where:}$$

F_s is the financial score of the Financial Proposal being evaluated, F_L is the quoted price of the lowest priced Financial Proposal, & F is the quoted price of the Financial Proposal under consideration.

Instructions to Tenderers
Annexure –3

Combined evaluation of bid on QCBS Method

The technical proposals has a weightage of 70% and the financial proposals has a weightage of 30%.

Final evaluation will be based on the combined score (Os) obtained by each consultant and shall be ranked highest (H1) to lowest in accordance with their total marks obtained.

Final overall score or Combined score (Os) shall be calculated as:

$$\mathbf{Os = (Ts \times 0.7) + (Fs \times 0.3)}$$

The Combined Score of the Tenderers would be calculated and the Tenderer with the highest “Os” (H1) will be declared as successful Tenderer subject to approval by competent authority.

Technical Score (Ts), Financial Score (Fs) and Combined Score (Os) shall be rounded off up to two decimal places.

In case more than one Tenderer has equal Combined Score (S), then tender shall be awarded to the **bidder with highest technical score**

If any dispute arises out of or in connection with the Agreement then senior representatives of the Parties with authority to settle the dispute shall, within twenty- eight (28) days of a written request from one Party to the other, meet in order to attempt to resolve the dispute amicably.

Instructions to Tenderers
Annexure 4 (As per Clause C18.1)
FORM OF BANK GUARANTEE FOR TENDER SECURITY

(To be stamped in accordance with Stamp Act, if any, of the country of issuing bank)

1. KNOW ALL MEN by these presents that we (Name of Bank) having our registered office at (Name of country) (here in after called “the Bank”) are bound unto Uttar Pradesh Metro Rail Corporation Limited (hereinafter called “the Employer”) in the sum of Rs..for which payment will and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents.
2. WHEREAS.....(Name of Tenderer) (hereinafter called “the Tenderer”) has submitted its tender dated for (Name of the work as per clause 1.1 of NIT) hereinafter called the tender.

AND WHEREAS the Tenderer is required to furnish a Bank Guarantee for the sum of Rs..... as Tender Security against the Tenderer’s offer as aforesaid.

AND WHEREAS.....(Name of Bank) have, at the request of the Tenderer, agreed to give this guarantee as hereinafter contained.

3. We further agree as follows:
 - a. That the Employer may without affecting this guarantee grant time or other indulgence to or negotiate further with the Tenderer in regard to the conditions contained in the said tender and thereby modify these conditions or add thereto any further conditions as may be mutually agreed upon between the Employer and the Tenderer.
 - b. That the guarantee hereinbefore contained shall not be affected by any change in the constitution of our Bank or in the constitution of the Tenderer.
 - c. That any account settled between the Employer and the Tenderer shall be conclusive evidence against us of the amount due hereunder and shall not be questioned by us.
 - d. That this Guarantee commences from the date hereof and shall remain in force till
 - e. That the expression ‘the Tenderer’ and ‘the Bank’ herein used shall, unless such an interpretation is repugnant to the subject or context, include their respective successors and assigns.
4. **THE CONDITIONS OF THIS OBLIGATION ARE:**
 - a. if the Tenderer withdraws his Tender during the period of Tender validity specified in the Form of Tender, or
 - b. if the Tenderer does not accept the correction of his tender price in terms of Clause **E5.2** of the “Instructions to Tenderers”.
 - c. if the Tenderer having been notified of the acceptance of his tender by the Employer during the period of tender validity:
 - i. fails or refuses to furnish the Performance Security in accordance with Clause **F 4.1** of the “Instructions to Tenderers” and/or

- ii. fails or refuses to enter into a Contract within the time limit specified in Clause **F 5** of the “Instructions to Tenderers”.
- iii. fails or refuse to furnish the unconditional acceptance of LOA within the time limit specified in clause **F3.1 of ITT**.

We undertake to pay to the Employer mere on demand without demur upto the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of any one or more of the conditions (a), (b), (c) mentioned above, specifying the occurred condition or conditions.

Notwithstanding anything contained herein:

- (a) Our liability under this Bank Guarantee shall not exceed Rs.....
(Rupees.....)
- (b) This Bank Guarantee shall be valid up to
- (c) We are liable to pay the guarantee amount or part thereof under this Bank Guarantee only & only if you serve upon us a written claim or demand on or before.....

**Signature of
Authorized Official of the Bank**

Signature of Witness

Name of Official

Name :

Designation

.....

Address :

Stamp/Seal of the
Bank.....

Notes:

- i. Stamp paper of appropriate value shall be purchased in name of the bank who issues the Bank Guarantee.
- ii. The Bank Guarantee shall be issued from Scheduled Commercial Bank in India.
- iii. Bank Guarantee should be issued on Structured Financial Messaging System (SFMS) platform.
- iv. In case of JV/ Consortium, Tenderer may submit BG for Tender Security/ EMD in the name of JV/ Consortium or in the name of any partner.
- v. The bank details of UPMRC has been given in key details of NIT for the preparation of Bank Guarantees:
- vi. The claim period of BG shall be 6 months beyond the expiry date of BG.

Instructions to Tenderers
Annexure – 5

**UNDERTAKING FOR ENCASHMENT / FORFEITURE OF TENDER
SECURITY
(Refer Clause C 18 of ITT)**

We, _____ (Legal Name of JV / Consortium) hereby confirm that Tender Security submitted in the form of FDR / Bank Guarantee (tick whichever is applicable) for the Contract _____ (Contract No.) in the name of _____ (name of the substantial member of JV / Consortium on whose name Tender Security is submitted) is on behalf of (Legal Name of the JV / Consortium).

We also undertake that in the event of encashment / forfeiture of Tender Security by the Employer in terms of tender provisions, none of the constituent members of (Legal Name of JV / Consortium) will have any objection for the same.

STAMP & SIGNATURE OF AUTHORISED
SIGNATORY(IES)

Note :

1. The undertaking is to be submitted in case the tender security (in form of FDR / Bank Guarantee) is submitted in the name of JV / Consortium members.
2. JV / Consortium Member on whose name the tender security is submitted shall be substantial member.

Instructions to Tenderers

Annexure 6 (As per Clause F4.1)

FORM OF PERFORMANCE SECURITY (GUARANTEE) BY BANK

1. This deed of Guarantee made this day of (month & year) between Bank of..... (hereinafter called the “Bank”) of the one part, and Uttar Pradesh Metro Rail Corporation Limited (hereinafter called “the Employer”) of the other part.
2. Whereas Uttar Pradesh Metro Rail Corporation Limited has awarded the contract for (Name of work as per Clause 1.1 of NIT) (hereinafter called the contract) to (Name of the Contractor) hereinafter called the Contractor.
3. AND WHEREAS the Contractor is bound by the said Contract to submit to the Employer a Performance Security for a total amount of Rs.....(Amount in figures and words).
4. Now we the Undersigned (Name of the Bank) being fully authorized to sign and to incur obligations for and on behalf of and in the name of..... (Full name of Bank), hereby declare that the said Bank will guarantee the Employer the full amount of Rs. (Amount in figures and Words) as stated above.
5. After the Contractor has signed the aforementioned Contract with the Employer, the Bank is engaged to pay the Employer, any amount up to and inclusive of the aforementioned full amount upon written order from the Employer to indemnify the Employer for any liability of damage resulting from any defects or shortcomings of the Contractor or the debts he may have incurred to any parties involved in the Works under the Contract mentioned above, whether these defects or shortcomings or debts are actual or estimated or expected. The Bank will deliver the money required by the Employer immediately on demand without delay and demur and without reference to the Contractor and without the necessity of a previous notice or of judicial or administrative procedures and without it being necessary to prove to the Bank the liability or damages resulting from any defects or shortcomings or debts of the Contractor. The Bank shall pay to the Employer any money so demanded notwithstanding any dispute/disputes raised by the Contractor in any suit or proceedings pending before any Court, Tribunal or Arbitrator/s relating thereto and the liability under this guarantee shall be absolute and unequivocal.
6. This Guarantee is valid till (The initial period for which this Guarantee will be valid must be for at least Six-months (Six months) longer than the anticipated expiry date of defect liability period as stated in Clause 4.2.1(i) of the “General Conditions of Contract”).
7. At any time during the period in which this Guarantee is still valid, if the Employer agrees to grant a time extension to the Contractor or if the Contractor fails to complete the Works within the time of completion as stated in the Contract, or fails to discharge himself of the liability or damages or debts as stated under Para 5, above, it is understood that the Bank will extend this Guarantee under the same conditions for the required time on demand by the Employer and at the cost of the Contractor.

8. The Guarantee hereinbefore contained shall not be affected by any change in the Constitution of the Bank or of the Contractor.
9. The neglect or forbearance of the Employer in enforcement of payment of any moneys, the payment whereof is intended to be hereby secured or the giving of time by the Employer for the payment hereof shall in no way relieve the bank of their liability under this deed.
10. The expressions “the Employer”, “the Bank” and “the Contractor” hereinbefore used shall include their respective successors and assigns.
11. Notwithstanding anything contained herein:
 - a) Our liability under this Bank Guarantee shall not exceed Rs.....(Rupees.....)
 - b) This Bank Guarantee shall be valid up to
 - c) We are liable to pay the guarantee amount or part thereof under this Bank Guarantee only & only if you serve upon us a written claim or demand on or before.....

**Signature of
Authorized Official of the Bank**

Signature of Witness

Name :

Address :

Name of Official

Designation

Stamp/Seal of the Bank.....

Notes:

- a. Stamp paper of appropriate value shall be purchased in name of the bank who issues the Bank Guarantee.
- b. The Bank Guarantee shall be issued from Scheduled Commercial Bank in India.
- c. Bank Guarantee should be issued on Structured Financial Messaging System (SFMS) platform.
- d. The bank details of UPMRC has been given in key details of NIT for the preparation of Bank Guarantees:
- e. Further, claim period of BG shall be 6 months beyond that expiry date of BG.

Instructions to Tenderers

Annexure 7

VERIFICATION STATEMENT

Tenderer/Applicant shall verify, confirm & declare about DEBARRED as on the due date of submission of bid. (Here DEBARRED means that the applicant has been blacklisted or debarred by Government of India/State Government/Government undertaking from participating in the tenders for a notified period of time. Copy of the notification of such debarment shall be submitted in the bid).

By virtue of my signature below, I confirm and verify to my best knowledge and belief that the company represented by me for submitting bid against this tender is not DEBARRED as on the due date of submission of bid.

Signed:_____ (to be signed by applicant)

Date:_____

Stamp:

Instructions to Tenderers

Annexure 8

FORM OF BANK GUARANTEE FOR ADVANCE PAYMENTS

(To be stamped in accordance with Stamp Act, if any, of the country of issuing bank) Ref:_
Bank Guarantee
Date:_____

Dear Sir,

In consideration of M/s _____ (hereinafter referred as the “Employer”, which expression shall, unless repugnant to the context or meaning thereof include it successors, administrators and assigns) having awarded to M/s. _____ (herein after referred to the “Consultant” which expression shall unless repugnant to the context of meaning thereof, include its successors, administrators, executors and assigns), a contract by issue of Employer’s Contract Agreement No. _____ dated _____ and the same having been unequivocally accepted by the Consultant, resulting in a Contract valued at _____ for _____ Contract (hereinafter called the “Contract”)

(Scope of work) and the Employer having agreed to make an advance payment to the Consultant for performance of the above Contract amounting to _____ (in words and figures) as an advance against Bank Guarantee to be furnished by the Consultant.

We _____ (Name and address of the Bank) having its Head Office at _____ (hereinafter referred to as the Bank, which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators executors and assigns) do hereby *unconditionally and irrevocably guarantee* and undertake to pay the Employer immediately on demand any or, all monies payable by the Consultant to the extent of _____ as aforesaid at any time upto @__without any demur, reservation, context, recourse or protest and/or without any reference to the consultant. Any such demand made by the client on the Bank shall be conclusive and binding notwithstanding any difference between the Employer and the Consultant or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable till the Employer discharges this guarantee.

The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to vary the advance or to extend the time for performance of the contract by the Consultant. The Employer shall have the fullest liberty without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Employer and to exercise the same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Contract between the Employer and Consultant any other course or remedy or security available to the Employer. The bank shall not be relieved of its obligation under these presents by any exercise by the Employer of its liberty with reference to the

matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would but for this provision have the effect of relieving the Bank.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Consultant and notwithstanding any security or other guarantee that the Employer may have in relation to the Consultant's liabilities.

Notwithstanding anything contained herein above or liability under this guarantee is limited to and it shall remain in force up to and including @ and shall be extended from time to time for such period (not exceeding one year) as may be desired by M/s on whose behalf this guarantee has been given.

Dated this _____ day of _____ month, 2026 at _____.

(Official Address) _____ Designation (with Bank stamp)

Attorney as Power of Attorney No._____
Dated_____

WITNESS

(signature) _____
(signature)

(Name) _____
(Name)

Strike out, whichever is not applicable.

@ The date will be 24 months after the date of release of payment.

Notes :

- a. Stamp paper of appropriate value shall be purchased in name of the bank who issues the Bank Guarantee.
- b. The Bank Guarantee shall be issued from Scheduled Commercial Bank in India.
- c. Bank Guarantee should be issued on Structured Financial Messaging System (SFMS) platform.
- d. The bank details of UPMRC has been given in key details of NIT for the preparation of Bank Guarantees:
- e. Further, claim period of BG shall be 6 months beyond that expiry date of BG.

Annexure-9
CONTRACT AGREEMENT

This Agreement is made at Lucknow on day of by and between :

- (1) Uttar Pradesh Metro Rail Corporation Limited, a company registered under provisions of the Companies Act, 1956 having registered office at Administrative Building, Vipin Khand, Gomti Nagar, Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal, Lucknow-226010, Uttar Pradesh, India represented by -----, hereinafter referred to as “UPMRC” or the “Employer”, as the case may be, on the one part,
and;
- (2) comprising:
- a) a company registered and existing under the laws of India, with head office located at, represented by Mr.& Mr....., authorised to sign and bind the company, under the Power of Attorney dated and the Board Resolution dated comprising
- b) a company registered and existing under the laws of India, with head office located at, represented by Mr.& Mr....., authorised to sign and bind the company, under the Power of Attorney dated and the Board Resolution dated comprising
- c) a company registered and existing under the laws of India, with head office located at, represented by Mr.& Mr....., authorised to sign and bind the company, under the Power of Attorney dated and the Board Resolution dated comprising

represented by Mr., authorised to sign and bind the company, under the Power of Attorney dated who shall be jointly and severally liable for the undertaking of this contract; hereinafter [Note 3] collectively referred to as the “Contractor” of the other part.

WHEREAS the Contractor has established a in accordance with Indian law and offered a tender for the and agrees to undertake performance of the works under the terms and conditions set forth in this contract.

Both parties hereby agree as follows:

Clause 1

Employer agrees to hire and the Contractor agrees to be hired to implement the **contract** under the terms and conditions specified in this Contract Agreement and the other Contract Documents attached hereto as follows:

- LOA issued vide letter no. -----.
- Technical package opened online through CPP portal on -----.
- Financial package opened online through CPP portal on -----.
- The Tender Documents.
- Contractor’s Proposal dated -----.
- Addendum documents (if any) shall forming part of the Contract.

All of the foregoing documents, together with this Contract Agreement, are referred to herein

as the Contract Documents. Also incorporated into these Contract Documents, and made part hereof, are all codes, standard specifications, and similar requirements that are referred to therein. In the event of a conflict, ambiguity or discrepancy between the contents of the Contract Documents, the order of precedence shall be according to the General Conditions of Contract.

Performance Bank Guarantee no. ----- dated ----- for an amount of INR----- (Rupees -----) & validity up to ----- and issued by ----- and confirmed by e-mail dated: ----- in reference to UPMRC letter no. -----

Clause 2 – Obligation of the Contractor:

The Contractor agrees, subject to the terms and conditions of the Contract Documents, to perform efficiently and faithfully all of the work for and other facilities requisite for or incidental to the successful completion of the Works and in carrying out all duties and obligations imposed by the Contract Documents.

Clause 3 – Obligation of the Employer:

The Employer agrees, subject to the terms and conditions of the Contract Documents, to pay the Contractor the amount specified, and at the rates and terms and in the manner set forth in the Contract Documents.

Clause 4 – Value of Work and Completion Time:

The Employer agrees to pay for the total cost of the Works and the Contractor agrees to accept the sums mentioned below to be the total cost for the Work carried out by him as part of his obligations, responsibilities and liabilities under and according to the provisions and obligations imposed on him by the Contract.

Contract Price of ----- (Rupees -----) which shall be -----

The Contractor shall complete the Works within ----- from the date stipulated in the Letter of Acceptance No. -----

Clause 5 – Notices:

All notices called for by the terms of the Contract Documents shall be in writing in the English language and shall be delivered by hand or by registered mail, acknowledgement due, to the parties' addresses given below. All notices shall be deemed to be duly made when received by the party to whom it is addressed at the following addresses or such other addresses as such party may subsequently notify to the other:

Employer Uttar Pradesh Metro Rail Corporation Limited,
 Administrative Building, Vipin Khand, Gomti Nagar,
 Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
 Lucknow-226010, Uttar Pradesh, India

Contractor

Clause 6 – Integration

The Employer and the Contractor agree that this Contract Agreement, together with the other Contract Documents, expresses all of the agreements, understandings, promises, and covenants of the parties, and that it integrates, combines, and supersedes all prior and contemporaneous negotiations, understandings, and agreements, whether written or oral and that no modification or alteration of the Contract Documents shall be valid or binding on either party, unless expressed in writing and executed with the same formality as this Contract Agreement, except as may otherwise be specifically provided in the Contract Documents.

Clause 7 – Governing Law

This Contract is enforceable and construed under the laws of the Republic of India.

Clause 8 – Language

This Contract Agreement and the other Contract Documents are made in the English language.

Clause 9 – Jurisdiction of Court

The Courts at Lucknow shall have the exclusive jurisdiction to try all disputes arising out of this agreement between the parties.

Clause 10 – Entire Agreement

This Agreement sets forth the entire understanding of the Parties and supersedes all prior or simultaneous representations, discussions, negotiations, letters, proposals, agreements and understandings between the Parties hereto, with respect to the subject matter hereof. Each Party acknowledges that it has not relied on or been induced to enter into this Agreement by, and to the extent permitted by applicable law, a Party is not liable to another Party in Agreement or tort or in any other way for, a representation or warranty that is not set out in this Agreement. This Agreement may be amended only by a written instrument signed by a duly authorized representative of each of the Parties. If any provision of this Agreement be held invalid or unenforceable by a competent court, such provision shall be modified to the extent necessary to make it valid and enforceable whilst preserving the intent of the Parties and all other provisions of this Agreement shall remain fully valid and enforceable unless otherwise agreed between the Parties. No provision of this Agreement nor any breach thereof will be considered waived by either Party, unless such waiver is in writing signed on behalf of that Party and no such waiver will constitute a waiver of, or excuse for any other or subsequent breach of this Agreement. Certain provisions of this Agreement which by their very nature ought to survive, shall so survive the termination of this Agreement.

This contract is made in three copies with identical wording. Both parties having thoroughly read and understood the contents hereof sign their names and affix the seal (if any) in the presence of witness and each shall retain one copy.

For and on behalf of the UPMRC
Uttar Pradesh Metro Rail Corporation Limited
The Employer

WITNESS

(.....)

For and behalf of
the Contractor

.....
.....

Authorised Representative

WITNESS

(.....)

TENDER NO: LKGC (02)-01

TENDER DOCUMENTS

VOLUME 1

**FORM OF TENDER
(FOT)**

FORM OF TENDER

Date:

To :

The Chief Engineer/ Contract
Uttar Pradesh Metro Rail Corporation Limited
Administrative Building,
Vipin Khand, Gomti Nagar,
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Lucknow-226010;

LKGC (02)-01: General Consultancy Services For Lucknow MRTS Project, Phase- 1B

GENTLEMEN,

1. Having inspected the Site, examined the Tender documents including Terms of Reference, and addenda thereto (if any) issued by the Employer for the above-mentioned Works, and the matters set out in Appendix 1 hereto, and having completed and prepared all Appendices hereto, we hereby (jointly and severally)* offer to complete the whole of the said Works in conformity with the above documents within the completion dates of NIT (from the date of commencement) for the sum stated in the Bill of Quantities (BOQ) as completed by us and appended hereto.

2. We undertake (jointly and severally) *:

(a) to keep this Tender open for acceptance without unilaterally varying or amending its terms for the period stated in Notice of Invitation to Tender hereto (the withdrawal of any member or any other change in the composition of the partnership/joint venture/consortium on whose behalf this Tender is submitted shall constitute a breach of this undertaking) *; and

(b) if this Tender is accepted, to provide Guarantees, Undertakings & Warranties for the due performance of the Contract as stipulated in the General Conditions of Contract, Special Conditions of Contract and Appendix 1 hereto; and

(c) to hold in confidence all documents and information whether technical or commercial supplied to us at any time by or on behalf of the Employer in connection with this Tender or with the above-mentioned Works and, without your written authority or as otherwise required by law, not to publish or otherwise disclose the same.

3. We submit with this Tender a duly executed Tender Guarantee in respect of our obligations under this Tender.

4. Unless and until a formal agreement is prepared and executed, this Tender together with your written acceptance thereof, shall constitute a binding contract between us.

5. We understand that you are not bound to accept the lowest or any tender you may receive.

6. We declare that the submission of this Tender confirms that no agent, middleman or any intermediary has been, or will be engaged to provide any services, or any other item of work related to the award and performance of this Contract. We further confirm and declare that no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the tender price does not include any such amount. We acknowledge the right of the Employer, if he finds to the contrary, to declare our Tender to be non-compliant and if the Contract has been awarded to declare the Contract null and void.

7. This Tender shall be governed by and construed in all respects according to the laws for the time being in force in India. The courts at Lucknow will have exclusive jurisdiction in the

matter.

8. We here by undertake and confirmed that complete tender documents including all Annexures and Appendices mentioned therein have been thoroughly read by us and shall be complied in all respect. In case, any false/misleading information are found in my submission, my tender submission may be rejected at any time without any notice. In case any annexure/appendices are erroneously not found attached in our technical submission, same shall be deemed to be accepted by us in Toto.

9. We have independently considered the penalties shown in Tender document and agree that they represent a fair estimate of the damages likely to be suffered by you.

10. If our Tender is accepted we understand that we are to be held solely responsible for the due performance of the Contract.

11. We including any subcontractors or suppliers for any part of the contract, have or will have nationalities from eligible countries, in accordance with **Clause 1.4.1 (x) of NIT**.

12. We including any subcontractors or suppliers for any part of the contract do not have any conflict of interest in accordance with **Clause 1.4.1 (iii) of NIT**.

13. We are not participating as a Tenderer, in more than one tender in this tendering process and we are not sub-contractor to any other tenderer participating in this tendering process in accordance with **A5 of ITT contract**.

14. We confirm that in case we are successful Tenderer, we will be deploying at least the proposed resources, personnel throughout the contract period as provided in the Tender submittals by the lead member and JV member(s).

15. We do hereby undertake that neither we nor any of our constituent companies including parent company (if any) have been banned/debarred/blacklisted for business by UPMRC/ Any other Metro Organisation (100% owned by Govt.)/ Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce, applicable for all Ministries/)/External funding (bi-lateral or multi-lateral) agency(ies) and also that none of our work was rescinded/terminated by UPMRC/ Any other Metro Organisation (100% owned by Govt.) after award of contract during last 3 years due to non-performance.

We are, Gentlemen,

Yours faithfully,

Signature:

Date -----

Name -----

For and on behalf of

Address

Witness:

Signature: -----

Date -----

Name -----

Address -----

*** Note:**

If the Tenderer comprises a partnership, joint venture or consortium:

(a) The provisions marked with an asterisk are to be retained subject to deletion of the brackets and inapplicable descriptions (i.e. partnership, joint venture or consortium)

(b) The liability of each member under the Tender, and under any contract formed upon its acceptance, will be joint and several.

(c) An authorised representative of each member must sign the Tender along with stamp.

(d) Signature on the Form of Tender shall be witnessed and dated with stamp.

(e) Copies of the relevant power of attorney shall be attached.

FORM OF TENDER – APPENDIX-1
[REQUIREMENTS UNDER GENERAL CONDITIONS OF CONTRACT]

S.No.	DESCRIPTION	REF. TO CLAUSE NO.	REQUIREMENT
i	Amount of Performance Security	Clause 5.8 of the GCC	10 % of the Contract Price in types and proportions of currencies in which the contract price is payable
ii	Latest 'date for commencement' of the Works	Clause 9.2 of the GCC	Date given in LOA or Employer's Notice to Proceed
iii	'Time for completion' of the work from the date of commencement of the work	Clause 9.4 of the GCC	As given in key details of NIT
iv	'Defects Liability Period' for the whole of the Works	Clause 7.1.5(c) of the GCC	In the event of any defect coming to the notice of the Employer during the 1 year period from the certified date(s) of completion and commissioning of a phase/phases of the project and in the eventuality of the consultant failing to rectify the same, the Employer will forfeit the amount of the performance guarantee.
v	Amount of advance payment	Clause 10.5.2 of the GCC	As per clause 10.5.2 of the GCC
vi	Amount of Professional Indemnity Insurance (PII)	Clause 5.10 of the GCC	As per clause 5.10 of the GCC
vii	Insurance cover for Contractor's All Risk and other requirements as specified in the GCC	Clause 5.10 of the GCC	As per clause 5.10 of the GCC
viii	Amount of Third Party Insurance	Clause 5.10 of the GCC	As per clause 5.10 of the GCC

ix	Period in which all insurances have to be effected	Clause 5.10 of the GCC	Within 4 weeks from the “date of commencement”
x	(a) Consultant’s Name and Address	GCC clause 4.3 (Tenderer to Complete)
	(b) Employer’s Name and Address	GCC clause 4.3	Uttar Pradesh Metro Rail Corporation Ltd. Administrative Building, Vipin Khand, Gomti Nagar, Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal, Lucknow-226010;

Date:

Place :

**Stamp & Signature of authorized
signatory of Tenderer**

FORM OF TENDER - APPENDIX 2

BILL OF QUANTITIES / PRICING DOCUMENT

Bill of Quantities & Schedule of Payments duly completed in all respect is to be submitted as Appendix-2 only in Package 2 – Financial Package.

Date :

Place :.....

**Stamp & Signature of
authorized signatory of Tenderer**

FORM OF TENDER - APPENDIX 3
GENERAL INFORMATION ABOUT THE TENDERER

A. TENDERER INFORMATION SHEET		
Tenderer's Legal Name		
Legal status of the Tenderer	Sole Proprietorship Firm / Partnership Firm / Private Limited Company / Public Limited Company / Joint Venture / Consortium (Please tick one)	
In case of JV/Consortium, Legal name of each partner with percentage participation (also provide information of each member in separate sheet (page 2 of 2))	Legal Name of JV/Consortium member	% participation
	1.	
	2.	
	3.	
Lead member of JV/Consortium		
Tenderer's legal address in India, telephone numbers, fax numbers, email address for communication		
Tenderer's authorized signatory (name, designation, address, contact no.)		
Tenderer's authorized representative (name, designation, address, contact no.)		
<p>FOLLOWING NEEDS TO BE SUBMITTED BY THE TENDERER: (by each member in case of JV/consortium) :</p> <ul style="list-style-type: none"> a) Affidavit in case of Proprietary firm. b) Partnership Deed in case of partnership firm. c) Memorandum & Article of Association in case of a Public/Private limited company. d) In case of JV/Consortium, MOU/Agreement (duly notarized) entered into by the joint venture / consortium members, containing intended percentage participation, nomination of Lead Member and division of responsibility to clearly define the work of each member etc. e) Authorization/POA in favour of authorized signatory of tenderer to sign the tender, and also in favour of authorized representative of each member in case of JV/Consortium. <p>Note: Tenderer's authorized representative shall be deemed to have authority of the tenderer to receive and deliver any correspondence and attend meetings with UPMRC related to the tender.</p>		

B. JV/CONSORTIUM MEMBER INFORMATION	
MEMBER – 1	
JV/Consortium Member's Legal Name	
Legal status of the Member	Sole Proprietorship Firm / Partnership Firm / Private Limited Company / Public Limited Company (Tick any one)
Member's country of constitution	
Member's legal address, telephone numbers, fax numbers, email address)	
Member's authorized signatory (name, designation, address)	
MEMBER – 2	
JV/Consortium Member's Legal Name	
Legal status of the Member	Sole Proprietorship Firm / Partnership Firm / Private Limited Company / Public Limited Company (Tick any one)
Member's country of constitution	
Member's legal address, telephone numbers, fax numbers, email address)	
Member's authorized signatory (name, designation, address)	

**STAMP & SIGNATURE OF AUTHORIZED
SIGNATORY ON BEHALF OF
TENDERER**

FORM OF TENDER - APPENDIX 4
MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) entered into this ____ day of ____ 2026 at ____

Among

(hereinafter referred as"____") and having office at _____, India
Party of the First Part ____

And

(hereinafter referred as"____") and having office at _____, India
Party of the Second Part ____

And

(hereinafter referred as"____") and having office at _____, India
Party of the Third Part ____

And

(hereinafter referred as"____") and having office at _____, India
Party of the Fourth Part ____

The parties are individually referred to as **Party** and collectively as **Parties**.

WHEREAS the UPMRC has invited proposals from shortlisted parties for General Consultancy Services for design, procurement, construction, testing and commissioning of the complete Lucknow Metro Rail Project. The aim of this contract is to obtain General Consultancy services for planning, design, procurement, project execution, testing and commissioning of the complete Lucknow Metro Rail Project.

The Terms of Reference for General Consultancy Services, project brief and other relevant information/details pertaining to General Consultancy Services are as per TENDER DOCUMENT.

AND WHEREAS the Parties have had discussions for formation of a JV/Consortium for applying for the said Project and have reached an understanding on the following points with respect to the Parties' rights and obligations towards each other and their working relationship.

IT IS HEREBY AS MUTUAL UNDERSTANDING OF THE PARTIES AGREED AND DECLARED AS FOLLOWS:

1. That the Parties shall carry out all responsibilities as Consultancy firm in terms of the Consultancy agreement.

2. That the roles and the responsibilities of each Party at the stage of Application shall be as follows:

.....

3. That the minimum equity holding of each Party (in percentage term) in the Company shall be as follows:

Name of the Party capital	%	of	equity
------------------------------	---	----	--------

.....

.....

.....

.....

4. That the Parties shall be jointly and severally liable for the execution of the Project in accordance with the terms of the Consultancy agreement.

5. That the Parties affirm that they shall render Consultancy services in good faith and shall take all necessary steps to see the Project through expeditiously.

6. That this MoU shall be governed in accordance with the laws of India and courts in Lucknow shall have exclusive jurisdiction to adjudicate disputes arising from the terms herein.

In witness whereof the Parties affirm that the information provided is accurate and true and have caused this MoU to be duly executed on the date and year above mentioned.

(Party of the first part
third part)

(Party of the second part)

(Party of the

Witness:

1.

2.

FORM OF TENDER – APPENDIX 5

POWER OF ATTORNEY FOR LEAD MEMBER IN CASE OF JV/CONSORTIUM

Whereas the Uttar Pradesh Metro Rail Corporation Limited (UPMRC) has invited proposals from interested parties for General Consultancy Services for Lucknow Metro Rail Projects.

Whereas, the members of the Consortium are interested in applying for the Project and providing the consultancy in accordance with the terms and conditions of the tender document, Agreement and other connected documents in respect of the Project, and

Whereas, it is necessary under the TENDER DOCUMENT for the members of the Consortium to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's Application for the Project or in the alternative to appoint one of them as the Lead Member who, acting jointly, would have all necessary power and authority to do all acts, deeds and things on behalf of the Consortium, as may be necessary in connection with the

NOW THIS POWER OF ATTORNEY WITNESSETH THAT:

We, M/s _____, M/s _____, M/s _____
and M/s (the respective names of the members along with address of their registered offices) do hereby designate M/s _____ (name along with address of the registered office) being one of the members of the Consortium, as the Lead Member of the Consortium, to do on behalf of the Consortium, all or any of the acts, deed or things necessary or incidental to the Consortium's Application for the Project, including submission of information/ documents and generally to represent the Consortium in all its dealings with UPMRC, any other Government Agency or any person in connection with the Project until culmination of the process of selection of consultant and thereafter till the Agreement is entered into with UPMRC

OR

We, M/s _____, M/s _____, M/s _____
and M/s _____ (the respective names and addresses of the registered office) do hereby designate M/s _____ (name and address of registered office) being one of the members of the Consortium as the Lead Member, of the Consortium who, acting jointly, shall do, all or any of the acts, deeds or things necessary or incidental to the Consortium's Application for the Project including submission of application, participating in conferences, responding to queries, submission of information/ documents and generally to represent the Consortium in all its dealings with UPMRC, any other Government Agency or any person in connection with the Project until culmination of the process of selection of consultant and thereafter till the Agreement is entered into with UPMRC

We hereby agree to ratify all acts, deeds and things lawfully done by Lead Member our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney.

Dated this _____ day of _____ 202__.

[Executant(s)]

(To be executed by all the members in the Consortium)

Note:

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
- Also wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as resolution/ Power of Attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the executant(s).

FORM OF TENDER - APPENDIX 5A

POWER OF ATTORNEY

Know all men by these presents, we _____ (name and address of the registered office of the Sole Applicant / Lead Member) do hereby constitute, appoint and authorize Mr. / Ms. _____ resident of _____ (name and address of residence) who is presently employed with us and holding the position of _____ as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to the Application of the consortium consisting of _____, _____ and _____ (please state the name and address of the members of the consortium) for the General Consultancy Services for Lucknow Metro Rail Project (the "Project")., including signing and submission of all documents and providing information / responses to the Uttar Pradesh Metro Rail Corporation Limited (UPMRC), India, representing us in all matters in connection with our Application for the General Consultancy Services for Lucknow Metro Rail Projects.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For

(Signature)

(Name, Title and Address)

Accept

.....(Signature)

(Name, Title and Address of the Attorney)

Notes:

- To be executed by the sole Applicant or the Lead Member in case of a Consortium.
- The mode of execution of Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
- Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a resolution / Power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the executant(s).

FORM OF TENDER - APPENDIX 6
(Undertaking by JV/Consortium members)

We understand that,

1. In case, it comes to notice of UPMRC either during or even after completion of Work that JV/ Consortium members have either altered / modified the MOU / JV agreement wrt to the MOU submitted at tendering stage or entered a separate MOU/ Agreement or made any other arrangement akin to a contract without the specific approval of Employer in writing, it shall be treated as a fraudulent practice under GCC clause 13.1 of this tender for which every constituent member of the JV/Consortia is liable to be debarred for a period upto three years along with such other legal actions as may be permissible under the law.

2. Apart from all of us being jointly and severally responsible, we understand that each of us shall also be individually responsible for our duties as specified in the MOU/JV agreement submitted in terms of clause 1.4.1 vii e of NIT. In case our JV/Consortium qualifies the criteria of work experience on the basis of our experience, each of us shall be responsible for deployment of key staff as per clause C12.1 of ITT. In case of failure on our part in fulfilling these duties, the performance security submitted by us may be forfeited by the employer in addition to other actions.

a. We are aware that our performance shall be adjudged by the Employer on quarterly basis, and if the same is not found satisfactory, actions as deemed appropriate by the Employer may be taken including termination of contract or termination of any of JV/Consortium member(s) from the contract i.e Part Termination of the contract as elaborated in NIT clause 1.4.1 i (Eligible Applicants) We are also aware that the performance of each of us may be specifically stated in the work experience certificate / performance certificates which may be issued to us during or after execution of work for our Business Development purposes.

(j) Stamp & Signature of Authorised Signatory

of 1st Member of JV / Consortium

(ii) Stamp & Signature of Authorised Signatory

of 2nd Member of JV / Consortium

AND SO ON.....

STAMP & SIGNATURE OF AUTHORISED SIGNATORY
ON BEHALF OF JV / Consortium

Note:

1. This undertaking shall be signed by each of the JV/Consortium members.
2. The undertaking shall be signed by the authorized signatory of each constituent member and counter signed by the authorized signatory of JV / Consortium.

FORM OF TENDER - APPENDIX 7
TENDER INDEX

I. Minimum Eligibility Criteria:

S.No./ Particulars	Marking/Scoring Criteria	Document attached (Yes/No & NA)	Page No.	Description of Works
A. Work Experience				
I.	For fulfilling the minimum eligibility criteria as defined in clause 1.4.2 (A) (i) of NIT			
II.	For fulfilling the minimum eligibility criteria as defined in clause 1.4.2 (A) (ii) of NIT			
III.	For fulfilling the minimum eligibility criteria as defined in clause 1.4.2 (A) (iii) (a) (i) of NIT			
IV.	For fulfilling the minimum eligibility criteria as defined in clause 1.4.2 (A) (iii) (a) (ii) of NIT			
V.	For fulfilling the minimum eligibility criteria as defined in clause 1.4.2 (A) (iii) (b) (i) of NIT			
VI.	For fulfilling the minimum eligibility criteria as defined in clause 1.4.2 (A) (iii) (b) (ii) of NIT			

LKGC (02)-01: General Consultancy Services For Lucknow MRTS Project, Phase-1B.

B. Financial Standing				
Liquidity	For fulfilling the minimum financial capabilities as per clause 1.4.2 B (i) [T1] of NIT			
Net Worth	For fulfilling the minimum financial capabilities as per clause 1.4.2 B (ii) [T2] of NIT			
Annual Turnover	For fulfilling the minimum financial capabilities as per clause 1.4.2 B (iii) [T3] of NIT			
S.No./ Particulars	Marking/Scoring Criteria	Document attached (Yes/No & NA)	Page No.	Description of Works
Bid Capacity Criteria	For fulfilling the minimum financial capabilities as per clause 1.4.2 B (iv) [T4] of NIT			

II. Evaluation (QCBS) of Technical Proposal:

S.No./ Particulars	Marking/Scoring Criteria	Document attached (Yes/No & NA)	Page No.	Description of Works
A. Criterion I: Specific Experience of the Tenderer				

LKGC (02)-01: General Consultancy Services For Lucknow MRTS Project, Phase-1B.

(i)	For “Number of Years of Experience in Consultancy services for infrastructure works” as mentioned in Annexure 1A (A) (i) of ITT			
(ii)	For “Number of Years of Experience in Consultancy services for infrastructure works in India” as mentioned in Annexure 1A (A) (ii) of ITT			
(iii)	For “Experience on eligible projects” as mentioned in Annexure 1A (A) (iii) of ITT			
(iv)	For “Quantity of project delivered” as mentioned in Annexure 1A (A) (iv) of ITT			

B. Criterion II: Financial Strength of the Tenderer				
Marking/Scoring Criteria		Document attached (Yes/No & NA)	Page No.	Description of Works
For “Average Annual turnover” as mentioned in Annexure 1A (B) (i) of ITT				
For “BID Capacity” as mentioned in Annexure 1A (B) (ii) of ITT				
For “Project Size” as mentioned in Annexure 1A (B) (iii) of ITT				

LKGC (02)-01: General Consultancy Services For Lucknow MRTS Project, Phase-1B.

C. Criterion III: Proposed Methodology & work plan responding to the TOR			
For “TOR Understanding & Methodology” as mentioned in Annexure 1A (C) (i) of ITT			
For “Work Plan” as mentioned in Annexure 1A (C) (ii) of ITT			

D. Criterion IV – Manpower Strength & Competency of Key Staff (CVs)			
For “Regular Employee Strength” as mentioned in Annexure 1A (D) (i) of ITT			
For “Competency of Key Staff (CVs)” as mentioned in Annexure 1A (D) (ii) of ITT. For QCBS positions & marking details, kindly refer to Annexure 1B & 1C of ITT.			

LKGC (02)-01: General Consultancy Services For Lucknow MRTS Project, Phase-1B.

S.No./ Particulars	Marking/Scoring Criteria	Document attached (Yes/No & NA)	Page No.	Description of Works
(a)	Professional Education			
(i)	Educational Qualifications			
(ii)	Professional Training/ Membership of Professional organization			
(b)	Experience in the assigned task			
(c)	Language proficiency in English			
(d)	Country experience			
(i)	For positions to be filled by foreign/expatriate experts			
(ii)	For all other positions			

**STAMP & SIGNATURE OF AUTHORIZED SIGNATORY
ON BEHALF OF TENDERER**

FORM OF TENDER - APPENDIX 8A

(As per Clause A 4.2)

UNDERTAKING FOR CORRUPT & FRAUDULANT PRACTICE

It is confirmed and declared that we, or any of our associate, have not been engaged in any prohibited practices as defined in Clause 13.1 or any misdemeanours as defined in Clause 13.3 of the General Conditions of Contract and that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other items of work related to the award and performance of this contract and no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the tender price will not include any such amount.

STAMP & SIGNATURE OF
AUTHORIZED SIGNATORY

NOTE:

1. In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
2. The undertaking shall be signed by authorized signatory of the tenderer or constituent member in case of JV/Consortium.

APPENDIX- 8B of FOT
STATEMENT FOR COVENANT OF INTEGRITY

(to the Promoter from a Tenderer, Contractor, Supplier or Consultant to be attached to its Tender (or to the Contract in the case of a negotiated procedure)

“We declare and covenant that neither we nor anyone, including any of our directors, employees, agents, joint venture partners or sub-contractors, where these exist, acting on our behalf with due authority or with our knowledge or consent, or facilitated by us, has engaged, or will engage, in any Prohibited Conduct (as defined below) in connection with the tendering process or in the execution or supply of any works, goods or services for [*specify the contract or tender invitation*] (the “**Contract**”) and covenant to so inform you if any instance of any such Prohibited Conduct shall come to the attention of any person in our organisation having responsibility for ensuring compliance with this Covenant.

We shall, for the duration of the tender process and, if we are successful in our tender, for the duration of the Contract, appoint and maintain in office an officer, who shall be a person reasonably satisfactory to you and to whom you shall have full and immediate access, having the duty, and the necessary powers, to ensure compliance with this Covenant.

If (i) we have been, or any such director, employee, agent or joint venture partner, where this exists, acting as aforesaid has been, convicted in any court of any offence involving a Prohibited Conduct in connection with any tendering process or provision of works, goods or services during the five years immediately preceding the date of this Covenant, or (ii) any such director, employee, agent or a representative of a joint venture partner, where this exists, has been dismissed or has resigned from any employment on the grounds of being implicated in any Prohibited Conduct, or (iii) we have been, or any of our directors, employees, agents or joint venture partners, where these exist, acting as aforesaid has been excluded by any major Multi-lateral/Bi-lateral Development Bank/ Agency including World Bank Group, African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank or Inter-american Development Bank etc from participation in a tendering procedure on the grounds of Prohibited Conduct, we give details of that conviction, dismissal or resignation, or exclusion below, together with details of the measures that we have taken, or shall take, to ensure that neither this company nor any of our directors, employees or agents commits any Prohibited Conduct in connection with the Contract [*give details if necessary*].

In the event that we are awarded the Contract, we grant the Project Owner, the funding agency and auditors appointed by either of them, as well as any authority or institution or body having competence under applicable law, the right of inspection of our records and those of all our sub-contractors under the Contract. We accept to preserve these records generally in accordance with applicable law but in any case for at least six years from the date of substantial performance of the Contract.”

For the purpose of this Covenant, Prohibited Conduct includes,

- **Corrupt Practice** is the offering, giving, receiving or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party. making offers,

solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution.

- **Anti-competitive practice** is any collusion, bid rigging or anti-competitive arrangement, or any other practice coming under the purview of The Competition Act, 2002, between two or more bidders, with or without the knowledge of the Procuring Entity, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels

- **Fraudulent Practice** is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation. any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract.

- **Coercive Practice** is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of any party to influence improperly the actions of a party. harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;

- **Collusive Practice** is an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party

- **Obstructive Practice** is

- (a) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

- (b) acts intended to materially impede the exercise of the funding agency's contractual rights of audit or access to information or the rights that any banking, regulatory or examining authority or other equivalent body; may have in accordance with any law, regulation or treaty or pursuant to any agreement into which the funding agency has entered in order to implement such law, regulation or treaty.

- (c) materially impede the Procuring Entity's investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the Procuring Entity's rights of audit or access to information

- **Money Laundering**

- **Terrorist Financing**

- **Project Owner** means the person designated as such in the tender documents or the Contract.

**Stamp & Signature of authorized
signatory on behalf of Tenderer**

NOTE:

1. In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
2. The undertaking shall be signed by authorized signatory of the tenderer or constituent member in case of JV/Consortium.

APPENDIX- 8C of FOT
STATEMENT FOR CODE OF INTEGRITY
As per Rule 175 (1) Code of Integrity, General Finance Rule

Bidder shall act in contravention of the codes which includes;

- (i) prohibition of :-
 - (a) making offer, solicitation or acceptance of bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to procurement process.
 - (b) any omission, or misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.
 - (c) any collusion, bid rigging or anticompetitive behaviour that may impair the transparency, fairness and the progress of the procurement process.
 - (d) improper use of information provided by the procuring entity to the bidder with an intent to gain unfair advantage in the procurement process or for personal gain.
 - (e) any financial or business transactions between the bidder and any official of the procuring entity related to tender or execution process of contract; which can affect the decision of the procuring entity directly or indirectly.
 - (f) any coercion or any threat to impair or harm, directly or indirectly, any party or its property to influence the procurement process.
 - (g) obstruction of any investigation or auditing of a procurement process.
 - (h) making false declaration or providing false information for participation in the tender process or to secure the contract;
- (ii) disclosure of conflict of interest.
- (iii) Disclosure by the bidder of any previous transgressions made in respect of the provisions of sub-clause (i) with any entity in any country during the last three years or of being debarred by any other procuring entity.

The violation of above may lead to the disqualification of the consultant or termination of its/his contract during execution of the assignment and punitive actions will be taken in terms of para 2.2.6 of Manual of Procurement of Consultancy & Other Services (updated time to time)/

Punitive Provisions: Without prejudice to and in addition to the rights of the Procuring Entity to other penal provisions as per the bid documents or contract, if the Procuring Entity comes to a conclusion that a (prospective) bidder/contractor/ Supplier/ consultant/ service provider, directly or through an agent, has violated this code of integrity in competing for the contract or in executing a contract, the Procuring Entity may take appropriate measures including one or more of the following:

- i) if his bids are under consideration in any procurement
 - a) Forfeiture or encashment of bid security
 - b) calling off of any pre-contract negotiations, and;
 - c) rejection and exclusion of the bidder from the procurement process
- ii) if a contract has already been awarded
 - a) Cancellation of the relevant contract and recovery of compensation for loss incurred by the Procuring Entity.;

- b) Forfeiture or encashment of any other security or bond relating to the procurement;
 - c) Recovery of payments made by the Procuring Entity along with interest thereon at the prevailing rate;
- iii) Provisions in addition to above:
- a) Removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the Procuring Entity for a period not less than one year;
 - b) In case of anti-competitive practices, information for further processing may be filed under a signature of the Joint Secretary level officer, with the Competition Commission of India;
 - c) Initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.)

**Stamp & Signature of authorized
Signatory on behalf of Tenderer**

NOTE:

1. In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
2. The undertaking shall be signed by authorized signatory of the tenderer or constituent member in case of JV/Consortium.

APPENDIX- 8D of FOT
Undertaking for Conflict of Interest

Conflict of Interest in case of consultants

i) The consultant is required to provide professional, objective, and impartial advice, at all times holding the Procuring Entity's interests paramount, strictly avoiding conflicts with other assignments or his/its own corporate interests, and acting without any consideration for future work.

ii) The consultant has an obligation to disclose to the Procuring Entity any situation of actual or potential conflict that impacts its/his capacity to serve the best interest of its client/Procuring Entity.

iii) Without limitation on the generality of the foregoing, and unless stated otherwise in the data sheet for the Tender document, the consultant shall not be hired under the circumstances set forth below:

a) **Conflicting activities:** a firm that has been engaged by the client to provide goods, works, or non-consultancy services for a project, or any of its affiliates, shall be disqualified from providing Consultancy service resulting from or directly related to those goods, works, or non-Consultancy services. Conversely, a firm hired to provide consultancy services for the preparation or implementation of a project, or any of its affiliates, shall be disqualified from subsequently providing goods or works or no consultancy services resulting from or directly related to the consultancy services for such preparation or implementation;

b) **Conflicting assignments:** Consultants (including its experts and sub--consultants) or any of their affiliates shall not be hired for any assignment that, by its nature, may be in conflict with another assignment of the consultant for the same or for another Procuring Entity; and

c) **Conflicting relationships:** A consultant (including its/his experts and subconsultants) that has a close business or family relationship with a professional staff of the Procuring Entity who are directly or indirectly involved in any part of: (i) the preparation of ToR for the assignment; (ii) selection process for the contract; or (iii) supervision of the contract, may not be awarded a contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the client throughout the selection process and execution of the contract.

Failure to disclose such situations may lead to the disqualification of the consultant or termination of its/his contract during execution of the assignment and punitive action may be taken.

We hereby confirm that we comply with all the stipulations especially mentioned in Clause 1.4.1 (iii) of NIT and have no conflict of interest, which affects fair competition. The tender submissions including quoted prices are competitive without adopting unfair/unethical/anti-competitive means. No attempt have been made or shall be made by us to induce any other consultant to submit or not to submit tender to restrict competition.

**Stamp & Signature of authorized
Signatory on behalf of Tenderer**

NOTE:

1. In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
2. The undertaking shall be signed by authorized signatory of the tenderer or constituent member in case of JV/Consortium.

APPENDIX- 8E of FOT
FORM OF INTEGRITY PACT

Between **Uttar Pradesh Metro Rail Corporation Ltd.** (hereinafter referred to as “The Employer,” and _____ hereinafter referred to as “The Bidder/ Contractor.”

The Employer intends to award contract/s for _____, under laid down organisational procedures, The Employer values full compliance with all relevant laws of the land, rules, regulations, economical use of resources, and fairness / transparency in its relations with its Bidder(s) and / or Contractor(s).

Section 1 – Commitments of the Employer:

1) The Employer commits itself to take all measures necessary to prevent corruption and to observe the following principles: -

a) No employee of the Employer, personally or through family members, shall in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

b) The Employer shall treat all Bidder(s) with equity and reason during the tender process. The Employer shall, in particular, before and during the tender process, provide to all Bidder(s) the same information and shall not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in the tender process or the contract execution.

c) The Employer shall exclude from the process all known persons having conflict of interest.

2) If the Employer obtains information on the conduct of any of its employees which is a criminal offence under the BNS/PC Act, or if there be a substantive suspicion in this regard, the Employer shall inform the Chief Vigilance Officer and in addition shall initiate disciplinary proceedings.

Section 2 – Commitments of the Bidder(s)/ Contractor(s):

1) The Bidder(s)/ Contractor(s) commits themselves to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits themselves to observe the following principles during participation in the tender process and the contract execution.

a) The Bidder(s)/ Contractor(s) shall not, directly or through any other person or firm, offer, promise, or give to any of the Employer’s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which they are not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or the execution of the contract.

b) The Bidder(s)/ Contractor(s) shall not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal, in violation of the Competition Act, 2002 (as amended from time to time). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the tender process.

c) The Bidder(s)/ Contractor(s) shall not commit any offence under the relevant BNS/PC Act; further, the Bidder(s)/ Contractor(s) shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Employer as part of the business relationship, regarding plans, technical proposals, and business details, including information contained or transmitted electronically.

2) The Bidder(s)/ Contractor(s) shall not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from the tender process and exclusion from future contracts;

If the Bidder(s)/Contractor(s), before award or during execution, has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Employer is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as per laid down procedure to debar the Bidder(s)/Contractor(s) from participating in the future procurement processes of the Government of India.

Section 4 – Compensation for Damages:

1) If the Employer has disqualified the Bidder(s) from the tender process before the award according to Section 3, the Employer is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.

2) If the Employer has terminated the contract according to Section 3, or if the Employer is entitled to terminate the contract according to Section 3, the Employer shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5 – Previous transgression:

1) The Bidder declares that no previous transgressions occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.

2) If the Bidder makes an incorrect statement on this subject, the Employer shall act like para 2) of Section 4 above.

Section 6 – Equal treatment of all Bidders / Contractors / Subcontractors:

In the case of Sub-contracting, the Contractor shall take responsibility for adopting the Integrity Pact by the Sub-contractor.

a. The Employer shall enter into agreements with identical conditions as this one with all Bidders and Contractors.

b. The Employer shall disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidder(s) / Contractor(s) / Subcontractor(s):

If the Employer obtains knowledge of the conduct of a Bidder, Contractor, or Subcontractor, or of an employee or a representative or an allied firm of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Employer has substantive suspicion in this regard, the Employer shall inform the same to the Chief Vigilance Officer.

Section 8 – Pact Duration:

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders, 6 months after the contract has been awarded. Any violation of the same would entail disqualifying the bidders and exclusion from future business dealings.

If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged / determined by the Management of the Employer.

Section 9 – Other provisions:

1) This agreement is subject to Indian Law. The place of performance and jurisdiction is the place from where the Tender/ Contract is issued.

2) Changes, supplements, and termination notices must be submitted in writing. Side agreements have not been made.

3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties shall strive to come to an agreement according to their original intentions.

(For & On behalf of the Employer)

Witness 1: _____

Place ----- Date -----

(For and on behalf of Bidder/ Contractor)

Witness 1: _____

Place ----- Date -----

FORM OF TENDER - APPENDIX 9

MINOR DEVIATIONS

(Refer **Clause C 15.1** of ITT)

The following are the particulars of minor deviations from the requirements of the Tender Document:

Sr.No.	Clause	Deviations	Remarks (Incl. Justification)	Confirming that price of adjustment of each deviation/s is given in Annexure- 2 of financial package (yes/no)

Note :

1.The Tenderer shall indicate price adjustment against each deviation in Annexure- 2 of BOQ. This price is the price which the tenderer shall reduce from his tender price if deviation(s) is/are accepted by the Employer.

2.Where there is no deviation, the statement should be returned duly signed with an endorsement indicating 'No Deviations'. In case, Performa of deviations is not submitted or submitted as blank, it will be construed that the tenderer has not proposed any deviations from tender documents.

3.If the tenderer proposes deviations in tender documents and/or any other terms and conditions of the tender, other than in this Appendix, it will have no effect.

Stamp & Signature of authorized
signatory on behalf of Tenderer

FORM OF TENDER- Appendix- 10
(Undertaking as per Clause 1.4.1 v(a) & (b) of NIT)

(to be submitted by tenderer (single entity) or by each member separately in case of JV/Consortium)

We do hereby undertake that UPMRC/ any other Metro Organization (100% owned by Govt.)/ Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce/Any other Government organization, applicable for all Ministries/ External funding (bi-lateral or multi-lateral) agency(ies) have not banned/debarred/blacklisted business with us (if any) as on the date of tender submission.

Also any work of the value more than 10% of NIT cost of work, executed either individually or in a JV/Consortium, has not been rescinded/ terminated by UPMRC/ any other Metro Organization (100% owned by Govt.)/ Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce/Any other Government organization, applicable for all Ministries after award of contract to us during last 3 years (from the last day of the previous month of tender submission) due to our non-performance.

Stamp & Signature of authorized signatory on behalf of Tenderer

Note :

- In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
- The undertaking shall be signed by authorized signatory of the tenderer. In case of JV/Consortium by the authorized signatory of the constituent member counter signed by the authorized signatory of the tenderer.

FORM OF TENDER- Appendix- 11**(Undertaking as per Clause 1.4.1 v(c) of NIT)**

(to be submitted by tenderer (single entity) or by each member separately in case of JV/Consortium)

(i) We do hereby undertake that following is the list of all the on-going Consultancy service works awarded by UPMRC/ any other Metro Organization (100% owned by Govt.)/ Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce/Any other Government organization, applicable for all Ministries of value more than 40% of NIT cost of work and the list of completed Consultancy service works awarded by UPMRC/ any other Metro Organisation (100% owned by Govt.) within last one year (from the last day of the previous month of tender submission) of value more than 40% of NIT cost of work.

** Strike whichever are not applicable*

Applicant's legal name Date.....

JV/Consortium Member's legal name..... Page Of Pages

S.N o.	Contract No. & Name of Work	Name of Employer / Client	Name of the contractor including constituent members in case of JV/Consortium	Performance of work	Performance based on
				* Satisfactory/ unsatisfactory	*Client's certificate/ Undertaking by tenderer
1					
2					
Add required number of rows					

(ii) We also do hereby undertake that the performance of works has been indicated above for all the works which are either based on Client / Employer certificate or our undertaking. We also understand that UPMRC at its sole discretion, may get performance of any such work, for which undertaking of satisfactory performance has been given by us, directly from the Client / Employer for the Works listed above and if performance from Client / Employer for such work is found to be unsatisfactory, we shall be considered non-complaint to the tender condition.

Note:

a) The tenderer may either submit satisfactory performance Certificate issued by the Client / Employer for the works or give an undertaking regarding satisfactory performance of the work with respect to completion of work/execution of work (for on-going works) failing which their tender submission shall not be evaluated and the

tenderer shall be considered non-responsive and non-compliant to the tender conditions. In case of non-submission of either satisfactory performance Certificate from Client / Employer or undertaking of satisfactory performance of any of the above work, the performance of such work shall be treated as unsatisfactory while evaluating the overall performance of tenderer in terms of Note (b) below. If the tenderer or any of the constituent JV/Consortium member(s) has reported four or less number of works in the **Appendix 11** then there should not be any unsatisfactory performance in any of the works of tenderer or any of the constituent JV/Consortium member(s). Otherwise, the tenderer including the constituent JV/Consortium member(s) shall be considered ineligible for participating in tender process. In other cases, if the Overall Performance of tenderer or any of the constituent JV/Consortium member(s), in more than 20% of the works reported in the Appendix 11 (rounding off to the nearest lower whole number) is unsatisfactory, the tenderer including the constituent JV/Consortium member(s) shall be considered ineligible for participating in tender process and they shall be considered ineligible applicants in terms Clause 1.4.1 of NIT.

b) If there are any adverse remarks in the client's completion/performance certificate, the same shall be examined during technical evaluation.

c) If there is any misrepresentation of facts with regards to performance in any of the works reported above, the same will be considered as "fraudulent Practice" under Clause 13.1 of GCC and the tender submission of such tenderers will be rejected besides taking further action as per Clause 13.4 of GCC.

d) The undertaking shall be signed by authorized signatory of the tenderer. In case of JV/Consortium by the authorized signatory of the constituent member counter signed by the authorized signatory of the tenderer.

Stamp & Signature of Authorized Signatory

Example :-

Works reported in the Appendix 11	0-4	5	6	7	8	9	10	14
No. of unsatisfactory works acceptable	Nil	1	1	1	2	2	2	3

FORM OF TENDER - Appendix- 12
(Undertaking as per Clause 1.4.1 v(d) of NIT)
(UNDERTAKING FOR NOT BEING PENALISED IN A CONTRACT)

(to be submitted by tenderer (single entity) or by each member separately in case of JV/Consortium)

We do hereby undertake that we have been neither penalized with liquidated damages of 10% (or more) of the contract value in a contract due to delay nor imposed with penalty of 10% (or more) of the contract value due to any other reason in any Consultancy works awarded by UPMRC/ any other Metro Organization (100% owned by Govt.)/ Ministry of Housing & Urban Affairs/ Order of Ministry of Commerce/Any other Government organization, applicable for all Ministries of value more than 10% of NIT cost of work executed either individually or in a JV/Consortium during last three years (from the last day of previous month of the tender submission).

** Strike whichever are not applicable*

STAMP & SIGNATURE OF AUTHORISED SIGNATORY

Note :

1. In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
2. The undertaking shall be signed by authorized signatory of the tenderer. In case of JV/Consortium by the authorized signatory of the constituent member counter signed by the authorized signatory of tenderer.

FORM OF TENDER - Appendix- 13

(UNDERTAKING FOR FINANCIAL STABILITY)

(to be submitted by tenderer (single entity) or by each member separately in case of JV/Consortium)

We do hereby undertake that we have not suffered bankruptcy/insolvency during the last 5 years (from the last day of previous month of the tender submission).

STAMP & SIGNATURE OF AUTHORISED SIGNATORY

Note:

1. In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
2. The undertaking shall be signed by authorized signatory of the tenderer. In case of JV/Consortium by the authorized signatory of the constituent member counter signed by the authorized signatory of tenderer.

FORM OF TENDER - Appendix- 14
(Pending Litigation as per Clause 1.4.1 v(f) of NIT)
(to be submitted by tenderer (single entity) or by each member separately in case of JV/Consortium)

Applicant's legal name Date.....

JV/Consortium Member's legal name..... Page Of..... Pages

Net Worth of the tenderer/ JV/Consortium Member INR* Crore during last audited financial year

S.No.	Contract Identification	Year of award	Total completed cost (current value in case of ongoing work) (INR*)	Total amount in dispute (including claims & counter-claim) (INR*)	Applicant's percentage participation (in case of work executed by the applicant in JV/Consortium)	Applicant's share of disputed amount (INR*)
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5) x (6)
Contract Identification: Name of Employer: Address of Employer: Matter in dispute: <i>[indicate main issues in dispute]</i> Status of dispute: <i>[indicate if it is under Arbitration or being dealt with by the Judiciary]</i>						
1						
2						
Add required number of rows						
	Total of amounts of all contracts in dispute (INR*)					
	Percentage of net worth					

* or respective currency

STAMP & SIGNATURE OF AUTHORISED SIGNATORY

Note:

1. In case of JV/Consortium, this information shall be submitted by each member of the JV/Consortium.
2. This information shall be signed by authorized signatory of the tenderer. In case of JV/Consortium by the authorized signatory of the constituent members counter signed by the authorized signatory of tenderer.

FORM OF TENDER- APPENDIX – 15
(Undertaking as per Clause 1.4.1 x of NIT)

I/We [Name of the bidder] have read the clause(s) regarding **Restrictions/ Prior Registration on Entities from a Class of Countries** ; I/We [Name of the bidder] certify that we are not from such a country or, if from such a country, has been registered with the Competent Authority **and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.** I/We hereby certify that [Name of bidder] fulfils all requirements in this regard and is eligible to be considered.

*Strike off the highlighted text in case of tenders for Works not involving possibility of sub-contracting.

Stamp & Signature of authorized signatory of Tenderer

NOTE:

1. In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
2. The undertaking shall be signed by authorized signatory of the tenderer or constituent member in case of JV/Consortium.
3. If the aforesaid certificate given by a bidder whose bid is accepted is found to be false, it will be considered as “fraudulent practice” under clause 4.33.1a (ii) of GCC and this would be a ground for immediate termination besides taking further action as per Clause 4.33.1(b) /legal action in accordance with law.

FORM OF TENDER- Appendix- 16

**Details of Bank Account for refund of Tender Security/EMD
(Applicable if EMD/Tender Security deposited through Demand Draft/
Banker's Cheque/ RTGS/ NEFT/ IMPS)**

1. Name of the firm/ Bidder:
2. Complete Address:
3. Name of the Bank:
4. Branch:
5. Address of the Bank Branch:
6. Name of the account holder in bank:
7. Account Type:
8. Account Number:
9. IFS Code of the bank Branch:
10. Whether a copy of cancelled Cheque of the Bidder/Firm submitted: Yes, or No (Please tick)
(A copy of cancelled cheque to be enclosed).

STAMP & SIGNATURE OF AUTHORISED SIGNATORY

Notes:-

- a) EMD/Tender Security will be refunded through NEFT/ RTGS/ IMPS/ DD/ Bankers Cheque/ any other mode of payment, in the name of firm and bank account mentioned in this appendix, which shall be of same firm and account through which EMD/Tender Security has been paid to UPMRC.

EMD/Tender Security shall be paid in compliance with ITT Clause C18.1.2 / C 18.1.3.

FORM OF TENDER- Appendix- 17
LETTER FOR SUBMISSION OF TECHNICAL PROPOSAL FORMAT

FROM:

TO :

Sir,

Subject: General Consultancy Services for Lucknow Metro Project

Regarding Technical Proposal

I/We _____ Consultant/Consultancy firm herewith enclose
Technical Proposal for selection of my/our firm/organization as General Consultant for _____

Yours faithfully,

Signature _____ Full Name _____ Designation __ Address _____

(Authorised Representative)

FORM OF TENDER- Appendix- 18

**APPROACH PAPER ON WORK PLAN AND METHODOLOGY PROPOSED
FOR PERFORMING THE ASSIGNMENT**

(Network diagram of Activity also to be submitted)

FORM OF TENDER- Appendix- 19

COMMENTS/SUGGESTIONS OF CONSULTANT

On the Terms of Reference

- 1.
- 2.
- 3.
- 4.
- 5.

.

.

On the Data, services and facilities to be provided by the Employer in the Terms of Reference.

- 1.
- 2.
- 3.
- 4.
- 5.

.

.

.

.

FORM OF TENDER- Appendix- 20

FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED KEY STAFF OF THE GROUP (Refer Clause D of Annexure 1 of ITT)

Proposed Position : _____

Name of staff : _____

Date of birth & Age (in years) : _____

Nationality : _____

Contact Details (Phone No. & Email ID) : _____

Name of Firm : _____

Years with Firm (Employment Since) : _____

Regular or Contract Employee/Consultant to firm : _____

Total Experience (in years) : _____

Experience of _____ years in railway or railway related industry out of which _____ years in Metro/RRTS/High Speed.

Total Experience in the same rank (applied for) or equivalent in Metro/RRTS/High Speed: _____ (with brief of positions, Project & Employer already mentioned under employment record)

Total Experience at rank (applied for) one rank below in Metro/RRTS/High Speed: _____ (with brief of positions, Project & Employer already mentioned under employment record)

Detailed Tasks to be assigned : _____

Educational qualifications:

Summarise college/university and other specialized education of staff member, giving names of schools/colleges , dates attended and diplomas / degrees obtained viz., graduate, post-graduate, PhD, MBA etc. (Use upto a quarter page) (Especially highlighting the requirement of Criterion IV (ii) (a) (i) of Annexure 1A of ITT). Duly Substantiated by Certificates.

Professional training/membership of Professional organization (including local and foreign) :

Indicate (a) attachments to research institutions (giving the name of the institution and period) &

professional organization after doing professional fieldwork in the task assigned (b) short term training courses of period not less than a week, on the task assigned (Especially highlighting the requirement of Criterion IV (ii) (a) (ii) of Annexure 1A of ITT). Duly Substantiated by Certificates.

Key qualifications:

Give an outline of staff member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by staff member on relevant previous assignment and give dates and locations. (Use upto half a page)

Languages Proficiency

Indicate proficiency in reading, speaking & writing of English and other languages by remarking "good", "fair", or "poor".

Employment Record:

Starting with present position, list in reverse order, every employment held. List all positions held by staff member since graduation, giving dates, names of employing organization, title of positions held **indicating its same rank/equivalent or rank one below or even lower** and location of assignments (indicate the name of the City and the country-developed/developing), Duration of employment in months (from DD/MM/YYYY to DD/MM/YYYY). Also give types of activities performed, responsibilities undertaken and Employer references. (Use upto three quarters of a page) **(This shall be supported by an undertaking from the tenderer that the employment record mentioned have been verified at their end).**

Certification

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications and my experience.

Signature of staff

Date /Day/Month/Year.

All Records/information furnished by the candidates have been verified and if at any stage, any of the information is found to be incorrect, the candidate will be removed immediately and UPMRC may take disciplinary action as deemed appropriate.

Stamp & Signature of Firm/Joint venture/Consortium

Note:

A. Following to be attached with CV:

- i) Photograph

- ii) Certificate for availability by the key professional
- iii) Copy of valid passport in case of international expert
- iv) Age proof
- v) All Certificates for the claims made.

B. Electronic signature of designated expert can be used provided the Authorized signatory signs the same CV

*All the pages of the CV & Certificates should be self-attested.

C. Post award of contract also all the CVs are required to be submitted as per format prescribed in **Appendix–20 of the Form of Tender (FOT) along with Appendix-21 of FOT.**

(Refer Clause 'D' of Annexure 1 of ITT)

NOTE – All information filled herein should corroborate with information provided through Appendix -20 (CVs) of FOT. Post award of contract also all the CVs are required to be submitted as per format prescribed in **Appendix-20 of the Form of Tender (FOT) along with Appendix-21 of FOT.**

UPMRC/LKGC (02)-01/Vol-I/FOT Page | 120

FORM OF TENDER- Appendix- 22**COMPOSITION OF THE TEAM PERSONNEL AND THE TASK WHICH WOULD BE ASSIGNED TO EACH TEAM MEMBER**

1. Professional Personnel including Supporting professional staff..

S.No.	Name	Position	Task assignment
<hr/>			
	(a) Local professional personnel		
1.			
2.			
3.			
4.			
	(b) Foreign professional personnel		
1.			
2.			
3.			
4.			
	(c) Supporting professional staff		
1.			
2.			
3.			
4.			

2. Support staff

S.No.	Name	Position	Task assignment
<hr/>			
1.			
2.			
3.			
4.			

3. Detailed proposal as per (xxxi) of Terms of Reference (TOR), the site office personnel of the Consultant shall be supported by the Head office of the Consultant.

FORM OF TENDER- Appendix- 23

PROPOSED DEPLOYMENT SCHEDULE FOR EACH TEAM MEMBER

Bidder should provide, month wise and package wise, proposed deployment schedule for each of the Team Member for Lucknow Metro Rail Project. It should contain:

Titles and names, detailed job descriptions and qualifications of key personnel (Local & Expat) to be assigned to work and staff months for each.

FORM OF TENDER

Appendix- 24

We hereby jointly and severally certify in accordance with Clause '9.a' of the Order no. P-45021/2/2017- PP (BE-II) of Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade (DPIIT), Government of India dated 04.06.2020, that the item(s) offered meets the minimum local content of 50% / 20% and we meet the minimum local content requirement for 'Class-I local supplier' / 'Class-II local supplier' (strike-through whichever is not applicable). The details including name of vendor and location at which the local value addition is made is enclosed as **Appendix-25 of FOT**.

We acknowledge that false declaration by the tenderer regarding local value addition including payments to be made to their vendors for local value addition shall be treated as a fraudulent practice under GCC clause 13.1 of this tender for which the tenderer or its successors can be debarred for a period upto two years along with such other actions as may be permissible under the law.

In cases of procurement for a value in excess of Rs. 10 crores, we also undertake to submit a certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practising cost accountant or practising chartered accountant (in respect of suppliers other than companies) giving the percentage of local content, in accordance with clause '9.b' of the Order no. P-45021/2/2017-PP (BE-II) of Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade (DPIIT), Government of India dated 04.06.2020, after completion of works to the Engineer.

Signature of authorized signatory on behalf of Tenderer

Note :

- a) This appendix need to be submitted only by 'Class-I local supplier' / 'Class-II local supplier' as defined in Clause 1.4.1 ix of NIT.
- b) The undertaking shall be signed by authorized signatory of the tenderer. In case of JV/Consortium by the authorized signatory of the constituent members counter signed by the authorized signatory of tenderer

FORM OF TENDER- Appendix- 25

**Performa for Submission of the List of the Goods, Works & Services
Tentatively Proposed to be Offered with Local Value Addition**

S.No.	Description of Items (Goods/Works/Services)	Vendor	Location	% of Local content

Signature of authorized signatory on behalf of Tenderer



UTTAR PRADESH METRO RAIL CORPORATION LIMITED

**GENERAL CONSULTANCY SERVICES
FOR LUCKNOW MRTS PROJECT, PHASE – 1B**

TENDER NO: LKGC (02)-01

TENDER DOCUMENTS

VOLUME 2

**GENERAL CONDITIONS OF CONTRACT (GCC)
SPECIAL CONDITIONS OF CONTRACT (SCC)**

**UTTAR PRADESH METRO RAIL CORPORATION LTD.
Administrative Building, Vipin Khand, Gomti Nagar
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Lucknow-226010, Uttar Pradesh, India**



UTTAR PRADESH METRO RAIL CORPORATION LIMITED

**General Conditions of Contract (GCC) for
Consultancy Services**

Tender No. : LKGC(02)-01

**Tender Name: General Consultancy Services for
Lucknow MRTS Project, Phase-1B**

**UTTAR PRADESH METRO RAIL CORPORATION LTD.
Administrative Building, Vipin Khand, Gomti Nagar
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Lucknow-226010, Uttar Pradesh, India**

INDEX

General Conditions of Contract (GCC)

Sl. No.	Description	Page No.
1	General	1
1.1	Tenets of Interpretation	1
1.2	Definitions	1
1.3	Document Conventions	4
1.4	Abbreviations	4
2	The Contract	4
2.1	Language of Contract	4
2.2	The Entire Agreement	5
2.3	Severability	5
2.4	Relationship between Parties	5
2.5	Contract Documents and their Precedence	5
2.6	Modifications/ Amendments, Waivers and Forbearances	6
2.6.1	Modifications/ Amendments of Contract	6
2.6.2	Waivers and Forbearance	6
3	Governing Laws and Jurisdiction	7
3.1	Governing Laws and Jurisdiction	7
3.2	Changes in Laws and Regulations	7
4	Communications	7
4.1	Communications	7
4.2	Persons signing the Communications	7
	1. On behalf of the Consultant	7
	2. On behalf of the Procuring Entity	8
4.3	Address of the parties for sending communications by the other party	8
5	Consultant's Obligations and restrictions on its Rights	8
5.1	Changes in Constitution/ financial stakes/ responsibilities of a Contract's Business	8
5.2	Obligation to Maintain Eligibility and Qualifications	9
5.3	Restriction on Potential Conflict of Interests	9
5.4	Consequences of breach by Constituents of a Consultant	9
5.5	Assignment and Sub-contracting	10
5.6	Obligation to Indemnify Procuring Entity	10
5.6.1	For breach of IPR Rights	10
5.6.2	Losses and Damages Caused by Consultant	11
5.7	Confidentiality, Secrecy and Property and IPR Rights	12
5.7.1	Property Rights	12
5.7.2	IPR Rights	12
5.7.3	Confidentiality	12
5.7.4	Secrecy	12
5.7.5	Restrictions on the Use of Information	13
5.7.6	Protection and Security of Personal Data	13
5.8	Performance Bond/ Security	14
5.9	Permits, Approvals and Licenses	15
5.10	Insurances	16
5.11	Accounting, Inspection and Auditing	16
5.12	Book Examination Clause	16
5.13	Legal Compliance	17
5.14	Custody and Return of the Procuring Entity's Assets loaned to Consultant	17

Sl. No.	Description	Page No.
6	Procuring Entity's Obligations	17
6.1	Assistance by the Procuring Entity	17
6.2	Facilities to be provided by the Procuring Entity	17
6.3	Counterpart Personnel	18
6.4	Payment Obligation	18
6.5	Difference of opinion between Employer and Consultant	18
7	Scope of Services and Performance Standards	18
7.1	Scope of Services	18
7.2	Eligible Services	19
8	Deployment of Resources	19
8.1	Site and Assets thereon	19
8.1.1	Site of Service Delivery	19
8.1.2	Clearance of Site on Completion	20
8.2	Key and Non-key Personnel	20
8.2.1	General Requirements	20
8.2.2	Key Personnel	20
8.2.3	Non-key Personnel	21
8.2.4	Removal of Key and Non-key Experts or Sub-consultant on Orders of the Contract Manager	22
8.3	Equipment and Tools of Trade	22
9	Delivery of Services and delays	23
9.1	Works plan	23
9.2	Commencement of Services	23
9.3	Contract Management	23
9.3.1	Consultancy Management Teams	23
9.3.2	Review of Phases and Milestones	24
9.4	Delivery of services, Time of Delivery and Extensions Thereof	24
9.4.1	Delivery of Services	24
9.4.2	Time of Delivery of Services is of Essence of the Contract	24
9.4.3	Extension for Excusable Delay Not Due to Consultant	25
9.4.4	Extension of Time for inexcusable Delay Due to Consultant	25
9.4.5	Extension of Time for Concurrent Delay Due to Both Parties	26
9.5	Damages and Deductions Thereof	26
9.5.1	Right of the Procuring Entity to recover Damages	26
9.5.2	Liquidated damages	26
9.5.3	Denial Clause	26
9.5.4	Limit on total Damages	27
9.6	Force Majeure	27
10	Prices and Payments	27
10.1	Prices	27
10.1.1	Contract Price	27
10.1.2	Firm Prices	28
10.1.3	Variations	28
10.2	Taxes and Duties	28
10.3	Terms and Mode of Payment	30
10.4	Withholding and lien in respect of sums claimed	30
10.5	Payments to Consultant	31
10.5.1	General	31
10.5.2	Advance Payments	32
10.5.3	Remuneration and Reimbursable Expenses	33
10.5.4	"On-Account" Payments	33
10.5.5	Final Payment	33

Sl. No.	Description	Page No.
10.5.6	No Claim Certificate and Release of Contract Securities	34
10.5.7	Post Payment Audit	34
10.5.8	Signature on Receipts for Amounts	34
10.6	Suspension of Payments	35
10.7	Payment Against Time-Barred Claims	35
10.8	Commissions and Fees	35
11	Claim and dispute resolution	35
11.1	Procedure for claims	35
11.2	Payment for claims	36
11.3	Dispute resolution process	36
11.4	Notice of dispute	36
11.5	Excepted matters	36
11.6	Adjudication	37
11.7	Mediation	38
11.7.1	Notice for Mediation	38
11.7.2	Constitution of High-Level Committee (HLC)/Mediation Forum	38
11.7.3	Qualification of Mediator	38
11.8	Procedure for Appointment of Mediator	38
11.9	Venue of Mediation	39
11.10	Mediation Process	39
11.10.1	Confidentiality:	39
11.10.2	Online Mediation	39
11.10.3	Mediation Proceedings	39
11.10.4	Termination of Mediation Proceedings	39
11.10.5	Mediated Settled Agreement (MSA)	40
11.10.6	Cost of Mediation	40
11.10.7	Challenge to MSA/ Execution of MSA	40
11.10.8	No Claim of Interest	40
11.11	No legal action during Mediation	40
11.13	Jurisdiction of Courts	40
11.14	Suspension of Work on Account of Adjudication/ Mediation	40
12	Defaults, Breaches, Termination, and closure of Contract	41
12.1	Termination due to Breach, Default, and Insolvency	41
12.1.1	Defaults and Breach of Contract	41
12.1.2	Notice for Default	41
12.1.3	Remedies for Breaches/ Default	41
12.1.4	Limitation of Liability	42
12.2	Termination for Default/ Convenience of Procuring Entity or Frustration of Contract	42
12.2.1	Notice for Determination of Contract	42
12.2.2	Frustration of Contract	43
12.3	Closure of Contract	43
13	Code of Integrity in Public Procurement; Misdemeanours and Penalties	44
13.1	Code of Integrity	44

General Conditions of Contract for Consultancy Services

13.2	Obligations for Proactive Disclosures	45
13.3	Misdemeanours	45
13.4	Penalties for Misdemeanours	46

General Conditions of Control (GCC)

1 General

1.1. Tenets of Interpretation

Unless where the context requires otherwise, throughout the contract:

- 1) The headings of these conditions shall not affect the interpretation or construction thereof.
- 2) Writing or written includes matter either whole or in part, in digital communications, manuscript, typewritten, lithographed, cyclostyled, photographed, or printed under or over signature or seal or digitally acceptable authentication, as the case may be.
- 3) Words in the singular include the plural and vice-versa.
- 4) Words importing the masculine gender shall be taken to include other genders, and words importing persons shall include any company, association, or body of individuals, whether incorporated or not.
- 5) Terms and expressions not herein defined shall have the meanings assigned to them in the contract Act, 1872 (as amended) or the Sale of Goods Act, 1930 (as amended) or the General Clauses Act, 1897 (as amended) or of INCOTERMS, (current edition published by the International Chamber of Commerce, Paris) as the case may be.
- 6) Any reference to 'Services' shall also be deemed to include the incidental Works/ Goods.
- 7) Any reference to any legal Act, Government Policies or orders shall be deemed to include all amendments to such instruments, from time to time, to date.
- 8) GCC-clause 5.12 (Book Examination clause) shall not apply unless invoked explicitly in the contract.

1.2. Definitions

In the contract, unless the context otherwise requires:

- 1) "Allied Firm" are all business entities that are within the 'controlling ownership interest' (ownership of or entitlement to more than twenty-five per cent of the company's shares or capital or profits) or 'control' (including the right to appoint a majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder agreements or voting agreements) of the principal firm acting alone or together or through one or more juridical persons. All successor firms or assigns of the principal firm shall be considered allied firms;
- 2) "Bill of Quantities" (including the term Price Schedule or BOQ) means the priced and completed Bill of Quantities forming part of the Proposal;
- 3) "Commercial Bank" means a bank, defined as a scheduled bank under section 2(e) of the Reserve Bank of India Act, 1934;
- 4) "Contract" (including the terms 'Purchase Order' or 'Supply Order' or 'Withdrawal Order' or 'Work Order' or 'Consultancy Contract' or 'Contract for Services', 'rate contract' or 'framework contract' or 'Letter of Award — LoA' (letter or memorandum communicating to the Consultant the acceptance of his Proposal) or 'Agreement' or a 'repeat order' accepted/ acted upon by the Consultant in specific contexts), means a formal legal agreement in writing

relating to the subject matter of procurement, entered into between the Procuring Entity and the Consultant on mutually acceptable terms and conditions and which are in compliance with all the relevant provisions of the laws of the country;

- 5) "Consultant" (as a participant in a Procurement Process - including the term 'contractor', 'bidder', 'tenderer', participant' or 'service provider' in specific contexts) means any person or firm or company, including any member of a consortium or joint venture, every artificial juridical person not falling in any of the descriptions of Consultants stated hereinbefore, including any agency branch or office controlled by such person, participating in a Procurement Process;
- 6) "Consultant" (as a contract holder - including the terms 'Supplier' or 'Service Provider' or 'Contractor' or 'Firm' or *Vendor' or 'Successful Consultant' in specific contexts) means the person, firm, company, or Joint Venture with whom the contract is entered into and shall be deemed to include the Consultant's successors (approved by the Procuring Entity), agents, Sub-consultant, representatives, heirs, executors, and administrators as the case may be unless excluded by the terms of the contract;
- 7) "Contract Manager" means any officer of procuring entity or a third party agency who has been assigned the authority to take all actions on behalf of procurement officer during the execution of the contract by the consultant.;
- 8) "Day", "Month", and "Year" shall mean respectively calendar day, month or year (unless reference to financial year is apparent from the context);
- 9) "Effective Date" means the date on which this Contract comes into force and effect as per the Contract;
- 10) "Experts" means, collectively, Key Experts, Non-Key Experts, or any other personnel of the Consultant, Sub-consultant or JV member(s) assigned by the Consultant to perform the Services or any part thereof under the Contract;
- 11) "Goods" (including the terms *Stores', and 'Material(s)' in specific contexts) includes all articles, materials, commodities, livestock, medicines, furniture, fixtures, raw material, consumables, spare parts, instruments, machinery, equipment, industrial plant, vehicles, aircraft, ships, railway rolling stock assemblies, sub-assemblies, accessories, a group of machines comprising an integrated production process or such other categories of goods or intangible, products like technology transfer, licenses, patents or other intellectual properties (but excludes books, publications, periodicals, etc., for a library), in specific contexts, procured or otherwise acquired by a Procuring Entity. Any reference to Goods shall be deemed to include small work or some services that are incidental or consequential to the supply of such goods;
- 12) "Government" means the Central Government or a State Government, as the case may be and includes agencies and Public Sector Enterprises under it in specific contexts;
- 13) "Intellectual Property Rights" (IPR) means the intellectual property owner's rights concerning possession/ exploitation of such property by others of tangible or intangible intellectual property, including rights to Patents, Copyrights, Trademarks, Industrial Designs, Geographical indications (GI);
- 14) "Joint Venture (JV or JV/C)" means an association or a Consortium with or without a legal personality distinct from that of its members, of more than one entity where one member has the authority to conduct all businesses for and on behalf of any and all the members of the JV, and where the members of the JV are jointly and severally liable to the Procuring Entity for the performance of the

Contract.

- 15) "Key Expert(s)" means an individual professional (usually identified by name) whose skills, qualifications, knowledge, and experience are critical to the performance of the Services under the Contract.
- 16) "Non-Key Expert(s)" means an individual professional (usually not identified by name) provided by the Consultant or its Sub-consultants to perform the Services or any part thereof under the Contract;
- 17) "Parties": The parties to the contract are the "Consultant" and the "Procuring Entity", as defined in GCC clause 2.4;
- 18) "Performance Security" (includes the terms 'Security Deposit' or 'Performance Bond' 'Performance Bank Guarantee' or other specified financial instruments in specific contexts) means a monetary guarantee to be furnished by the successful Consultant or Contractor in the form prescribed for the due performance of the contract;
- 19) "Procurement" (in the context of Public/ Government 'procurement' or 'Purchase', or 'Acquisition' including an award of Public-Private Partnership projects, in specific contexts) means the acquisition of Goods/ Services/ works or a combination thereof by way of purchase, lease, license or otherwise, either using public funds or any other source of funds (e.g. grant, loans, gifts, private investment etc.) by a Procuring Entity, whether directly or through an agency with which a contract for procurement is entered into, but does not include any acquisition without consideration. The term "procure"/ "procured" or "purchase"/ "purchased" shall be construed accordingly;
- 20) "Procuring Entity" means the Employer/UPMRC;
- 21) "Procurement Officer" means the officer signing the Letter of Award (LoA) and/or the contract on behalf of the Procuring Entity;
- 22) "Procurement Process" (or "Tender"; "RFP"; "EOI", "Tender Enquiry" in specific contexts): 'Procurement Process' is the whole process from the publishing of the RFP/Tender Document to the resultant award of the contract. 'RFP/Tender Document' means the document (including all its sections, appendices, forms, formats, etc.) published by the Procuring Entity to invite Proposals/Bid in a Procurement Process. The RFP/Tender Document and Procurement Process may be generically and interchangeably referred to as "Bid Document", "Tender" or "Tender Enquiry, "which would be clear from context without ambiguity;
- 23) "Proposal" (including the term 'tender', 'offer', 'quotation' or 'bid' in specific contexts) means an offer to supply goods, services or execution of works made as per the terms and conditions set out in a document inviting such offers;
- 24) "Services" means the activities to be performed by the Consultant under this Contract.
- 25) "Signed" means ink signed or digitally signed with a valid Digital Signature as per IT Act 2000 (amended from time to time). It also includes stamped, except in the case of a Letter of Award or amendment thereof;
- 26) "Sub-consultant" means a person or corporate body with an agreement with the Consultant to carry out a specific part of the 'Services' while the Consultant remains solely liable for the execution of the Contract;
- 27) "Variation" means an instruction given by the Contract Manager, which varies the scope, quantum or performance standards of the Service performed;
- 28) "Works" refer to any activity involving construction, fabrication, repair, overhaul, renovation, decoration, installation, erection, excavation, dredging, and so on,

which make use of a combination of one or more engineering designs, architectural design, material and technology, labour, machinery, and equipment.

1.3. Document Conventions

All words and phrases defined in GCC-clause 1.2 are written as 'Capitalised words' and shall have the defined meaning. The rest of the words shall be as per grammar, inter-alia 'Services' shall indicate the definition given in the GCC, while 'services' shall have the usual dictionary meaning.

1.4. Abbreviations:

Abbreviation	Definition
AITC	Appendix to Instructions to Consultants
BOQ	Bill of Quantities
BSD	Bid Securing Declaration
CV	Curriculum Vitae
EMD	Monetary Guarantee to be furnished by a Consultant along with its proposal
EOI	Expression of Interest
FBS	Fixed Budget Selection
GCC	General Conditions of Contract
GST	Goods and Services Tax
GSTIN	GST Identification Number
GTE	Global Tender Enquiry (International Competitive Bidding)
HSN	Harmonized system of Nomenclature
IEM	Independent External Monitor
IPR	Intellectual Property Rights
ITC	Instruction to Consultants
JV/C	Joint Venture/ Consortium
LCS	Least Cost Selection
LoA	Letter of Acceptance
QCBS	Quality and Cost Based Selection
REOI	Request for Expression of Interest
RFP	Request for Proposal
RFPL	Request for Proposal Letter
SCC	Special Conditions of Contract
TIA	Tender Inviting Authority
TIS	Tender Information Summary
TOR	Terms of Reference

2 The Contract

2.1. Language of Contract

The contract and all subsequent correspondence documents, during its execution,

between the consultant and the Procuring Entity shall be written in the Language (hereinafter called the contract's language) as stipulated in the Contract (or, if not so specified, in English). However, the language of any printed literature furnished by a Consultant may be written in any other language provided a certified translation accompanies the same in the contract's language. For purposes of interpretation, translation in the contract's language shall prevail.

2.2. The Entire Agreement

This Contract and its documents (referred to in GCC-clause 2.5 below) constitute the entire agreement between the Procuring Entity and the Consultant and supersede all other communications, negotiations, and agreements (whether written or oral) of the Parties made before the date of this Contract. No agent or representative of either Party has the authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not outlined in this Contract.

2.3. Severability

If any provision or condition of this Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of the Contract or any of its other provisions and conditions.

2.4. Relationship between Parties

- 1) The parties to the contract are the Consultant and the Procuring Entity, as nominated in the contract.
- 2) Nothing contained herein shall be construed as establishing a relationship in the nature of master and servant or principal and agent between the Procuring Entity and the Consultant. The Consultant, subject to this Contract, is legally the main principal/ master of the Experts and Sub-consultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.
- 3) Authority of Member in Charge: In case the Consultant is a Joint Venture, the members hereby authorize the member specified in the contract to act on their behalf in exercising all the Consultant's rights and obligations towards the Procuring Entity under this Contract, including without limitation the receiving of instructions and payments from the Procuring Entity.
- 4) Authorised Representative: Any action required or permitted to be taken and any document required or permitted to be executed under this Contract by the Procuring Entity or the Consultant may be taken or executed by the officials specified in the contract.
- 5) Good Faith: The Parties shall act in good faith concerning each other's rights under this Contract and adopt all reasonable measures to ensure the realization of the objectives of this Contract. The Consultant shall always act, in respect of any matter relating to this Contract or the Services, as a faithful adviser to the Procuring Entity and shall at all times support and safeguard the Procuring Entity's legitimate interests in any dealings with the third parties.

2.5. Contract Documents and their Precedence

The following conditions and documents in indicated order of precedence (higher to lower) shall be considered an integral part of the contract, irrespective of whether these are not appended/ referred to in it. Any generic reference to 'Contract' shall

imply reference to all these documents as well:

- a) The Contract Agreement;
- b) The Letter of Acceptance;
- c) Pre and Post bid proceeds
- d) Form of Tender
- e) BOQ/Payment schedule
- f) NIT
- g) ITT
- h) Terms of Reference (TOR)
- i) The Special Conditions of Contract;
- j) The General Conditions of Contract;
- k) The Consultant's Proposal; and
- l) Any other document forming part of the Contract.

The Contract shall be read as a whole and interpreted harmoniously, with due regard to the intent and purpose of its provisions. In case of any inconsistency, ambiguity, or conflict among the various documents forming part of the Contract, the same shall be resolved by giving precedence to the documents in the above order, unless otherwise expressly stated.

2.6. Modifications/ Amendments, Waivers and Forbearances

2.6.1 Modifications/ Amendments of Contract

- 1) After the contract documents have been signed, no modified provisions shall be applicable unless the Procuring Entity suo-moto or, on request from the Consultant, by written order, amend the contract, at any time during the currency of the contract, by making alterations and modifications within the general scope of the Contract. Requests for changes and modifications in the Contract may be submitted in writing by the Consultant to the Procuring Entity.
- 2) If the Consultant does not agree to the suo-moto modifications/ amendments made by the Procuring Entity, he shall convey his views within 14 days from the date of amendment/ modification. Otherwise, it shall be assumed that the Consultant has consented to the amendment.
- 3) Any verbal or written arrangement abandoning, modifying, extending, reducing, or supplementing the contract or any of the terms thereof shall be deemed conditional and shall not be binding on the Procuring Entity unless and until the same is incorporated in a formal instrument and signed by the Procuring Entity, and till then the Procuring Entity shall have the right to repudiate such arrangements.

2.6.2 Waivers and Forbearance

The following shall apply concerning any waivers, forbearance, or similar action taken under this Contract:

- 1) Any waiver of a Procuring Entity's rights, powers, or remedies under this Contract must be in writing, dated, and signed by an authorized representative of the Procuring Entity granting such a waiver and must specify the terms under which the waiver is being granted.
- 2) No relaxation, forbearance, delay, or indulgence by Procuring Entity in enforcing any of the terms and conditions of this Contract or granting of an extension of time

by Procuring Entity to the Consultant shall, in any way whatsoever, prejudice, affect, or restrict the rights of Procuring Entity under this Contract, neither shall any waiver by Procuring Entity of any breach of Contract operate as a waiver of any subsequent or continuing breach of Contract.

3 Governing Laws and Jurisdiction

3.1. Governing Laws and Jurisdiction

- 1) This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Laws of India for the time being in force.
- 2) Irrespective of the place of delivery, the place of performance or the place of payments under the contract, the contract shall be deemed to have been made at the place from which the Letter of Award (LoA, or the contract Agreement, in the absence of LoA) has been issued. Unless otherwise specified in the Contract, the courts of such a place shall alone have jurisdiction to decide any dispute arising out or in respect of the contract.

3.2. Changes in Laws and Regulations

Unless otherwise stipulated in the contract, if after the deadline for the Proposal submission (Techno-commercial), any law, regulation, ordinance, order or bye-law having the force of law is enacted, promulgated, abrogated, or changed in India (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/ or the contract Price, then such Delivery Date and/ or Contract Price shall be correspondingly increased or decreased as per GCC clause 2.6, by agreement between the Parties hereto, to the extent that the Consultant has thereby been affected in the performance of any of its obligations under the contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the applicable price adjustment provisions.

4. Communications

4.1. Communications

- 1) All communications under the contract shall be served by the parties to each other in writing, in the contract's language, and served in a manner customary and acceptable in business and commercial transactions.
- 2) The effective date of such communications shall be either the date when delivered to the recipient or the effective date mentioned explicitly in the communication, whichever is later.
- 3) No communication shall amount to an amendment of the terms and conditions of the contract, except a formal letter of amendment of the Contract expressly so designated.
- 4) Such communications would be an instruction, a notification, an acceptance, a certificate from the Procuring Entity, or a submission or a notification from the Consultant. A notification or certificate required under the contract must be communicated separately from other communications.

4.2. Persons signing the Communications

For all purposes of the contract, including arbitration, thereunder all communications to the other party shall be signed by:

- 1) **On behalf of the Consultant:** The person who has signed the contract on behalf of the Consultant shall sign all correspondences. A person signing communication in

respect of the contract or purported to be on behalf of the Consultant, without disclosing his authority to do so, shall be deemed to warrant that he has authority to bind the Consultant. If it is discovered at any time that the person so signing has no authority to do so, the Procuring Entity reserves its right, without prejudice to any other right or remedy, to terminate the contract for default in terms of the contract and/ or avail any or all the remedies thereunder and hold such person personally and/ or the Consultant liable to the Procuring Entity for all costs and damages arising from such misdemeanours.

- 2) **On behalf of the Procuring Entity:** Unless otherwise stipulated in the contract, the Contract Manager signing the contract shall administer the contract and sign communications on behalf of the Procuring Entity. Paying Authorities mentioned in the contract shall also administer respective functions during Contract Execution.

4.3. Address of the parties for sending communications by the other party.

For all purposes of the contract, including dispute resolution mechanism, thereunder, the address of parties to which the other party shall address all communications and notices shall be:

- 1) The Consultant's address as mentioned in the contract, unless the Consultant has notified change by a separate communication containing no other topic to the Procuring Entity. The Consultant shall be solely responsible for the consequence of an omission to notify a change of address in the manner aforesaid, and
- 2) The Procuring Entity's address shall be the one mentioned in the contract. The Consultant shall also send additional copies to officers of the Procuring Entity presently dealing with the contract.
- 3) In case of communications from the Consultant, copies of communications shall be marked to the Contract Manager and the Procuring Entity's officer signing the contract and as relevant to the Paying Authorities mentioned in the contract. Unless specified before the contract's start, the Procuring Entity and the Consultant shall notify each other if additional copies of communications are to be addressed to additional addresses.

5 Consultant's Obligations and restrictions on its Rights

5.1 Changes in Constitution/ financial stakes/ responsibilities of a Contract's Business

The Consultant must proactively keep the Procuring Entity informed of any changes in its constitution/ financial stakes/ responsibilities during the execution of the contract.

- 1) Where the Consultant is a partnership firm, the following restrictions shall apply to changes in the constitution during the execution of the contract:
 - a) A new partner shall not be introduced in the firm except with the previous consent in writing of the Procuring Entity, which shall be granted only upon execution of a written undertaking by the new partner to perform the contract and accept all liabilities incurred by the firm under the contract before the date of such undertaking.
 - b) On the death or retirement of any partner of the Consultant firm before the complete performance of the contract, the Procuring Entity may, at his option, terminate the contract for default as per the contract and/ or avail any or all remedies thereunder.
 - c) If the contract is not terminated as provided in Sub-clause (b) above,

notwithstanding the retirement of a partner from the firm, that partner shall continue to be liable under the contract for acts of the firm until a copy of the public notice given by him under Section 32 of the Partnership Act, has been sent by him to the Procuring Entity in writing or electronically.

5.2 Obligation to Maintain Eligibility and Qualifications

The contract has been awarded to the Consultant based on evaluation and scoring criteria stipulated in the Tender Document after he was shortlisted in the Procurement Process based on eligibility and qualifications criteria stipulated therein. The Consultant is contractually bound to maintain compliance with all such criteria during the execution of the contract. Any change which would vitiate the basis on which the Consultant was shortlisted or awarded the contract should be pro-actively brought to the notice of the Procuring Entity within 7 days of it coming to the Consultant's knowledge.

5.3 Restriction on Potential Conflict of Interests

- 1) Neither the Consultant nor its Sub-consultants nor the Personnel shall engage, either directly or indirectly, in any of the following activities:
 - a) During this Contract's term, any business or professional activities in India/abroad that would conflict with the activities assigned to them.
 - b) After this Contract's termination, such other activities as may be stipulated in the contract.
- 2) Furthermore, if the Consultant, as part of the Services, has the responsibility of advising the Procuring Entity on the procurement of goods, works or services, the Consultant shall at all times exercise such responsibility in the best interest of the Procuring Entity. Any discounts or commissions obtained by the Consultant in the exercise of such procurement responsibility shall be for the account of the Procuring Entity.
- 3) During the term of this Contract and after its termination, the Consultant and its affiliates, as well as any Sub-consultant and any of its affiliates, shall be disqualified from providing goods, works, or Services (other than the subject Service of this Contract and any continuation thereof) for any project resulting from or closely related to the subject Services of this Contract.
- 4) The payment of the Consultant according to (GCC Clause 10.5) shall constitute the Consultant's only payment in connection with this Contract. The Consultant shall not accept for its benefit any trade commission, discount, or similar payment in connection with activities under this Contract or the discharge of its obligations hereunder. The Consultant shall use its best efforts to ensure that any Sub-consultants and the Experts and agents of either shall not receive any additional payment.
- 5) The Consultant has an obligation and shall ensure that its Experts and Sub-consultants shall have an obligation to disclose any actual or potential conflict that impacts their capacity to serve the best interest of the Procuring Entity, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant and/ or the termination of the Contract.

5.4 Consequences of breach by Constituents of a Consultant

Should the Consultant or any of its partners, its Sub-consultants, any of its members in case of JV/C, or their Personnel commit a default or breach of GCC-clause 5.1 to 5.7,

the Consultant (in case of JV, by the Lead Member, or in the case of the Lead Member being the defaulter, by the member nominated as Lead Member of the remaining JV/C) shall remedy such breaches within 21 days, keeping the Procuring Entity informed. Procuring Entity may call upon the Lead Member to assign the work of the defaulting member to any other equally competent party acceptable to the Procuring Entity. However, at its discretion, the Procuring Entity shall be entitled, and it shall be lawful on his part, to treat it as a breach of contract and avail any or all remedies thereunder. The decision of the Procuring Entity as to any matter or thing concerning or arising out of GCC-clause 5.1 to 5.7 or on any question whether the Consultant or any partner of the Consultant firm has committed a default or breach of any of the conditions shall be final and binding on the Consultant.

5.5 Assignment and Sub-contracting

- 1) The Consultant shall not, save with the previous consent in writing of the Procuring Entity, sublet, transfer, or assign the contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever to any Sub-consultant.
- 2) The Consultant shall notify the Procuring Entity in writing of all such Sub-consultants, if not already stipulated in the contract, in its original Proposal or later. Such notification shall not relieve the Consultant from any of its liability or obligation under the terms and conditions of the contract. Sub-consultants must comply with and should not circumvent the Consultant's compliance with its obligations under GCC-clause 5.1 to 5.7.
- 3) If the Consultant sublets or assigns this Contract or any part thereof without such permission, the Procuring Entity shall be entitled, and it shall be lawful on his part, to treat it as a breach of contract and avail any or all remedies thereunder.

5.6 Obligation to Indemnify Procuring Entity

5.6.1 For breach of IPR Rights

- 1) The Consultant shall indemnify and hold harmless, free of costs, the Procuring Entity and its employees and officers from and against all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which may arise in respect of the Services provided by the Consultant under this Contract, as a result of any infringement or alleged infringement of any patent, utility model, registered design, copyright, or other Intellectual Proprietary Rights (IPR) or trademarks, registered or otherwise existing on the date of the contract arising out of or in connection with:
 - a) Any design, data, drawing, specification, or other documents or Services provided or designed by the Consultant for or on behalf of the Procuring Entity.
 - b) The sale by the Procuring Entity in any country of the services/ products produced by the Services delivered by Consultant, and
 - c) The delivery of the Services by the Consultant or the use of the Services at the Procuring Entity's Site
- 2) Such indemnity shall not cover any use of the Services or any part thereof other than for the purpose indicated by or to be reasonably inferred from the contract, neither any infringement resulting from the use of the Services or any part thereof, or any service/ products produced thereby in association or combination with any other service, equipment, plant, or materials not delivered by the Consultant.

- 3) If any proceedings are brought, or any claim is made against the Procuring Entity arising out of the matters referred above, the Procuring Entity shall promptly notify the Consultant. At its own expense and in the Procuring Entity's name, the Consultant may conduct such proceedings and negotiations to settle any such proceedings or claim, keeping the Procuring Entity informed.
- 4) If the Consultant fails to notify the Procuring Entity within twenty-eight (28) days after receiving such notice that it intends to conduct any such proceedings or claim, then the Procuring Entity shall be free to conduct the same on its behalf at the risk and cost to the Consultant.
- 5) At the Consultant's request, the Procuring Entity shall afford all available assistance to the Consultant in conducting such proceedings or claims and shall be reimbursed by the Consultant for all reasonable expenses.

5.6.2 Losses and Damages Caused by Consultant

- 1) The Consultant shall indemnify and keep harmless the Procuring Entity, from and against, all actions, suit proceedings, losses, costs, damages, charges, claims, and demands of every nature and description brought or recovered against the Procuring Entity because of any act or omission or default or negligence or trespass of the Consultant, his agents, or employees despite all reasonable and proper precautions may have been taken, during the execution of the Services. The Consultant shall make good at his own expense all resulting losses and/ or damages to:
 - (a) the Services themselves or
 - (b) any other property of the procuring entity or
 - (c) the lives, persons, or property of others
- 2) In case the Procuring Entity is called upon to make good such costs, loss, or damages or to pay any compensation, including that payable under the provisions of the Workmen's Compensation Act or any statutory amendments thereof, the amount of any costs or charges including costs and charges in connection with legal proceedings, which the Procuring Entity may incur about it, shall be charged to the Consultant. All sums payable by way of compensation under any of these conditions shall be considered reasonable compensation to be applied to the actual loss or damage sustained and whether or not any damage shall have been sustained.
- 3) The Procuring Entity shall have the power and right to pay or to defend or compromise any claim of threatened legal proceedings, or in anticipation of legal proceedings being instituted consequent on the action or default of the Consultant, to take such steps as may be considered necessary or desirable to ward off or mitigate the effect of such proceedings, charging to Consultant, as aforesaid, any sum or sums of money which may be paid and any expenses whether for reinstatement or otherwise which may be incurred and the propriety of any such payment, defence or compromise, and the incurring of any such expenses shall not be called in question by the Consultant.

5.7 Confidentiality, Secrecy and Property and IPR Rights

5.7.1 Property Rights

- 1) Physical assets, e.g., Equipment, vehicles and materials made available to the Consultant by the Procuring Entity or purchased by the Consultant wholly or partly with funds provided by the Procuring Entity, shall be the property of the Procuring Entity and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultant shall make an inventory of such equipment, vehicles, and materials available to the Procuring Entity and dispose of such equipment, vehicles, and materials in accordance with the Procuring Entity's instructions. While in possession of such equipment, vehicles and materials, the Consultant, unless otherwise instructed by the Procuring Entity in writing, shall insure them at the expense of the Procuring Entity in an amount equal to their total replacement value.
- 2) Intangible assets, e.g., license agreements, Software Packages, and memberships for purposes of performance of this contract provided by the Procuring Entity or purchased by the Consultant wholly or partly with funds provided by the Procuring Entity, shall be the property of the Procuring Entity and shall be registered accordingly. These shall be obtained in the name of the Procuring entity after obtaining the Procuring Entity's prior written approval. The Procuring entity shall have an encumbered right to use such assets, even after the termination of the Contract. Any restrictions about the future use of these documents and software shall be specified in the Contract.

5.7.2 IPR Rights

All deliverables, outputs, plans, drawings, specifications, designs, reports, and other documents and software submitted by the Consultant under this Contract shall become and remain the property of the Procuring Entity and shall be subject to laws of copyright and must not be shared with third parties or reproduced, whether in whole or part, without the Procuring Entity's prior written consent. The Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Procuring Entity, together with a detailed inventory thereof. The Consultant may retain a copy of such documents and software but shall not use it for commercial purposes.

5.7.3 Confidentiality

All documents, drawings, samples, data, associated correspondence or other information furnished by or on behalf of the Procuring Entity to the Consultant in connection with the contract, whether such information has been furnished before, during or following completion or termination of the contract, are confidential and shall remain the property of the Procuring Entity and shall, without the prior written consent of Procuring Entity neither be divulged by the Consultant to any third party, nor be used by him for any purpose other than the design, procurement, or other services and activities required for the performance of this Contract. If advised by the Procuring Entity, all copies of all such information in original shall be returned on completion of the Consultant's performance and obligations under this contract.

5.7.4 Secrecy

If the contract declares the subject matter of this Contract as coming under the Official

Secrets Act, 1923 or if the contract is marked as “Secret”, the Consultant shall take all reasonable steps necessary to ensure that all persons employed in any connection with the contract, have acknowledged their responsibilities and penalties for violations under the Official Secrets Act and any regulations framed thereunder.

5.7.5 Restrictions on the Use of Information

- 1) Without the Procuring Entity's prior written consent, the Consultant shall not use the information mentioned in the sub-clauses above except for performing this contract.
- 2) The Consultant shall treat and mark all information as confidential (or Secret — as the case may) and shall not, without the written consent of the Procuring Entity, divulge to any person other than the person(s) employed by the Consultant in the performance of the contract. Further, any such disclosure to any such employed person shall be made in confidence and only so far as necessary for such performance for this contract.
- 3) Notwithstanding the above, the Consultant may furnish to its holding company or its Sub-consultant(s) such documents, data, and other information it receives from the Procuring Entity to the extent required for performing the contract. In this event, the Consultant shall obtain from such holding company/ Sub- consultant(s) an undertaking of confidentiality (or secrecy —as the case may be) similar to that imposed on the Consultant under the above clauses.
- 4) The obligation of the Consultant under sub-clauses above, however, shall not apply to information that:
 - a) the Consultant needs to share with the institution(s) participating in the financing of the contract;
 - b) now or hereafter is or enters the public domain through no fault of Consultant;
 - c) can be proven to have been possessed by the Consultant at the time of disclosure and which was not previously obtained, directly or indirectly, from the Procuring Entity; or
 - d) otherwise lawfully becomes available to the Consultant from a third party with no obligation of confidentiality.
- 5) The above provisions shall not in any way modify any undertaking of confidentiality (or Secrecy — as the case may be) given by the Consultant before the contract date in respect of the contract, the RFP Document, or any part thereof.
- 6) The provisions of this clause shall survive completion or termination for whatever reason of the contract.

5.7.6 Protection and Security of Personal Data

- 1) Where the Consultant is processing Personal Data for the Procuring Entity (as part of Services), the Consultant shall:
 - a) Process the Personal Data only as per instructions from Procuring Entity (which may be specific instructions or instructions of a general nature) as set out in this Contract or as otherwise notified by Procuring Entity;
 - b) Comply with all applicable laws;
 - c) Process the Personal Data only to the extent and in such manner as is necessary for the discharge of the Consultant's obligations under this

- Contract or as is required by Law or any Regulatory Body;
- d) Implement appropriate technical and organizational measures to protect Personal Data against unauthorized or unlawful Processing and accidental loss, destruction, damage, alteration, or disclosure. These measures shall be appropriate to the harm which might result from any unauthorized or unlawful Processing, accidental loss, destruction, or damage to the Personal Data and having regard to the nature of the Personal Data which is to be protected;
 - e) Take reasonable steps to ensure the reliability of its staff and agents who may have access to the Personal Data;
 - f) Obtain prior written consent from the Authority to transfer the Personal Data to any Sub-consultant for the provision of the Services;
 - g) Not cause or permit the Personal Data to be transferred, stored, accessed, viewed, or processed outside of India without the prior written consent of the Procuring Entity.
 - h) Ensure that all staff and agents required to access the Personal Data are informed of the confidential nature of the Personal Data and comply with the obligations set out in this clause.
 - i) Ensure that none of the staff and agents publishes or disclose any personal data to any third parties unless directed in writing to do so by the Procuring Entity.
 - j) Not disclose Personal Data to any third parties in any circumstances other than with the written consent of the Procuring Entity or compliance with a legal obligation imposed upon the Procuring Entity;
- 2) Notify the Procuring Entity (within five Working Days) if it receives the;
- a) a request from an employee of Procuring Entity to have access to his or other employees' Personal Data; or
 - b) a complaint or request relating to the Procuring Entity's obligations under the law;
- 3) The provision of this clause shall apply during the contract period and indefinitely after its expiry.

5.8 Performance Bond/ Security

- 1) Within 30 days from date of issue of Letter of Acceptance, the successful Tenderer shall furnish Performance Security, valid up to 12 months after the date of completion of all contractual obligations.

The Extension of time for submission of Performance Security beyond 30 (Thirty) days up to 60 days from date of issue of LOA may be given by the Authority who is competent to sign the Contract Agreement. However, a Penal Interest of 15% per annum shall be charged for the entire period i.e. from the date of issue of LOA to the date of submission of Performance Security.

No extension of time for submission of Performance Security beyond 60 days from the date of Letter of Acceptance shall be granted under any circumstances.

- 2) The amount of Performance security shall be stipulated in the RFP document, or the Contract (or if not specified @ 10% of the contract Price in types and proportions of currencies in which the Contract Price is payable either in the form of a RTGS/NEFT, FDR or in the form of a Bank Guarantee from a branch in India of a scheduled foreign bank or from a scheduled commercial bank in India acceptable to the Employer.

- 3) If the Consultant, having been called upon by the Procuring Entity to furnish Performance Security, fails to do so within the specified period, it shall be lawful for the Procuring Entity at its discretion to annul the award and forfeit the EMD (or enforce Bid Securing Declaration, if that was submitted in lieu of Bid Security), besides taking any other administrative punitive action like 'Removal from List of Registered Suppliers', debarment from participating in re-tender for that work or any other tender of UPMRC for a period of one year from date of issue of letter of annulment of LOA.
- 4) If the Consultant fails to maintain the requisite Performance Security during the Contract's currency, it shall be lawful for the Procuring Entity at its discretion.
 - (a) treat it as a breach of contract and avail any or all contractual remedies provided for breaches/ default, including termination of the Contract for Default, or
 - (b) without terminating the Contract, recover from the Consultant the amount of such security deposit by deducting the amount from the pending bills of the Consultant under the contract or any other contract with the Procuring Entity or the Government or any person contracting through the Procuring Organization or otherwise, howsoever as per GCC-clause 10.4.
- 5) If a contract is amended, the Consultant shall furnish amended Performance Security with revised value and validity within twenty-one days of the issue of such an amendment.
- 6) The Procuring Entity shall be entitled, and it shall be lawful on his part,
 - (a) to deduct from the performance securities or to forfeit the said security in whole or in part in the event of:
 - i) Any default, failure, or neglect on the part of the Consultant in the fulfilment or performance in all respect of this contract or any other contract with the Procuring Organization or any part thereof
 - ii) for any loss or damage recoverable from the Consultant which the Procuring Entity may suffer or be put to for reasons of or due to the above defaults/ failures/ neglect
 - (b) and in either of the events aforesaid to call upon the Consultant to maintain the said performance security at its original limit by making further deposits, provided further that the Procuring Entity shall be entitled, and it shall be lawful on his part, to recover any such claim from any sum then due or which at any time after that may become due to the Consultant for similar reasons.
- 7) Subject to the sub-clause above, the Procuring Entity shall release the performance security without any interest to the Consultant on completing all contractual obligations.
- 8) No claim shall lie against the Procuring Entity regarding interest on cash deposits, Government Securities, or depreciation thereof.

5.9 Permits, Approvals and Licenses

Whenever the Services and incidental Goods/ Works delivery requires the Consultant to obtain permits, approvals, and licenses from local public authorities or any third party, it shall be the Consultant's sole responsibility to obtain these and keep them current and valid. Such requirements may include but not be restricted to licenses or environmental clearance if required. If requested by the Consultant, the Procuring Entity shall make its best effort to assist the Consultant in complying with such requirements in a timely and expeditious manner without diluting the Consultant's responsibility in this regard.

5.10 Insurances

The Consultant shall take out and maintain, and shall cause any Sub- consultants to take out and maintain, at its (or the Sub-consultants', as the case may be) own cost but on terms and conditions approved by the Procuring Entity, insurance against the risks, and for the coverage, as stipulated in the contract or any applicable law including Labour Codes; and at the Procuring Entity's request, shall provide evidence to the Procuring Entity showing that such insurance has been taken out and maintained and that the current premiums have been paid. The Consultant shall ensure that such insurances are in place before commencing the Services as stated in GCC clause 9.2. Alterations to the terms of insurance shall not be made without the approval of the Contract Manager.

5.11 Accounting, Inspection and Auditing

The Consultant shall keep and make all reasonable efforts to cause its Sub-consultants to keep accurate and systematic accounts and records in respect of the Services and in such form and detail as shall identify relevant time changes and costs and as per accounting principles prescribed in India.

5.12 Book Examination Clause

If explicitly invoked in the contract, the Procuring Entity reserves the right for 'Book Examination' as follows:

- 1) The Consultant shall, whenever called upon and required to produce or cause to be produced, for examination by any Government Officer duly authorised on that behalf, any cost or other book of account, voucher, receipt, letter, memorandum, paper or writing or any copy of or extract from any such document. The Consultant shall also furnish information relating to the execution of this contract or relevant for verifying or ascertaining the cost of execution of this contract to such Government Officer in such manner as may be required. This Government Officer's decision on the relevancy of any document or information of return shall be final and binding on the parties. The obligation imposed by this clause is without prejudice to the Consultant's obligations under any other statute, rules or orders which shall be concurrently binding on the Consultant.
- 2) The Consultant shall, if the authorised Government Officer so requires (whether before or after the prices have been finally fixed), afford facilities to the Government Officer concerned to visit the Consultant's premises to examine the processes of delivery of Services and estimate or ascertain the cost of performance of Contract. The authorised Government Officer shall have the power, mutatis mutandis, to examine all the relevant books of the Consultant's Sub-consultant or any subsidiary or allied firm or company, if any portion of the contract is entrusted or carried out by such entities.
- 3) If, on such examination, it is established that the contracted price is more than the actual cost-plus reasonable profit margin, the Procuring Entity shall have the right to reduce the price and determine the amount to a reasonable level.
- 4) The Consultant or its agency is bound to allow examination of its books within 60 days from the date the notice is received by the Consultant or its agencies calling for the production of documents under sub-clause (1) above. In the event of the Consultant's or his agency's failure to do so, the contract price would be reduced and determined according to the best judgment of the Procuring Entity, which

would be final and binding on the Consultant and his agencies.

5.13 Legal Compliance

The Consultant shall perform the Services in accordance with the Contract and the Applicable Law and shall take all practicable steps to ensure that any of its Experts and Sub-consultants comply with the Applicable Law.

5.14 Custody and Return of the Procuring Entity's Assets loaned to Consultant

- 1) The contractors shall sign accountable receipts for all documents and materials or other assets/ properties made over to them by the Contract Manager on behalf of the Procuring Entity or purchased by Consultant with funds provided by the Contract Manager on behalf of the Procuring Entity. All such Equipment and Materials shall be marked accordingly. All such assets shall be deemed in good condition when received by the Consultant unless he has notified the Procuring Entity to the contrary within twenty-four hours of receipt. Otherwise, he shall be deemed to have waived the right to do so at any subsequent stage. The Consultant shall maintain inventory details of all such equipment and materials.
- 2) These assets shall remain the property of the Procuring Entity, and the Consultant shall take all reasonable care of all such assets. The Consultant shall be responsible for all damage or loss from whatever cause while assets are possessed or controlled by the Consultant, staff, workmen, or agents.
- 3) Where the Consultant insures such assets against loss or fire at the request of the Procuring Entity, such insurance shall be deemed to be by way of additional precaution and shall not prejudice the Consultant's liability as aforesaid.
- 4) The Consultant shall return all such assets in good order and repair, reasonable wear and tear excepted, before the completion/ closure/ termination of the contract and shall be responsible for any failure to account for the same or any damage done to that as assessed by the Procuring Entity whose decision shall be final and binding.

6 Procuring Entity's Obligations

6.1. Assistance by the Procuring Entity

Unless otherwise specified in the Contract, the Procuring Entity shall use its best efforts

- 1) Issue instructions and information to its officials, agents, and stakeholders for prompt and effective implementation of the Services.
- 2) Provide to the Consultant any other assistance as specified in the Contract.
- 3) Access to Project Site: The Procuring Entity warrants that the Consultant shall have, free of charge, unimpeded access to the project site if such access is required for the performance of the Services.

6.2. Facilities to be provided by the Procuring Entity

- 1) The Procuring Entity shall make available to the Consultant and the Experts, for the performance of the contract, free of any charge (unless otherwise stated therein), the services, facilities, and property described in the SCC. The Consultant shall use such properly for the execution of the contract and no other purpose whatsoever.
- 2) In case such services, facilities and property shall not be made available to the

Consultant as and when specified in tender document, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Consultant for the performance of the Services, (ii) how the Consultant shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Consultant as a result thereof according to GCC clause 10.1.1.

6.3. Counterpart Personnel

- 1) The Procuring Entity shall make professional and support counterpart personnel available to the Consultant, as specified in contract.
- 2) If counterpart personnel are not provided by the Procuring Entity to the Consultant as and when specified in contract., the Procuring Entity and the Consultant shall agree on (i) how the affected part of the Services shall be carried out, and (ii) the additional payments, if any, to be made by the Procuring Entity to the Consultant as a result thereof.
- 3) Professional and support counterpart personnel, excluding Procuring Entity's Contract Management and liaison personnel, shall work under the exclusive direction of the Consultant. If any member of the counterpart personnel fails to perform any work assigned to such member by the Consultant that is adequately consistent with the position occupied by such member, the Consultant may request the replacement of such member, and the Procuring Entity shall not unreasonably refuse to act upon such request.

6.4. Payment Obligation

Considering the Services performed by the Consultant under this Contract, the Procuring Entity shall pay the Consultant for the deliverables specified in the contract and in such manner as is provided in clause 10 of GCC.

6.5. Difference of opinion between Employer and Consultant

In the case of a difference of opinion between the Employer and the Consultant on any important matters involving professional judgment that might affect the proper evaluation or execution of the project, the employer shall allow the consultants to submit promptly to the employer a written report. The employer shall resolve the differences amicably.

7 Scope of Services and Performance Standards

7.1 Scope of Services

- 1) Services: This contract is for the performance/ delivery of Services of the description, scope/ quantum outlined in 'Terms of Reference' during the contract period specified therein.
- 2) Incidental Works/ Goods/ Other Services: If so stipulated, the Consultant shall be required to perform/ deliver specified incidental Works/ Goods/ other Services as an integral part of the Services in the contract.
- 3) Location: The Services shall be performed at such locations as are specified in SCC and, where the location of a particular task is not so specified, at such locations, whether in the Procuring Entity's country or elsewhere, as the Procuring Entity may approve.
- 4) Reporting Requirements: The Consultant shall deliver to the Procuring Entity the reports, deliverables, outputs, and documents, in the form, in the numbers and within the periods outlined in the contract.

5) Standard of Performance:

- a) The Consultant shall perform and carry out the Services with all due diligence, efficiency, and economy, in accordance with generally accepted professional standards and practices, observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods.
- b) Unless otherwise specified, the performance standards and quality of the Services shall conform to the Terms of Reference as stipulated in the contract or as per best standards in the market, where not so specified.
- c) Defects in Services: The Procuring Entity shall promptly notify the Consultant of any identified defects, requesting the correction of the notified defect within a reasonable time. If the Consultant has not corrected notified defect within the time stipulated in the Procuring Entity's notice, the Procuring Entity may, without prejudice to any other rights under the contract, take one or more of the following actions:
 - (a) Suspend payments as per GCC clause 10.6; and/or
 - (b) Impose suitable penalties as deemed appropriate; and/or
 - (c) Direct immediate demobilization or replacement of the responsible GC Professionals; and/or
 - (d) Take any other corrective or remedial action as may be considered necessary in the interest of the Project.

The decision of the Procuring Entity in this regard shall be final and binding on the Consultant.

7.2 Eligible Services

Unless otherwise stipulated in the Contract, the country of origin of 'Services' and related 'Goods' under the contract shall have their origin in India or other countries (if specified in the Contract). It must conform to the declaration made by the Consultant during the Tender Process regarding Central Government policies restricting the participation of entities from i) Certain countries sharing land borders with India and ii) Countries that restrict the participation of Bidders from India on a reciprocal basis. They should ensure that they continue to be free from such restrictions.

8. Deployment of Resources

8.1 Site and Assets thereon

8.1.1 Site of Service Delivery

- 1) The site for Service delivery shall be the lands, spaces, and other places on, under, in or through which the Services are to be carried out and any other lands or places provided by the Procuring Entity for the contract.
- 2) No land or building or any other asset belonging to or in possession of the Procuring Entity shall be occupied/ used by the Consultant without the permission of the Procuring Entity. The Consultant shall not use or allow the site to be used for any purposes other than executing or concerning the execution of the services.
- 3) Prohibition of Smoking and Intoxicants: The Consultant shall exercise influence and authority to the utmost extent to secure strict compliance by his staff or any labour employed through Sub-consultants or petty contractors with all the rules and regulations stipulated by the Procuring Entity relating to the access to the project

site, including but not limited to

- a) Prohibition of Smoking in 'No Smoking Zone' and in Public Places
- b) Prohibition of the use of any intoxicating substances including, but not limited to, intoxicating beverages during the service period or on-site or near the site or in any of the facilities, sites, buildings, encampments, or tenements owned, occupied by or within the control of the Consultant or any of his employees.
- c) Safely practices relating to Procuring Entity's staff, Public and third parties
- d) Maintenance of peace and business-like ambience

8.1.2 Clearance of Site on Completion

- 1) On completion of the services, the Consultant shall hand over the whole project site to the procuring Entity on 'as it was' basis. No final payment in settlement of the accounts for the Services shall be paid to the Consultant till, in addition to any other condition necessary for final payment, site clearance shall have been affected by him.
- 2) In the event of failure on the part of the Consultant to comply with this provision within 7 days after receiving notice for clearance of Procuring Entity's site and lands, the Contract Manager shall cause them to be removed in such a way as deemed fit and convenient and cost as increased by supervision and other incidental charges shall be recovered from the Consultant. The Procuring Entity shall not be held liable for any loss or damage to the Consultant's property as may be on the site and due to such removal.

8.2 Key and Non-key Personnel

8.2.1 General Requirements

- 1) **Restrictions on the Employment of Retired Staff or Officers or Managers of Procuring Entity within One Year of their Retirement:** The Consultant shall not himself be a retired Government employee of Gazetted rank or engage any employee or associate who is a retired Government employee of Gazetted rank, if such persons have not completed one year (or any other period prescribed by the relevant authority) from the date of retirement, in connection with this Contract in any manner whatsoever without obtaining prior permission of the relevant authority. If the Consultant is found to have contravened this provision, it shall constitute a breach of contract, and Procuring Entity shall be entitled to terminate the contract and/ or avail any or all the remedies thereunder.
- 2) **Team Lead:** The Consultant, when he is not personally present on the workplace site, shall nominate a Team Lead during working hours, which shall, on receiving reasonable notice, present himself to the Contract Manager. Orders given by the Contract Manager or his representative to the Team Lead shall be deemed to have the same force as if given to the Consultant.
- 3) The Consultant shall employ and provide qualified and experienced Key and Non-key Experts and Sub-consultants as required to carry out the Services.

8.2.2 Key Personnel

- 1) The titles, job descriptions, minimum qualifications, and estimated periods of the Consultant's Key Personnel engagement in carrying out the Services are described in "Pricing Document/BOQ".
- 2) The Consultant Professionals shall not be entitled to be paid for overtime nor shall

to take paid sick leave or vacation leave except as specified in, "Pricing Document/BOQ" and the Consultant's remuneration be deemed to cover these items.

- 3) Working hours and holidays for Experts are outlined in SCC.
- 4) Any leave-taking by Consultant Professionals shall be subject to the prior approval by the Consultant, who shall ensure that absence for leave purposes shall not delay the progress and or impact adequate supervision of the Services. If Consultant Professionals are not deployed for significant periods, affecting the progress and quality of the assignment, payments may be suspended as per clause 10.6 below.
- 5) **Substitution of Key Experts:**
 - a) Unless the Procuring Entity may otherwise agree in writing, no changes shall be made in the Consultant Professionals. In case any Consultant Professional becomes unavailable, the Consultant shall forthwith provide a replacement, subject to maintaining continuity of the position.
 - b) Notwithstanding the above, the substitution of Key Experts during Contract execution may be considered only based on the Consultant's written request and due to compelling or unavoidable situations outside the reasonable control of the Consultant, including but not limited to death or medical incapacity. The Consultant shall forthwith provide as a replacement, subject to maintaining continuity of the position, a person of equivalent or higher credentials acceptable to the Employer. Such substitution shall not exceed the limit specified in the Contract (or 30%, if not specified) of total key personnel.
 - c) Substitution of the first 10% of key personnel at the request of the Consultant shall be subject to a reduction of remuneration by a percentage specified in the Contract (or 5%, if not specified) of the remuneration which would have been paid to the original personnel from the date of the replacement till completion of the contract. Such reduction in remuneration shall progressively increase further for subsequent substitutions as specified in the Contract. If not specified, the reduction in remuneration shall be 10% and 15%, respectively, for the subsequent two slabs of 10% substitutions of key personnel (i.e., till 30% substitution). Such reduction shall not apply to the substitution of experts in pursuance of orders by the Contract Manager as per sub-clause (8.2.4) below.
- 6) **Additional Key Experts:** If additional Consultant Professionals are required to carry out the Services during the execution of the contract, the Consultant shall submit to the Procuring Entity for review and approval a copy of their Curricula Vitae (CVs). If the Procuring Entity does not object in writing (stating the reasons for the objection) within twenty- one (21) days from receiving such CVs, such additional Key Experts shall be deemed approved by the Procuring Entity provided that any such increase shall not, except as otherwise agreed, cause payments under this Contract to exceed the quoted/contract amount under the respective head(s). The rate of remuneration payable to such new additional Key Experts shall be based on the rates for other Key Experts' positions which require similar qualifications and experience.

8.2.3 Non-key Personnel

The Consultant must ensure the deployment of non-key Personnel as per contract condition and the approved Works plan as updated. Daily attendance records of such non-key personnel, as per contract conditions, shall be maintained by the Consultant and shared with the Contract Manager. If the Contract Manager believes that the Consultant is not employing sufficient Non-key personnel as is specified or otherwise for the proper execution of the Services, he shall issue a notice to the Consultant for remedial measures. The Consultant shall forthwith, on receiving intimation to this effect, deploy the additional number of non-key personnel as specified by the Contract Manager immediately, and failure on the part of the Consultant to comply with such instructions shall entitle the Procuring Entity to suspend payments as per GCC clause 10.6 for the shortfall in performance or terminate the contract and/ or avail all the remedies thereunder.

8.2.4 Removal of Key and Non-key Experts or Sub-consultant on Orders of the Contract Manager

- 1) The Consultant shall, at the Procuring Entity's written request, provide a replacement, if the Procuring Entity finds that any of the Experts or Sub-consultant:
 - (a) commits severe misconduct or has been charged with having committed a criminal act
 - (b) persists in any misconduct or lack of care
 - (c) is found to be negligent, incompetent or incapable of discharging assigned duties;
 - (d) fails to comply with any provision of the Contract
 - (e) based on reasonable evidence, is determined to have engaged breached the Code of Integrity (including Fraud and Corruption) during the execution of the Works;
- 2) Subject to the requirements in the sub-clause above, and notwithstanding any requirement from the Procuring Entity to request a replacement, the Consultant shall take immediate action as appropriate in response to any violation in the sub-para above. Such immediate action shall include removing (or causing to be removed) such Key/ Non-Key Expert or sub-consultant from carrying out the Services.
- 3) Any replacement of the removed Experts or Sub-consultants shall possess equivalent or better qualifications and experience and be acceptable to the Procuring Entity.
- 4) The Consultant shall bear all costs from or incidental to any removal and/or replacement of such Experts.

8.3 Equipment and Tools of Trade

The Consultant must ensure the deployment of Equipment and Tools of Trade necessary to deliver services as per the Contract Conditions and approved Works plan as updated. If the Contract Manager believes that the Consultant is not employing on the Services sufficient Equipment/Tools of Trade as is specified or otherwise for the proper execution of the Services within the prescribed time, the Consultant shall forthwith on receiving intimation to this effect deploy the additional equipment/ tools of the trade as specified by the Contract Manager, in line with the contract conditions, immediately and failure on the part of the Consultant to comply with such instructions shall entitle the Procuring Entity to suspend payments as per GCC clause 10.6 for the shortfall in performance or terminate the contract and/ or avail any or all the remedies thereunder for breach of contract.

9. Delivery of Services and delays

9.1. Works plan

- 1) Before the commencement of the Services, the Consultant shall submit for approval of the Contract Manager a Works plan showing the Methods, schedule of delivery of services, and deployment plans for Personnel, Equipment and Materials for the execution of the services. The programme of delivery of Services amended as necessary by discussions with the Contract Manager shall be treated as the agreed Works plan for this Contract. The Services shall be carried out and monitored as per the approved Program as updated.
- 2) The Contract Manager shall direct the order in which the several components of the Services shall be provided, and the Consultant shall execute all orders the Contract Manager gives from time to time without delay. Still, the Consultant shall not be relieved thereby from responsibility for the due performance of the Services in all respects.

9.2. Commencement of Services

- 1) **Effective Date of Contract:** Consultant shall commence the Services and shall proceed with due expedition and without delay from the effective date of Contract (all dates of delivery shall be counted from such a date), which shall be the date mentioned as the effective date in the contract, or if not so mentioned 15 days from the Procuring Entity's notice (unless specified otherwise) to the Consultant instructing him to begin carrying out the Services. This notice shall confirm that the effectiveness prerequisites listed in the contract have been met.
 - a) If no such order is issued 15 days from the date of the Issue of the LOA or the signing of the Contract agreement, whichever is earlier.
- 2) **Commencement of Services:** Not later than the number of days after the Effective Date specified in the Contract or the Notice to proceed, the Consultant shall begin carrying out the Services after confirming the following:
 - a) As required by the Contract, all JV members and key experts needed at the beginning of the assignment are effectively participating.
 - b) That upon provision of Bank Guarantees, advance payments, if any, are implemented.
 - c) That the Procuring Entity has provided facilities (including Data, Documents and Background Information) as per the Contract
 - d) that all parties involved in the assignment (users, security team, and other relevant departments of the Procuring Entity and other third-party stakeholders) have been informed by the Procuring Entity
 - e) that all permits, licences, and authorisations have been obtained.
- 3) **Termination of Contract for Failure to Become Effective:** If this Contract has not become effective (as per sub-clause 1) above) within such period after the date of Contract signature as specified in the Contract, either Party may, by not less than twenty-one (21) days' written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.

9.3. Contract Management

9.3.1 Consultancy Management Teams

The Procuring Entity shall nominate a Contract Manager (or a Consultancy Management Team), and the Consultant shall nominate a counterpart Team Lead to monitor the assignment so that the output is in line with the Procuring Entity's objectives of the Contract.

9.3.2 Review of Phases and Milestones

The Contract Manager and Consultant/ Team Lead shall hold progress meetings at various phases and Milestones into which the assignment is divided as per the contract. Unless otherwise indicated in the contract, the following actions would be taken during such progress meetings.

- 1) **Kick-off Meeting:** The contract Manager and the Consultant/ Team Lead shall meet at the start of the assignment to ensure that the Contract requirements are clearly understood by all concerned and that the Contract Management procedures are finalised.
- 2) **Inception Phase Review:** The inception meeting shall be held at a period (specified in contract document or the Notice to Proceed) after the date of commencement of services or, if not so specified, within 21 days of the effective date. Before this meeting, the consultant must provide a draft Inception Report for discussion. The Consultant shall submit a final Inception Report within the specified time in the 'Terms of Reference' or as agreed in the Inception Meeting, or if not so specified, within 7 days of the Inception Meeting. Template for Inception Report may be agreed to beforehand in the Inception Meeting. It should, at the minimum, cover comments and suggestions on the following:
 - a) Terms of Reference
 - b) Work plan and staffing schedule
 - c) Facilities to be provided by the Procuring Entity
 - d) Working arrangements and liaison
- 3) **Periodic Reviews:** Unless otherwise decided by the Contract Manager and the Consultant's Team Lead, periodic review meetings (monthly if not otherwise stipulated) shall be held to review the pace of progress as compared to the Work Plan and remedial actions thereto.
- 4) **Deliverables Reviews:** The contract Manager and Consultant/ Team Lead may hold other meetings to review and approve specific deliverables or phases (including Interim and Final Reports) as specified in Annexure A or as agreed between the parties.

9.4. Delivery of services, Time of Delivery and Extensions Thereof

9.4.1 Delivery of Services:

The Consultant shall deliver all Services and submit deliverables as per the approved work plan in the manner specified in the Contract.

9.4.2 Time of Delivery of Services is of Essence of the Contract:

- 1) The time for delivery of Services shall be deemed to be the essence of the contract. Subject to any requirement in the contract as to the completion of any portions or portions of the Services before completion of the whole, the Consultant shall fully and finally complete the whole of the services comprised in the contract as per the Delivery and Completion Schedules.
- 2) If at any time during the currency of the contract, the Consultant encounters conditions hindering the timely performance of services; the Consultant shall

promptly inform the Procuring Entity in writing about the same and its likely duration.

- 3) He may request to the Procuring Entity for an extension of the delivery schedule not less than one month before the expiry of the date fixed for completion of the services. Procuring Entity may agree to extend the completion schedule, with or without liquidated damages and denial clause, by issuing an amendment to the contract in terms of the following clauses.

9.4.3 Extension for Excusable Delay Not Due to Consultant

- 1) If in the opinion of the Consultant, the progress of Services has at any time been delayed due to the following reasons, then within 15 days of such happening causing delay, he shall give notice thereof in writing to the Contract Manager, but shall nevertheless do due diligence to bring down or make good the delays and to proceed with the services:
 - a) proceedings taken or threatened by or dispute with external third parties arising otherwise than from the Consultant's own default etc. or
 - b) delay due to circumstances beyond the control of either party
 - c) delay authorized by the Contract Manager pending arbitration or
 - d) Any act or neglect of Procuring Entity, e.g.:
 - i) Delay or failure to issue notice to commence the services or
 - ii) delay or failure to issue necessary instructions for which the Consultant had applied explicitly in writing.
 - iii) Delay in or failure to handover of possession of the site or the necessary facilities/ documents/ data or instructions by the Procuring Entity to the Consultant
 - iv) Delay caused by modification issued by the Contract Manager or
 - v) any other delay caused by the Procuring Entity due to any other cause.
- 2) The Consultant may also indicate the period for which the Services are likely to be delayed and ask for a necessary extension of time. On receipt of such request from the Consultant, the Contract Manager shall consider the same and grant such extension of time as, in his opinion, is reasonable regarding the nature and period of delay and the type and quantum of work affected thereby. No other compensation shall be payable for work carried forward to the extended period. The same rates, terms, and conditions as the original Contract shall apply during the extended period.

9.4.4 Extension of Time for inexcusable Delay Due to Consultant

- 1) If the Consultant fails to deliver the Services within the fixed/ extended period for reasons other than those stipulated in GCC-clause 9.4.3 above, the Procuring Entity may, if satisfied that the service delivery can still be completed within a reasonable time, extend the period further.
- 2) On such extension, the Procuring Entity shall be entitled without prejudice to any other right and remedy available on that behalf to recover from the Consultant as agreed damages and not by way of penalty Liquidated Damages as per GCC- clause 9.5 below.
- 3) Provided further that if the Procuring Entity is not satisfied that the service can be completed by the Consultant or in the event of failure on the part of the

Consultant to complete the service within the extension of time allowed further as aforesaid, the Procuring Entity shall be entitled without prejudice to any other right or remedy available in that behalf, treat the delay as a breach of contract and avail any or all the remedies thereunder, whether or not actual damage is caused by such default.

- 4) **Inordinate Delays:** Delays due to the Consultant of more than one-fourth (25%) of the total completion period shall be treated as inordinate delays. Such inordinate delays shall be noted as poor performance and be held against the Consultant in future procurements. A show-cause notice shall be issued to the Consultant before declaring it a poor performance. Such delays may be considered a breach of the contract at the option of the Procuring Entity.

9.4.5 Extension of Time for Concurrent Delay Due to Both Parties

If the Contract Manager determines that two or more events responsible for delay overlap each other. The delays may be concurrently attributable to both Procuring Entity and the Consultant. The proportion for extension of time as per GCC-Clause 9.4.3 or 9.4.4 above shall be determined by plotting each contributing concurrent delay on the critical path.

9.5. Damages and Deductions Thereof

9.5.1 Right of the Procuring Entity to recover Damages.

Procuring Entity shall be entitled to, and it shall be lawful to recover Liquidated damages as detailed in this clause from all payments due, any Performance Security, or any retention money.

9.5.2 Liquidated damages

- 1) For delays covered under clause 9.4.4 (Extension of Time for inexcusable Delay Due to Consultant) above:
 - a) The Procuring Entity shall, without prejudice to other rights and remedies available to the Procuring Entity under the contract, deduct from the contract price as liquidated damages for each week of delay or part thereof until actual delivery or performance, but not as a penalty, a sum equivalent to the 0.5% per cent per week of delay of the related monthly bill of the Services. Besides liquidated damages during such a delay, the denial clause as per GCC-clause 9.5.3 shall also apply. Total damages in the contract shall be limited as per clause 9.5.4 below.
 - b) Any failure or delay by any Sub-consultant, though their employment may have been sanctioned, shall not be admitted as a ground for any extension of time or for exempting the Consultant from liability for any such loss or damage as aforesaid.

9.5.3 Denial Clause:

- 1) For delays covered under clause 9.4.4 (Extension of Time for inexcusable Delay Due to Consultant) above:
 - a) no increases in price on account of any statutory increase in or fresh Imposition of GST, or on account of any other taxes/ duty/ cess/ levy) leviable in respect of the Services and incidental goods/ works stipulated in the said Contract which takes place after the original delivery date shall be admissible on such of the said Services, as are delivered after the said date; and
 - b) Notwithstanding any stipulation in the contract for an increase in price on

any other ground, including the price variation clause, no such increase after the original delivery date shall be admissible on such Services delivered after the said date.

- c) Nevertheless, the Procuring Entity shall be entitled to the benefit of any decrease in price on account of reduction in or remission of GST or on account of any other tax or duty or any other ground as stipulated in the price variation clause, which takes place after the expiry of the original delivery date.

9.5.4 Limit on total Damages

However, deduction on account of damages for delays under this clause put together shall be subject to a maximum of 10% (or any other percentage if prescribed) of the entire value of the Contract of Services. Penalties/ liabilities outside this clause shall be covered by GCC clause 12.

9.6 Force Majeure

- 1) On the occurrence of any unforeseen event beyond the control of either Party, directly interfering with the delivery of Services arising during the currency of the contract, such as war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, or acts of God, the affected Party shall, within a week from the commencement thereof, notify the same in writing to the other Party with reasonable evidence thereof. Unless otherwise directed by the Procuring Entity in writing, the Consultant shall continue to perform its obligations under the contract as reasonably practicable and seek all reasonable alternative means for performance not prevented by the Force Majeure event. If the force majeure condition(s) mentioned above be in force for 90 days or more at any time, either party shall have the option to terminate the contract on expiry of 90 days of commencement of such force majeure by giving 14 days' notice to the other party in writing. In case of such termination, no damages shall be claimed by either party against the other except those which had occurred under any other clause of this Contract before such termination.
- 2) Notwithstanding the remedial provisions contained in GCC-clause 9.5 and 12, none of the Party shall seek any such remedies or damages for the other Party's delay and/ or failure in fulfilling its obligations under the contract if it is the result of an event of Force Majeure.

10. Prices and Payments

10.1 Prices

10.1.1 Contract Price

- 1) The Contract price is outlined in the Contract (Pricing Document/BoQ). The Contract price breakdown is provided in Pricing Document/BoQ, and the total payments under this Contract shall not exceed this Contract price.
- 2) Any change to the Contract price specified above can be only made if the Parties have agreed to the revised scope of Services under GCC clause 2.6 and have amended the Contract in writing.

10.1.2 Firm Prices

Unless otherwise stipulated in the contract, Prices shall be fixed and firm. If the Price Variation Clause is included, such up and down, variations shall also be payable.

10.1.3 Variations

In case the Contract provides for a Price Variation Clause or variation on any other account, the price shall be subject to adjustment as per such clauses only during the original Delivery Period, subject to the following:

- 1) For Extension of Time covered by clause 9.4.5 above, any increase due to such variations during the extended delivery period beyond the original delivery period shall not be paid by the Procuring Entity; however, it shall be entitled to any reduction under GCC clause- 9.5.3 (Denial Clause).
- 2) Taxes and duties, if any, chargeable and payable on the Services shall be charged on the net price after variations.
- 3) While claiming payments where such variations are applicable, the Consultant must submit its calculations for each invoice, even if the payment for these variations is nil. Any price reduction due to such variations must be passed to the Procuring Entity.
- 4) **No Other Claim due to Variations:** With the payment of such variations, no additional individual claim shall be admissible on account of fluctuations in market rates, increase in taxes/any other levies/tolls etc.
- 5) If the Price Variation clause is applicable as per the contract, the price shall be subject to adjustment to take care of the changes in the cost of labour, material, and fuel/ power components as per the price variation formula specified therein.
- 6) **Base Month:** Unless otherwise stipulated in the contract, the 'Base Month' for the 'Price Variation Clause' shall be taken as the month before the month of the last date of Proposal submission. Unless the contract has stipulated a different time lag for reckoning Price Variation, the month of reckoning the varied price shall be the month before the month in which delivery has been made. The Price Variation shall be based on the relevant Indices in the Base Month and Month of reckoning.
- 7) **Applicability:** If the Contract provides for some inputs to be supplied by Procuring Entity free or at a fixed rate, the cost of such inputs shall be excluded from the value of the Goods supplied in the relevant month for payment/recovery of price variation.

10.2. Taxes and Duties

- 1) The Consultant, Sub-consultants, and Experts shall be entirely responsible for all taxes, duties, fees, levies etc., incurred relating to the delivery of the Services. Further instruction, if any, shall be as provided in the Contract.
- 2) If applicable under relevant tax laws and rules, the Procuring Entity shall deduct from all payments and deposit required taxes to respective authorities on account of GST Reverse Charge Mechanism; Tax Deducted at Source (TDS), and Tax Collected at Source (TCS) relating to Income Tax, labour cess, royalty etc.
- 3) Payment of GST Tax under the contract:
 - (a) The payment of GST and GST Cess to the Consultant shall be made only on the latter submitting a GST compliant Bill/ invoice indicating the appropriate

HSN code and applicable GST rate duly supported with documentary evidence as per the provision of the relevant GST Act and the Rules made there under. The delivery of Services shall be shown as being made in the name, location/ state, and GSTIN of the beneficiary of the Services only; the location of the procurement office of the procuring entity has no bearing on the invoicing.

- (b) Provision w.r.t. E-Invoicing requirement as per GST laws: Consultant who is required to comply with the requirements of E-invoice as per the GST Law, all payments shall be made against proper e-invoice(s) only. Invoices issued in violation shall not be processed for payment, as Procuring Entity shall not be allowed to avail of Input Tax Credit (ITC) against such invoices.
- (c) Returns and details required to be filled under GST laws & rules regarding invoices (or e-invoices) should be filed promptly by the Consultant. If input tax credit (ITC) is not available to Procuring Entity for any reason attributable to the Consultant, then Procuring Entity shall not be liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff/ recover such GST amounts (CGST & SGST/UTGST or IGST) together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the Consultant under this contract or under any other contract.
- (d) While claiming reimbursement of duties, taxes etc. (like GST) from the Procuring Entity, as and if permitted under the contract, the Consultant shall also certify that in case it gets any refund out of such taxes and duties from the concerned authorities at a later date, it (the Consultant) shall refund to the Procuring Entity, the Procuring Entity's share out of such refund received by the Consultant. The Consultant shall also refund the appropriate amount to the Procuring Entity immediately after receiving the same from the concerned authorities.
- (e) All necessary adjustment vouchers, such as Credit Notes/ Debit Notes for any short/ excess delivery of Services or revision in prices or any other reason under the contract, shall be submitted to the Procuring Entity in compliance with GST provisions.
- (f) GST shall be paid as per the rate at which it is liable to be assessed or has been assessed, provided the provision of Services is legally liable to such taxes and is payable as per the terms of the contract subject to the following conditions:
 - i) The Procuring Entity shall not pay a higher GST rate if leviable due to any misclassification of the HSN number or incorrect GST rate incorporated in the contract due to the Consultant's fault. Wherever the Consultant invoices the Goods at GST rate or HSN number, which is different from that incorporated in the contract, payment shall be made as per GST rate, which is lower of the GST rates incorporated in the contract or billed.
 - ii) However, the Procuring Entity shall not be responsible for the Consultant's tax payment or duty under a misapprehension of the law.
 - iii) The consultant is informed that he shall be required to adjust his basic price to the extent required by a higher tax rate billed as per invoice to match the all-inclusive price mentioned in the contract.
 - (iv) In case of profiteering by the Consultant relating to GST tax, the Procuring Entity shall treat it as a violation of the Code of Integrity in the

contract and avail any or all punitive actions thereunder, in addition to recovery and action by the GST authorities under the Act.

(g) The Consultant should issue Receipt vouchers immediately on receipt of all types of payments along with tax invoices after adjusting advance payments, if any, as per Contractual terms and GST Provisions.

(h) Liquidated damages or any other recoveries should be shown as deductions on the invoice, and GST shall be applicable only on the net balance payment due.

4) Statutory Variation Clause: Unless otherwise stated in the contract, statutory increase in applicable GST rate only during the original delivery period shall be to Procuring Entity's account. Any increase in the rates of GST beyond the original completion date during the extended delivery period (excepting extension under GCC-Clause 9.4.3) shall be borne by the Consultant. The benefit of any reduction in the GST rate must be passed on to the Procuring Entity during the original and extended delivery period. However, GST rate amendments shall be considered for quoted HSN code only, against documentary evidence, provided such an increase of GST rates occurs after the last proposal submission date.

10.3. Terms and Mode of Payment

- 1) Unless otherwise stipulated, the usual payment term is 100% on delivery and acceptance of Services at 'the Site' by the Procuring Entity and the Consultant's production of all required documents.
- 2) The payments shall be made as per Procuring Entity's payment procedures. Unless otherwise stipulated in the contract, payments to Consultants shall only be made through EFT (Electronic Funds Transfer). The Consultant shall consent in a mandate form for receipt of payment through NEFT (National Electronic Fund Transfer). In case of non-payment through EFT or where the EFT facility is unavailable, payment may be released through cheque.
- 3) In Domestic Contracts, payments shall only be made in Indian Rupees. In Global Tenders, payment to foreign Consultants shall be made in the currency/ currencies authorized in the contract. However, agency commission and local value addition shall be paid only in Indian Rupees.
- 4) The Consultant shall send its claim for payment in writing as per GST-compliant Invoice and documents, when contractually due, along with relevant documents etc., as stipulated in the Contract and as specified therein.
- 5) While claiming payment, the Consultant is also to certify in the bill that the payment being claimed is strictly in terms of the contract and all the Consultant's obligations for claiming that payment has been fulfilled as required.

10.4. Withholding and lien in respect of sums claimed:

- 1) Whenever any claim or claims for payment of a sum of money arises against the Consultant, out of or under the contract, the Procuring Entity shall be entitled, and it shall be lawful on his part, to withhold and also have a lien to retain such sum or sums, in whole or in part pending finalisation or adjudication of any such claim from
 - a) any security or retention money, if any, deposited by the Consultant.
 - b) Any sum(s) payable till now or hereafter to the Consultant under the same Contract or any other contract with the Procuring Entity if the security is insufficient or if no security has been taken from the Consultant.

- 2) Where the Consultant is a partnership firm or a limited company, the Procuring Entity shall be entitled, and it shall be lawful on his part, to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/ limited company, as the case may be, whether in his capacity or otherwise.
- 3) It is an agreed term of the contract that the sum(s) of money so withheld or retained under the lien referred above shall be kept withheld or retained till the claim arising out of or under the contract is determined under GCC clauses 11 and/ or 12. The Consultant shall have no claim for interest or damages whatsoever on any account regarding such withholding or retention under the supra lien and duly notified to the Consultant.
- 4) **Lien in respect of Claims in other Contracts:** Any sum of money due and payable to the Consultant (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Procuring Entity or Government against any claim of the Procuring Entity or Government in respect of payment of a sum of money arising out of or under any other contract made by the Consultant with the Procuring Entity or Government.

10.5. Payments to Consultant

10.5.1 General

- 1) All payments under this Contract shall be made to the Consultant's accounts specified in the contract.
- 2) **Currency of Payment:** Unless otherwise specified in the Contract, any payment shall be made in Indian Rupees (INR).
- 3) **The Itemized Invoices:** As soon as practicable and not later than fifteen (15) days after the end of each time interval stipulated in the Contract in this regard (if not stipulated, then after the end of each calendar month), the Consultant shall submit to the Procuring Entity, in duplicate, itemized invoices, accompanied by the receipts or other appropriate supporting documents, of the amounts payable for such an interval under GCC Clause 10.5. Separate invoices shall be submitted for expenses incurred in foreign and local currencies. Each invoice shall show remuneration and reimbursable expenses separately.
- 4) The Contract Manager shall cross-check all relevant records before passing the Consultant's bills. Upon verification of the records by Procuring Entity, payments can be released to the Consultant.
- 5) The Procuring Entity shall pay the Consultant's invoices within Fifty-Six (56) days after the receipt by the Procuring Entity of such itemized invoices with supporting documents. Only a portion of an invoice not satisfactorily supported may be withheld from the payment. Should any discrepancy exist between actual payment and costs authorized to be incurred by the Consultant, the Procuring Entity may add or subtract the difference from subsequent payments.
- 6) Except for the final payment under GCC Clause 10.5.5 below, payments do not constitute acceptance of the Services nor relieve the Consultant of any obligations.
- 7) **Time-Based (Inputs admeasurement):** Unless instructed in writing by the Procuring entity, payments shall not be made for any extra inputs deployed over and above the requirements mentioned in the contract. Nevertheless, if such inputs are deployed less than those stipulated, deductions shall be made based on the rates indicated for the inputs listed in the contract.

- 8) **Unit-Rate (Output admeasurements)**: Unless otherwise stipulated, payments shall be made monthly for the volume of services rendered during the period.
- 9) **Lumpsum**: Unless otherwise stipulated, payments shall be made on completion of stipulated milestones or on completion of entire Services, whichever is stipulated in the contract. In the case of Lump-sum Contracts, Payments under this Contract shall not exceed the ceilings in foreign currency and the local currency specified in the contract. For any payments above such ceiling amount, an amendment to the Contract shall be signed by the Parties referring to the provision of this Contract that permits such amendment.
- 10) **Percentage (of Value of Transactions)**: The payment for the total price of services calculated at the percentage of the actual value of Activities rendered shall be made every month or on completion of milestones or on completion of entire Services, whichever is stipulated in the contract.

10.5.2 Advance Payments

- 1) If the contract provides explicitly for Advance Payments to be made to the Consultant, then on the request of the Consultant, the Procuring Entity shall make the advance payment to the Consultant against submission of an unconditional Bank Guarantee from a Commercial bank acceptable to the Procuring Entity in amounts equal to 110% (one hundred ten per cent) of the amount of the advance payment being requested. Such Bank Guarantee shall be in the form outlined in Contract or the other form the Procuring Entity shall have approved in writing. Advance payments shall be released in not less than two instalments commensurate with work progress.
- 2) The Bank Guarantee shall remain effective until the advance payment has been repaid, but the amounts repaid by the Consultant shall progressively reduce the guaranteed amount. Interest shall not be charged on the advance payment. However, if the contract is terminated due to the Consultant's default, the Advance payment shall be deemed an interest-bearing advance at the prevailing rate (MIBID - Mumbai Interbank Proposal Rate) on the date of such advance payment.
- 3) The Consultant is to use the advance payment only for the performance of Services. The Consultant shall demonstrate that the advance payment has been used by Utilization certificate enclosing copies of invoices or other documents to the Contract Manager. Further instalments shall be released after getting a satisfactory utilization certificate from the Consultant for the earlier instalment.
- 4) The advance payment shall be recovered in a time-based manner not linked with the work progress by deducting proportionate amounts from payments otherwise due to the Consultant for the Services performed. Any delayed recoveries due to the late submission of bills by the Consultant shall attract interest at the prevailing rate (MIBID - Mumbai Interbank Proposal Rate). No account of the advance payment or repayment shall be taken in assessing valuations of Services performed, variations, price adjustments, or liquidated damages.

10.5.3 Remuneration and Reimbursable Expenses

- a) The Procuring Entity shall pay to the Consultant (i) remuneration that shall be determined based on time spent by each Expert in the performance of the Services after the date of commencing of Services or such other date as the

Parties shall agree in writing; and (ii) reimbursable expenses that are actually and reasonably incurred by the Consultant in the performance of the Services.

- b) All payments shall be at the rates outlined in Pricing Document/BoQ.
- c) Unless the Contract provides for the price adjustment of the remuneration rates, said remuneration shall be fixed for the duration of the Contract.
- d) The remuneration rates shall cover: (i) such salaries and allowances as the Consultant shall have agreed to pay to the Experts as well as factors for social charges and overheads (bonuses or other means of profit-sharing shall not be allowed as an element of overheads), (ii) the cost of backstopping (reinforcement/ support) by home office staff not included in the Experts' list in the contract, (iii) the Consultant's profit, and (iv) any other items as specified in the contract.
- e) Any rates specified for Experts not yet appointed shall be provisional and be subject to revision, with the written approval of the Procuring Entity once the applicable remuneration rates and allowances are known.

10.5.4 "On-Account" Payments

- 1) The Consultant shall be entitled to be paid (unless otherwise stipulated in the contract) by way of "On-Account" payment, only for such Services, as in the opinion of the Contract Manager, the Consultant has executed in terms of the contract during the period. All payments due against the Contract Manager or his representative's certificates shall be subject to any deductions, which may be made under the contract, always provided that the Contract Manager may by any certificate make any correction or modification in any previous certificate, which he may have issued.

The Contract Manager may withhold any certificate if the Services or any part thereof are not carried out as per the contractual performance standards.

- 2) **On-Account Payments Not Prejudicial to Final Settlement:** "On-Account" payments made to the Consultant shall be without prejudice to the final settlement of the accounts. They shall not be considered or used as evidence of any facts stated in or inferred from such accounts, any particular quantity of service being executed, or the manner of its execution being satisfactory.

10.5.5 Final Payment

- 1) The final payment under this Clause shall only be made after the final report/ deliverables and a final invoice, identified as such, shall have been submitted by the Consultant and approved as satisfactory by the Procuring Entity. Completion certificate/ Final payment shall be made only after ensuring that all facilities/ documents/ sites have been returned to the Procuring Entity as per GCC clause 5.14. The Services shall be deemed completed and finally accepted by the Procuring Entity.
- 2) The Consultant shall submit a final bill on the Contract Manager's acceptance certificate of final deliverables. The Final payment shall be made as per the following calculations after receiving a clear "No Claim Certificate" signed by the Consultant:
 - a) necessary adjustment for any payments already made or retained
 - b) any deduction which may be made under the contract,
 - c) A complete account of all claims the Consultant may have on the Procuring

Entity, and the Contract Manager gave a certificate in writing that such claims are correct,

- 3) The final report and final invoice shall be deemed approved by the Procuring Entity as satisfactory ninety (90) calendar days after receipt of the final report and final invoice by the Procuring Entity unless the Procuring Entity, within such ninety (90) calendar day period, gives written notice to the Consultant specifying in detail deficiencies in the Services, the final report or final invoice. The Consultant shall promptly make any necessary corrections, and the preceding process shall be repeated.
- 4) Any amount that the Procuring Entity has paid or has caused to be paid under this Clause more than the amounts payable under the provisions of this Contract shall be reimbursed by the Consultant to the Procuring Entity within thirty (30) days after receipt by the Consultant of notice thereof. Any such claim by the Procuring Entity for reimbursement must be made within twelve (12) calendar months after receipt by the Procuring Entity of a final report and a final invoice approved by the Procuring Entity in accordance with the above.

10.5.6 No Claim Certificate and Release of Contract Securities

The Consultant shall submit a 'No-claim certificate' to the Procuring Entity in such form as shall be required by the Procuring Entity after the Services are finally accepted and before the final payment/ performance securities are released. The Procuring Entity shall release the contractual securities without any interest if no outstanding obligation, asset, or payments are due from the Consultant. The Consultant shall not be entitled to make any claim whatsoever against the Procuring Entity under or arising out of this Contract, nor shall the Procuring Entity entertain or consider any such claim, if made by the Consultant, after he shall have signed a "No Claim" Certificate in favour of the Procuring Entity. The Consultant shall be debarred from disputing the correctness of the items covered by the "No Claim" Certificate or demanding arbitration.

10.5.7 Post Payment Audit

Notwithstanding the issue of the Completion Certificate and release of final Payment, the Procuring Entity reserves the right to carry out within 180 days (unless otherwise stipulated in the contract) of such completion/ final payment, a post-payment audit and/ or technical examination of the Services and the final bill including all supporting vouchers, abstracts etc. If any over-payment to the Consultant is discovered due to such examination, the Procuring Entity shall claim such amount from the Consultant.

10.5.8 Signature on Receipts for Amounts

Every receipt for money, which may become payable, or for any security which may become transferable to the contractors under the contract, shall be signed by a person authorized to do so by the Consultant (or otherwise as per GCC-Clause 4.2), to be a suitable and sufficient discharge to the Procuring Entity in respect of the sums of money or security purported to be acknowledged thereby. In the event of the death of any Consultant or partner during the pendency of the contract, every receipt by anyone of the surviving constituents shall be suitable and sufficient discharge as aforesaid. Nothing in this Clause shall be deemed to prejudice or effect any claim that the Procuring Entity may have against the legal representative regarding any breach of any contract conditions by any Consultant partner/member so dying. Nothing in this clause shall be deemed to prejudice or affect the respective rights or obligations of the

Consultant partners/ members and the legal representatives of any deceased Consultant partners/ members.

10.6. Suspension of Payments

The Procuring Entity may, by written notice of suspension to the Consultant, suspend part or all payments to the Consultant hereunder if the Consultant fails to deliver the Services as per the Terms of Reference, including the non-rectification of notified defects in the Services/ deliverables, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultant to remedy such failure within a period not exceeding thirty (30) calendar days after receipt by the Consultant of such notice of suspension. Such a suspension shall not entitle the Consultant to any extension of time for delivery of Service.

10.7. Payment Against Time-Barred Claims

In accordance with the Limitation Act 1963, all claims against the Procuring Entity shall be legally time-barred after three years calculated from when the payment falls due unless the payment claim has been under correspondence. The Procuring Entity is entitled to, and it shall be lawful to reject such claims.

10.8. Commissions and Fees

The Consultant shall disclose any commissions or fees that may have been paid or are to be paid to agents, representatives, or commission agents concerning the selection process or execution and performance of this Contract. The information disclosed must include the name and address of the agent, representative, or commission agent, the amount and currency, and the purpose of the commission or fee.

11 Claims and dispute resolution

11.1. Procedure for claims

If the Consultant intends to claim any additional payment under any Clause of these Conditions or otherwise, the Consultant shall give written notice to the Contract Manager describing the event or circumstances giving rise to the claim as soon as possible, but no later than 30 days of the start of the event. The Consultant shall also submit any other notices as required by the Contract, and supporting particulars relevant to the claim.

The Consultant shall keep such contemporary records necessary to substantiate any claim, either on the Site or at any other location acceptable to the Contract Manager. Upon receipt of notice, the Contract Manager shall, without admitting the liability to the Employer may, inspect such records, monitor the record-keeping and/or may instruct the Consultant to keep further contemporary records. The Consultant shall permit the Contract Manager to inspect all such records, and shall (if instructed) submit copies to the Contract Manager.

Within 30 days of initial notice, or any other time agreed by the Contract Manager, the Consultant shall submit to the Contract Manager a fully detailed claim including all supporting particulars and additional payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

- a) The initial detailed claim shall be considered as interim;
- b) The Consultant shall submit further interim claims at monthly intervals, showing the accumulated claim amount, and additional particulars requested by the Engineer and

- c) The Consultant shall submit a final claim within 30 days after the conclusion of the event effects or such other period as may be proposed by the Contractor and agreed by the Engineer.

Failure by the Consultant to comply with these provisions shall result in forfeiture of the right to claim additional payment.

Within 60 days after receiving a claim or any supplementary particulars supporting the claim, or such other period as may be proposed by the Contract Manager and accepted by the consultant, the Contract Manager shall respond with approval, disapproval with detailed comments, or may request further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.

Within the above defined period of 60 days, the Contract Manager shall proceed in accordance with tender conditions to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub- Clause 9.4 (Extension of Time for Completion), and/or (ii) the additional payment (if any) to which contractor is entitled under the contract.

11.2. Payment for claims

The Consultant shall be entitled to have included in any Interim Payment Certificate such amount for any claim as the Contract Manager considers due, after taking approval from the Employer. If the particulars supplied are insufficient to substantiate the whole of the claim, the Consultant shall be entitled to payment for such part of the claim as has been substantiated.

11.3. Dispute resolution process

All disputes and differences between the parties, as to the construction or operation of the contract, or the respective rights and liabilities of the parties on any matter in question; dispute or difference or any other account whatsoever, but excluding the Excepted Matters (detailed below); arising out of or in connection with the contract, whether before or after the completion/ termination of the contract, that cannot be resolved amicably between the Employer and the Consultant within the time frame as stipulated above from aggrieved Party notifying the other Party of such matters, shall be hereinafter called the "Dispute".

The Dispute shall be attempted to be resolved without recourse to courts through dispute resolution mechanisms detailed subsequently, in the sequence as mentioned below, and the next mechanism shall not be invoked unless the earlier mechanism has been invoked or has failed to resolve it within the deadline mentioned therein.

- a) Adjudication

- b) Mediation

11.4 Notice of dispute

A dispute shall be deemed to arise when one Party serves on the other Party a notice in writing (hereinafter called a "Notice of Dispute") stating the nature of the Dispute provided that no such notice shall be served later than 30 days after the date of issue of Performance Certificate by the Employer.

11.5 Excepted matters

Matters for which provision has been made in any clause of the contract shall be deemed as 'excepted matters' (matters not disputable/ arbitral), and decisions of the

Employer, thereon shall be final and binding on the Consultant. The 'excepted matters' shall stand expressly excluded from the purview of the Dispute Resolution Mechanism, including Arbitration. However, where the Employer has raised the dispute, this sub-clause shall not apply. Unless otherwise stipulated in the contract, excepted matters shall include but not limited to:

- (a) any controversies or claims brought by a third party for bodily injury, death, property damage or any indirect or consequential loss arising out of or in any way related to the performance of this Contract ("Third Party Claim"), including, but not limited to, a Party's right to seek contribution or indemnity from the other Party in respect of a Third-Party Claim.
- (b) Issues related to the pre-award tender process or conditions.
- (c) Issues related to ambiguity in contract terms shall not be taken up after a contract has been signed. All such issues should be highlighted before the signing of the contract by the contractor.
- (d) Issues related to contractual action/ termination of contract etc., by the Employer on account of fraud, corruption, debarment of contractors, criminal or wilful negligence of the contractor etc.
- (e) Issues that are already under investigation by CBI, Vigilance, or any other investigating agency or government.
- (f) Provisions incorporated in the contract, which are beyond the purview of the employer or are in pursuance of policies of Government, including but not limited to:
 - (i) Provisions of restrictions regarding local content and Purchase Preference to Local suppliers in terms of Make in India policy of the Government.
 - (ii) Provisions regarding restrictions on Entities from Countries having land-borders with India in terms of the Government's policies in this regard.
 - (iii) Purchase preference policies regarding MSMEs and start-ups.

11.6 Adjudication

1. After exhausting efforts to resolve the Dispute with the employer, the consultant shall give a 'Notice of Adjudication' within 30 days of exhausting efforts to resolve the issues amicably specifying the matters which are in question, or subject of the dispute or difference indicating the relevant contractual clause, as also the amount of claim item-wise to the Employer ie MD UPMRC or his authorised representative (hereinafter called the Adjudicator) for invoking resolution of the dispute through Adjudication.
2. Where necessary, e.g. matters of high value, Employer may proceed with adjudication by a high-level committee as per clause 11.8 below.
3. During his adjudication, the Adjudicator shall give the Consultant an adequate opportunity to present his case. Within 60 days after receiving the representation, the Adjudicator shall make and notify decisions in writing on all matters referred to him. The parties shall not initiate, during the adjudication proceedings, any mediation or judicial proceedings in respect of a dispute that is the subject matter of the adjudication proceedings.
4. If not satisfied by the decision in adjudication, or if the Adjudicator fails to notify his decision within the abovementioned time-frame, the consultant may proceed to invoke the process of Mediation as follows.

11.7 Mediation

11.7.1 Notice for Mediation

Any party may invoke Mediation by submitting “Notice of Mediation” to the other party within 30 days of the decision of the Adjudicator. The Mediation shall be conducted as per The Mediation Act 2023.

Mediation proceedings shall be initiated within 30 days of consultant giving the Notice of Dispute seeking initiation of Mediation. Mediation shall commence when Contract Manager accepts the consultant's request of Mediation in writing. If the contractor does not receive a reply within 30 days from the date on which it sends the Notice of Dispute seeking Mediation, it may elect to treat this as a rejection by the contract manager to mediate and inform the manager accordingly.

11.7.2 Constitution of High-Level Committee (HLC)/Mediation Forum

The Mediation shall be undertaken by:

- (a) A Single External Mediator for small value disputes of up to Rs. 1.00 Crores.
- (b) High Level Committee (HLC) /Mediation Forum maintained by UPMRC consisting of three Mediators, in case of large value disputes having financial implication of more than Rs. 1.00 crores.

11.7.3 Qualification of Mediator

High Level Committee (HLC) /Mediation Forum will be consisting of independent and impartial members from a Panel/Form whose members will be:

- (i) Retired Govt. or Retired UPMRC/Metro officials (Technical/Finance expert)
- (ii) Not less than 55 years and not more than 75 years of age on date of appointment.
- (iii) In case of retired government officials, should have retired from working level-14 (SAG/HOD or higher) as per 7th CPC or equivalent with minimum 5 years' experience in level-14, having experience in Contract Management/Arbitration/ Mediation handling of Construction Contracts.
- (iv) In case of retired PSU/UPMRC/Metro Officials, should have retired from working level not below E-8 grade in a UPMRC/Metro with minimum 5 years' experience in E-8 grade having experience in Contract Management of Consultancy/Construction Contracts.

11.8 Procedure for appointment of Mediator

11.8.1 UPMRC shall offer the choice of Two High Level Committee (HLC) /Mediation Forum/ (a Mediation forum may consist of 3 Mediators or single Mediator) to the Contractor within 30 days from receipt of request for Mediation to choose one High Level Committee (HLC) /Mediation Forum. Both UPMRC and other party should represent before High Level Committee (HLC) through their senior management and not through any hired legal professional.

11.8.2 Mediation proceedings are to be completed:

- a) In case of Sole Mediator - within a period of not more than 03 (three) months commencing from the date of reference to the Sole Mediator, and.
- b) In case of High Level Committee (HLC) /Mediation Forum - within a period of not more than 06 (six) months commencing from the date of reference to the High Level Committee (HLC) /Mediation Forum.

The said periods may be extended for a further period of 30 days for reasons to be recorded in writing.

11.8.3 In case of long-duration works contracts, where a renegotiation of the terms may best serve public interest due to unforeseen major events, in such circumstances, the terms of the tentative re-negotiated contract may be placed before a suitably constituted High-Level Committee/Mediation Forum before approval by the competent authority.

11.8.4 Approval of the head of the procuring entity is required to be obtained for the final accepted solution.\

11.8.5 After a mediator is appointed, they must disclose any conflict of interest. Either party can seek a replacement of the Mediator after such disclosure.

11.9 Venue of Mediation

Mediation proceedings shall be held at Lucknow, Uttar Pradesh, India and the language of the mediation proceedings and that of all documents and communications between the Parties shall be in English.

11.10 Mediation process

11.10.1 Confidentiality

All the acknowledgements, opinions, suggestions, promises, proposals, apologies, and admissions made during the mediation; acceptance/ willingness to accept proposals in the mediation; documents prepared solely for the conduct of mediation are strictly confidential. These can neither be relied upon as evidence in any subsequent court proceedings nor be asked to be disclosed by any court/ tribunal. No audio or video recording of the mediation proceedings shall be made or maintained by the parties or the participants, including the mediator and mediation service provider, whether conducted in person or online, to ensure the confidentiality of the mediation proceedings.

11.10.2 Online Mediation

The Act allows parties to opt for online/ virtual Mediation, which shall be deemed to occur within the jurisdiction of a competent court. The Act also requires online mediation communication mechanisms to ensure confidentiality.

11.10.3 Mediation Proceedings

The mediator initially meets the parties separately and communicates the view of each party to the other to the extent agreed upon by them. He assists them in identifying issues, advancing better understanding, clarifying priorities, and exploring areas of the parties' responsibility, identifying common interests, and encouraging compromise. He then meets them jointly to encourage a mutually acceptable resolution. At any stage of the mediation proceedings, at the parties' request, the mediator may suggest a dispute settlement in writing.

11.10.4 Termination of Mediation Proceedings

The process must be completed within 120 days, though parties can extend it by another 60 days through mutual consent. If Mediation is not completed within this timeline, the Mediator shall prepare a non-settlement report without disclosing the cause of non-settlement or any other matter or thing referring to their conduct during mediation for the parties. Mediation shall also stand terminated on a declaration of the mediator, after consultation with the parties or otherwise, that further efforts at mediation are no longer justified or on communication by a party(ies) in writing, addressed to the mediator and the other parties that they wish to opt out of mediation. On termination of Mediation, if the dispute is still alive, the aggrieved

party shall be free to invoke Judicial process.

11.10.5 Mediated Settled Agreement (MSA)

If the Parties reach agreement on a settlement of the dispute, they may draw up and sign a written settlement agreement duly authenticated by the Mediator for the parties. When the Parties sign the MSA, it shall be final and binding on the Parties and persons claiming under them respectively. The settlement agreement arrived at shall be signed only after obtaining the prior written consent of the competent authority i.e. MD/UPMRC.

11.10.6 Cost of Mediation

The parties shall equally bear all costs of mediation, including the fees of the mediator.

11.10.7 Challenge to MSA/ Execution of MSA

MSA can be challenged within 90 days on limited grounds of (a) fraud, (b) corruption, (c) impersonation, and (d) subject matter being unfit for Mediation.

If there is no challenge or a challenge is unsuccessful, the Act ensures that the MSA is binding and enforceable, akin to a judgment or decree. This means that if one party fails to comply with the MSA, the non-defaulting party has a right to enforce it through the Court.

11.10.8 No claim of Interest

No claim of Interest during Mediation proceedings: Parties shall not claim any interest on claims/counter-claims from the date of notice invoking Mediation till the execution of the settlement agreement if so arrived. If parties cannot resolve the dispute, either party shall claim no interest from the date of notice invoking Mediation until the date of Termination of Mediation Proceedings.

11.11 No legal action during Mediation

The parties shall not initiate, during the mediation proceedings, any judicial proceedings in respect of a dispute that is the subject matter of the mediation proceedings.

11.12 If the Consultant(s) does/do not prefer his/their specific and final claims in writing, within a period of 90 days of receiving the intimation from the Employer/Contract Manager that the final bill is ready for signature of the Consultant(s), he/they will be deemed to have waived his/their claim(s) and the Employer shall be discharged and released of all liabilities under the Contract in respect of these claims.

11.13 Jurisdiction of Courts

Where recourse to a Court is to be made in respect of any matter, dispute, issue arising out of or under the Contract or connected with the Contract the Appropriate court at Lucknow shall have the exclusive jurisdiction to try all disputes issues, dispute arising out of or under the Contract or connected with the Contract between the Parties.

11.14 Suspension of Work on Account of Adjudication/ Mediation

The reference to Adjudication/Mediation shall proceed notwithstanding that the Works shall not then be or be alleged to be complete, provided always that the obligations of the Employer, Contract Manager and the Consultant shall not be altered by reasons of dispute resolution process being conducted during the

progress of the Works. Neither Party shall be entitled to suspend the Work or part of the Work to which the dispute relates on account of Mediation and payments to the Consultant shall continue to be made in terms of the Contract.

12 Defaults, Breaches, Termination, and closure of Contract

12.1. Termination due to Breach, Default, and Insolvency

12.1.1 Defaults and Breach of Contract

In case the Consultant undergoes insolvency or receivership, neglects or defaults or expresses inability or disinclination to honour his obligations relating to the performance of the contract or ethical standards or any other obligation that substantively affects the Procuring Entity's rights and benefits under the contract, it shall be treated as a breach of contract. Such defaults could include inter-alia:

- 1) **Default in Performance and Obligations:** if the Consultant fails to deliver any or all of the Services or fails to perform any other contractual obligations (including Code of Integrity or obligation to maintain eligibility and evaluation criteria based on which contract was awarded) within the period stipulated in the contract or within any extension thereof granted by the Procuring Entity. In the case of a Joint Venture/ Consortium, if the performance of any JV/C member is persistently unsatisfactory by the Procuring Entity in respect of the responsibilities assigned to him as per the JV agreement, which is part of this Contract.
- 2) **Insolvency:** If the Consultant being an individual or if a firm, any partner thereof, shall at any time be adjudged insolvent or shall have a receiving order or order for the administration of his estate made against him or shall take any proceeding for composition under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or enter into any assignment or composition with his creditors or suspend payment or if the firm be dissolved under the Partnership Act, or **Liquidation:** if the Consultant is a company being wound up voluntarily, or by order of a Court or a Receiver, Liquidator or Manager on behalf of the Debenture-holders is appointed, or circumstances shall have arisen which entitle the Court or Debenture-holders to appoint a Receiver, Liquidator or Manager.

12.1.2 Notice for Default:

As soon as a breach of contract is noticed, a show-cause 'Notice of Default' shall be issued to the Consultant, giving two weeks' notice, reserving the right to invoke contractual remedies. After such a show-cause notice, all payments to the Consultant would be suspended as per GCC clause 10.6 above to safeguard needed recoveries due to invoking contractual remedies.

12.1.3 Remedies for Breaches/ Default

In the event of an unsatisfactory resolution of 'Notice of Default' within two weeks of its issue as per the sub-clause above, the Procuring Entity, if so decided, shall

- 1) take one; or more of the following contractual remedies.
 - a) Recover liquidated damages and invoke a denial clause for delays.
 - b) In the case of JV/C, Procuring Entity may call upon the Lead Member to assign the work of the defaulting member to any other equally competent party acceptable to the Procuring Entity.
 - c) Temporarily withhold payments due to the Consultant till recoveries due to invocation of other contractual remedies are complete.

- d) Call back any loaned property or payment advances with a levy of interest at the prevailing rate (MIBID - Mumbai Interbank Proposal Rate).
 - e) Encash and/ or Forfeit performance or other contractual securities.
 - f) Prefer claims against the insurance, if any.
 - g) Terminate the Contract for default, fully or partially, including its right for Risk-and-Cost Procurement as per the following sub-clause.
 - h) Initiate proceedings in a court of law for the transgression of a law, tort, and loss not addressable by the other remedies above.
- 2) By written Notice of Termination for Default sent to the Consultant, terminate the contract in whole or in part, without compensation to the Consultant.
- a) Such termination shall not prejudice or affect the rights and remedies, including under the sub-clause below, which have accrued and/ or may accrue to the Procuring Entity after that.
 - b) Unless otherwise instructed by the Procuring Entity, the Consultant shall continue to perform the contract to the extent not terminated.
 - c) All Defect Liability obligations, if any, shall survive despite the termination.
 - d) **Risk and Cost Procurement:** In addition to termination for default, the Procuring Entity shall be entitled, and it shall be lawful on his part, to procure Services similar to those terminated, with such terms and conditions and in such manner as it deems fit at the "Risk and Cost" of the Consultant. Such Risk and Cost Procurement must be contracted within nine months from the breach of contract. The Consultant shall be liable for any loss which the Procuring Entity may sustain on that account provided the procurement, or, if there is an agreement to procure, such agreement is made. The Consultant shall not be entitled to any gain on such procurement, and the manner and method of such procurement shall be at the discretion of the Procuring Entity. It shall not be necessary for the Procuring Entity to notify the Consultant of such procurement. It shall, however, be at the discretion of the Procuring Entity to collect or not the security deposit from the firm/ firms on whom the contract is placed at the risk and cost of the defaulted firm.

12.1.4 Limitation of Liability

Except in cases of criminal negligence or willful misconduct, the aggregate liability of the Consultant to the Procuring Entity, whether under the contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Consultant to indemnify the Procuring Entity concerning IPR infringement.

12.2. Termination for Default/ Convenience of Procuring Entity or Frustration of Contract

12.2.1 Notice for Determination of Contract

- 1) The Procuring Entity reserves the right to terminate the contract, in whole or in part, for its (the Procuring Entity's) convenience or frustration of Contract as per the sub-clause below, by serving written 'Notice for Determination of Contract' on the Consultant at any time during the currency of the contract. The notice shall specify that the termination is for the Procuring Entity's convenience or the contract's frustration. The notice shall also indicate inter- alia, the extent to which the Consultant's performance under the contract is terminated, and the date from which such termination shall become effective.

- 2) Such termination shall not prejudice or affect the rights and remedies accrued and/ or shall accrue after that to the Parties.
- 3) Unless otherwise instructed by the Procuring Entity, the Consultant shall continue to perform the contract to the extent not terminated.
- 4) All Defect Liability obligations, if any, shall survive despite the termination.
- 5) The Services and incidental goods/ works that can be delivered or performed within thirty days after the Consultant's receipt of the notice of termination shall be accepted by the Procuring Entity as per the contract terms. For the remaining Services and incidental goods/ works, the Procuring Entity may decide:
 - a) To get any portion of the balance completed and delivered at the contract terms, conditions, and prices; and/ or
 - b) To cancel the remaining portion of the Services and incidental goods/ works and compensate the Consultant by paying an agreed amount for the cost incurred by the Consultant, if any, towards the remaining portion of the Services and incidental goods/ works.

12.2.2 Frustration of Contract

- 1) **Notice of Frustration Event:** Upon a supervening cause occurring after the effective date of the contract, including a change in law, beyond the control of either party, whether as a result of the Force Majeure clause (GCC 9.6) or within the scope of section 56 of the Indian Contract Act, 1872, that makes it impossible to perform the contract within a reasonable timeframe, the affected party shall give a 'Notice of Frustration Event' to the other party giving justification. The parties shall use reasonable efforts to agree to amend the contract as necessary to complete its performance. However, if the parties cannot reach a mutual agreement within 60 days of the initial notice, the Procuring Entity shall issue a 'Notice for Determining the contract' and terminate the contract due to its frustration, as in the sub-clause above.
- 2) However, the following shall not be considered as such a supervening cause
 - a) Lack of commercial feasibility or viability or profitability or availability of Funds.
 - b) if caused by either party's breach of obligations under this Contract or failure to act in good faith or use commercially reasonable due diligence to prevent such an event.

12.3. Closure of Contract

12.3.1 Unless terminated earlier under GCC clauses 12.1 and 12.2 above, this Contract shall expire:

1. At the end of such a period after the Effective Date as specified in the Contract.
2. Upon successful performance of all obligations by both parties, including completion of Defect Liability obligations and final payment
3. termination and settlements after that, if any, as per GCC clause 12.1 or 12.2 above.

12.3.2 Cessation of Rights and Obligations

Upon termination of this Contract under Clauses GCC 1 2.1 or 1 2.2 hereof or expiration of this Contract under GCC clause 1 2.3.1, all rights and obligations of

the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality outlined in GCC clause 5.7. (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records outlined in GCC clause 5 and to cooperate and assist in any inspection or investigation, and (iv) any right a Party may have under the Applicable Law.

12.3.3 Cessation of Services

Upon termination of this Contract by notice under Clauses GCC 1 2.1 or GCC 1 2.2, the Consultant shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. Concerning documents prepared by the Consultant and equipment and materials furnished by the Procuring Entity, the Consultant shall proceed as provided by Clauses GCC 9.4 and GCC 5.14.

12.3.4 Payments upon Termination

Upon termination of this Contract, the Procuring Entity shall make the following payments to the Consultant:

- (a) payment for Services satisfactorily performed before the effective date of termination; and
- (b) in the case of termination under GCC clause 12.2, reimbursement of any reasonable cost incidental to the prompt and orderly termination of this Contract, including the cost of the return travel of the Experts.

13 Code of Integrity in Public Procurement; Misdemeanours and Penalties

13.1. Code of Integrity

Procuring authorities as well as Consultants, suppliers, contractors, and consultants - should observe the highest standard of ethics and should not indulge in following prohibited practices, either directly or indirectly, at any stage during the Procurement Process or during the execution of resultant contracts:

- 1) **"Corrupt practice"** - making an offer, solicitation or acceptance of a bribe, reward or gift or any material benefit in exchange for an unfair advantage in the Procurement Process or to otherwise influence the Procurement Process;
- 2) **"Fraudulent practice"** - any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. Such practices include a false declaration or false information for participation in a Procurement Process or to secure a Contract, or in the execution of the contract;
- 3) **"Anti-competitive practice"** - any collusion, Proposal-rigging or anti- competitive arrangement, or any other practice coming under the purview of the Competition Act, 2002, between two or more Consultants, with or without the knowledge of the Procuring Entity, that may impair the transparency, fairness, and the progress of the Procurement Process or to establish Proposal prices at artificial, non-competitive levels;
- 4) **"Coercive practice"** - harming or threatening to harm persons or their property to influence their participation in the Procurement Process or affect the execution of a

contract;

- 5) **"Conflict of interest"** —participation by a bidding firm or any of its affiliates who are either involved in the Consultancy Contract to which this procurement is linked; if they are part of more than one Proposal in the procurement; or if their personnel have a relationship or financial or business transactions with any official of procuring entity who are directly or indirectly related to tender or execution process of contract; or improper use of information obtained by the (prospective) Consultant from the Procuring Entity with an intent to gain unfair advantage in the Procurement Process or for personal gain;
- 6) **"Obstructive practice"** - materially impede procuring entity's investigation into allegations of one or more of the above-mentioned prohibited practices either by deliberately destroying, falsifying, altering; or concealing evidence material to the investigation; or by making false statements to investigators and/ or by coercive practices mentioned above, to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or by impeding the Procuring Entity's rights of an audit or access to information;

13.2. Obligations for Proactive Disclosures:

Procuring authorities, Consultants, suppliers, contractors, and consultants are obliged under this Code of Integrity to *suo-moto* proactively declare any violation of the Code of Integrity (pre-existing or as and as soon as these arise at any stage) in any Procurement Process or execution of the contract. Failure to do so shall amount to a violation of this code of integrity.

13.3. Misdemeanours

Any Consultant must declare, whether asked or not in a Proposal-document, any previous transgressions of such code of integrity during the last three years or of being under any category of debarment by the Central Government or the Ministry/ Department of the Procuring Organisation from participation in Procurement Processes. Failure to do so shall amount to a violation of this code of integrity. The following shall be considered misdemeanours - if a Consultant, either directly or indirectly, at any stage during the Procurement Process or during the execution of resultant contracts:

- 1) Commits any of the following misdemeanours:
 - (a) Violates the code of Integrity mentioned in GCC-clause 13.1 or the Integrity Pact if included in the Tender/ Contract;
 - (b) Any other misdemeanour, e.g., supply of sub-standard quality of material/ services/ work, non-performance or abandonment of contract, or violations of Bid/ performance Security conditions.
- 2) Commits any of the following misdemeanours:
 - (a) Has been convicted of an offence:
 - i) Under the Prevention of Corruption Act, 1988; or
 - ii) he Indian Penal Code or any other law is in force for causing any loss of life or property or causing a threat to public health as part of the execution of a public procurement contract.
 - (b) It is determined by the Government of India to have doubtful loyalty to the

country or national security considerations.

- (c) Employs a government servant who has been dismissed or removed on account of corruption or employs a non-official convicted for an offence involving corruption or abetment of such an offence in a position where he could corrupt government servants or employs a government officer within one year (or any other period prescribed by the relevant authority) of his retirement, who has had business dealings with him in an official capacity before retirement.

13.4. Penalties for Misdemeanours

Without prejudice to and in addition to the rights of the Procuring Entity to other remedies as per the Tender-documents or the contract, If the Procuring Entity concludes that a (prospective) Consultant directly or through an agent has committed a misdemeanour in competing for the tender or in executing a contract, the Procuring Entity shall be entitled, and it shall be lawful on his part to take appropriate measures, including the following:

13.4.1 if his Proposals are under consideration in any procurement

- 1) Enforcement of Bid Securing Declaration in lieu of forfeiture or encashment of Bid Security.
- 2) calling off any pre-contract negotiations and;
- 3) rejection and exclusion of Consultants from the Procurement Process

13.4.2 if a contract has already been awarded

- 1) Termination of Contract for Default and availing all remedies prescribed thereunder;
- 2) Encashment and/ or Forfeiture of any contractual security or bond relating to the procurement.
- 3) Recovery of payments, including advance payments, if any, made by the Procuring Entity along with interest thereon at the prevailing rate (MIBID - Mumbai Interbank Proposal Rate);

13.4.3 Remedies in addition to the above:

In addition to the above penalties, the Procuring Entity shall be entitled, and it shall be lawful on his part, to:

- 1) File information against Consultant or any of its successors with the Competition Commission of India for further processing in case of anti-competitive practices;
- 2) Initiate proceedings in a court of law against Consultant or any of its successors under the Prevention of Corruption Act, 1988 or the Indian Penal Code or any other law for transgression not addressable by other remedies listed in this sub- clause.
- 3) Remove the Consultant or any of its successors from the list of registered suppliers for a period not exceeding two years. Suppliers removed from the list of registered vendors or their related entities may be allowed to apply afresh for registration after the expiry of the removal period.
- 4) Initiate suitable disciplinary or criminal proceedings against any individual or staff found responsible.
- 5) Debar, a Consultant, from participation in future procurements without prejudice to Procuring Entity's legal rights and remedies. Debarment shall automatically extend to all the allied firms of the debarred firm. In the case of a Joint Venture/ consortium, all its members shall also stand similarly debarred:

- a) A Ministry/ Department (or any of its CPSUs, attached offices, autonomous

bodies) may debar a Consultant or any of its successors from participating in any Procurement Process undertaken by all its procuring entities for a period not exceeding two years commencing from the date of debarment for misdemeanours listed in GCC sub- clause 13.3-1) above. The Ministry/Department shall maintain such a list which shall also be displayed on their website.

- b) Central Government (Department of Expenditure (DoE), Ministry of Finance) may debar a Consultant or any of its successors from participating in any Procurement Process undertaken by all its procuring entities for a period not exceeding three years commencing from the date of debarment for misdemeanours listed in GCC sub-clause 13.3-2) above. DoE shall maintain such a list which shall be displayed on Central Public Procurement Portal (CPPP).



UTTAR PRADESH METRO RAIL CORPORATION LIMITED

**LKGC(02)-01: General Consultancy services for Lucknow
MRTS Project, Phase- 1B**

Special Conditions of Contract (SCC)

**UTTAR PRADESH METRO RAIL CORPORATION LTD.
Administrative Building, Vipin Khand, Gomti Nagar
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Lucknow-226010, Uttar Pradesh, India**

SPECIAL CONDITIONS OF CONTRACT (SCC)		
S.No	Reference Number of GCC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract.
1		SCC is to be read in conjunction with GCC. Entire clause of GCC is not replaced unless specifically mentioned in SCC against the relevant Clause.
2	1.2 (15)	All K1 & K2 level positions executed under this tender shall be treated as Key Staff
3	2.1	The Language of Contract shall be English.
4	2.4 (2)	Following is added in S. No. 2): The consultant, subject to this contract, shall carry out services/ assignments for the benefit of the Procuring entity, in accordance with the terms and conditions herein.
5	2.4 (4) 4.2 (1) & (2)	Following is added in S. No. 4): The Authorised representative are as follows: For Employer :- Managing Director (MD), UPMRC or any other person authorised by him on his behalf. For Consultant: _____
6	4.3	Following is added to clause 4.3 of GCC: a) All notices to the Consultant or employer or engineer, shall be served by post or telex or telefax or e-mail or by hand to the Consultant or employer or engineer or his authorized Representatives. In case of notices delivered by post, they will be deemed to have been delivered after 7 days of dispatch. b) The Consultant shall, on award of the Contract, furnish to the Engineer, the name, designation, address and telephone, telex and telefax numbers and e-mail address of his representative. The addresses are: For the Employer Uttar Pradesh Metro Rail Corporation Limited, Administrative Building, Vipin Khand, Gomti Nagar, Near Dr. Bhim Rao Ambedkar Samajik Parivartan Sthal, Lucknow, Uttar Pradesh – 226010 E-mail ID & Telephone No.: (Detail of UPMRC personals nominated or appointed from time to time by the Procuring Entity) For the Consultant _____ Attention : _____ Cable address : _____ E-mail ID : _____ Facsimile : _____ Telephone No. : _____ (Note: Fill in the Blanks)
7	5.1 (2)	Clause 5.1 (2) is added: a) It shall be open for UPMRC to terminate the Agreement upon death, retirement, insanity or insolvency of any person being the proprietor/partner in the firm/company, or on the addition or introduction of a new partner managing the Project for the consultant without the previous approval in writing of UPMRC. b) But in absence of and until its termination by UPMRC as aforesaid, this Agreement shall be in full force and effect notwithstanding any changes in the constitution of the firm by death, retirement, insanity or insolvency of any of its proprietors/partners or addition or introduction of any new partners. c) In case of death or retirement, the surviving or remaining partners of the firm shall be jointly and severally liable for the due and satisfactory performance of all terms and conditions of the Agreement, and likewise on the addition of a new partner, the latter will also become jointly and severally liable.

8	5.3.1 (b)	<p>Following is added as S. No. 5.3.1 (b):</p> <p>For a period of one year after the expiration of this Contract, the Consultants shall not engage, and shall cause their Personnel as well as their Sub-consultants and their Personnel not to engage, in the activity of a purchaser (directly or indirectly) of the assets on which they advised the Employer under this Contract nor in the activity of an adviser (directly or indirectly) of potential purchasers of such assets. The Consultants also agree that their affiliates shall be disqualified for the same period of time from engaging in the said activities.</p>
9	5.3 (6)	<p>Following is added as S. No. 5.3 (6):</p> <p>All necessary care has been taken by the Employer to ensure that the Scope of Works under the DDC Contract (LKDDC-02) and the GC Contract (LKGC (02)-01) are distinctly defined so as to avoid any conflict of interest. Accordingly, the successful bidder of either tender is not barred from participating in the other. However, in the event that a conflict of interest is observed at any stage in the scope of DDC & GC contract, the deliverables under the DDC Contract shall be subject to review, proof-checking, or validation by an independent third party, duly approved by the Employer. The cost of such third-party scrutiny shall be borne entirely by the General Consultant, without any financial implication to the Employer. Further, any delay, disruption, or additional time arising from such third-party scrutiny shall not entitle the General Consultant to any extension of time, additional payment, or claim whatsoever.</p>
10	5.7.1 (1)	<p>Following is added to 5.7.1 (1):</p> <p>Upon termination or expiration of this contract, the depreciated value of such physical assets shall be deducted from the final bill of the Consultant. The useful life of such equipments and materials along with the method of depreciation will be in accordance with companies act 2013 or any amendment thereof with prior approval of UPMRC.</p>
11	5.8 (5)	<p>Following is added in S. No. 5.8 (5):</p> <p>In case the Contract value exceeds beyond 25% of the Original Contract Value, the Consultant shall have to submit additional Performance Security as follows:</p> <p>(a) If variation amount on plus side exceeds 25% of the Original Contract Value either due to Employer's variation or due to Consultant's variation, the Consultant shall submit additional performance security equal to an amount of 10% of the variation amount exceeding 25% of the Original Contract Value.</p> <p>(b) No additional Performance Security will be required to be submitted if the variation amount on plus side is within 25% of the Original Contract</p>
12	5.10	<p>Following is added to clause 5.10 :</p> <p>The Consultants shall also register with EPFO, comply with the provisions thereof and shall submit Copy of registration to the Employer.</p> <p>The risks and the coverages shall be as follows:</p> <p>a) Third Party motor vehicle liability insurance as required under Motor Vehicles Act, 1988 in respect of motor vehicles operated in India by the Consultants or their Personnel or any Sub-Consultants or their Personnel for the period of Consultancy.</p> <p>b) Third Party liability insurance with a minimum coverage, for INR. 4 crores for the period of consultancy.</p> <p>c) Project specific Professional Indemnity insurance policy with a minimum coverage equal to specified in limitation of liability. Global cover (with specific mention of coverage of GC contract for Metro Project under it) is also acceptable. Validity of PII shall be upto 3 years beyond date of completion.</p> <p>d) employer's liability and workers' compensation insurance in respect of the Personnel of the Consultants and of any sub-consultant, in accordance with the relevant provisions of Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and</p> <p>e) insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultants' property used in the performance of the Services, and (iii) any documents prepared by the Consultants in the performance of the Services.</p>

13	5.11	<p>Following is added to clause 5.11 :</p> <p>The consultant shall permit the Employer or its designated representative periodically, and up to three (03) years from the expiration or termination of this Contract, to inspect the same and make copies thereof. The Consultants shall also have their accounts relating this project audited once in a year and furnish a copy of this audited accounts to the Employer within three months from the close of each financial year.</p>
14	5.14 (4)	<p>Clause 5.14 (4) of GCC is replaced as under:</p> <p>The Consultant shall reconcile (periodically and Prior to submission of the final bill) all such assets/ properties provided by the Procuring Entity under the Contract. The Consultant shall be responsible for maintaining such assets in good working condition during the Contract period, reasonable wear and tear excepted. Any loss or damage to the same during this period shall be assessed by the Procuring Entity, whose decision shall be final and binding.</p> <p>Upon completion, closure, or termination of the Contract, such assets, equipment, and materials shall remain with the Consultant, and the depreciated value thereof shall be deducted from the final bill.</p> <p>The useful life and method of depreciation shall be in accordance with the provisions of the Companies Act, 2013 or any amendment thereof, with the prior approval of UPMRC.</p>
15	6.1 (2)	<p>Following is added to clause 6.1 (2) :</p> <p>a) Assist the foreign Consultant, Sub-consultants and Personnel to obtain Work permits and such other documents as shall be necessary to enable the Consultant, Sub- consultants or Personnel to perform the Services in India for this project.</p> <p>b) Assist foreign Personnel and, if appropriate, their eligible dependents to be provided promptly with all necessary entry and exit visas, residence permits, and any other document required for their stay in India</p> <p>c) Facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Personnel and their eligible dependents.</p> <p>d) Issue to officials, agents and representatives of the Government all such instructions as may be necessary for appropriate, prompt and effective implementation of the Services;</p> <p>e) Assist the Consultant, their Personnel and any Sub-consultants employed by the Consultant for the Services in any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity according to the Applicable Laws</p> <p>f) grant to the Consultant, any sub-consultant and the Personnel of either of them the privilege, pursuant to the Applicable Laws, of bringing into India reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Personnel and their dependents and of withdrawing any such amounts as may be earned therein by the Personnel in the execution of the services.</p>
16	6.2 (1)	<p>For the purposes of the services under the scope of this contract, the minimum facilities & properties admissible is described in Annexure 1 of Pricing Document/BOQ which are part of overheads. The Consultant shall use such facilities & property for the execution of the contract and no other purpose whatsoever.</p> <p>The consultant shall bid accordingly and no payment other than the bid shall be admissible. It is the responsibility of the consultant to make available such facilities to its professionals.</p>
17	6.2 (2)	<p>Following is to be read in addition to clause 6.2 (2) of GCC.</p> <p>The minimum facilities & properties admissible is described in Annexure 1 of Pricing Document/BOQ which are part of overheads. The consultant shall bid accordingly and no payment other than the bid shall be admissible. It is the responsibility of the consultant to make available such facilities to its professionals.</p>
18	6.3	Clause 6.3 is DELETED
19	7.1 (3)	<p>The Services shall be performed at Lucknow and manufacturing unit of Rolling Stock, apart from this, where the location of a particular task is not so specified, at such locations, whether in the Procuring Entity's country or elsewhere, as the Procuring Entity may approve - Additional cost - only travel related expenses viz. Transport, Lodging and Fooding incurred by consultant for performing services at such locations will be reimbursed as per actuals by UPMRC subject to ceiling limits as specified in contract/Pricing Document.</p>

20	7.1 (5) (a)	<p>Following is to be read with 7.1 (5) (a):</p> <p>(i) The Consultants shall always act, in respect of any matter relating to this contract or to the Services, as faithful advisers to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with sub-consultants or Third Parties.</p> <p>(ii) The Consultant shall employ and provide such qualified and experienced Experts and Sub-consultants as are required to carry out the Services.</p>
21	8.2.2 (1)	<p>Following is added to clause 8.2.2 (1):</p> <p>If required to comply with the provisions made in the Contract, adjustments with respect to the estimated periods of engagement of Consultant Professionals may be made by the Consultant by written notice to the Employer, provided that the aggregates of such adjustments shall not cause payments under this Contract to exceed the quoted/contract amount under the respective head(s) . Any such adjustments shall only be made with the Employer's written approval.</p> <p>If additional work is required beyond the scope of the Services specified in Terms of Reference, estimated periods of engagement of consultant professionals set forth in contract may be increased by agreement in writing between the Employer and the Consultant, provided that any such increase shall not, except as otherwise agreed, cause payments under this Contract to exceed the quoted/contract amount under the respective head(s).</p>
22	8.2.2 (3)	<p>Biometric/IT enabled System for Record of attendance at the designated place of deployment shall be compulsory and copies of reports certified by the Consultant shall be submitted along with monthly invoices. The Biometric/IT enabled System should be capable of recording date, time, Name, Designation and Location of the deployed personnel (without any manual intervention) with acceptable accuracy.</p> <p>GC shall have 6 day working in a week. No leave will be allowed as the payment is on man- month basis considering the month of 30 days taking into account the holidays and rest days. (Details of duration of overtime and vacation leave should be given in Appendix 23 of FOT. The rate thereof and total cost on this account has to be included in the financial proposal.)</p> <p>However, for the holidays (as applicable to contractor including Sundays), whenever works are being carried out at site(project execution locations) - Day & Night- a roster of field staff should be drawn ensuring adequate coverage of project execution site. Such staff shall be given weekly off on some other week day in the same week and such weekly offs shall not be transferred to further weeks. No over-time or compensatory holiday is applicable to GC staff.</p> <p>For GC professionals the working hour as applicable to contractors - Day & Night- shall be applicable. Accordingly, GC should prepare Roster ensuring adequate coverage of project execution site as well as adequate rest time to the field staff.</p> <p>GC should ensure that no work is hampered/ delayed due to non-availability of required GC professionals, otherwise, it may attract suitable penalty as per contract conditions.</p>
23	8.2.2 (5) (c)	<p>Clause 8.2.2 (5) (c) of GCC is replaced as under:</p> <p>Substitution/Alteration/Replacement of GC Professionals shall be dealt as mentioned in Clause 5.7 (B) of Terms of Reference.</p> <p>The Provisions of Clause 5.7 (B) shall not apply to the substitution of experts in pursuance of orders by the Contract Manager as per sub-clause (8.2.4) of GCC.</p>
24	9.1	GCC clause 9.1 is to be read in conjunction with Terms of Reference.
25	9.2	Effective Date of Contract shall be from the date of Letter of Acceptance (LOA) and commencement of services, deployment shall be from the date of Notice to Proceed (NTP).
26	9.3.1	<p>Clause 9.3.(1) of GCC is replaced as under:</p> <p>The Procuring Entity shall nominate a Contract Manager (or a Consultancy Management Team), and the Consultant shall nominate a counterpart team to monitor the assignment so that the output is in line with the Procuring Entity's objectives of the Contract.</p> <p>The Contract Manager (or a Consultancy Management Team) alongwith the Consultant's nominated counterpart team shall together form Project Management Committee (PMC).</p>
27	10.1.2	Contract Prices shall be fixed and firm. No Price Variation is applicable.

28	10.3.3 & 10.5.1 (2)	Payment shall be made in Indian Rupees only.
29	10.5.1 (1)	Payment shall be made to the following account: _____ _____ _____
30	10.5.1 (8)	Following is added to 10.5.1 (8): Remunerations for periods less than one month i. shall be calculated on an hourly basis for actual time spent in the consultant's home office and directly attributable to the services (one hour equivalent to 1/240th of a month), and ii. on a calendar-day basis for time spent away from home office (1 day being equivalent to 1/30th of month).
31	10.5.1 (9) & (10)	Clause 10.5.1 (9) & (10) is deleted.
32	10.5.2 (1)	Following is added to clause 10.5.2 (1): a) An advance payment not exceeding five percent (5%) of the issued work order value (contract value), in not less than 2 (two) installments, shall be made. b) Advance shall be paid against acceptable Bank Guarantee issued from a Scheduled Commercial Indian Bank or Schedule Commercial Foreign Bank (Except Cooperative Bank) having business offices in India. The value of Bank Guarantee taken towards security of "Advance Payment" / "Mobilization Advance" shall be 110% of the advance amount (including GST) requested by the Consultant and valid for 60 Days beyond scheduled completion time.
33	10.5.2 (2)	Following is added to clause 10.5.2 (2): a) The Bank Guarantee shall remain effective/valid for 60 Days beyond scheduled completion time. b) The bank guarantee shall be in the amount and in the currency of the contract and at no time shall be less than the 110% of the outstanding advance. c) Employer is empowered to encash the Advance Bank Guarantee, if the Contract is terminated or foreclosed or for what so ever reasons the Advance Amount is not repaid by Consultant
34	10.5.2 (4)	Following is added to clause 10.5.2 (4): All advance payment will be recovered by the Employer in equal installments against the bills for the first twenty four (24) months of the Service, until the balance payment thereon has been fully repaid. However, if for any month the advance recovery installment is more than the amount billed, there will be no negative billing on this account and the balance of the recovery will be carried over to subsequent month or months.
35	10.5.3	Following is added to 10.5.3: f) It is understood that the bonuses or other means of profit sharing shall not be allowed as an element of overhead or remuneration, and g) The cost estimates for Foreign Personnel (Expat) and the cost estimates for local Personnel are set forth in Pricing Document/ BOQ. h) In addition to remuneration rates, the Consultant shall also be eligible for the payment of i. Overhead 1 cost ii. Overhead 2 cost iii. Reimbursable cost The details of above specified costs are provided in Pricing Document/BOQ which is to be read in conjunction with Annexure 1 of Pricing Document/BOQ. i) All payments shall be made in Indian Rupees only.



UTTAR PRADESH METRO RAIL CORPORATION LIMITED

**GENERAL CONSULTANCY SERVICES
FOR LUCKNOW MRTS PROJECT, PHASE – 1B**

TENDER NO: LKGC (02)-01

TENDER DOCUMENTS

VOLUME 3

TERMS OF REFERENCE (TOR)

**UTTAR PRADESH METRO RAIL CORPORATION LTD.
Administrative Building, Vipin Khand, Gomti Nagar
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Lucknow-226010, Uttar Pradesh, India**

TENDER NO: LKGC (02)-01

TENDER

DOCUMENTS

VOLUME 3

TERMS OF REFERENCE (TOR)

TABLE OF CONTENT

S.NO.	DESCRIPTION	PAGE NO.
1	Objectives	3
2	Data and information to be provided by UPMRC	3
3	Scope of Services for the General Consultant (GC)	3
4	Obligations and Responsibilities of the General Consultant (GC)	14
5	Staffing by GC for the Consultancy Services	16
6	Reporting system of the Progress of the project	20
7	Scope and Nature of Authority delegated to GC	27
8	Services and Facilities to be provided by UPMRC to GC	27
9	Duration of the Consultancy Services	28
10	Language	28
12	Planning of 5D BIM across UPMRC,GC,DDC & Contractors	28
13	Annexure 1	31
14	Annexure 2	41

TERMS OF REFERENCE FOR GENERAL CONSULTANT (GC)**1.0 Objectives**

The objective of this Tender is to obtain General Consultancy Services for procurement, construction, testing and commissioning of Lucknow Phase-1B MRTS Project.

It includes all civil engineering structures, tracks, signals, AFC, BIM, Multimodal integration, Traction - 750v DC transmission, telecom facilities, traction arrangements, air conditioning & ventilation, rolling stock, maintenance depots, stations, operation control center, offices & residential buildings (if required) but excluding Design or Proof Checking of Design Works.

Lucknow Metro Rail Project :- E-W Corridor of Lucknow MRTS Phase-1B - Charbagh to Vasantkunj including Depot at Vasantkunj.

Corridors	Elevated (Km)	Underground (Km)	Ramp (Km)	Total Length (Km)
E-W Corridor, Phase 1B- Charbagh to Vasantkunj	4.120	6.717	0.328	11.165

1.1 Property Development:

The UPMRC intends to exploit the space within the Metro premises, commercially, through property development in Lucknow. This activity may be taken up either along with or independent of other Project activities. In the whole system, wherever feasible stations would be developed as commercial hubs including multi-storey structures. The designs for the Project will make provision of the same as well as for subsequent activities. UPMRC may also intend to do commercial development on the depot land area in Lucknow.

It is intended to have 'Seamless travel' for metro commuters. It will involve integration of various modes of travel. It is also intended to have common ticketing of various modes of travel, viz. metro, bus, other forms of rail based urban transport, taxis, etc. Suitable models of seamless travel have to be developed.

12. The design of terminal stations for the Lucknow Metro Rail project shall be such that any subsequent extension of the lines, could be implemented with the least expenditure.

13. Technical Standards & Specifications

The recommended design criteria, specifications, standards and codes of practice will be in accordance with the approved DBR and relevant Indian codes of practice/specifications. Where the standards and specifications are not available in the Indian codes of practice / specifications, International codes of practice/ specifications will be adopted with the approval of UPMRC.

2. Data and information to be provided by UPMRC.

Technical specifications, codes of practice and design data where ever available.

3 Scope of services for the General Consultant (GC)

- a) All technical, financial and contract management powers will be exercised by UPMRC. GC will have necessary powers to guide and supervise the activities of the project

within the approvals obtained from UPMRC & shall ensure quality, safety and timely completion within the cost.

- b) The GC will obtain UPMRC's approval to all matters that lie within their scope of services. Any subsequent changes to the Project detail will also be put up to UPMRC along with time and cost implications for approval.

c) The role of the Detailed Design consultants (DDC), GC and UPMRC for the works under Design & Build scope will be as below:

○ **Pre Tender**

- The Detailed Design Consultant (DDC), engaged by UPMRC, shall prepare all designs, drawings, specifications, estimates, and Bills of Quantities (BoQs), which shall be submitted for approval to UPMRC.
- Based on the approved documents from the DDC, UPMRC shall compile and prepare the tender documents and initiate the tender process.
- The General Consultant (GC) shall ensure effective interface management between all stakeholders and monitor the timely submission of drawings, specifications, and other deliverables from the DDC, to support adherence to the tender timelines.
- The GC's role shall be limited to oversight, coordination, and advisory support, without assuming responsibility for preparation of designs or tender documents

○ **Post Award of Tender**

- After the award of the contract, the Contractor shall develop the designs and drawings, which shall be submitted to the Detailed Design Consultant (DDC) for proof checking or independent design verification, in accordance with the contract conditions.
- The DDC shall review, check, and approve the drawings, and submit them to UPMRC for final acceptance and issuance.
- Upon acceptance, UPMRC shall forward the approved drawings to the General Consultant (GC) for issuance to all relevant stakeholders.
- The GC shall ensure effective interface management among all stakeholders — including Contractor-DDC, DDC-UPMRC, UPMRC-Contractor, and internal coordination within UPMRC and GC departments. The GC shall monitor the timely submission and flow of drawings, specifications, and other deliverables to support adherence to the project schedules and contractual timelines. The GC's responsibility shall be limited to oversight, monitoring, and advisory support and shall not extend to preparation or approval of designs or drawings.

d) The role of the Detailed Design consultants (DDC), GC and UPMRC for the works under Item Rate (construct only) scope will be as below:

○ **Pre Tender**

- The Detailed Design Consultant (DDC), engaged by UPMRC, shall prepare all designs, drawings, specifications, estimates, and Bills of Quantities (BoQs), which shall be submitted for approval to UPMRC.
- Based on the approved documents from the DDC, UPMRC shall compile and prepare the tender documents and initiate the tender process.

- The General Consultant (GC) shall ensure effective interface management between all stakeholders and monitor the timely submission of drawings, specifications, and other deliverables from the DDC, to support adherence to the tender timelines.
- The GC's role shall be limited to oversight, coordination, and advisory support, without assuming responsibility for preparation of designs or tender documents
- **Post Award of Tender**
 - After the award of the contract, the DDC shall develop the designs and drawings, which shall be submitted to UPMRC for proof checking.
 - The UPMRC shall review, check, and approve the drawings, and forward them to GC for issuance to all relevant stakeholders.
 - The GC shall ensure effective interface management among all stakeholders — including DDC-UPMRC, UPMRC-Contractor, and internal coordination within UPMRC and GC departments. The GC shall monitor the timely submission and flow of drawings, specifications, and other deliverables to support adherence to the project schedules and contractual timelines. The GC's responsibility shall be limited to oversight, monitoring, and advisory support and shall not extend to preparation or approval of designs or drawings.
- e) **Further, Broad Heads of Services:**
 - i) **Tender document preparation:**

Broadly, there will be tenders for:

 - Design and construction of underground portions in Lucknow Metro Phase-1B Project, including underground stations under single/multiple packages. This contract may also include general electrical and mechanical works at the stations, TVS and ECS works.
 - Design and construction of elevated portions in Lucknow Metro Phase-1B Project, including elevated stations under various packages
 - Construction of Depot in Lucknow Metro Phase-1B Project.
 - Other contracts (as necessary) like-
 - (a) Property Development Centers & Service Buildings
 - (b) Residential Building.
 - (c) Miscellaneous Minor contracts

GC to fulfill its obligations as outlined in clause 3(c) & (d)
 - ii) Assist UPMRC in evaluation, negotiation (if necessary) of various bids and award of contracts. This shall include interface management and ensuring submission of conceptual plans for various civil engineering structures and depots including that of system works from DDC.
 - iii) Supervision of all construction activities- including bill certification - (excluding the supervision and contract management of civil construction of Elevated Stations, Viaducts and Depot) including contract management support, enforcement and compliance monitoring of Safety-Health-Environment (SHE) requirements, Quality Control and Assurance, and oversight of installation, integration, testing, and commissioning of system works including track works and rolling stock. The scope

shall also cover interface management with civil contractors to ensure effective system integration and provide necessary support to the Employer in achieving project completion within the stipulated time and budget

- iv) UPMRC will be responsible for supervision and contract management of civil construction of elevated stations, viaducts and Depot. However, SHE enforcement & compliances, Quality Control & Assurance (as also stated in (vii), (viii), (xii), (xv) etc.) will be the responsibility of the General consultant.
- v) Supervision of Installation, Integration, Testing and Commissioning (T&C) (including obtaining final sanction from Commissioner for Metro Railway Safety) of the complete System works, including track, rolling stock, MEPFS (Mechanical, Electrical, Plumbing, Firefighting & Specialized Systems), and all system sub-packages, across all designated project contracts. The responsibility shall include oversight and verification of compliance with contract specifications, statutory requirements and Testing and Commissioning activities. However, the execution of the Testing and Commissioning activities shall remain the responsibility of the respective contractors.
- vi) Preparation of various Manuals for the Metro Rail Projects as detailed in para 3.5.1.
- vii) Preparation of a comprehensive Safety, Health, and Environment (SHE) Management Plan covering all designated project contracts, in conformity with statutory requirements, contractual provisions, and international best practices. The scope shall include developing an overarching SHE framework for the project, reviewing and consolidating contractors' SHE plans, monitoring and reporting compliance at site, and recommending corrective or preventive measures as necessary. The Consultant shall also provide support to the Employer in ensuring safe, sustainable, and environmentally compliant project delivery within the stipulated time and budget.
- viii) Development of comprehensive Quality Assurance Plans (QAPs) covering all designated project contracts, in line with applicable codes, standards, statutory requirements, and Employer's specifications. The scope shall include preparing an overarching quality assurance framework for the project, reviewing and consolidating contractors' QAPs, monitoring implementation of quality procedures at site, conducting independent audits and inspections, and recommending corrective or preventive measures as necessary. The Consultant shall also provide support to the Employer in ensuring adherence to quality standards and achieving defect-free project delivery within the stipulated time and budget.
- ix) Framing Property Development proposal including financials etc. as commercial hubs in stations and commercial and transportation hubs at depots, at terminal stations and at other stations both inside and outside the station box area.
- x) GC will also coordinate with National Highway authorities or other government/state agencies on safety where ever they plan flyovers or any other developmental activities on alignment common with that of UPMRC. GC will assists UPMRC in correspondence, drawing, estimate technical input etc. while coordinating with NHAI and other Government/ State Agencies.
- xi) GC will assist UPMRC in keeping the Commissioner of Metro Railway Safety (CMRS) Government of India informed about project design/construction and obtaining intermediate approvals as required and final sanction for Revenue Operations.

- xii) GC shall ensure that all contractors strictly adhere to the standards prescribed by UPMRC with respect to the safety of works, safety of adjoining and overlying structures, safety of workmen, and safety of the public during the construction stage. This includes monitoring implementation of safety measures, identifying potential hazards, ensuring corrective actions are taken promptly, and reporting compliance status to the Employer.
- xiii) For all works (excluding civil construction of Elevated Stations, Viaducts and Depot) the General Consultant (GC) shall certify the quantum of work executed, verify its compliance with quality standards, and provide recommendations for payments to be made to the responsible department engaged in the implementation of the project. Such certification shall be based on the review of work records, site inspections, and conformity with contract requirements. The GC's certification shall be advisory to the Employer, and the final payment approval shall rest with the Employer in accordance with the contract provisions.
- xiv) GC will coordinate review/monitor the efforts of all contractors, consultants, suppliers and manufacturers for scope of works under GC.
- xv) GC will carry out Erection/Lowering supervision at various levels in Elevated/ Underground Sections, including safety compliance, quality standards, and coordination with contractors.
- xvi) GC shall interface & ensure that all contractors submit their package-wise programmes and schedules in accordance with the contract requirements. The GC shall consolidate these into a master (overall) project schedule and review them to ensure alignment with the project objectives, timelines, and critical milestones. This shall include identification of deviations, interface issues, and critical items, and providing necessary flagging and recommendations to the Employer for corrective or preventive actions. The GC's responsibility shall be limited to review, monitoring, and recommendation support, and shall not extend to direct execution or management of contractors' works.
- xvii) GC shall ensure proper interface coordination among all contractors to facilitate timely completion of works and commissioning of the various project sections in accordance with the approved implementation schedule (master Project Schedule). The GC shall monitor inter-contractor dependencies, identify potential conflicts or delays, and provide necessary recommendations and flagging to the Employer to enable corrective or preventive action. All interface issues and recommendations shall be linked to the Master Project Schedule to support timely resolution and overall project delivery.
- xviii) GC will provide schemes for integration with other modes of transport including related transportation planning and assist UPMRC in putting in place a mechanism of 'seamless travel' through various means of public/private transport with common ticketing and complete AFC integration.
- xix) GC will advise UPMRC on various options of property development with respect to optimal utilization and integration of the separable commercial land available with UPMRC including exploitation of airspace at various stations and depots.

- xx) In regard to coordination of activities with local authorities and other Government departments, the General Consultant (GC) shall prepare and submit detailed proposals to the Employer (UPMRC) for discussion and resolution within the various coordination groups established by the Government of India or the State Government of Uttar Pradesh. The GC shall provide all necessary technical data, sketches, drawings, and related documentation, and shall attend coordination meetings along with UPMRC representatives to facilitate review and obtain approvals of proposals from the respective coordination groups.
- xxi) Confidentiality –The General Consultant (GC) shall maintain strict confidentiality and shall not disclose to any third party, or use in any unauthorized manner, any confidential information regarding UPMRC's processes, technologies, designs, drawings, process layouts, infrastructures, or business affairs that the GC may acquire during negotiations, discussions, examinations, or any activities related to this Agreement. The GC shall use such information solely for purposes expressly permitted under this Agreement. The obligations of confidentiality shall survive the termination or cancellation of this Agreement and shall remain in full force and effect thereafter.
- xxii) Titles to documents – Titles to all technical data including, but not limited to specifications, drawings, bills of materials, flow diagrams, layout details and the contents thereof, furnished by UPMRC to the Contractor, DDC or GC shall remain with UPMRC. The GC shall not use or divulge the data to others except to the extent necessary in connection with the performance by the Contractor.
- xxiii) Patents – The GC shall at all times indemnify UPMRC against all claims which may be made in respect of the items for infringement of any right protected by patent, registration of design or trade mark.
- xxiv) Wherever needed, the site office personnel of the GC shall be supported by the Head Office of GC for back office works at no additional cost to UPMRC. GC to provide the details of such proposal in Appendix 22 of FOT.
- xxv) GC shall ensure that social and environmental aspects of the project are in compliance with the requirements of international financiers, applicable laws, and UPMRC's policies.

UPMRC reserves the right to operate part or full works as mentioned in the Tender Documents, based upon its requirements.

3.1 Deleted

3.2 Preparation of Tender design and Tender documents for procurement of Systems and Rolling Stock for the Lucknow, Metro Rail Projects:

3.2.1 GC will review and supplement the design criteria/specifications given for various Systems and Rolling Stock.

3.2.2 The tender design for Rolling stock to be used in Lucknow Metro Rail Projects will be prepared by GC, in a manner that it is consistent with the final design of corridors, track, stations, and the associated equipment, maintaining safety clearances and

ventilation/air conditioning requirements.

3.2.3 The tender design for the rolling stock should be fully compatible with Signaling and Train Control System, traction power system, desired operational system, transport capacity. The recommended designs should satisfy the criteria of economy in initial cost, operating as well as maintenance cost as also life cycle cost. Energy saving for economy or counter measures against temperature rise in tunnel should also be a guiding criterion.

3.2.4 The tender design is required to spell out the basic system design covering the propulsion, brake and auxiliary power supply system in addition to the main structure and safety aspects, in sufficient detail, so as to enable the bidders to make competitive bids.

3.2.5 The tender documents for the Systems and Rolling Stock shall be prepared, on the same lines as in para 3.2.4 above, with suitable modifications. The tender documents will provide for the appraisal standard for evaluation of Technical proposals from the tenders for supply of Rail cars and other Rolling stock.

3.2.6 Invitation of bids for supply of the required Systems, Rolling Stock and Depot equipments, plant and machinery will be done by UPMRC, based on the tender design, specifications and acceptance criteria as approved by the UPMRC on recommendations of the GC.

3.2.7 There will be separate tender for each item, broadly, as under (Subject to change during implementation of project depending on need):

- (i) Detailed design manufacture, supply, installation, testing and commissioning of Traction and Power Supply system
- (ii) Design, manufacture, installation, testing and commissioning of Rolling Stock and Signalling system as combined work.
- (iii) Design, manufacture, installation, testing and commissioning of Telecommunication system
- (iv) Design, manufacture, installation, testing and commissioning of Lifts.
- (v) Design, manufacture, installation, testing and commissioning of Escalators.
- (vi) Design, manufacture, installation, testing and commissioning of Automatic Fare Collection system (proposed through PPP).
- (vii) Procurement of 60 Kg head-hardened rails
- (viii) Procurement of turn-outs, scissors cross overs, derailing switches etc. for ballastless and ballasted tracks.
- (ix) Installation of Track works including supply of fastening system for ballastless tracks for elevated and underground sections and ballasted/ ballastless tracks for the Depot.
- (x) Detailed Design of Depot layout and buildings for the Depot-cum- Workshop including plant machinery and equipment to be finalized in consultation with UPMRC
- (xi) Construction of Depot cum workshop including general electrification.
- (xii) Supply and installation of Depot equipment, (the number of contracts to be decided by GC with the approval of UPMRC).

3.2.8 Selection of contractors/suppliers/ detailed design consultants

The GC shall assist UPMRC in the process of selection of contractors and suppliers.

The scope of services to be rendered by the GC in this regard shall include, but not necessarily be limited to:

3.2.9 Pre-qualification of contractors for bidding

GC shall undertake all necessary works regarding preparation for announcement, receiving and evaluation of contractor's documents and recommending to UPMRC the pre-qualified list for their acceptance.

3.2.10 Evaluation of the tender proposals and recommendations for the selection of the contractors for all contracts

- 1) Prepare formal evaluation criteria and procedures for evaluation of the proposals, obtain approval for the same from UPMRC and assist UPMRC to invite bids from prequalified contractors..
- 2) Perform independent evaluation of all tender proposals for all contracts received including ranking of the tenderers.
- 3) Prepare a confidential Executive Evaluation Summary Report. This report should contain a concise set of basis and justification for:
 - a. Ranking of the tenders including the recommendations concerning whether negotiations should be initiated with any of the tenderers.
 - b. Prepare Tender Evaluation Report and presentation documents.
 - c. To make a presentation pertaining to the recommendations to a committee and/or a working group that may be set up by UPMRC.

3.2.11 Negotiations with Tenderers

- 1) Prepare information and data to be used in the negotiations/clarifications.
- 2) Assist UPMRC in negotiations/clarifications with the selected tenderer(s) and record minutes of all meetings.
- 3) Assist UPMRC in analysis and evaluation of the results of negotiations/clarifications in all aspects in order to be able to select the most suitable tenderer.

3.2.12 GC will assist UPMRC in preparation of Contract agreements.

UPMRC reserves the right to operate part or full works as mentioned in the Tender Documents, based upon its requirements.

3.3 Performance of the role of Engineer or Engineer's representative

3.3.1 Supervision and Monitoring

Apart from the responsibilities outlined under Clause 3 (a) to (f), the General Consultant (GC) shall implement Project Management Consultancy (PMC) services through the adoption of specialized digital tools and processes. The GC shall deploy a robust Document Management System (DMS) and Information Management System using specialized, licensed and secure cloud-based or server-based platforms.

All project documentation—including but not limited to designs, drawings, RFIs, QA/QC reports, safety logs, minutes of meetings, progress records, and contractual correspondences—shall be digitally maintained with appropriate metadata tagging to ensure traceability, version control, and ease of retrieval.

The GC shall establish a dedicated Information Management (IM) / Document Control team responsible for uploading, classifying, reviewing, and approving documents in accordance with defined workflows. The system shall also incorporate access

controls to safeguard confidentiality and ensure compliance with Employer's requirements.

Further, the GC shall ensure stage-wise digital and physical handover protocols—covering construction, commissioning, and project closeout—in conformity with ISO standards and international best practices, thereby enabling seamless project knowledge transfer and archival.

3.3.1.1 Site Visits

- 1 The General Consultant (GC) shall undertake regular and special visits to the construction sites to monitor the Contractor's activities with respect to **quality assurance, safety compliance, adherence to contract specifications, and conformity with the approved time schedules**. While the correctness, completeness, and adequacy of the works, as well as compliance with statutory obligations, shall remain the responsibility of the Contractors, the GC shall be accountable for identifying, reporting, and ensuring timely rectification of any deficiencies in the performance of the Contractors.
- 2 The GC shall monitor Contractor's activities with the objective of minimizing adverse impacts on **public safety, traffic circulation, residential and commercial establishments, and the environment**, and shall immediately flag any non-compliance or potential risks to UPMRC along with remedial recommendations.
- 3 The GC shall keep UPMRC continuously informed of their findings, observations, and recommendations arising from such site visits. The GC shall also exercise urgency in follow-up, ensuring that corrective or preventive measures are implemented by the Contractors in a timely manner, failing which the GC shall escalate such issues formally to UPMRC for intervention.

3.3.1.2 Inspection, Testing and Commissioning

- 1) To have close coordination with the manufacturers who will follow the design, manufacture, installation, testing and commissioning of all plant equipment, rolling stock, signaling, automatic fare collection, power supply and control equipment, etc.
- 2) To advise the UPMRC on the final acceptance of the system based on the results of the prototype, serial and/or system test.
- 3) During the maintenance period after the completion, the GC shall provide adequate and relevant staff to undertake necessary follow-up and monitoring and reporting to UPMRC on completeness of all works, proper execution of works of all parties and any components of works to be checked up and maintained according to construction/supply contracts.

3.3.1.3 Information Programmes

- 1) To develop public information programmes in close cooperation with UPMRC and inform the general public on:
 - a) The project in general
 - b) The design of stations and other passenger facilities, incl. traffic integration facilities, etc.
 - c) Temporary restrictions to traffic and other encroachments on urban life.
- 2) To assist UPMRC in maintaining public approval of the Project and to foster willingness to put up with temporary inconveniences caused by construction.

3.3.1.4 Budgeting and Accounting

- 1 The General Consultant (GC) shall **estimate the overall programme cost** in alignment with the approved Master Implementation Schedule, and regularly update such estimates to reflect variations, claims, or delays impacting project cash flows.
- 2 The GC shall **assess the financial position of the Project** and prepare/review long-term financial statements, forecasts, and cost-to-completion analyses to provide UPMRC with early visibility on potential overruns or savings.
- 3 The GC shall **certify all interim and final payments** (for the contracts directly under its supervision) due to Contractors, Consultants, Suppliers, and other agencies engaged under the Project, after due verification of compliance with contractual terms, quality, progress, and performance. The GC shall also provide clarifications or recommendations to UPMRC on any financial observations or disputes prior to payment release.
- 4 The GC shall **assist UPMRC in preparing and submitting disbursement claims** to the Funding Institution(s), ensuring all required supporting documents, certifications, and justifications are compiled in accordance with the financier's guidelines.

3.3.1.5 In the course of performing the Supervisory functions for the Project, GC will also:

Monitor all contract works in progress and identify any schedule or coordination conflicts, recommend measures to eliminate or mitigate problems and implement the recommended measures with the approval of UPMRC.

3.3.1.6 Continuous coordination will be required with various local authorities, External funding agency and govt. departments for resolution of issues related to the implementation of the project. While the main coordinating agency will be UPMRC, the General Consultant will be associated wherever required, to provide technical support, by way of data, drawings, sketches, and technical aspects of the issues.

3.3.2 Commissioning and trial runs

- i) The completed sections of the projects can be opened to passenger movements only after the sections are certified fit for passenger traffic by the Commissioner of Metro Railway Safety (CMRS) and the sanction is accorded by the Government under the relevant law for opening the section for passenger movements.
- ii) UPMRC will submit all necessary documents and have discussions etc. with CMRS both at the design stage and construction stage to obtain intermediate approvals. GC will assist UPMRC, in all respects, in obtaining these approvals.
- iii) Prior to the invitation to the CMRS for inspection of the line, the sections intended to be opened for traffic will be required to be subjected to the requisite trial tests. GC will plan, arrange, supervise and certify all these trial tests. if required with the support of UPMRC staff, well in advance of the trial runs.
- iv) GC will enable UPMRC, giving all necessary assistance, to conduct the tests. The shortfalls noticed during the tests will be arranged to be rectified by GC through the contractors. In order that the deficiencies are limited to the minimum, the design and construction should take due consideration of the requirements under the

relevant laws for opening of a Metro Rail system for the Public Carriage of Passengers.

- v) All information as required to be furnished to the CMRS in connection with the section to be opened to traffic shall be tabulated and furnished by GC to UPMRC, for seeking the certification of CMRS for opening of the section(s) to traffic.

3.4 The scope of work shall also include independent quality monitoring, safety monitoring, progress review, review of interfacing arrangement and evaluation of project implementation plan with structured reporting to UPMRC. The General Consultant (GC) shall ensure that such reviews are carried out in an impartial and timely manner, highlighting deficiencies, risks, and recommendations for corrective or preventive measures. Please refer **Annexure 1** of TOR for further details.

3.5 Preparation of manuals, training, resettlement/rehabilitation and others:

3.5.1 Preparation of Manuals for construction, administration, operation and maintenance

UPMRC set up for construction, management, operation and maintenance of the Lucknow Metro Rail Projects would require to prescribe Instruction Manuals for all its facets of functioning. GC would be required to develop draft manuals (as required) for being approved and issued by UPMRC, for regulating the functioning of the Lucknow Metro.

The list of Manuals not limited to following to be developed (on requirement basis) are:

- i) Track Manual
- ii) Civil Works Manual
- iii) Signaling Manual
- iv) Telecommunication Manual
- v) Commercial Manual
- vi) Operating Manual
- vii) Accident and Safety Manual
- viii) Rolling Stock Manual
- ix) Electrical Traction manual
- x) Environmental Manual
- xi) Quality Assurance Manual
- xii) Manual for lifts and escalators.
- xiii) Climate Control

These Manuals are intended to form the basis of the training of Operations and Maintenance personnel. GC is to identify any other manual also required to be developed and take suitable action for preparation of the same in consultation with UPMRC.

3.5.2 Training of Personnel of UPMRC.

GC in consultation with CMT shall prepare and implement a capacity building plan for UPMRC personnel through structured training modules to be conducted primarily in Lucknow. The modules should cover Project Planning & Control, Project Management, Quality assurance & Quality control and BIM or any other topic(s) as deemed appropriate.

At the end of each training module, the GC shall issue certificates of participation to UPMRC staff. GC shall maintain training records and submit annual capacity-building progress reports to UPMRC.

3.5.3 Review and audit the implementation of the resettlement and rehabilitation

GC will monitor the implementation of the Resettlement Action Plans for all relevant sections of the Lucknow Phase-1B Project by:

- a) Periodically verifying that the RAP implementation process is in accordance with what has been defined in the RAP.
- b) Periodically verifying that all agreed entitlements have been delivered in full to the affected people in accordance to what has been set up in the respective RAPs.
- c) Attending as observers key consultation meetings held by UPMRC and other relevant institutions with the Project Affected People.
- d) Attending as observers any key milestone resettlement related activities (e.g. during the physical resettlement period, etc.).
- e) Preparing quarterly reports on the progress of RAP implementation including progress, incidents, grievances, and issues with respect to the RAP implementation.
- f) Monitoring the grievance redress mechanism and recommend any follow-up actions, if needed.

4.0 Obligations and Responsibilities of the General Consultant (GC).

All technical, financial and contract management powers will be exercised by UPMRC. GC will have necessary powers to guide and supervise the implementation of the project within the approvals obtained from UPMRC.

The GC will obtain UPMRC's approval to all matters that lie within their scope of services. Any subsequent changes to the Project detail will also be put up to UPMRC along with time and cost implications for approval.

4.1 Responsibilities of General Consultant

The following will be the responsibilities of the General Consultant.

- i. GC shall at all times exercise all reasonable skill, care and diligence, in the discharge of his duties. GC shall also be responsible for the accuracy and completeness of his works and commissioning of Lucknow Phase-1B project.
- ii. GC will be responsible to ensure that the goods and services used on the Project are appropriate, suitable and are reasonably costed. It is also essential that the GC is and remains demonstrably impartial in the performance of its duties.
- iii. In performance of all services, the GC shall function in close co-ordination with UPMRC.
- iv. The functions/activities of GC, including quality assurance and safety at work site will be monitored by UPMRC. Required assistance for the same will be provided by GC. However, GC shall have overall responsibility in Safety and Quality

Assurance matters.

- v. GC will advise UPMRC for engagement of all contractors, suppliers, manufacturers and other consultants and then be responsible for coordinating the effort and activities of all such agencies.
- vi. GC shall maintain full records relating to all aspects of the work covered by the project. Such records shall be made available at all times to the UPMRC for inspection. Mere acceptance by UPMRC shall not relieve GC of their professional obligations to correct at their own cost any errors in their work.
- vii. GC will assist UPMRC for obtaining necessary environmental approvals as required from GoI/GoUP. GC shall monitor the progress in these matters and report to UPMRC.
- viii. The tracings and other originals of all plans, drawings, engineering specifications and similar materials, and any data and all records or documents pertaining to the work, including soft copies thereof, shall be treated as confidential by GC and shall not, without written consent of UPMRC, be made available to any person and shall be delivered to UPMRC upon completion of the work and shall become the property of UPMRC. However, GC may retain, for his own record, copies of the said plans and documents.
- ix. Advise the Client on resolution of any dispute with the Contractor and providing assistance for all dispute resolution mechanisms;
- x. Carry out field inspections on the Contractor's setting out of the works in relation to original points, lines and levels of reference specified in the contract check that the correlations among benchmarks provided by the Client are accurate enough;

4.2 Utility Relocation Assistance the Consultant shall

- A) Review of utility relocation drawings submitted by the Contractor.
- B) Review the cost estimate of the relocation works of unchartered utilities submitted by the Contractor and supervise the relocation works, and cause the Contractor to meet all the contractual requirements, wherever required.

4.3 Review of studies conducted by other consultants selected by the Client regarding risk and measures to be adopted for risk mitigation concerning heritage structures, slope failure etc.

4.4 Project management

The GC shall support UPMRC in the Project management and coordination of the project and shall:-

- Prepare and implement coordination procedures,
- Prepare and implement project control procedures,
- Prepare and implement document control procedures

4.5 Contract management (see also section 6 on Reporting)

The GC shall support UPMRC in the contract management of the project and shall:-

- Support preparation of contract documents and correspondences to contractors,
- Manage claim control,
- Manage change control

4.6 Programme management (see also section 6 Reporting)

To make the Project Programme the GC shall:

- Establish Master programme,
- Review contractors programmes and associated progress,
- Prepare consolidate programme / progress report

4.7 Monitor safety, health and environment (SHE) (see also section 6 Reporting and Annexure 1 of TOR)

GC shall establish requirements for SHE and overview the contractors' activities for its compliance. GC shall also review Safety Manual (prepared by contractor) and ensure compliance for tunneling and erection activities.

4.8 Quality assurance and quality control (QA /QC) (see also section 6 Reporting and Annexure 1 of TOR)

GC shall implement a quality assurance system for the project and ensure its compliance.

GC shall establish requirements for Contractor QA/QC and overview the contractors' activities. GC shall review and approve quality assurance program submitted by individual contractors and to formulate and implement an integrated quality assurance program for the project including ensuring its compliance.

4.9 Support to prepare proposal to obtain Carbon Credits and Green Certificate

GC shall support UPMRC to prepare proposals to enable the project obtain carbon credits, considering inter alia, energy regeneration of the Project in the braking mode of rolling stock. GC shall also prepare other useful proposals (as required).

5.0 Staffing by GC for the consultancy services.

5.1 The GC services are required to be rendered for a period as specified in clause 9 of TOR. This period may be extended by mutual agreement. The tentative target dates for section wise phased commencement of commercial operation (ROD) is attached as **Annexure 2 of TOR**.

5.2 Considering the multi-disciplinary nature of the Lucknow Metro Project, the Consultant is required to have expertise in the following disciplines (but not limited to the list):

1. Project management/coordination
2. Construction Planning.
3. (a) Station Planning/Architecture (elevated)
(b) Station Planning/Architecture (underground)
4. Geo-technical Engineering.
5. Structural Engineering.
6. Bridge Engineering.
7. Tunnel Engineering
8. Track Technology
9. Quality Assurance

10. Environmental Impact Analysis.
11. Traffic Engineering.
12. Train Operations.
13. Utility Engineering.
14. Contract Administration (including dispute review and resolutions).
15. (a) Electro-Mechanical Engineering. (elevated stations)
(b) Electro-Mechanical Engineering (underground stations)
16. Ventilation and Air-conditioning Engineering.
17. Communication Technology.
18. Signaling.
19. Power Supply and Traction.
20. Rolling Stock.
21. Car Maintenance Depot and workshop
22. Automatic Fare Collection system
23. Energy consumption and conservation
24. Financial Analysis
25. Safety and Security
26. Property Development
27. Multimodal transportation-Seamless travel.
28. 5D-BIM
29. IT Platform
30. NATM tunnel
31. Mechanical, Electrical & Plumbing

The consultant subject to UPMRC concurrence shall at all times use all commercially reasonable endeavors to minimize cost and any delay in the performance of its obligations under this contract.

UPMRC reserves the right to operate part or full works as mentioned in the Tender Documents, based upon its requirements.

- 5.3** The GC in its offer, shall provide the proposal for staffing schedule for the entire period of the implementation of the project including the period of commissioning. The sections intended to be opened for traffic will be required to be subjected to the requisite tests and trials under the construction contracts prior to the invitation to the CMRS for inspection of the line and also during the operation period.
- 5.4** During Execution of the Contract, the Consultant shall be responsible for the progressive mobilization and deployment of necessary manpower required for successful completion of the tender conditions. **Such mobilization and deployment is to be undertaken only after the approval of UPMRC** (the approval process is mentioned in clause 5.7). A list of minimum manpower required, Position wise minimum eligibility & qualification criteria and minimum facilities to be provided by GC

is mentioned in **Annexure 1 of Pricing Document/BOQ**.

5.5 Even after approval of mobilization and deployment schedule, depending upon progress of the project and requirement, UPMRC may require GC to adjust and regulate the deployment of their personnel.

5.6 A notice period of 1 month for local personnel and 2 months for expatriate personnel shall be applicable for their demobilization and remobilization. However, in case the consultant's personnel is removed in accordance to **GCC clause 8.2.4**, above stated notice period may not be applicable and UPMRC reserves the right for immediate demobilization. In this case, GC shall take all necessary measures to ensure that the duties are delegated to competent professionals.

Further, in all circumstances GC shall ensure that no work/obligations under the scope of this contract are hampered or delayed due to non-availability of required GC professionals.

5.7 Manpower Approval Procedure, Deployment Performance review and Penalties:

A. Methodology:

i. Initial Mobilization

- Within **30 days of Notice to Proceed (NTP)**, the Consultant, *on approval of UPMRC*, shall mobilize personnel and resources as per *Annexure 1C of ITT*.
- No changes in the GC Professionals proposed under QCBS shall be allowed (Ref. s.no. B(i)).

ii. Programme Review & Consolidation

- Consultant shall coordinate with UPMRC and all contractors, review their programmes and progress, and prepare a **consolidated programme/progress report**.

iii. Inception Workshop & Report

- Within **45 days of NTP**, the Consultant shall organize a **workshop with UPMRC/CMT**.
- Based on the consolidated report and discussions in workshop, within 5 days, Consultant shall submit the **Inception Report** containing:
 - Requirement of all professional positions and projected mobilization schedule.
 - Proposed professionals and details of associated activities.
 - Required facilities and projected cost estimates.
- Minimum manpower and facilities shall be as per *Annexure 1 of Pricing Document/BOQ*.

iv. Identification & Approval of Key Positions

- Within **50 days of NTP**, Consultant shall propose positions to be mobilized in the next 180 days and shall seek UPMRC's approval for such positions.
- After the approval of the Positions, GC for such approved positions shall
 - For **K1 & K2 level (Key Positions) positions** submit CVs for UPMRC approval.

a) Evaluation of the submitted CVs will be in two stages:

- Stage 1: CV evaluation based on criteria IV(ii) of Annexure 1A of ITT – minimum 70% score is required.
- Stage 2: Interview by UPMRC for candidates with $\geq 70\%$ score.

b) Interviews will normally be conducted quarterly; however, if required, UPMRC may call for interviews earlier also. The decision on such submitted CVs will be communicated within 2 weeks from the date of interview.

- For **K3 and below positions**: Consultant shall submit CVs and notify UPMRC. Approval of CVs will generally not be required. Generally, UPMRC may undertake reasonable scrutiny of CVs based on minimum requirements as specified in the tender and will communicate to GC within 2 weeks of CV submission.

v. **Quarterly Review & Adjustments**

- Consultant shall update and review manpower requirements on a **quarterly basis**, linked to the consolidated programme/progress report/Master Plan.
- Updated proposals shall include:
 - Status of previously approved positions and mobilization.
 - Revised requirements with projected mobilization dates, professionals, activities, facilities, and cost estimates.
 - Any change of professionals with detailed reasons and mitigation measures along with **Personnel Replacement Schedule**.
- Consultant and UPMRC shall identify and finalise/approve positions required within next **180 days**. Within **one week of UPMRC/CMT approval**, Consultant shall submit proposals, to be processed as per iv & v above.

vi. **Performance Monitoring**

- Consultant's performance, mobilization compliance, and progress of services shall be reviewed on a **quarterly basis** as per Clause 9.3 of GCC. The same shall be recorded in the CMT meeting minutes.

Mobilization Delays & Penalties

- After approval, any delay in mobilization of approved K1/K2 personnel(s) beyond 3 months or the agreed date shall attract a penalty of **0.1% of (Remuneration + Overhead 1) cost (rate) per day** of non-deployment.
- Delays beyond **15 days** will additionally attract penalties applicable to "replacement of personnel."

B. Penalties

i. **Alteration of QCBS-Proposed Professionals (Key Positions)**

- Professionals proposed under QCBS shall not be altered during deployment.
- In *exceptional circumstances* (reasons duly recorded), if UPMRC permits a change:
 - A penalty of **0.04% of Contract Value** shall apply, **plus one Yellow Ticket**.

ii. Change in Personnel before Mobilization (Key Positions) post UPMRC approval.

- If a proposed/approved candidate withdraws or declines mobilization:
 - **One Yellow Ticket** shall be issued for each such instance.

iii. Replacement of Personnel (Post-Mobilization) For K1 & K2 personnel (Key Positions) resigned/removed (as per GCC 8.2.4) and requiring replacement:

1. **First replacement** → Penalty = **0.01% of Contract Value**.
 2. **Second replacement** → Penalty = **0.015% of Contract Value**.
 3. **Third replacement** → Penalty = **0.02% of Contract Value + 1 Yellow Ticket**.
 4. **Fourth and subsequent replacements** → **1 Red Ticket** per instance.
- **5 Yellow Tickets = 1 Red Ticket**.
 - Each **Red Ticket = 0.03% of Contract Value penalty**.

The Consultant shall present a **Personnel Replacement Schedule** in every CMT meeting in the agreed format and shall include the same in Quarterly Progress Reports.

iv. Exemptions

- In case of prolonged illness, accident, death or any other incapacity to work etc., replacement (key Position) may be allowed **without penalty**, subject to documentary proof and UPMRC approval. Such exemption will be allowed only **once per position (for Key Positions only)**.
- UPMRC, considering requirement of work, may relax/revoke the penalties related to GC personnel mobilization.

v. Non-Performance / Deployment Failures

- For non-deployment of non-key staff or delay or defect or incident(s) or work delay(s) attributable to Consultant/Consultant's personnel or not providing minimum facilities as mentioned in Annexure 1 of BoQ or not adhering to contract requirements may attract
 - **Penalty = ₹25,000 to ₹5,00,000 per instance**, as decided by UPMRC which shall be final & binding.

6. Reporting System of the Progress of the Project.

GC should design, execute and maintain for UPMRC an electronic project management system including suitable information system with functionality as mutually agreed between them and UPMRC and shall submit following reports to UPMRC:

Reports and Documents

S No.	Category	Type of Report	No. of Copies
I.	General	Inception Report	05
II.	Execution	Progress Report – Monthly, Quarterly & Annual	05

III	General	Operation and Maintenance (O&M) Manual	20
IV		Draft Final Report	05
V		Final Report	10
VI.		Completion Report	20
VII.		Executive Summary Report	20

Contents to be included in each report (but not limited to) are as follows:

General

A. Inception Report- to be submitted within 50 days of Notice to Proceed, outlining the detailed approach and methodology to undertake the monitoring task, schedule of supervision surveys/ monitoring locations and field activities, Consultant's organization chart denoting the titles and names of personnel proposed to be mobilized.

It shall also include quality assurance plan system of the Consultant's own working and including, but not limited to, quality policy, organizational structure, organizational chart, roles and responsibility of various positions, names of personnel proposed to man these positions, list of management procedures and element comparison schedule. Roles and responsibilities of Key Personnel and Other Professional Personnel specified shall be expanded and detailed by the Consultant so as to make each Professional Personnel responsible for specific items in a manner that all items of the Terms of Reference are distinctively covered.

As a part of the inception report, the Consultant should clearly bring out its plan:

- to supervise the contractors on site works, including the site organization proposed to support this activity;
- how is it planned to check that the desired quality of work is maintained by the contractors;
- method of checking contractor's invoices for the works and ensuring its integrity; and
- adequacy and verification of the type of equipment brought to site by the Contractor to confirm that works progress as per the agreed schedule For successful completion of the project and for smooth functioning of execution process among all stakeholders, an approach to Total Quality Project Management comprising the following heads is to be submitted along with the inception report by the Consultant. Detailed methodology on each of below items to be given: -

- **Scope Management:** Detailed procedure for monitoring the list of drawing

along with their revision and distribution with auditing procedures.

- **Time Management:** Detailed procedure on how the project will be monitored on time schedule basis to complete without any time delays and take adequate steps to resolve the issues in the project.
- **Integration Management:** Integration & Planning of all trade of works for final commissioning.
- **Cost Management:** The procedure of Contract Management during execution of the project resulting in completion of the project within the project cost.
- **Communication Management:** Communication protocol between various stakeholders.
- **HR Management:** The consultant to propose the brief principles and concepts adopting for supervision of the works by optimum utilization of the supervision manpower.
- **Procurement Management:** Detailed procedure to be submitted for approvals of all the materials used in the procurement works along with the monitoring of the procurement process.
- **Risk Management:** Standard procedure to be adopted for Identifying the risks and steps to be taken for nullifying the same is to be submitted.
- **Quality Management:** Quality Control of the works.
- **Construction Management:** Total Execution methodology, review and approval.
- **Health, Safety, Environment Management:** Monitoring of Safety, Health & Environment aspects during the execution of project as per supplement EIA and EMP.
- **Contract Management:** Stepwise procedure along with checklist to be submitted with methodological contract management for various process for checking the compliance of the clauses.

B. Execution – Progress Report – Monthly, Quarterly & Annually

Monthly Progress Report

General

Monthly Progress Report shall be submitted by the 5th day of each calendar month and shall account for all work actually performed from the first (01st) day of the month up to and including the last day of the previous month. Monthly Progress Report shall be submitted in a format acceptable to Client, describing, but not limited to, the topics listed below.

a. Executive Summary

Consultant shall provide an executive summary covering the Status of work performed during the previous month, major achievements made during the Reporting Month, the activities planned for the next month and any issues that are affecting or may in future affect the progress of the Works. These items shall be dealt with in full detail within the body of the MPR.

b. Progress

- i. It shall describe the status of work performed during the previous month, significant accomplishments, including critical items and problem areas, corrective actions taken or planned and other pertinent activities and shall in particular, address interface issues, problems and resolutions.
- ii. It shall include a simplified presentation of progress of the various parts of the contractual works in percentage terms compared with percentage planned derived from the Works Programme.
- iii. The status of permanent and temporary staffing of GC.

c. Programme Update and Status

The Consultant shall provide a Programme update with respect to master project schedule (The GC shall consolidate all packages programme into a master (overall) project schedule and review them to ensure alignment with the project objectives, timelines, and critical milestones.) for the Works which shall include but not be limited to the following items:

- i. **A Monthly Programme Update**, which shall be prepared by recording actual activity completion dates and percentage of activities completed up to the end of the Report Month, together with estimates of remaining durations and expected activity completion based on current progress. The Monthly Programme Update shall:
 - 1.0** Account for the actual progress of the Works;
 - 2.0** Include updated Work Segment Programmes to reflect modifications in the design, construction and testing and commissioning programme' and overall master (overall) project schedule.
 - 3.0** Include the status of every activity in progress, its graphic representation (completed and remaining) with respect to the identified works in the Report Month, as well as for all the major works and relevant activities; and

4.0 Include a progress 'S' curve indicating the baseline 'S' curve for the accepted Programme and physical progress.

- ii. **The Monthly Programme Update** shall be accompanied by an activity report and a narrative statement which shall explain the basis of the Contractor's submittal regarding:

1.0 Work Segment Programmes – explaining the determination of activity durations and describing the Contractor's approach for meeting Milestones, other identified time(s) for completion and Time(s) for Completion as specified in the Contract;

2.0 Updated Work Segment Programmes –the Works actually completed and reflecting along the critical path in terms of days ahead or behind allowable dates. Specific requirements for the narrative are:

- a. Identification of causes of actual and potential delays (if any) with respect to Milestones, other identified time(s) for completion and Time(s) for Completion;
- b. Provision of an explanation for any works affected by delays and proposed corrective actions / mitigation measures to achieve the Milestones, other identified time(s) for completion and Time(s) for Completion and mitigate potential delays;
- c. Identification of any deviation from previous month's critical path;
- d. Clear identification of every activity with a number and description for activities in progress and activities scheduled to be completed;
- e. Provision of time required to cater for any design changes or Variation, if any.

3.0 Programme Status presenting:

- a. The status of Work Segment Programmes up to and including the current Report Month, with cumulative progress to date and a forecast of remaining work;
- b. A programme bar-chart in A3 size and a time-related logic network diagram in A1 size, including activity listings.

4.0 Activity Variance Analysis - analysing activities planned to start prior to or during the Report Month but not started at the end of the Report Month, as well as activities started or completed in advance of the Work Segment Programmes or both.

d. Three Months Rolling Programme Revisions and Updates

The Three Months Rolling Programme shall be extended forward each month as described above. Each submission of the Three Months Rolling Programme shall be accompanied by a Programme Analysis Report, describing actual

progress to date, and the forecast for activities occurring over the next three-month period.

If the Three Months Rolling Programme is at variance with the Work Segment Programmes, the Programme Analysis Report shall be accompanied by a supporting narrative statement describing the Contractor's plan for the execution of the activities to be undertaken over the three-month period, including programme assumptions and methods to be employed in achieving timely completion.

The Contractor shall revise the Three Months Rolling Programme or propose revisions of the Work Segment Programmes, or both, from time to time as may be appropriate to ensure consistency between them.

e. Design Status

The status of design progress shall be reported, including but not limited to:

- a. Review of submittals such as Preliminary and Detailed Design and Drawings, Technical Design & Drawings, Construction/ Installation Drawings etc., any outstanding issues to be resolved (together with solutions) during the Reporting Period.
- b. The progressive and detailed version of the Design Submissions Programme or its sub-programme, indicating actual achievement dates and forecast dates for outstanding items.
- c. Design Revisions Report - covering Design and detailed drawings revisions (wherever required and agreed by the Client) for the Works Packages
- d. A report detailing the design progress made for 'Contractor's Design' and 'As Built Documents', as the case may be, and;

f. Physical Progress

The MPR shall describe the status of the Works performed, significant accomplishments, including critical items and any problem areas, corrective actions taken or planned and other pertinent activities, with respect to all items/sub-items of the Milestones/ Schedule in each Work Segment Programme and shall, in particular, address any interface issues, problems and resolutions, and including a representation of progress measured in percentage terms compared with percentage planned, as derived from the Work Segment Programmes.

The physical progress shall be reported including:

- i. A listed description of all Works performed during the Reporting Period with quantified progress and updated Work Segment Programmes showing both the programmed and actual progress of each sub-item of the work corresponding to each Milestone/ Schedule pertaining to each Work Segment;
- ii. The percentage of each main work activity completed, as well as the projected percentage thereof to be completed to the end of the Report Month;
- iii. The total overall percentage of the Works completed, as well as the projected percentage thereof to be completed with respect to each Schedule, each Work Segment and the Works as a whole to the end of the Report Month, and with appropriate comments to explain any differences and how to regain any lost time or set-backs which may have occurred;

- iv. A list of quantities of each of the major items of the Works (including Temporary Works) performed during the month vis-a-vis the total estimated quantities to be executed, and illustrations showing the exact location of the work done, such as for example, a schedule of concrete lifts; and
- v. A list of major Works (including Temporary Works) activities to be started within the next two (2) months and estimated quantities thereof. If the expected start or completion dates are different from those shown on updated programme or both, an explanation is to be given.

g. Safety, Health and Environment

A review of all safety aspects during the month including reports on all accidents, apprehended accidents and actions proposed to prevent further occurrence.

h. Financial Aspects

- 1) A review of all significant financial matters, payments due and made, and action proposed or taken in respect to any outstanding matters during the month.
- 2) A schedule indicating the status of all variations and expenditure forecast.
- 3) A schedule of the status of outstanding claims (if any). The report shall in particular, provide interim updated accounts of continuing claims.

i. Quality Aspects

GC shall report monthly on quality, including a review of all major non-conformances during the month including reports on actions proposed to prevent further occurrence.

j. General Consultant Organization & Work

Details of positions required, any modifications required based upon consolidated progress report of projects, status of previously agreed positions and mobilization status along with projected mobilization period, proposed professionals along with projected and consumed cost positions shall be provided. Consultant shall also provide a personnel replacement schedule in the format as agreed by UPMRC.

i. Quarterly Progress Report

Quarterly report will have the same information as in the case of monthly progress report but the period of information, it will contain is for three months. It shall also include **Personnel Replacement Schedule along with any other detail as per contract.**

ii. Annual Progress Report

Annual report will also be like monthly and quarterly progress report but the period of reporting will be annually. It shall also include **Personnel Replacement Schedule along with any other detail as per contract.**

C. O&M manual will have the procedure for maintaining the line after it is commissioned. It will provide the information regarding the organization needed for maintaining the corridor. It will also provide the information of any important features/Problems of the line faced during construction and require special attention during operation. Report shall be submitted within 15 days from the date of ROD (Revenue Operation Date) of the section.

D. Draft final report is only a Pre-Final report and have all the information in connection with position of completion drawings, completion statements, contractors' disputes/claims etc. It will be prepared only in the last year of Consultancy.

E. Final Report shall be submitted by GC to UPMRC. It shall contain, apart from

other concerned matters, position of completion drawings, completion statements, contractors' disputes/claims etc.

F. Completion report

GC shall prepare a Completion Report, inclusive of all data and drawings (including soft copies) pertaining to the execution of the contracts shall be submitted at the completion of the contracts. This shall also contain all details/data including drawings, documents arising out of the project. This record keeping of archived data and its handing over to UPMRC in agreed format.

G. Executive Summary Report shall be covering in a refined form the main summary of the material contained in the Completion Reports, shall be submitted on completion of the contracts.

7.0 Scope and Nature of Authority Delegated to GC

GC shall be authorised to exercise following powers subject to the overall control and directions of UPMRC:-

- a) Exercise the powers of 'Engineer' or 'Engineer's Representative', (as mentioned in authority delegation letter issued by UPMRC to GC for each contract) as stipulated in the contract documents for all contracts.
- b) To act on behalf of UPMRC in coordination & other matters with the city authorities, Govt. Departments and Statutory bodies as decided in individual cases by UPMRC.
- c) Scrutiny and check of all designs and drawings, Plumbing, Electrical, Traction, S&T, Rolling Stock, etc. and enabling works submitted by the contractors, in respect of their adequacy to conform to the design standards approved by UPMRC (after scrutiny and check, be put up for approval of UPMRC).
- d) Finalization of quality assurance manual, for all works, for UPMRC; scrutiny and approval of quality assurance program submitted by individual contractors and to formulate and implement an integrated quality assurance program for the project ensuring strict compliance.
- e) Clearances of all matters relating to interfacing between the different works, after a critical examination.
- f) Exercise the powers of UPMRC for the certification of payments, to be made by UPMRC, in case of all contracts (including consultancy contract with a Detailed Design Consultant).

8.0 Services and Facilities to be provided by UPMRC to GC

UPMRC will:

- a) Provide or reimburse for the services mentioned in Annexure 1 of Pricing Document/BOQ
- b) Assist the foreign Consultant, Sub-Consultants and personnel to obtain work permits and such other documents as shall be necessary to enable the Consultants, Sub- consultants or personnel to perform the Services in India for this project.

- c) Assist foreign personnel and, if appropriate, their eligible dependants to be provided promptly with all necessary entry and exit visas, residence permits and any other document required for their stay in India.
- d) Issue to officials, agents and representatives of the Government, all such instructions as may be necessary for appropriate, prompt and effective implementation of the Services.
- e) Assist the foreign Consultants their personnel and any Sub-consultants employed by the Consultants for the Services in any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity according to the Applicable Laws.
- f) Provide to the foreign Consultants, Sub-consultants and personnel such other assistance as may be specified in the Special Conditions of Contract (SCC).
- g) GC shall do investigations/other studies/ specialized consultancy /Survey works on approval of UPMRC. The reimbursement shall be done on actual basis.
- h) For site supervision by GC, site offices shall be provided under various construction contracts, reasonably furnished, as approved by UPMRC.

9.0 Duration of the Consultancy Services

The duration of the consultancy services (other than the performance guarantee period) from the date of issue of 'Letter of Acceptance' is 50 months (i.e. Approximately 44 months for Project Execution and 6 months for Handing over). This period may be extended by mutual agreement. The tentative target date for section-wise phased commencement of commercial operations (ROD) is attached as **Annexure 2 of TOR.**

10.0 Language

The tender submission prepared by the Applicant and all correspondence and documents related to the tender, and exchange by the Applicant and UPMRC shall be written in English. Any printed literature furnished by the Applicant may be written in another language as long as such literature is accompanied by a translation of its pertinent passages in English, in which case, for purpose of interpretation of the tender, the English translation shall govern.

11.0 DELETED

12.0 Planning of 5D BIM across UPMRC, GC, DDC & Contractors

UPMRC envisages e-project management where the need for the documentation in hard copies has to be bare minimum. In pursuance of this goal a separate digital platform including 5D BIM (Building Information Modeling) will be created/developed.

The success of the digital platform depends on the understanding and efficient application of the same by the GC. The GC should have adequate expertise to create and coordinate with all stakeholders and understand their digital outputs and give the relevant feedback to UPMRCL.

The GC should verify the inputs given by the DDC/contractor through the Virtual Building Information Model (3D BIM model) and attempt to regulate and optimize contractor's working through the same. It is the responsibility of the GC to analyze the

construction planning and monitor the actual construction progress to ensure that the digital platform is being used efficiently. Also, the GC should have in its team, people having the relevant knowledge of various technologies related to the digital platform, so that the benefits of the platform are being utilized effectively and to suggest any improvements. GC shall make necessary arrangements to make the platform available to UPMRC also.

It is to note that the contractor's DDC will be 5D BIM compliant and would be supplying the coordinated 3D BIM model plus time and cost in a mutually agreed form; as an additional deliverable which will have to be studied / analyzed by the GC. Also, time and cost information of the planned works and the actual construction progress will have to be analyzed and accumulated by the GC using its digital platforms & capabilities.

- GC has the responsibility of setting up of 5D-BIM/ Compliant digital infrastructure & Digital Project Management System including specialized licensed software for the implementation of 5-D BIM system. GC shall make necessary arrangements to make the platform available to UPMRC.
- The GC has the responsibility of coordination of the Building Information Model provided by the contractor/DDC with all stakeholders.
- It is imperative for the GC to have members in the team for analyzing the time & cost information being provided by the contractor in its desired digital format and incorporating the same in the work Programme/master programme & its financial projections/status. It should have the technical knowhow of handling the planning information and ensuring it is suitable for conversion to 4D and 5D in the digital platform.
- It is the responsibility of the GC to study the BIM generated coordination reports by the contractor and submit to UPMRC the drawings after the multidisciplinary clashes are resolved by the contractor.
- The GC should verify the quantities and cost of the modeled components provided by the contractor through the virtual model. It should inform UPMRCL about any discrepancies in quantities generated by the BIM model and the actual quantity in the bills.
- The engineering team of GC should have the relevant software and IT knowledge to be able to coordinate with the IT team of the contractors. They should study and accumulate the relevant project management information given by the contractor which should be further analyzed and generate reports through the digital platform.
- The BIM expert / manager of the GC should be conversant with the following international standards and methodologies for digital delivery of the projects:-
 - a) BS EN ISO 19650 - "Organization and digitization of information about buildings and civil engineering works, including building information modelling -- Information management using building information modelling: Concepts and principles & Delivery phase of the assets"

b) BIM Forum LOD Specification 2024

12.1 The objective of the Integrated Digital project is to develop a working environment that enables higher efficiency and effectiveness, not only in internal functions, but also across the entire ecosystem of the Employer including Contractors. It will include the following class of software packages:-

a) 5D BIM

b) Scheduling services as deemed appropriate by the UPMRCL.

c) Progress and performance reporting software supported by the digital platform.

d) 4D and 5D BIM software packages including Trimble Vico Office suite or as deemed appropriate by UPMRCL.

12.2 General Consultant as part of its scope under Clause 3.5.2 of TOR shall also plan, design and execute a skill transfer/ training module for UPMRC executives to train them in 5D BIM.

Annexure 1

The Scope of work shall also include Independent Quality, Safety Monitoring, Review of Interfacing & Project implementation plans and reporting of the UPMRC Metro Rail Project as stipulated below.

1.0 Preparation of Quality and Safety Monitoring Plan (QSMP): A Plan shall be prepared for sample inspections, audits and verifications of the adherence to the Quality Assurance Plan and Safety Manual as adopted by the Contractors of UPMRC. This plan shall be named as the 'Quality and Safety Monitoring Plan (QSMP)'.

- i. Formulation of QSMP - The QSMP shall be prepared within 50 days of Commencement of the Assignment along with inception report, it shall be put up to UPMRC for approval. Commencement of Assignment shall be considered from the date of Notice of Proceed.

A. Quality Monitoring Plan

1.1.1 Reference Documents –GC shall study the following documents:

- a) Scope of works, specifications and contractual obligations as per the contract awarded to the Contractors for the Project
- b) Regulations, Rules, Standards, Codes of practices as applicable in the contractual obligations of the contractors.
- c) Quality Assurance Plans and Manuals as proposed by the Contractors for the Project including Inspection and Test Plans (ITP), formats, records in line with the provisions already included in the agreed contract documents covering all aspects of ISO-9001.

1.1.2 Plan for Monitoring of Scheduled Tests of Contractor-- The Plan shall include monitoring of tests being done by the Contractor by way of the following:

- a) Witnessing minimum 80% of the total number of such tests and sampling as scheduled in the approved Quality Plan to be adopted by the Contractors.
- b) Conducting minimum 15% of the total number of such tests and sampling as scheduled in the approved Quality Plan. Such tests may be done at the site laboratory or be got done by the GC from external laboratories through the Contractors.

1.1.3 Plan for Super Checks (Additional Tests) -- The Plan shall include additional tests and sampling for assessing/auditing the conformance by the Contractors to the Quality Plan.

1.1.4 Essential Components of Quality Monitoring Plan-- Based on the above, the Comprehensive Quality Monitoring Plan (QMP) to be adopted by the GC shall include plans, procedures, standard test methods, reporting formats, methodologies, frequencies, tolerances, test schedules, random test guidelines and compliance protocol for sampling, tests and physical verifications with respect to the following heads as detailed in subsequent paragraphs:

- Monitoring of Resource Mobilization of Contractor
- Monitoring of Inventory
- Testing
- Physical Verification
- Monitoring of Documentation
- Documentation and Communication
- Compliance Protocol

1.2 Monitoring of Resource Mobilization

1.2.1 Onsite Laboratory: GC shall:

- a) Monitor if the Contractor has set up the onsite laboratory in accordance with the conditions of applicable contract.
- b) Verify that the laboratory is equipped with adequate equipment, tools, and consumable and is manned by required skilled staff conforming to the relevant sections and standards of the reference documents.
- c) Monitor if the methods, techniques and documentations being adopted in the onsite laboratory are as specified in the relevant sections of reference documents.
- d) Monitor if the laboratory is delivering results and reports within its scheduled or specified period.

1.2.2 External Laboratory - Some tests are to be done through external laboratories and in this context the GC shall:

- a) Verify if the external laboratories selected by the Contractor have the requisite capabilities and are accredited with the NABL.
- b) Shortlist NABL accredited laboratories and academic/government institutes capable of conducting tests as per the QMP
- c) Monitor if the laboratory is delivering results and reports within its scheduled or specified period.
- d) Ensure that the confidentiality of test result is maintained by the testing lab

1.2.3 Monitoring of Resources - Monitoring whether the equipment, plant, machinery, tools, manpower etc. being utilized by the Contractor are in conformity with the conditions laid out in the contract so as to ensure implementation of the work with due quality and safety and adhering to the prescribed time schedule.

1.3 Monitoring of Inventory

1.3.1 Sourcing and Receipt: The GC shall monitor if the process of sourcing of material is being followed as specified in the contract especially with respect to the following:

- a) if the materials used in the works of specified quality are being procured from approved sources & suppliers and adhering to legal procedures viz royalty, challans etc.
- b) if the sourced materials comply strictly with the prescribed standards as specified in the reference documents.

- c) Conformance of material before leaving the manufacturers' premises, quarry or resource, wherever possible.
- d) Whether the manufacturers' or suppliers' (as the case may be) certificates of test, test reports from outside laboratories, proof sheets etc. as specified in the reference documents are being obtained.

1.3.2 Storage Procedures

- The GC shall monitor if the storage of materials is in accordance with IS4082 and/or other applicable codes and the QMP. This would include but not be limited to storing on racks, supports, bins, under cover etc. to prevent deterioration and damage.
- The GC shall monitor if the 'control samples' provided for retention are being labeled properly in boxes suitable for storage and are being stored in accordance with the specified standards.

1.3.3 Removal ---GC shall also monitor if the non-conforming and rejected materials are being removed from the site promptly

1.4 Testing

1.4.1 Testing of Materials: General Consultant shall

- a) Monitor if the samples required for testing onsite as well as in external laboratories are being collected by the Contractor as per the schedule, procedures and quantities outlined in the QMP.
- b) Witness and/or conduct sampling, inspections and tests on input materials (including natural, processed, designed and manufactured materials) as per the provisions of the QMP.
- c) Monitor if the materials being used in the Project are corresponding in character and quality with approved samples.

1.4.2 Testing of Workmanship

The GC shall conduct quality control tests and inspections on construction/works in progress' as per the provisions of the QMP. The Quality of the 'Completed Works' shall be checked for their conformance to specifications through specified test methods and standards.

1.5 Physical Verification

GC shall conduct inspections for physical verification of all features including but not limited to:

- a) Alignment and layout of the Project as per the specified plans and drawings including physical survey and co-ordinate checking.
- b) All civil works for viaducts, stations and depot as per specified plans and specifications including physical survey and co-ordinate checking.
- c) Track, Traction and other MEP Works.
- d) Aesthetics and heritage features as per approved plans.

1.6 Monitoring Documentation: The GC shall:

- a) Monitor if the Contractors are recording and maintaining sampling data, test results, equipment calibration data & related correspondence in specified formats of the QAP, as adopted by the Contractors
- b) Bring the non-conforming works and materials as determined by the

GC to the notice of UPMRC.

1.7 Documentation and Communication

The GC shall:

- a) Prepare and maintain rigorous documentation of non-conforming test results, workmanship inspection reports, compliance reports etc. as per the QMP.
- b) Submit monthly progress reports in the agreed standard formats, both in printed as well as electronic format so as to maintain uniformity and traceability of records even after the physical completion of the project.
- c) Submit a monthly schedule of activities for following month, to UPMRC, latest by 25th of each month during the period of the Assignment.
- d) Undertake all communication with the Contractors.

1.8 Compliance Protocol

1.8.1 Reporting

- a) **Reporting of conforming tests** - To be conveyed via email to UPMRC within 24 hrs of the receipt of test reports.
- b) **Reporting of non-conforming tests**- To be immediately conveyed to UPMRC in writing/printed format, under acknowledgment, not later than 24 hrs of the receipt of such reports. GC shall also detail out probable causes of non-conformance.

1.8.2 Remedial Measures

The GC shall:

- a) Suggest remedial measures to improve the quality system if any of the component is found non-conforming to specified norms. **However, GC will also get these suggestions implemented through the Contractor.**
- b) Monitor if procedures are being followed by the Contractor for corrective action and rejection with respect to non-conformances as determined in house by the Contractors or as reported by the GC.
For this purpose, a monthly review of non-conformance reports for each Contractor shall be undertaken with reference to the corrective action taken by the respective Contractors.

B. Safety Monitoring Plan

1.1.1 Reference Documents: Every contractor appointed by UPMRC is required to undertake works in accordance with the applicable international guidelines, standards and specifications on SHE and shall aim to achieve ISO certifications listed below during the currency of the contract:

- a) OHSAS 18001-1999: Occupational Health and Safety Management System.
- b) ISO14001-2004: Environmental Management Systems.

1.1.2 Plan for Monitoring of SHE aspects of Construction Contractors

- a) The Contractor as per the contract shall formulate a SHE policy and get it approved by UPMRC and display it at conspicuous places at work sites in English and the local language understood by the majority of

construction workers. The GC will ensure compliance of this.

- b)** Within prescribed period of the notification of acceptance of the proposal, the GC shall submit a detailed and comprehensive SHE Plan to UPMRC. The SHE Plan shall include detailed policies, procedures and regulations which, when implemented, will ensure compliance of the contract provisions. The SHE Plan shall include the following but not be restricted to:
- i. A statement of the GC's policy, and arrangements for SHE
 - ii. The name(s) and experience of person(s) who shall be responsible for coordinating and monitoring the Contractor's SHE performance;
 - iii. SHE staff who shall be employed on the Works, their responsibilities, authority and line of communication.
 - iv. A statement of the GC's policy and procedures for identifying and estimating hazards, and the measures for addressing the same;
 - v. A list of SHE hazards anticipated for the Contract and sufficient information to demonstrate the Contractor's proposals for achieving effective and efficient health and safety procedures;
 - vi. A description of the SHE training courses and emergency drills, which shall be provided by the Contractor, with an outline of the syllabus to be followed;
 - vii. Details of the safety equipment which shall be provided by the Contractor, including personal protective equipment;
 - viii. A statement of the Contractor's policy and procedures for ensuring that contractor's Equipment used on the Project Site are maintained in a safe condition and are operated in a safe manner;
 - ix. A statement of the Contractor's policy and procedures for ensuring that sub- contractors comply with the Contractor's safety plan;
 - x. A statement of the Contractor's disciplinary procedures with respect to SHE related matters, and
 - xi. A statement of the Contractor's procedure for reporting and investigating accidents, dangerous occurrences or occupational illnesses.

1.1.3 The GC shall:

- i. Review UPMRC's safety policies and practices
- ii. Monitor the adequacy of the Contractor's site SHE plan and ensure its implementation.
- iii. Review the Contractor's monthly SHE report.
- iv. Identify probable causes of accident and unsafe practices in construction work and suggest remedial measures.
- v. Stimulate interest of UPMRC and Contractors' workers in safety by assisting them in organizing safety competition, talks and film-shows on safety, preparing posters or taking similar other measures as and when required or as necessary.
- vi. Go round the construction site with a view to check unsafe practices and detect unsafe conditions and to suggest remedial measures for their rectifications including first- aid, medical and welfare facilities.
- vii. Bring to the notice of UPMRC the hazards associated with use, handling

- and maintenance of the equipment used during the course of building and other construction work.
- viii. Suggest measures for improving welfare amenities in the construction site and other miscellaneous aspects of safety, health and welfare in building or other construction work.
 - ix. Look into the health hazards associated with handling different types of explosives, chemicals and other construction materials and to suggest remedial measures including personal protective equipment.
 - x. Review the last safety committee meeting minutes and to recommend action against persons/sub-contractors for non-compliance, if any.
 - xi. GC shall monitor erection & lowering activities taken up by contractor and ensure compliance of standards and industry practices.

1.2 Essential Component of Safety Monitoring Plan

The GC shall evolve and administer a system of conducting SHE inspections and other risk management analysis on a periodical basis.

The purpose of SHE inspection is to identify any variation in construction activities and operations, machineries, plant and equipment and processes against the SHE Plan and its supplementary procedures and programs.

Following SHE inspections program shall be adopted by GC Consultant:

- i. Planned General Inspection
- ii. Routine Inspection especially inspection of tunnels.
- iii. Specific Inspection
- iv. Other Inspection.

Specific Inspection

Specific inspections will be performed on activities without a predetermined date. Safety Engineer will perform inspections before start of the activities for ensuring whether the activities are executed in accordance with a general set of rules; method statement submitted or developed procedures.

The following are examples of what will be commonly performed as required on the construction site:

- i) Inspection performed before a heavy lifting operation or lowering operation.
- ii) Inspection performed before and after the entry of person into a confined space as tunnels.
- iii) Inspection performed before and after a welding and gas cutting operation,
- iv) Inspection of formwork before concreting by formwork erector.

For these activities, GC in consultation with UPMRC shall have the authority to stop the activities if safety protocols are not followed or complied with.

The list mentioned above is not exhaustive. The GC & Contractor shall ensure that a competent supervisor inspects all high-risk processes and activities.

Other Inspection

Other inspections include the following:

- i. Mandatory Inspections by Labour Department of Government.
- ii. Contractor's site SHE management team.

1.3 Monitoring of resources for SHE implementation

The GC will check that the persons deployed by the Contractor are adequate and qualified as specified in approved SHE manual.

1.3.1 Monitoring of Resources -- The GC will ensure that the following PPEs are provided by the Contractor to workmen to protect against safety and/or health hazards. Primarily PPEs are:

- i. Head Protection (Safety helmets)
- ii. Foot Protection (Safety footwear, Gumboot, etc.)
- iii. Body Protection (High visibility clothing (waistcoat/jacket), Apron, etc.)
- iv. Personal fall protection (Full body harness, Rope-grip fall arrester, etc.)
- v. Eye Protection (Goggles, Welders glasses, etc.)
- vi. Hand Protection (Gloves, Finger coats, etc.)
- vii. Respiratory Protection. (Nose mask, Scabs', etc.)
- viii. Hearing Protection (Ear plugs, Ear muffs, etc.)

1.4 Documentation and Communication

GC will prepare an audit report and directly send it to UPMRC within 3 days of conducting the audit. The Audit Report will contain:

- a) Executing summary - Based on the finalized checklists as written and the findings to UPMRC by the audit team members. The audit leader will compile a concise and accurate summary of observations and findings.
- b) Introduction - This will contain basic information regarding the facilities of the organization audited, the specific audit dates (inclusive of those for preparation and post-audit activities).
- c) Principal positive findings - This will contain the summary of positive aspects as observed by the auditors. It will also contain highlights of those issue, which may warrant dissemination as best practice regarding methodology used or achievement.
- d) Findings - All audit findings as detailed in the audit checklists shall be grouped together as priority 1 and 2 as detailed below in a separate listing.

Priority 1: Actions to rectify gaps or weakness should generally be implemented within a maximum of one week, if risk potential is high or unacceptable.

Priority 2: Actions should be generally implemented or rectified within a maximum of 2-3 weeks, which if not rectified would create a likelihood of minor injury or business loss.

1.5 Remedial Measures

- a) The GC shall inspect the site immediately after 10 days of conducting initial audit for checking the adequacy of implementation of items mentioned under

priority 1 by the Contractor and shall submit a conformity / non-conformity report to UPMRC.

- b) The auditor shall again inspect after 21 days of conducting initial audit for checking the adequacy of implementation of items mentioned under priority 2 by the Contractor and shall submit a conformity / non-conformity report to UPMRC.

In case of non-conformity of items mentioned by auditor, GC shall recommend appropriate remedial measure including stoppage of work or imposing penalty to ensure the items being implemented.

1. MONITOR PROGRESS, QUALITY AND SAFETY OF THE WORKS THROUGH REGULAR INSPECTION AND REPORT TO UPMRC.

The bid document requires the GC to take a proactive role in keeping the Project on Schedule and maintaining the quality & safety standards. The GC is required to:

- Inspect the Project regularly and report to the UPMRC on compliance with the approved design and progress.
- Monitor the implementation of Quality Management Plan and report to UPMRC.
- Within 3 days of the inspection the GC will issue an Inspection Report to UPMRC.
- Attend and convene meetings on quality and progress.
- Review Testing and commissioning Plan prepared by Contractors and review material and test reports.
- Inspect workshops and manufacturing facilities supplying the works.
- Audit compliance in addressing progress and quality issues to achieve the Project objectives.

a) Monitor Compliance with Approved Design.

The GC will inspect the Works during construction and shall monitor the Contractor(s) compliance with the Approved Design, in particular the GC will:

- Ensure that facilities are provided as required by the design.
- Materials, including architectural finishes, meet design requirements.
- Tests required by the contract are executed and records properly maintained and Equipment meets specifications and is fully tested to prove compliance.

The GC shall list any serious non-compliance and deficiencies identified during inspection in particular any non-conformances that threaten the performance of the system. A register of the status of these items will be maintained and included in the GC's Monthly Report.

b) Monitor Progress

The GC will review progress of all aspects of the implementation of the Works – design, procurement, construction, installation and testing – and compare actual progress with the approved Programme.

Any deviations will be noted and flagged for action in the GC Inspection Report. The GC will pay particular attention to achievement of Milestones and progress towards achieving Milestones and to procurement of long-lead time equipment. In addition to the regular scheduled Monthly Inspections, the GC will conduct ad-

•hoc site visits and inspections of design activities to determine that activities remain in schedule. **Furthermore, the IQSM (Integrated Quality Management System) will be always be alert to events that may in future delay the Project** procurement of equipment, delays in design; for example. UPMRC will be kept fully informed of any actual or forecast delays.

The GC will work closely with all parties to develop mitigation measures, or work-around to avoid or minimize the impact of delays on the overall Project schedule. The GC's Project Director, Dy. Project Director and Project Planning & Scheduling Expert (PPSE) will be responsible for monitoring the progress of the works. The PPSE will make use of computerized scheduling software to test the impact that a delay to any one activity (or group of activities) will have on the achievement of Milestones and commissioning of the Project.

A register of the status of these items will be maintained and included in GC's Monthly Report.

c) Monitor Quality

During the inspections the GC will inspect the contractors' quality records, including materials test results and equipment test, to check that the quality management plans are being implemented.

The quality records to be inspected / reviewed are:

- a. Material delivery dockets and accompanying QC documentation.
- b. Inspection and Test Procedure (ITP) records.
- c. Materials test results (concrete, rebar etc.).
- d. Site Diaries.
 - i. Activity records
 - ii. Equipment and manpower records oWeather records oSafety Register oEnvironmental register
- e. Equipment test results and reports.
- f. Non-conformance Report Register.

The GC, at his own cost and with prior intimation to UPMRC, will arrange inspection visits to in-country facilities responsible for the manufacture, supply or storage of materials and equipment to be incorporated into the Works . At these visits the IQSM will request and inspect such quality documentation as may be required by the Contract and shall identify any non-conformances to be addressed.

Corrective Action Requests (CAR) will be issued where quality non-conformances are identified and the GC will track all CAR's through to closure. The GC will maintain a CAR register for Quality Management, which will be presented in the GC's Monthly Report.

- g. Audit reports shall be sent to UPMRC.
- h. All reports shall be sent to UPMRC.
- i. All comments on quality and CAR's will be recorded in the GC's Inspection Report including follow up actions to CAR's which will be part of monthly report.

d) Monitor Compliance with Environmental Management Plan (EMP)

The GC will review the requirements of the Project Environmental Management Plan and will draw up checklists to be used by GC staff who will be responsible for auditing the Contractors' compliance with the EMP. The GC Safety and

Environmental Expert will be responsible for this aspect of the services.

The GC would conduct EMP audits as well as the scheduled Inspections. The results of the EMP audits will be presented in the monthly inspections Reports and summarized in the GC's Monthly Report. The GC will maintain a CAR Register dedicated to the EMP.

e) Monitor Compliance with the Safety Management Plan (SMP)

The GC will review the requirements of the various Safety Management Plans and will draw up checklists to be used by GC staff who will be responsible for auditing the Contractors' compliance with the EMP. The GC Safety and Environmental Expert will be responsible for this aspect of the GC services.

As with quality, non-conformances, any SMP non-conformances will be identified and recorded and the Contractor will be advised through issue of a Corrective Action Request (CAR). Such CAR's will be followed up by the GC through to closure.

The GC shall conduct SMP audits as well as the scheduled Inspection.

The results of the SMP audits will be presented in the monthly Inspection Reports and summarized in the GC's Monthly Report to UPMRC. The GC will maintain a CAR Register dedicated to Health & Safety.

All audit reports, CAR, test report shall form part of monthly report.

ANNEXURE-2

[illegible]



UTTAR PRADESH METRO RAIL CORPORATION LIMITED

**GENERAL CONSULTANCY SERVICES
FOR LUCKNOW MRTS PROJECT, PHASE – 1B**

TENDER NO: LKGC (02)-01

TENDER DOCUMENTS

VOLUME 4

**INSTITUTIONAL ARRANGEMENTS
&
PROJECT INFORMATION**

**UTTAR PRADESH METRO RAIL CORPORATION LTD.
Administrative Building, Vipin Khand, Gomti Nagar
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Lucknow-226010, Uttar Pradesh, India**

TENDER NO: LKGC (02)-01

**TENDER
DOCUMENTS**

VOLUME 4

**INSTITUTIONAL ARRANGEMENTS
&
PROJECT INFORMATION**

TABLE OF CONTENT

<u>S.NO.</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
1	Institutional Arrangement & Project Information	3-5
2	Annexure 1: Executive Summary Lucknow	6-51

INSTITUTIONAL ARRANGEMENTS **&** **PROJECT INFORMATION**

1.0 ORGANISATION AND FINANCING ARRANGEMENT

Lucknow Metro Rail Project will be implemented by Uttar Pradesh Metro Rail Corporation Ltd. (UPMRC) a company set up under the Companies Act, 1956. The project is proposed to be funded partly through equity contribution from Govt. of Uttar Pradesh (UP) and Govt. of India (GOI) and partly through loan from external funding agency. The project funding is also expected to be supplemented by interest-free subordinate debt from the Government of India and Government of Uttar Pradesh for a limited extent. The UPMRC will be permitted to develop property within the Metro premises to generate funds to supplement the project funding.

2.0 IMPLEMENTATION OF THE PROJECT

The Project will be executed by UPMRC with supervision by a competent General Consultant being appointed through this bid. Broad details of the services to be provided by GC are given in the 'Terms of Reference' (TOR)

3.0 ROLE OF GOVERNMENT OF INDIA (GOI) and GOVERNMENT OF UTTAR PRADESH (GOUP).

Construction of Lucknow Metro Rail Project will get active support of the promoters, ie, the GOI and GOUP to deal expeditiously with references from the UPMRC. In addition, to facilitate co-ordination, several co-ordination groups / committees at various levels may be set up.

The General Consultant (GC) will put up proposals/project requirements regarding land, utilities, traffic diversions, resettlement and rehabilitation or any other matter involving Uttar Pradesh Government agencies to these groups through the UPMRC and assist UPMRC in obtaining the necessary approvals.

The progress of the project implementation will be monitored by GoUP as well as Gol.

4.0 ROLE OF UTTAR PRADESH METRO RAIL CORPORATION LIMITED (UPMRC)

UPMRC will be the implementing authority for the Lucknow Metro Rail Project. In brief:-

- It will exercise all technical, financial and contract management powers and all proposals of GC will be put up to it for its final decision /approval.
- UPMRC will oversee the Quality Assurance aspects, as considered necessary.
- It will be responsible for arranging funding for the project and payment to contractors / consultants upon certification by GC wherever required,
- UPMRC will make separate arrangements, after opening to commercial train operations, for any future extension to the system.
- UPMRC will arrange for public relations and marketing.

- UPMRC will be fully empowered to make financial commitments in regard to Lucknow Metro including the award and the operation of the contracts.

5.0 LEGAL COVER FOR THE PROJECT

The Parliament has passed the Metro Railway (Amendment Bill), 2009 which provides for extension of Metro Railway (Construction of Works) Act, 1978 and Delhi Metro Railway (Operation and Maintenance) Act 2002, (which after amendment is renamed as the Metro Railway (Operation and Maintenance) Act, 2002) to National Capital region and Metropolitan areas as defined in Article 243 P of the Constitution. The Bill has become the Act as per the notification in the Gazette on 27/8/2009. With this amendment there is uniform legislative cover for all the Metro Rail/Mono Rail Projects in the country, whether within one municipal area or beyond to provide uniformity of standard as well as safety certification by the Commissioner of Railway Safety. As such all the Metro Rail Projects in the Country will be covered under this amended Acts.

6.0 ROLE OF FUNDING AGENCIES

As the project is proposed to be partly funded through loans from external Funding Agencies, their guidelines with respect to tendering and finalizing the contracts related to the portion to be funded by them, will be followed.

7.0 ROLE OF GENERAL CONSULTANT

All technical, financial and contract management powers will be exercised by UPMRC. The GC will obtain UPMRC's approval to all matters that lie within its scope of services. Any subsequent changes to the Project detail will also be put up to UPMRC along with time and cost implications for its approval. GC will have necessary powers to guide and supervise the implementation of the project within the approvals obtained from UPMRC.

The main role of GC will be as follows:

- 7.1 GC will provide all necessary assistance in preparation, evaluation, negotiations (if necessary) of bids invited by UPMRC and award of contracts.
- 7.2 GC will render all necessary assistance to UPMRC in the selection of Contractors, suppliers, manufacturers, detailed design consultants and other related services to Metro system.
- 7.3 GC will ensure adherence, to the standards prescribed by UPMRC, by contractors with regard to safety of works, safety of adjoining and overlying structures, safety of workmen and safety of public during construction stage.
- 7.4 GC will certify the quantum of work done, its quality and the payments to be made to various agencies engaged in the implementation of the project.
- 7.5 GC will co-ordinate, review/monitor the efforts of all contractors, consultants, suppliers and manufacturers.
- 7.6 GC will carryout construction/erection supervision at all levels including contract administration, safety, quality and environmental aspects.

- 7.7 GC will plan and arrange for training of personnel of UPMRC.
- 7.8 GC will assist UPMRC in keeping the Commissioner of Railway Safety (CRS) Government of India or appropriate authority informed about project design/construction and obtaining intermediate approvals as required.
- 7.9 GC will assist UPMRC in ensuring tests, trials and commissioning of the system (including obtaining final sanction from Commissioner for Railway Safety or appropriate authority).
- 7.10 GC will provide schemes for integration with other modes of transport, including related transportation planning and assist UPMRC in putting in place a mechanism of 'seamless travel' through various modes of public/private transport. In all relevant aspects of its work, the GC shall examine the possibility of multiple classes of travel.
- 7.11 GC will provide proper interface co-ordination to ensure timely completion of all works on time and commissioning of the various sections as programmed.
- 7.12 GC will advise UPMRC on various options of property development with respect to optimal utilization and integration of the Commercial land available with UPMRC including exploitation of airspace at various stations and depots.
- 7.13 GC will ensure roles and responsibilities outlined in various sections of this contract.

ANNEXURE – I

EXECUTIVE SUMMARY LUCKNOW METRO RAIL PROJECT (PHASE-1B)

1 INTRODUCTION

1.1 Background

Economic growth and spatial development are quite often governed by the quality and quantity of infrastructure provided. While an inadequate transport facilities causes congestion, delays and hazards result in significant socio – economic costs to the society. An oversupply, apart from being uneconomical, often acts as counter to the long term spatial development strategies of settlements and regions. Supplying and maintaining an optimal level of infrastructure is the key to planned development. India is passing a stage where urbanization is taking place at an increasing rate. With rapid urbanization, there has been a widening gap between demand and supply of urban infrastructure of which transportation is an essential component.

Lucknow is popularly known for its cultural and intellectual traditions as well as, its current status as a nucleus of service industry, education & research. Lucknow is the capital of Uttar Pradesh & administrative headquarters of Lucknow district & division. With its 2.8(COI, 2011) million inhabitants Lucknow Urban Agglomeration has currently over 2.9 million population. The master plan has projected a population of about 4.0 million by years 2021. Being an important cultural and trading centre Lucknow continues to grow and attract large number of people to the city. The rapid growth of the city and the associated urban sprawl has accentuated the demand supply mismatch amidst the constrained transport infrastructure resulting in economic and social externalities. Lucknow must keep pace with the demographic and economic growth. The inadequate commuter transportation system in Lucknow is overwhelmed by upsurge of private automobiles. Private vehicles (motorised 2-wheelers and cars) constitute 90 per cent of total vehicles registered in Lucknow City. The supply of city buses being only 6 per lakh population is inadequate for a city's size like Lucknow. The benchmark is between 70 to 80 buses per lakh residents in an urban area in India.

One of the key issues to be tackled is to improvise on a reliable public transport system; above all, lay emphasis on a mass transportation system which is environmental friendly to cater to city's growing travelling needs to sustain in the growing economic activities. India being in the process of economic reforms and that such mass transport systems will involve heavy investments.

Against this backdrop of increase in number of vehicles on road and increase in congestion and air pollution, the Lucknow Development Authority had commissioned DMRC to prepare Detailed Project Report for a Mass Rapid Transit System (MRTS) for Lucknow City to serve forecast travel up to the horizon year 2030.

1.2 Scope & Objective of the Study

Uttar Pradesh being the most populous state in India, demand for mobility in the state has been increasing very fast with the rapidly changing socio-economic environment. Lucknow, the capital city of the state of Uttar Pradesh, being the administrative centre has undergone considerable growth in various development related activities and functions. With the increasing number of industries located in and around the city, has led to

considerable increase in transport demand. The city is experiencing heavy congestion, delay and vehicular pollution because of the inadequate transport infrastructure. The low share of modal split in favour of public transport emphasizes the urgent need for reviewing the existing public transport system and plan for a suitable system to meet the future demand. In order to increase the share of public transport the strategic plan should be to improve the public transport system and examine the feasibility of introducing mass transit system in a phased programme.

The Government of Uttar Pradesh is seized of the matter and desired to carry out a study of Mass Transport System for the city of Lucknow to enable smooth dispersal of intra-city traffic.

Government of Uttar Pradesh had commissioned Delhi Metro Rail Corporation (DMRC) in January, 2009 for undertaking Detailed Project Report for MRT System in Lucknow. DMRC prepared the Detailed Project Report for Lucknow Metro comprising under mentioned two corridors;

- i) CCS Airport to Munshipulia (22.878 km.)
- ii) Charbagh to Vasantkunj (11.098 km.)

Accordingly, DPR was submitted by DMRC in October 2013. Out of the two proposed Corridors, N-S Corridor from CCS Airport to Munshipulia was sanctioned and the same is presently operational.

In 2018, LMRC requested DMRC to update the DPR for the E-W Corridor from Charbagh to Vasantkunj. Updated DPR submitted to LMRC in February 2019.

Now since the updated DPR of East-West corridor is 3 years old, therefore vide letter No. Adv/C/E-W Corr/Rev/2016/Part-II/433 dated 22.03.2022, UPMRC requested DMRC to update it to 2022 levels. Further UPMRC is of the view that in this corridor, 750 V DC third rail traction system should be used in place of 25kV OHE as the Kanpur and Agra Metro Projects of UPMRC are being executed with 750V DC traction system and hence, it will be advantageous to UPMRC as the same Rolling Stock may be utilized for the East-West corridor of Lucknow Metro Project.

1.3 Study Area

The geographic area within the jurisdiction of Lucknow Development Authority (LDA) will be the Study Area (Figure 0.1) for the current Study.

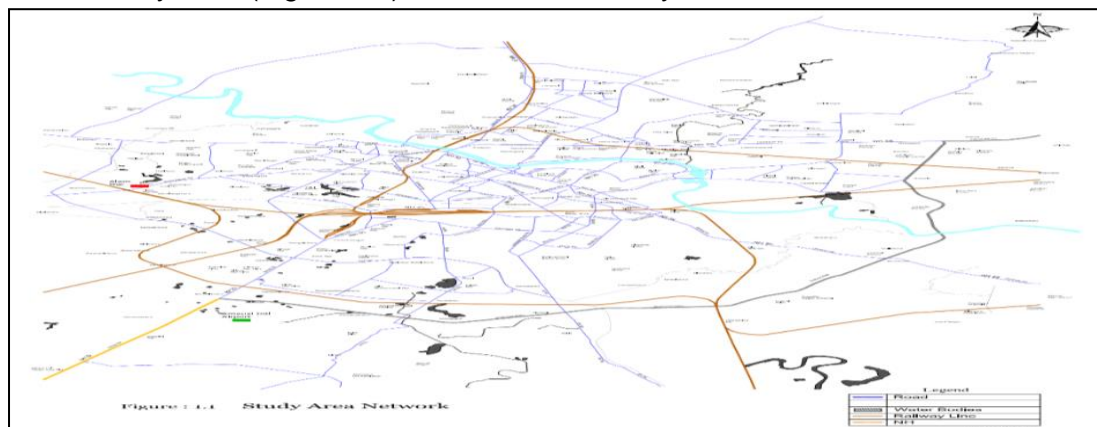


Fig.1 - Study Area

2 TRAFFIC DEMAND FORECAST

Large number of alternate routes for Metro for Lucknow were taken in the traffic analysis and the Peak Hour and Peak direction traffic (PHPDT) on such routes determined. Based on PHPDT, two routes; one connecting North to South and East to West were identified. North – South corridor starts at CCS airport and ends at Munshipulia (Phase 1A) via Hazaratganj, Sachivalaya, IT Chouraha etc with a total length of 22.878 km. East- West corridor (Phase 1B) with its Length of 11.165kms, starts at Charbagh Railway station and ends at Vasantkunj passing through City railway station, Balaganj, Musabagh etc.

Phase 1 A is already operational. Now it proposed to implement phase 1B and complete it by 2027.

2.1 Section Loading

The traffic assignment was carried out with the proposed two alignment in place. The loading on the proposed metro alignment is presented in Table below:-

Table 1 - Summary of transport demand projections

Year	Corridor Length (km)	PHPDT	Daily Passenger Km	Daily Ridership	Average Trip Length (km)
East-West Corridor: Lucknow Rly Station to Vasantkunj (Phase 1B)					
2027	11.165	17170	1194962	274074	4.36
2030		20420	1413396	321958	4.39
2041		25337	1777192	420140	4.23
2051		26941	1853926	446729	4.15
2055		27049	1838927	448519	4.10

The daily ridership on the East- West corridor will be 2.74 lakhs in 2027 and 4.48 lakhs passengers per day in 2055. The maximum range of PHPDT on the East-West alignment in 2027 will be 17170 and by 2055 the maximum range of PHPDT is projected to be in the order of 27049.

2.2 Station Loading

The daily station loading (two way boarding's) for the alignment is presented in **Table 2** below:-

Table 2 - Daily Station Loading for East-West Corridor

STATION NO.	STATION NAME	2027	2030	2041	2051
1	Charbagh	34297	35301	46172	49094
2	Gautam Buddha Marg	13594	15841	33474	35592
3	Aminabad	29539	33138	43785	46556
4	Pandeyganj	36158	43932	50337	53523
5	City Rly. Stn	14868	17430	24297	25835
6	Medical Chauraha	21867	26999	35581	37833
7	Chowk	51705	62839	72863	77474
8	Thakurganj	27909	31269	44688	47516
9	Balaganj	26366	35980	41601	44234

STATION NO.	STATION NAME	2027	2030	2041	2051
10	Sarfarazganj	6262	6804	11298	12013
11	Musabagh	7225	7994	9205	9788
12	Vasantkunj	4511	4998	6489	6900
	Total	2,74,301	3,22,525	4,19,790	4,46,357

Note: Numbers are Daily Boarding's on both directions (Up and Down)

3.0 ALTERNATIVE ANALYSIS

3.1 Daily Ridership on Lucknow Metro East West Corridor in Various Horizon Years

Daily ridership on the Lucknow metro rail network in 2027 is expected to be 2,74,074 passengers. The average trip length will be 4.36km in year 2027. Daily Ridership figures on the East West Corridor for the years 2027, 2030 and 2041, 2051, 2055 and PHPDT are shown in Table 0.3.

Table 3–Summary of Daily Ridership figures on the East West Corridor

Moderated Figures

Horizon Year	Daily Ridership (Passengers)	PHPDT (Passengers)	Daily Passenger Kilometers (km)	Average Trip Length (km)
2027	2,74,074	17,170	11,94,962	4.36
2030	3,21,958	20,420	14,13,396	4.39
2041	4,20,140	25,337	17,77,192	4.23
2051	4,46,729	26,941	18,53,926	4.15
2055	4,48,519	27,049	18,38,927	4.10

3.2 Mode Selection for Charbagh- Vasantkunj Corridor of Lucknow Metro

Road-based transit systems can optimally carry up to a maximum of 8,000 PHPDT. As PHPDT is 17,170 in 2027 and road is too narrow to cater even present-day traffic requirement. With an aim of reduction in road traffic a grade separated Mass Transit System is required. There can be following options

- Mono Rail and
- Segregated Light Rail
- Light Capacity Metro

Based on MMRDA's experience, following are the demerits of Monorail.

- Technology is not proven.
- It has comparatively high maintenance cost due to wear and tear of rubber tyres.
- Problems in emergency evacuation thus posing disaster management problems.
- Total dependence on Rolling Stock supplier. No indigenous production of Rolling Stock. Total dependence on manufacturer of spares.
- It has poor ride quality as compared to metro.
- Rolling Stock cannot be purchased from another manufacturer without changing the guide beams.

- Higher Life Cycle Cost

The capital cost of Mono rail is also almost same as that of Light Capacity Metro. MMRDA is now shifting to Metro Rail System on its earlier proposed Monorail Corridor Thane-Bhiwandi – Kalyan after having bad experience of their Wadala – Chembur Monorail Corridor.

Light rail Transit system could be another option but it will not be enough to meet the demand ultimately. LRT system is normally Segregated Light Rail cannot be implemented on this corridor as road along the corridor is so narrow that hardly there is any space to accommodate segregated Light Rail Transit System.

Moreover, UPMRC (earlier LMRC) has already implemented same type of system on North South Corridor (Phase 1A). Any new mode of transport will require new team of experts during implementation stage and separate team of operation and maintenance staff.

In view of above discussion, it is recommended to adopt Light Capacity Metro System consisting trains of three car length.

4 GEOMETRIC DESIGNING PARAMETERS AND ALIGNMENT DESCRIPTION

4.1 Route Alignment & Geometric Design Parameters

The geometric design norms presented in this chapter have been worked out based on a detailed evaluation of passenger comfort, safety, experience and internationally accepted practices used currently operating rapid transit and rail systems. Various alternatives were considered for most of these parameters but the best-suited ones have been adopted for the system as a whole.

4.2 Alignment Considerations

- Minimum tangent lengths between curves are recommended to ensure sufficient time for passengers to recover from one curve before entering another.
- Super elevation on curves is applied to counter the effect of lateral force felt by passengers and to prevent passengers from feeling as if they are sliding across the seat.
- Minimum vertical curve radii are designed with passenger comfort in mind.

4.3 General Criteria

General criteria used for the design purpose is given below:

Table 4 - Design Criteria

S. N.	Criteria	Dimension
1	Gauge (14mm below top of rail crown)	1435 mm
2	Design Speed	90 kmph
3	Maximum axle load	16T
4	Electric power collection	750 V DC Third Rail traction system

4.4 Curved Sections

4.4.1 Circular Curves

Circular curves shall be defined by their radii in meters. Larger radii shall be used whenever possible to improve the riding quality. The minimum radius of curvature for

mainline track shall be governed by the design speeds and by the limits for cant but shall not be less than 120m.

The minimum length of a circular curve shall be either $V/2$ in metres, where V is the design speed in km/h or 25 m whichever is higher in order to accommodate the full length of a car/coach.

For dual tracks on curves, the smaller of the two radii shall govern the selection of clearance requirement and minimum spacing of track centres. The curve parameters are as below:

Table 5

CURVE RADIUS IN MID SECTION	
(i) Underground sections	
Minimum	300 m
Absolute Minimum	200 m
(ii) Elevated Section	
Minimum	200 m
Absolute minimum	120 m
Minimum curve radius at stations	1000 m
Maximum permissible cant (Ca)	120 mm
Maximum cant deficiency (Cd)	100

4.4.2 Vertical Curves

Vertical curves are to be provided when change in gradient exceeds 0.4%. However it is recommended that all changes in grade shall be connected by a circular curve or by a parabolic curve.

Vertical curves in main lines shall wherever possible be positioned such that coincidence with both transition curves and canted portions is avoided. Where such coincidence is unavoidable the largest practicable vertical curve radius shall be employed and the cant gradient shall be the minimum. In all such cases the resultant geometry shall be verified as being compatible with safe passage at the design speeds by the proposed rolling stock.

Minimum radius and length of vertical curves shall be:

Table 6

RADIUS OF VERTICAL CURVES	
On main line	
Desirable	2500 m
Absolute minimum	1500 m
Other Locations	1500 m
Minimum length of vertical curve	20

4.5 Track Structure

Track on Metro Systems is subjected to intensive usage with very little time for day-to-day maintenance. Thus, it is imperative that the track structure selected for Metro Systems should be long lasting and should require minimum or no maintenance and at the same time, ensure highest level of safety, reliability and comfort, with minimum noise and

vibrations. The track structure has been proposed keeping the above philosophy in view.

4.5.1 General

Two types of track structures are proposed for any Metro. The normal ballasted track is suitable for At-Grade (surface) portion of Main Lines and in Depot (except inside the Workshops, inspection lines and washing plant lines. The ballast-less track is recommended on Viaducts and inside tunnels as the regular cleaning and replacement of ballast at such location will not be possible. Only in case of the depot normal ballasted track is proposed for adoption.

From considerations of maintainability, riding comfort and also to contain vibrations and noise levels, the complete track is proposed to be joint-less and for this purpose even the turnouts will have to be incorporated in LWR/CWR.

The track will be laid with 1 in 20 canted rails and the wheel profile of Rolling Stock should be compatible with the rail cant and rail profile.

4.5.2 Rail Section

Keeping in view the proposed axle load and the practices followed abroad, it is proposed to adopt UIC-60 (60 kg. /m) rail section. Since on main lines, sharp curves and steep gradients would be present, the grade of rail on main lines should be 1080 Head Hardened as per IRS-T- 12-96. As these rails are not manufactured in India at present, these are to be imported. For the Depot lines, the grade of rails should be 880, which can be easily manufactured indigenously.

4.6 Route Alignment

During the traffic studies carried out for Lucknow City, number of corridors were examined based on the Peak hour Peak Direction traffic (PHPDT) and the importance of locality to be served, two corridors have finally been frozen i.e. Corridor-1 from North to South and Corridor-2 from East to West. Of the two corridors the North-South corridor from Chaudhari Charan Singh Airport to Munshi Pulia has been recommended for execution in the Phase-IA and is under implementation.

Both the North –South Corridor and the East-West Corridors are partly underground and elevated. The elevated alignment is mostly located on the median of the roads. In the central area near Lucknow Railway Station, Aminabad, Hazratganj the N-S and E-W corridor will run underground with switch-over ramps for transitions from elevated to underground on NH-25 (Kanpur Road) and underground to elevated on the Mahatma Gandhi Road at the end of Hazratganj Market for the N-S corridor, for E-W corridor the ramp has been proposed at the Hardoi road to transit from underground to elevated. The depot for the East – West corridor has been proposed on the Land behind Fish Mandi on Hardoi Road. The break-up of length of the E-W corridors (in kilometers) is given below in Table 7.

Table 7 Proposed E-W MRTS Corridor

Corridor	Total	Elevated	Ramp	Underground	At Grade
East – West (Charbagh to Vasantkunj)	11.165 km	4.120 km	0.328 km	6.717 km	-

5 CIVIL ENGINEERING

This chapter deals with civil elevated & underground structure, Geotechnical investigation, construction methods, land requirements, Utility services and Traffic diversion during construction etc.

5.1 Construction Methodology

5.1.1 Underground Construction

As in the underground section most of the area is either built-up or passing under Road, it is proposed to tunnel through Tunnel Boring Machine (TBM) or New Austrian Tunneling Method (NATM) in the overburden soil mass. This will reduce cost substantially and inconvenience to general public during construction. Tunnel excavation for a major part of this underground section is expected to be carried out by Tunnel Boring Machines. There is some smaller section along the underground part of the alignment where Cut & Cover method has been considered for construction before and after Switch Over Ramp (SOR). Tunnel boring machines (TBMs) capable of drilling in soft soil with a finished internal diameter of 5.6 m can be successfully employed for boring tunnels through this stratum. The tunnels are proposed with a minimum soil cover of 6 m.

5.1.2 Underground Stations

Six underground stations have been proposed to be constructed by cut and cover with top-down method. One station namely Pandeyganj is proposed to be constructed by NATM method. For cut and cover method, the diaphragm walls for such station constructions would be 80 to 100 cm thick and will function as a permanent side wall of the station. It is, therefore, necessary to construct the diaphragm walls absolutely watertight and with the required concrete strength as has been done in the Delhi Metro station constructions. By resorting to top-down method the surface could be restored quickly and further excavations and construction of the station will not hamper the surface activity.

5.1.3 Cut & Cover Method Of Construction Of Underground Stations

Cut and Cover mainly consists of following steps:

- Diversion of utilities
- Construction of support walls
- Excavation between the support walls along with the installation of struts between the two walls to keep them in position.
- Construction of tunnel/structure and removal of temporary struts.
- Back filling and restoration of the surface

5.1.4 Utility Diversion

It is suggested that all utilities falling within excavation area are diverted away in advance to avoid damage to such utilities during the excavation/ construction phase. The cross utilities, however has to be kept supported. It is suggested that pressure water pipelines crossing the proposed cut area are provided with valves on both sides of the cut so that the cut area can be isolated in case of any leakage to the pipeline to avoid flooding of the cut/damage to the works.

5.2 Choice of Superstructure

The choice of superstructure has been made keeping in view of the factors like ease in construction, standardization of formwork, Optimum utilization of form work for wide spans etc.

Generally four types of Superstructure are used for construction of elevated section of Metro Corridor, i.e. (i) Segmental Box Girder, (ii) Segmental U Girder, (iii) I Girder and (iv) Double U Girder, depending upon characteristic of the corridor such as traffic congestion on roads, available working space, etc.

In case of this corridor, it is suggested to use Double U-Girder in the superstructure upto radius 300m because of the following merits:

- It is an efficient and economical method.
- Its construction permits a reduction of construction time as it may be manufactured while substructure work proceeds and assembled rapidly thereafter.
- This method of construction protects the environment as only space required for foundation and sub-station is required at site. The superstructure is manufactured at a place away from busy areas and placement of superstructure is done at site.
- Girders are easy to stack in the casting yard/stacking yard in more than one layer, thereby saving in requirement of space.
- Interference to the traffic during construction is significantly reduced.
- It contributes towards aesthetically pleasing structures and good finishes.
- The overall labour requirement is less than that for conventional methods.
- Better quality control is possible in the casting yard.
- During construction, the technique shows an exceptionally high record of safety.

For Radius less than 300 m and at locations where point and crossing are to be provided, it is suggested to use I-Girder.

5.3 Geotechnical Investigation

No fresh Geotechnical investigations are carried out for this revision of E-W corridor. Geotechnical Investigations carried out during preparation of original DPR for Lucknow Metro Phase-I along the proposed alignment are used to determine the strata, depth of foundation and safe bearing capacity of foundations required for the above proposed E-W corridor.

Lucknow city is situated in the Gangetic plain and is located in the **Seismic Zone III**. The city has a warm humid subtropical climate with maximum temperature rising to 40-45 degree Celsius and minimum temperature lowering down to around 3 degree Celsius. The city gets an average rainfall of 1010mm mostly from the South-west Monsoon winds.

5.3.1 Recommendations

Depending on the field and laboratory observations of subsoil strata, test results and the type of structures proposed at site, the most feasible soil-foundation system is recommended as normal bored cast in situ R.C.C. piles foundations of 1.0m to 1.2m diameter for the EW corridor, at different depths with cut-off level at 2.0m depth below existing Ground level.

5.4 Utility Diversion

Large number of sub-surface, surface and over head utility services viz. sewers, water mains, storm water drains, telephone cables, OH electrical transmission lines, electric poles, traffic signals, etc. are existing along the proposed alignment. These utility services are essential and have to be maintained in working order during different stages of construction, by temporary/permanent diversions or by supporting in position. Since these

may affect construction and project implementation time schedule/costs, for which necessary planning/action needs to be initiated in advance. Meticulous planning therefore will have to be taken in tackling the issue of protection/diversion of these utility services.

5.5 Land Requirement

Availability of land is one of the major prerequisites for a project in cities like Lucknow. As the Metro alignment has to be planned on set standards and parameters, it becomes difficult to follow the road alignment. Apart from alignment the various structures like stations, parking facilities, traction sub stations, communication towers, etc. require large plots of land. The land being scarce, costly and acquisition being complex process, the alignment is so planned that land acquisition required is minimum. Land is mainly required for:

- Metro Structure (including Route Alignment), Station Building, Platforms, Entry/Exit Structures, Traffic Integration Facilities, etc.
- Receiving/Traction Sub-stations
- Radio Towers
- Property Development.
- Temporary Construction Depots and work sites.
- Depot
- Switch Over Ramps, etc.
- Staff quarters, office complex and operation control centre(OCC)

5.5.1 Summary of Land Requirement

Abstract of land requirements for East-West corridor is given in Table 8 and 9.

Table 8- Summary of Permanent Land Requirement (All figures in Sq. m)

Sr. No.	Description	Govt.	Private
1	Stations	27811	12647
2	Running Section	0	0
3	Depot	123268	0
4	Staff Quarters	5000	0
5	Office Complex and OCC	5000	0
6	RSS/TSS	7200	0
7	Ventilation Shaft	700	0
8	Mid Shaft	0	0
9	Ancillary Structure	9800	0
Total		178779	12647

Total Permanent Land	=	19.1426 ha
Permanent Land (Govt.)	=	17.8779 ha
Permanent Land (Pvt.)	=	1.2647 ha

Table 9- Summary of Temporary Land Requirement

Sr. No.	Description	Govt.	Private
1	Temporary Office/ Site Office	4000	0
2	Segment Casting Yard	40000	0
3	For construction of UG Stations by cut and cover method	1329	1159

Total	45329	1159
--------------	--------------	-------------

Total land required for temporary acquisition is **4.6488 ha out of which 4.5329 ha is government land and 0.1159 ha is private land.**

6 STATION PLANNING

Length of the E-W corridor of Lucknow Metro Rail Project Phase-1 (Charbagh to Vasantkunj) is 11.165 km and 12 stations have been planned along this corridor. The locations of the stations have been identified taking into consideration the constraints in land acquisition, congestion issues and integration. Therefore, stations are proposed in such a way so as to attract maximum demand from the traffic nodal points.

A total of 12 Stations have been planned along the proposed Corridor, out of these 12 stations, 7 are underground and rest 5 are elevated. This corridor is elevated for a length of 4.286 km (including ramp portion) and underground for a length of 6.879 km (including ramp portion). This corridor meets NS corridor at Charbagh which will be a major interchange station between NS and EW corridors.

6.1 Planning & Design Criteria for Stations

Salient features of a typical station are as follows:

- The stations can be divided into public and non-public areas (those areas where access is restricted). The public areas can be further subdivided into paid and unpaid areas.
- The platform level has adequate assembly space for passengers for both normal operating conditions and a recognized abnormal scenario.
- The platform level at elevated stations is determined by a critical clearance of 5.50-m under the concourse above the road intersection, allowing 3.00-m for the concourse height, about 1-m for concourse floor and 2.00-m for structure of tracks above the concourse. Further, the platforms are 1.09-m above the tracks. This would make the platforms in an elevated situation at least 13.60m above ground.
- The concourse contains automatic fare collection system in a manner that divides the concourse into distinct areas. The 'unpaid area' is where passengers gain access to the system, obtain travel information and purchase tickets. On passing through the ticket gates, the passenger enters the 'paid area', which includes access to the platforms.
- The arrangement of the concourse is assessed on a station-by-station basis and is determined by site constraints and passenger access requirements. However, it is planned in such a way that maximum surveillance can be achieved by the ticket hall supervisor over ticket machines, automatic fare collection (AFC) gates, stairs and escalators. Ticket machines and AFC gates are positioned to minimize cross flows of passengers and provide adequate circulation space.
- Sufficient space for queuing and passenger flow has been allowed at the ticketing gates.
- Station entrances are located with particular reference to passenger catchment points and physical site constraints within the right-of-way allocated to the MRTS.
- Office accommodation, operational areas and plant room space is required in the non-

public areas at each station.

- Tunnel Ventilation fans and ASS in underground stations are provided at platform level/ concourse level depending on availability of land for locating vent shafts.
- The DG set, bore well pump houses and ground tank would be located generally in one area on ground.
- The system is being designed to maximize its attraction to potential passengers and the following criteria have been observed:
 - Minimum distance of travel to and from the platform and between platforms for transfer between lines.
 - Adequate capacity for passenger movements.
 - Convenience, including good signage relating to circulation and orientation.
 - Safety and security, including a high level of protection against accidents.
- Following requirements have been taken into account:
 - Minimum capital cost is incurred consistent with maximizing passenger attraction.
 - Minimum operating costs are incurred consistent with maintaining efficiency and the safety of passengers.
 - Flexibility of operation including the ability to adapt to different traffic conditions changes in fare collection methods and provision for the continuity of operation during any extended maintenance or repair period, etc.
 - Provision of good visibility of platforms, fare collection zones and other areas, thus aiding the supervision of operations and monitoring of efficiency and safety.
 - Provision of display of passenger information and advertising.
- The numbers and sizes of staircases/escalators are determined by checking the capacity against AM and PM peak flow rates for both normal and emergency conditions.
- In order to transfer passengers efficiently from street to platforms and vice versa, station planning has been based on established principles of pedestrian flow and arranged to minimize unnecessary walking distances and cross-flows between incoming and outgoing passengers.
- Passenger handling facilities comprise of stairs/escalators, lifts and ticket gates required to process the peak traffic from street to platform and vice-versa (these facilities must also enable evacuation of the station under emergency conditions, within a set safe time limit).

A list of accommodation required in the non-public area at each station is given below:

Table 10 : Non Public Area – Station Accommodation	
Station Control Room	Cash & Ticket Room
Platform Supervisor's Booth	Fire Tank & Pump room
Station Master's Office	Staff Area
Traction Substation	UPS and Battery Room
Information & Enquiries	Cleaner's Room
Signaling Room	Security Room
Ticket Office	Staff Toilets
Communication Room	Refuse Store
Ticket Hall Supervisor & Excess Fare	Miscellaneous Operations Room

Collection (Passenger Office)	
Station Substation	First Aid Room

7 TRAIN OPERATION PLAN

7.1 Operation Philosophy

The underlying operation philosophy is to make the MRT System more attractive and economical, the main features being:

- Selecting the most optimum frequency of Train services to meet sectional capacity requirement during peak hours on most of the sections.
- Economical & optimum train service frequency not only during peak period, but also during off-peak period.
- Optimization of trains reliability for achieving best possible availability on line.
- A train consists of 3 coaches.
- Multi-tasking of train operation and maintenance staff.

7.2 Stations

List of stations for this Corridor of Lucknow Metro are given below: -

Table 11: Stations

S. No	Name of Station	Chainage (in m)	Inter – Station Distance (in m)	Remarks
	Start of Alignment	0.000	-	
1	Charbagh	171.025		Underground
2	Gautam Buddha Marg	1035.552	864.527	Underground
3	Aminabad	2121.627	1086.075	Underground
4	Pandeyganj	2926.457	804.830	Underground
5	City Railway Station	4150.992	1224.535	Underground
6	Medical Chauraha	4968.426	817.434	Underground
7	Chowk	5945.462	977.036	Underground
8	Thakurganj	7395.566	1450.104	Elevated
9	Balaganj	8392.832	997.266	Elevated
10	Sarfarazganj	9400.459	1007.627	Elevated
11	Musabagh	10110.242	709.783	Elevated
12	Vasantkunj	10813.189	702.947	Elevated
	End of Alignment	11165.000		

7.3 Salient Features

- Running of services for 19 hours of the day (5 AM to Midnight) with a station dwell time of 30 seconds,
- Make up time of 5-10% with 8-12% coasting.
- Scheduled speed for the corridor has been considered as 33 kmph.

7.4 Train Formation

The basic unit of 3-car train comprising of DMC + TC + DMC configuration is selected for

the Lucknow Metro Corridor.

Composition

DMC : Driving Motor Car

TC : Trailer Car

3 Car Train Composition: DMC + TC + DMC

Capacity AW2 (@ 6 passengers per square meter of standee area)

Driving Motor Car (DMC) - 247 (43 seated + 204 standing)

Trailer Car (TC) - 270 (50 seated + 220 standing)

3 Car Train - 764 (136 seated + 628 standing)

Capacity AW3 (@ 8 passengers per square meter of standee area)

Driving Motor Car (DMC) - 315 (43 seated + 272 standing)

Trailer Car (TC) - 342 (50 seated + 292 standing)

3 Car Train - 972 (136 seated + 836 standing)

7.5 Year Wise Rake Requirement

The PHPDT capacity provided along with the rake requirement on East-West corridor in different years of operation is tabulated below:

Table 12 - PHPDT Capacity and Rake Requirement

Corridor	Year	Effective Headway (min)	No. of Rakes for Phase-IB	Rake Consist	No. of Coaches	Max. PHPDT Demand	PHPDT Capacity Available
Charbagh to Thakurganj	2027	3.25	15	3-car	45	17170	14105# (17945)*
Thakurganj to Vasantkunj		6.50				4527	7052# (8972)*
Charbagh to Thakurganj	2030	2.80	17	3-car	51	20420	16371# (20829)*
Thakurganj to Vasantkunj		5.60				5265	8186# (10414)*
Charbagh to Thakurganj	2041	2.30	20	3-car	60	25337	19930# (25357)*
Thakurganj to Vasantkunj		4.60				6377	9965# (12678)*
Charbagh to Thakurganj	2051	2.15	22	3-car	66	26941	21321# (27126)*
Thakurganj to Vasantkunj		4.30				6781	10660# (13563)*
Charbagh to Thakurganj	2055	2.15	22	3-car	66	27049	21321# (27126)*

Thakurganj to Vasantkunj		4.30				6808	10660# (13563)*
--------------------------------	--	------	--	--	--	------	--------------------

@ 6 persons per square meter of standee area

* @ 8 persons per square meter of standee area

7.6 Train Frequency

Table 13 - Train Frequency

Corridor	2027		2030		2041		2051		2055	
	Peak Hour Head-way	Lean Hour Head-way	Peak Hour Head-way	Lean Hour Head-way	Peak Hour Head-way	Lean Hour Head-way	Peak Hour Head-way	Lean Hour Head-way	Peak Hour Head-way	Lean Hour Head-way
Charbagh To Thakurganj	3.25 min	5 to 15 min	2.80 min	4 to 10 min	2.30 min	3 to 10 min	215 min	3 to 10 min	2.15 min	3 to 10 min
Thakurganj to Vasantkunj	6.50 min	10 to 30 min	5.60 min	8 to 20 min	4.60	6 to 20 min	4.30 min	6 to 20 min	4.30 min	6 to 20 min

No services are proposed between 00:00 hrs to 5.00 hrs, which are reserved for maintenance of infrastructure and rolling stock.

8 ROLLING STOCK

The required transport demand forecast is the governing factor for the choice of the Rolling Stock. The forecasted Peak Hour Peak Direction Traffic calls for a Medium Rail Transit System (MRTS).

8.1 Optimization of Coach Size

The following optimum size of the coach has been chosen for this corridor:-

Table 14 - Size of the coach

Description	Length*	Width	Height
Driving Motor Car (DMC)	21.64 m	2.9 m	3.9 m
Trailer car (TC)/Motor Car (MC)	21.34 m	2.9 m	3.9 m

*Maximum length of coach over couplers/buffers = 23 m

8.2 Passenger Carrying Capacity

In order to maximize the passenger carrying capacity, longitudinal seating arrangement shall be adopted. The whole train shall be vestibuled to distribute the passenger evenly in all the coaches.

Following train composition is recommended:

3-car Train: DMC + TC + DMC

Table 0.15 shows the carrying capacity of Rail Vehicles with standing passenger @ 6 passengers per sqm of standee area and @ 8 passengers per sqm of standee area respectively.

Table 15 - Carrying Capacity of Rail Vehicles

Particulars	Driving Motor car	Trailer car	3 Car Train (Total)
Seated	43	50	136
Standing@ 6p/sqm	204	220	628
Standing @ 8p/sqm	272	292	836
Total @ 6p/sqm	247	270	764
Total @ 8p/sqm	315	342	972

8.3 Performance Parameters

Motorisation of 67% for all categories of Metro Rolling Stock. The recommended performance parameters are:

Table 16 - Recommended Performance Parameters

Item	Values
Minimum Design Average Acceleration rate for fully loaded (seating plus standees @8 persons per sqm) train on level tangent track shall be as under: 0 to 40 kmph 0 to 60 kmph 0 to 80 kmph	1.0m/s ² 0.6m/s ² 0.3m/s ²
Minimum Operational Average Acceleration rate for (seating plus standees @6 persons/sq.m) loaded on level tangent track shall be as under: 0 to 35 kmph 0 to 60 kmph 0 to 80 kmph	1.20 m/s ² 0.65 m/s ² 0.35 m/s ²
Service braking rate from 80 kmph to standstill for fully loaded (seating plus standees @8 persons per sqm) train on level tangent track:	1.0 m/s ²
Service braking rate from 80 kmph to standstill for fully loaded (seating plus standees @6 persons per sqm) train on level tangent track:	1.1 m/s ²
Emergency braking rate from 80 kmph to 0 kmph for fully loaded train on level tangent track:	1.3 m/s ²
Jerk rate (maximum)	0.75 m/s ²

9 DEPOT

It is proposed to establish one depot- cum- workshop with following functions:

- (i) Major overhauls of all the trains.
- (ii) All minor schedules and repairs.
- (iii) Lifting for replacement of heavy equipment and testing thereafter.
- (iv) Repair of heavy equipments.

The Depot planning is based on following assumptions:

- (i) Enough space should be available for establishment of a Depot- Cum- workshop.
- (ii) All workshop lines, stabling lines are designed to accommodate one train sets of 3- Car each and space earmarked for future provision.
- (iii) All inspection lines are designed to accommodate one trains of 3- Car each.
- (iv) All stabling lines are planned in the proposed depot-cum-workshop assuming adequate space availability. In case of space constraints, if any, stabling facilities may need to be

created at terminal stations or elsewhere (preferably as closed to depot as possible) to cater to the required stability facilities.

- (v) In case of space constraint for depot two storeyed Stabling lines can also be planned.

In broad terms, based on the planned Rolling Stock requirements, this chapter covers conceptual design on following aspects and will work as a guide for detailed design later:

- Layout of Stabling-shed, Inspection-shed, minor repairs and heavy repair overhauling workshop and cleaning of Rolling Stock.
- Operational and functional safety requirements.
- Ancillary buildings for other maintenance facilities.
- Electrical & Mechanical Services, power supply and distribution system.
- Water Supplies, Drainage & Sewerage.

10 POWER SUPPLY ARRANGEMENTS

10.1 Power Requirements

Electricity is required for operation of Metro system for running of trains, station services (e.g. lighting, lifts, escalators, signalling & telecom, fire fighting, etc.) and workshops, depots & other maintenance infrastructure within premises of metro system. The power requirements of a metro system are determined by peak-hour demands of power for traction and auxiliary applications. Broad estimation of auxiliary and traction power demand is made based on the following requirements:-

- Specific energy consumption of rolling stock 60 kWh/1000 GTKM in case of 750V dc Traction is considered as per MOUD guideline vide letter No. 14011/9/2014-UT.II-Part I, dated 21.04.2017.
- Elevated/at –grade station load – initially 250 kW, which will increase to 300 kW in the year 2055.
- Underground station load – initially 2000 kW, which will increase to 2250 kW in the year 2055.
- Depot auxiliary load - initially 1500 kW (each), which will increase to 2000 KW in the year 2055.

Keeping in view of the train operation plan and demand of auxiliary and traction power, power requirements projected for the year 2027, 2030, 2041, 2051 and 2055 are summarized in **Table below:-**

Table 17- Power Demand Estimation (MVA)

Corridor	Load	Year				
		2027	2030	2041	2051	2055
East-West Corridor from Charbagh to Vasantkunj (Phase – 1B), 11.165 km (07 Underground Station, 5 Elevated Station & 1 Depot)	Traction	5.38	6.16	7.32	7.84	7.95
	Auxiliary	20.69	20.94	23.32	23.53	23.78
	Total	26.07	27.10	30.63	31.37	31.73

10.1 Sources of Power Supply

The high voltage power supply network of Lucknow city has 220kV and 132kV network to

cater to various types of demand in vicinity of the proposed corridor. These sub stations are located along the alignment of Corridors. Based on the discussions with Madhyanchal Vidyut Vitran Nigam Ltd., it is proposed to avail power supply for traction as well as auxiliary services from the grid sub-stations at 132 kV and 220 kV voltage through cable feeders.

East – West corridor treated as a separate corridor: - As per previous experience, one RSS is planned for every 10 km in MRTS system. However, keeping in view the reliability requirements, two independent sources are normally considered for this corridor near Vasantkunj Depot and Lucknow Railway Station/ near Nawajganj.

East – West Corridor interlinked with North – South: - In this case, only one RSS may be constructed at Vasantkunj, then special arrangement needs to be made at Charbagh Interchange Station of North – South Corridor to extend feed to East – West Corridor in case of emergency.

Table 18 - Sources of Power Supply

Corridor	Grid sub-station (with Input voltage)	Location of RSS of Metro Authority	Approx. length of cables
East – West Corridor (Charbagh to Vasantkunj)	Two bays at 132 kV from 220kV Sub Station at Hardoi Road	132/33kV RSS near Vasantkunj	2 km. 132kV cabling Double circuit
	Two bays at 132 kV from TRT / Hardoi Road Sub Station, 132 kV	132/33kV RSS Near Lucknow railway station/ near Nawajganj	2 km. 132kV cabling Single circuit

MVVNL have confirmed availability of requisite power at their above sub-stations vide letter No./75MD/MVVNL/camp, dated:- 01.04.2010. Ideally the second source for elevated portion of East- West corridor should get supply near Nawaj Ganj. MVVNL has indicated their inability to provide power at Aminabad- Nawaj Ganj, therefore either to feed the section through second source available at that point of time or alternatively power can be available from TRT. A final decision can be taken in detailed design stage.

Table 19 - Power Demand Projection for various sources

Corridor	Input Source / Receiving Sub Station (RSS)	Peak Demand – Normal (MVA)		Peak Demand – Emergency (MVA)**	
		2027	2055	2027	2055
East – West Corridor (Charbagh to Vasantkunj)	132/33kV RSS near Vasantkunj				
	Traction	2.06	2.94	5.38	7.95
	Auxiliary	3.40	4.32	20.69	23.78
	Total	5.46	7.26	26.07	31.73
	132/33 kV RSS Near Lucknow railway station/ near Nawajganj				
	Traction	3.32	5.01	5.38	7.95
	Auxiliary	17.29	19.46	20.69	23.78
	Total	20.61	24.47	26.07	31.73

** In case of failure of other source of power

11 VENTILATION AND AIR-CONDITIONING SYSTEM

This chapter covers the Ventilation and Air-conditioning (VAC) system requirements for

the underground sections of the proposed Lucknow Metro alignment. It includes the following:

- Station Air-conditioning System
- Ventilation System for station plant rooms (ancillary spaces)
- Station Smoke Management System
- Tunnel Ventilation System

11.1 Need for Ventilation and Air Conditioning

The underground stations of the Metro Corridor are built in a confined space. A large number of passengers occupy concourse halls and the platforms, especially at the peak hours. The platform and concourse areas have a limited access from outside and do not have natural ventilation. It is therefore, essential to provide forced ventilation in the stations and inside the tunnel for the purpose of:

- Supplying fresh air for the physiological needs of passengers and the authority's staff;
- Removing body heat, obnoxious odours and harmful gases like carbon dioxide exhaled during breathing;
- Preventing concentration of moisture generated by body sweat and seepage of water in the sub-way;
- Removing large quantity of heat dissipated by the train equipment like traction motors, braking units, compressors mounted below the under-frame, lights and fans inside the coaches, A/c units etc.;
- Removing vapour and fumes from the battery and heat emitted by light fittings, water coolers, Escalators, Fare Gates etc. working in the stations;
- Removing heat from air conditioning plant and sub-station and other equipment, if provided inside the underground station.

This large quantity of heat generated in M.R.T. underground stations cannot be extracted by simple ventilation. It is therefore, essential to provide mechanical cooling in order to remove the heat to the maximum possible extent. As the passengers stay in the stations only for short periods, a fair degree of comfort conditions, just short of discomfort are considered adequate. In winter months it may not be necessary to cool the ventilating air as the heat generated within the station premises would be sufficient to maintain the comfort requirement.

11.2 Design Parameters for VAC System

The following VAC system design parameters are assumed in the present report.

(1) Outside ambient conditions:

This is based upon ISHRAE Weather Data 2017, recommended design conditions for 1% criteria, as under

	<u>1% Criteria</u>
Summer :	40.80 DB, 22.8 WB
Monsoon:	28.8 WB, 33.20 DB

For Lucknow Metro Underground Corridor it is suggested to use 1% criteria, which is defined as the conditions, when the DB or WB temperatures are likely to exceed for only 1% of the total time.

(2) Inside design conditions:

Platform/ Concourse	–	27 deg. C at 55 % RH
(3) <u>Tunnel design conditions</u>		
Normal conditions	–	Max. DB 40 deg. C
Congested conditions	–	Max. DB 50 deg. C
(4) Minimum fresh air (in station public areas)	–	10 % or 18 cmh / person

11.3 Design Concepts for VAC System

There are various VAC design concepts technically feasible in a subway system that can provide and maintain acceptable subway environment conditions under different requirement and constraints. These are: Open type; Closed type; platform screen doors etc. The experience available from the design of VAC system for Delhi Metro provides key guidelines for Lucknow Metro. Accordingly, the following features may also be explored based on their life cycle cost analysis:-

1. Full height PSD at the platform.
2. Elimination of UPE.
3. Provision of Air cooled chillers in place of water cooled chillers in case of water scarcity.

There shall be provision of Trackway Exhaust System (TES) by which platform air can be re-circulated. The train cars reject substantial heat inside subway.

When the trains dwell at the stations TES would capture a large portion of heat released by the train air conditioners mounted on the roof tops and under gear heat because of braking, before it is mixed with the platform environment.

12 SIGNALLING AND TRAIN CONTROL SYSTEM

The Signalling and Train Control System shall provide the highest security level for means of an efficient Train Control, ensuring safety in train movements. It assists in optimization of rail infrastructure investment and running of efficient train services on the network.

12.1 Signalling

The Signalling shall provide the highest security level to ensure that the operational activities are developed following strict safety requirements. At the same time, it shall meet the requirements for efficient train operations and high quality of service.

The proposed signalling system design for proposed corridor of Lucknow Metro Phase-1B will cater the following.

- Continuous Automatic Train Control System (CATC)
- Automatic Train Protection (ATP) System
- Automatic Train Operation (ATO) System
- Communication based Automatic Train Control (ATC) System
- On board Equipment
- Cab Signalling
- Electronic Interlocking device (Computer based Interlocking)
- Track side Radio equipment, Track side Signals
- Track Vacancy Detection System
- Electric Point Machine
- Centralized Traffic Control System

- OCC & BCC equipment
- Fall-Back Block Working System
- Power Supply of signalling
- Cable for signalling
- Onboard Radio Antennas, Large Video Screen, MMIs etc.

12.2 Standards

The following standards will be adopted with regard to the Signalling system.

Table 20: Standards

System	Details/ Standards
Train protection system	Train Protection system shall be based on CBTC (Communication based Train Control) System. The system architecture shall provide in redundancy. The system will conform to IEEE 1474 standards.
Interlocking	Computer based Interlocking adopted for station having switches and crossing. All related equipment as far as possible will be centralized in the equipment room at the station. The depot shall be interlocked except for lines mainly used for workshop lines etc.
Block Working	Moving Block working concept may be followed in CBTC System and Fixed Block working in failure of CBTC system.
Default Mode of Operation	The system shall be capable of Automatic Train Operation (ATO), however, the mode of operation may be decided / finalized by metro at detail design stage.
Maximum Safe Speed of Operation	90 Km/h
Operation of Points	Non-Trailable Electrical Point Machine capable of operating with 3-phase, 50 Hz. 380V AC will be used on main line and the depot point machine will be trailable/ non -trailable type electrical point machine capable of operating with either 3 phase, 50 Hz. 380V AC or 110V DC.
Track Vacancy Detection System	Primary mode for track vacancy detection system on main line and in Depot (except workshop line) may be through radio (CBTC System) and secondary detection it may be through Axle Counter.
Signals at Stations with point & crossings	Line Side signals to protect the points (switches). LED type signals for reliability and less maintenance cost.
Uninterrupted power Supply at stations as well as for OCC	Uninterrupted Power Supply System is Common for Signalling, Telecommunications and AFC systems.
Train Descriptor System	Automatic Train Supervision system. Movement of all trains to be logged on to a central computer and displayed on workstations in the Operational Control Centre and at the SCR. Remote control of stations from the OCC. The system architecture shall provide in redundancy.
Fall Back CTC	Backup OCC (BCC)
On board CCTV	Display of CCTV images from Train to OCC on Large Video

System	Details/ Standards
Stream	Screen and MMIs
Cables	Outdoor cables will be steel armored as far as possible.
Fibers cable	Fibers required for Signaling System shall be procured by Signalling wing.
Fail Safe Principles	SIL-4 safety levels as per CENELEC standard for Signal and Train Control System.
Immunity to External Interface.	All data transmission on telecom cables/OFC/Radio. All Signalling and telecom cables will be separated from power cables as per standard. CENELEC standards to be implemented for EMC.
Train Working under emergency	Running on site with line side signal with speed automatically restricted between 15-25 Kmph.
Environmental Conditions	Air-conditioners for all equipment rooms.
Maintenance philosophy	Philosophy of continuous monitoring of system status and preventive & corrective maintenance of Signalling equipment shall be followed. Card / module / sub-system level replacement shall be done in the field and repairs under taken in the central laboratory/ manufacturer's premises.

13 TELECOMMUNICATION AND AUTOMATIC FARE COLLECTION SYSTEM

13.1 Telecommunication System

The Telecommunication system acts as the communication backbone for Signalling systems and other systems such as SCADA, AFC etc. and provides Telecommunication services to meet operational and administrative requirements of the metro network.

13.1.1 Technology

The Technologies proposed to be adopted for Telecommunication systems are shown in Table below:

Table 21 - Technologies for Telecommunication Systems

System	SYSTEM
Transmission Media	IP-MPLS based Optical Fiber system as the main bearer for bulk of the Telecommunication network
Telephone Exchange	SIP-PBX of minimum 30 ports are to be provided at all Stations, an Exchange of 45 Ports to be provided at Terminal Station and 200 ports at Depot/OCC.
Train Radio System	Digital Train radio communication between motorman of moving cars, stations, maintenance personnel and central control.
Train Destination Indicator System	High intensity multi-purpose True Color LED Boards in platforms and multi-purpose TFT Active Matrix LCD Type Display Boards in concourse to be provided at convenient location at all stations to provide bilingual visual indication of the status of the running trains, special messages in emergencies, Audio/Visual Advertisements, Analog Clocks & Passenger Loading.

System	SYSTEM
Centralized clock System	Accurate display of time through a synchronization system of slave clocks driven from a GPS master clock at the OCC and sub – master clock in station. This shall also be used for synchronization other systems.
Passenger Announcement System	Passenger Announcement System covering all platform and concourse areas with local as well as Central Announcement.
Central Voice Recording System	Centralized digital voice recording system at OCC to record all telephone conversation of all dispatchers.
Central fault Monitoring System	CTFMS will help in diagnosing faults immediately from a central location and attending the same with least possible delay, thus increasing the operational efficiency and reduction in manpower requirement for maintenance.
CCTV System	IP based full HD CCTV system for video surveillance and recording functions.
Redundancy (Major System)	Redundancy on Radio's in the Base Stations, Path Redundancy for Optical Fiber Cable by provisioning in ring configuration.
Fiber cable	Fiber cable laid by Telecommunication wing shall be used by Signalling, SCADA, CCTV, Radio, AFC, Networking, LAN, ESS, SAP, GSM/CDMA etc. as per requirement, if required.
Environmental Conditions	All equipment rooms to be air-conditioned.
Maintenance Philosophy	System to have, as far as possible, automatic switching facility to alternate routes/circuits in the event of failure. Philosophy of preventive checks of maintenance to be followed. System networked with NMS for diagnosing faults and co-ordination. Card/module level replacement shall be done in the field and repairs undertaken in the central laboratory/manufacture's premises.

13.2 Automatic Fare Collection

Metro System handles large number of passengers. Ticket issue and fare collection play a vital role in the efficient and proper operation of the system. To achieve this objective, ticketing system shall be simple, easy to use / operate and maintain, easy on accounting facilities, capable of issuing single / multiple journey tickets, amendable for quick fare changes and require overall less manpower. In view of the this, computer based automatic fare collection system is proposed. Seamless ticketing is being thought of for Lucknow Metro Rail.

13.2.1 Automatic fare collection systems have the following advantages:

- A)** Less number of staff required.
- B)** Less possibility of leakages of revenue due to 100% ticket check by control gates.
- C)** Recycling of ticket fraudulently by staff avoided.
- D)** Efficient and easy to operate.

- E)** System is amenable for quick fare changes.
- F)** Management information reports generation is easy.
- G)** System has multi operator capabilities. Same Smart Card can be used for other applications also.
- H)** AFC systems are the world wide accepted systems for Metro environment.

The proposed AFC system shall be based on National Common Mobility Card (NCMC), stored value smart card (Media used on existing operational corridor of Lucknow Metro) which is contact less in operation and QR ticket. For multiple journeys, NCMC and stored value smart card shall be utilized and for the single journey, QR based ticket on Mobile and Paper shall be as utilized. The equipment for the same shall be provided at each station counter / booking offices and at convenient locations and will be connected to a local area network with a computer in the Station Master's room. Equipment and installation cost of Contactless Smart Card / QR based AFC system is similar to magnetic ticket-based AFC system, but Contactless system proves cheaper due to reduced maintenance, less wear and tear and less prone to dusty environment.

It is proposed, that AFC system in Lucknow Metro shall enable seamless travel by different metros and other transport systems across the city besides retail shopping and purchases

The AFC system shall support the EMV (Europay, MasterCard, and Visa), RuPay based open loop ticketing following the NCMC standard model for interoperability with other operators by use of non-proprietary standard so that the interface is scalable to other networks (transit operator/ retail outlets/parking/Toll etc) in Lucknow, Stored value smart card (Media used on existing operational corridor of Lucknow Metro), NFC Media and QR Ticket based ticketing, integration of clearing house, smart card host system of Financial Institutions and integration of mobile application with AFC system.

14 DISABLED FRIENDLY FEATURES

The objective of making this chapter is to create a user-friendly mass transport system in India which can ensure accessibility to persons with disabilities, people travelling with small children or are carrying luggage, as well as people with temporary mobility problems (e.g. a leg in plaster) and the elderly persons.

The design standards for universal access to Public Transport Infrastructure including related facilities and services, information, etc. would benefit people using public transport.

The access standards given here are extracted from Indian Roads Congress Code, IRC 103: 2012, Guidelines for Pedestrian Facilities; Model Building Bye-Laws, 2011 and National Building Code, 2005. Central Public Works Department's (CPWD) "Space Standards for Barrier Free Built Environment for Disabled and Elderly Persons", 1998 and 2013 edition (under revision by MoUD), and international best practices / standards. Further, it has also been attempted to provide guidelines/ standards for alighting and boarding area, approach to station, car parking area, drop-off and pick-up areas, taxi/auto rickshaw stand, bus stand/stop, footpath (sidewalk), kerb ramp, road intersection, median/pedestrian refuge, traffic signals, subway and foot over bridge etc. to achieve a seamless development around metro stations.

14.1 Content

1. Rail Transport

2. Metro Rail Station

- Way finding
- Signage
- Automated Kiosks
- Public Dealing Counters
- Audio-visual Displays
- Public Telephones
- Rest Areas/Seating
- Tactile Paving - Guiding & Warning
- Doors
- Steps & Stairs
- Handrails
- Ramps
- Lifts/Elevators
- Platform/Stair Lift
- General and Accessible toilets
- Drinking Water Units
- Visual Contrasts
- Emergency Egress/Evacuation

3. Street Design

- Footpath (Sidewalk)
- Kerb Ramp
- Road Intersection
- Median/Pedestrian Refuge
- Traffic Signals
- Subway and Foot Over Bridge

4. Alighting and Boarding Area

- Approach
- Car Park
- Drop-off and Pick-up Areas
- Taxi/Auto Rickshaw Stand
- Bus Stand/Stop

15 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

15.1 Background

Lucknow is the capital city of Uttar Pradesh, the most populous state of India. Lucknow had a population of 22.45 lakh in 2001 and 29.08 lakh in 2011. The Lucknow Metro is being proposed to strengthen public transport system in the city.

Any environment has a limited carrying capacity and it can only sustain negative impact up to a level without further degradation. But sensitive systems are not so resilient to cope up with changes in physical and natural environment, thus leading to negative impact and socio-economic losses. The railway development projects, like any other projects, have certain adverse, as well as, beneficial impacts on biophysical and social environment. Though railway projects do not come under the preview of environmental clearance from

Ministry of Environment and Forest, Government of India, the Environmental Impact Assessment provides tools for decision-making, as well as, it also help in ensuring the sustainable development with least environmental damage by providing proper Environmental Management Plan.

15.2 Legislation, Policies and Legal Frame Work

The Government of India has enacted nearly 30 'Environment Conservation Laws and Acts'. Some of these are: Wildlife (Protection) Act 1972; Forest (Conservation) Act 1980; Water (Prevention and Control of Pollution) Act 1974, Air (Prevention and Control of Pollution) Act 1981; 1988 Amendment of Motor Vehicle Act (M.V.) Act, 1939 and Environment (Protection) Act (EPA) 1986.

Environment (Protection) Act, 1986 is widely regarded as a comprehensive / umbrella legislation for environment in its entity and it provides measures for protection of environment and aims at loopholes in the other related Acts. The other Acts and Rules related to environment in India, such as Air and Water Acts were brought under this umbrella legislation.

15.3 Objective

The objective of EIA study is to assess the following components:

- i. To determine the baseline quality of various environmental components along the proposed corridor.
- ii. To establish the general nature and categorization of potential impacts due to the project activities.
- iii. To identify suitable Mitigation measures for all the potential impacts envisaged due to the proposed project
- iv. To formulate an effective Environmental Management Plan for ensuring successful implementation of all the measures suggested during various stages of the project to avoid, mitigate or minimize the adverse impact due to the project.
- v. To ensure that all the statutory requirements are met with.
- vi. To prepare an Environmental Impact Assessment Report containing the above points

15.3.1 Methodology

The EIA study comprises of the following stages.

Table 22

Stage 'A'	Determination of baseline conditions.
Stage 'B'	Assessing the impacts on the environment due to the construction and operation of the project and recommendations on preventive measures to be taken to minimize the impact on the environment to acceptable levels
Stage 'C'	Preparation of EIA document containing Environment Management Plan

16 SECURITY MEASURES FOR A METRO SYSTEM

Metro is emerging as the most favoured mode of urban transportation system. The inherent characteristics of metro system make it an ideal target for terrorists and miscreants. Metro systems are typically open and dynamic systems which carry thousands of commuters. Moreover the high cost of infrastructure, its economic impotence, being the life line of city high news value, fear & panic and man casual ties

poses greater threat to its security. Security is a relatively new challenge in the context of public transport. It addresses problems caused intentionally. Security differs from safety which addresses problems caused accidentally. Security problems or threats are caused by people whose actions aim to undermine or disturb the public transport system and/or to harm passengers or staff. These threats range from daily operational security problems such as disorder, vandalism and assault to the terrorist threat.

16.1 Necessity of Security

It is well known that public transportation is increasingly important for urban areas to prosper in the face of challenges such as reducing congestion and pollution. Therefore, security places an important role in helping public transport system to become the mode of choice. Therefore, excellence in security is a prerequisite for Metro system for increasing its market share. Metro railway administration must ensure that security model must keep pace with rapid expansion of the metro and changing security scenario.

16.2 Three Pillars of Security

Security means protection of Physical, Human and intellectual assets either from criminal interference, removal of destruction by terrorists or criminals or incidental to technological failures or natural hazardous events. There are three important pillars of security as mentioned under:

- (i) The human factor;
- (ii) Procedures; and
- (iii) Technology

17 DISASTER MANAGEMENT MEASURES

“Disaster is a crisis that results in massive damage to life and property, uproots the physical and psychological fabric of the affected communities and outstrips the capacity of the local community to cope with the situation.” Disasters are those situations which cause acute distress to passengers, employees and outsiders and may even be caused by external factors. As per the disaster management act, 2005 *“disaster” means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area*”. As per world health organization (WHO):

“Any occurrence that causes damage, economic disruption, loss of human life and deterioration of health and services on a scale sufficient to warrant an extra ordinary response from outside the affected community or area.”

A disaster is a tragic event, be it natural or manmade, which brings sudden and immense agony to humanity and disrupts normal life. It causes large scale human suffering due to loss of life, loss of livelihood, damages to property and persons and also brings untold hardships. It may also cause destruction to infrastructure, buildings, communication channels essential services, etc.

17.1 Need for Disaster Management Measures

The effect of any disaster spread over in operational area of Lucknow Metro is likely to be substantial as UPMRC will deal with thousands of passengers daily in underground tunnels, viaducts and stations. Disaster brings about sudden and immense misery to

humanity and disrupts normal human life in its established social and economic patterns. It has the potential to cause large scale human suffering due to loss of life, loss of livelihood, damage to property, injury and hardship. It may also cause destruction or damage to infrastructure, buildings and communication channels of Metro. Therefore there is an urgent need to provide for an efficient disaster management plan.

17.2 Objectives

The main objectives of this Disaster Management Measures are as follows:

- Save life and alleviate suffering.
- Provide help to stranded passengers and arrange their prompt evacuation.
- Instill a sense of security amongst all concerned by providing accurate information.
- Protect Metro Rail property.
- Expedite restoration of train operation.
- Lay down the actions required to be taken by staff in the event of a disaster in Lucknow Metro Rail Corporation in order to ensure handling of crisis situation in coordinated manner.
- To ensure that all officials who are responsible to deal with the situation are thoroughly conversant with their duties and responsibilities in advance. It is important that these officials and workers are adequately trained in anticipation to avoid any kind of confusion and chaos at the time of the actual situation and to enable them to discharge their responsibilities with alertness and promptness.

18 MULTI-MODAL TRAFFIC INTEGRATION

While Metro provides a high capacity corridor to carry the passengers, the need for integration of with other secondary/intermediate transport modes is getting highlighted more than ever to ensure a seamless transfer. This concept is to provide at least last mile or half mile connectivity to the commuters with in their places of stay. Accordingly, top priority to this issue, MoUD has laid down policy guidelines to include the need and provisioning of all public, IPT and private modes in the DPRs for the Metro Systems. (Ref: MoUD (Urban Transport Wing) Advisory Circular No. K-14011/1/2007-UT-IV dated 30.08.2013).

The share of various modes of secondary/ intermediary modes of travel is complex and debatable issue which is dependent on a large number of variables like available road width, penetration in the residential areas, Road condition, distance from the existing Metro Stations, availability of parking and lay out and availability of circulating areas at the Metro Stations, Business centre or markets & existing traffic densities. These factors relate with each other and evolve with development of new modal mix of transport, infrastructure and changes with the passage of time. Even though for a given urban transport scenario, optimal mode share may be determined from computer based models, but actual optimal mode share is never achievable on the road due to dynamic nature of demand and supply of transport modes

Multi Modal Traffic Integration or the Last Mile Connectivity refers to the provision of travel service from home or workplace to the nearest public transportation mode. A trip is considered as the entire journey between origin and destination. Commuters may utilize and combine different modes of transport for the entire trip. Metro or BRTS may cater to a majority of this kind of trip, but commuters always need to complete the access and egress part on their own.

There is a need to ensure that all modes of transport are integrated in such a manner that the commuter gets benefit of single trip through fare integration as well enjoys a seamless physical transition from one mode to another. Along with this, there is a need to ensure that last mile connectivity through pedestrian and bicycle facilities are enhanced. The cost requirement for such facilities would also be estimated at block costs level to get an idea of the funds required.

18.1 Aims & Objectives

The aim of this study is to suggest measures to increase last mile connectivity for metro users and to integrate metro with other modes of transit. The specific objectives are:

- To suggest measures that provide local destinations with safe, comfortable and convenient accessibility to Metro stations
- To propose design guidelines for local street environment
- To propose conceptual designs that will maximize benefits and efficiency of interchanges

19 COST ESTIMATES

Detailed cost estimates for East-West Corridor (Charbagh– Vasantkunj) have been prepared covering civil, electrical, signalling and telecommunications works, rolling stock, environmental protection, rehabilitation, etc. considering 750 V DC Third Rail Traction System at April 2022 price level.

While preparing the capital cost estimates, various items have generally been grouped under three major heads on the basis of (i) route km length of alignment, (ii) number of units of that item, and (iii) item being an independent entity. All items related with alignment, whether elevated or at-grade or underground construction, permanent way, traction, signaling & telecommunication, whether in main lines or in maintenance depot, have been estimated at rate per route km basis. Cost of station structures, other electrical services at these stations including Lifts & Escalators and Automatic Fare Collection (AFC) installations at all stations have been assessed in terms of each station as a unit. Similarly rolling stock costs have been estimated in terms of number of units required. In remaining items, viz. land, utility diversions, rehabilitation, etc. the costs have been assessed on the basis of each item, taken as an independent entity.

In order to arrive at realistic cost of various items, costs have been assessed on the basis of rates as per Agra Metro Rail DPR provided by LMRC, duly updated to April 2022 level in accordance with escalation factor suggested by UPMRC vide email dated 17.05.2022. As per LMRC's letter dated: 21.06.2018, contingencies are not included in land cost. Taxes & Duties such as Customs Duty, CGST, SGST and IGST wherever applicable, have been worked out on the basis of prevailing rates and included in the cost estimates separately.

The overall capital cost for this Corridor at April 2022 price level, works out to **Rs. 4264.89 Crores** excluding taxes and duties, but including general charges & design charges @ 5% on all items except land and 3% contingencies on all items except land. Total taxes and duties works out to **Rs. 769.66 Crores**. The abstract of estimated cost is shown in table given below.

Table 23 – Abstract of Estimated Cost

Length (km)	Capital Cost (Rs. Crore)	Taxes & Duties (Rs. Crore)	Total (Rs. Crore)
11.165	4264.89	769.66	5034.55

19.1 Detailed Cost Estimate

Table 24 - Capital Cost Estimate

Total UG (including C&C and half Ramp length) = 6.880km
(UG by TBM: 6.524, UG by C&C: 0.356 Including half ramp length)

Total Elevated length = 4.285km(including half length of ramp)

Total Station = 12 nos, UG = 7(C&C = 6, NATM = 1), Elv = 5

April 2022 level

S. No.	Item	Unit	Rate	Qty.	Amount (Rs. in Cr.)
				Without taxes	
1.0	Land				
1.1	Permanent				
a	Government	ha	5.50	17.88	98.34
b	Private	ha	92.00	1.26	115.92
1.2	Temporary Land (@5% pa for 4 years)				
a	Government	ha	1.32	4.53	5.98
b	Private	ha	22.08	0.12	2.65
1.3	R & R incl. Hutments etc.	R. Km.	3.90	11.45	44.66
	Subtotal (1)				267.55
2.0	Alignment and Formation				
2.1	Underground section by T.B.M excluding station length (180m each)	R. Km.	141.64	5.44	771.09
2.2	Underground section by Cut & Cover excluding station length (180m each)	R. Km.	138.83	0.36	49.42
2.3	Elevated section including station length (Including Cost of Rain Water Harvesting)	R. Km.	41.97	4.29	179.84
2.4	Depot entry connection	R. Km.	41.97	0.29	12.05
	Subtotal (2)				1012.40
3.0	Station Buildings				
3.1	Underground Station(180m length) incl. EM works, lifts, escalators, VAC etc.				
a	Underground Station by cut and cover- Civil works	Each	111.17	6.00	667.02
b	Underground Station by NATM (Pandeyganj)- Civil works	Each	145.58	1.00	145.58
c	Underground Station- EM works etc.	Each	47.98	7.00	335.86
3.2	Elevated stations(including finishes)				
a	Type (A) way side- civil works	Each	22.10	4.00	88.40
b	Type (A) way side- EM works etc	Each	3.77	4.00	15.08
c	Type (B), Terminal station -civil works	Each	25.42	1.00	25.42
d	Type (B), Terminal station -EM works	Each	3.77	1.00	3.77
3.3	Lifts & Escalators (Elevated and UG Stations)				

LKGC (02)-01: General Consultancy Services for Lucknow MRTS Project, Phase-1B

S. No.	Item	Unit	Rate	Qty.	Amount (Rs. in Cr.)
				Without taxes	
a	Lifts	Each	0.53	43.00	22.79
b	Escalators	Each	0.83	43.00	35.69
	Subtotal (3)				1339.61
4.0	Depot				
a	Civil works	LS			73.65
b	EM works + Machinery & Plant + General Works	LS			39.66
	Subtotal (4)				113.31
5.0	P-Way				
5.1	Ballastless track for elevated & underground section	R. km.	7.93	11.45	90.80
5.2	Ballasted track for depot	T. km.	3.97	6.30	25.01
	Subtotal (5)				115.81
6.0	Traction & Power Supply (750V DC)				
6.1	UG Section	R. km.	14.84	6.88	102.10
6.2	Elevated including SCADA	R. km.	12.85	4.57	58.75
6.3	Traction in Depot	T.Km	6.42	6.30	40.45
6.4	For 132 kV GIS & 132 kV cable/Transmission line for one RSS	LS			55.33
	Subtotal (6)				256.63
7.0	Signalling and Telecom.				
7.1	Signalling	R. km.	7.65	11.45	87.59
7.2	Telecom	Stn.	5.67	12.00	68.04
7.3	Automatic fare collection	Stn.			
	a) Underground stations	Each	5.48	7.00	38.36
	b) Elevated and at grade stations	Each	5.48	5.00	27.40
7.4	Providing Platform Screen Doors (PSD) at all stations	Each	3.48	24.00	83.52
	Subtotal (7)				304.91
8.0	Misc. Utilities, roadworks, other civil works such as median stn. signages Environmental protection	R. Km.			
a	Civil works	R. Km.	3.40	11.165	37.96
b	EM works etc.	R. Km.	3.40	11.165	37.96
	Subtotal (8)				75.92
9.0	Rolling Stock	Each	9.06	45	407.70
	Subtotal (9)				407.70
10.0	Capital expenditure on security				
a	Civil works	R.Km.	0.34	11.17	3.80
b	EM works etc	R.Km.	0.08	11.17	0.89
	Subtotal (10)				4.69
11.0	Staff quarter for O & M				
a	Civil works	R. km.	1.48	11.17	16.52
b	EM works etc	R. km.	0.37	11.17	4.13
	Sub Total (11)				20.65

S. No.	Item	Unit	Rate	Qty.	Amount (Rs. in Cr.)
				Without taxes	
12.0	Capital expenditure on Multimodal Traffic Integration				
a	Capital expenditure on Multimodal Integration	Each	3.40	12.00	40.80
	Sub Total (12)				40.80
13.0	Total of all items except Land				3737.09
14.0	General Charges incl. Design charges @ 5 % on all items except land#				186.85
15.0	Total of all items including G. Charges except land				3923.94
16.0	Contingencies @ 3 %				117.72
17.0	Gross Total				4041.66
	Cost without land			=	4042
	Cost with land without contingencies on land			=	4264.89

In accordance with MoUD's letter F.No.K-14011/58/2013-MRTS-I(Vol.I)

Table 25 - Details of Taxes and Duties

Basic Customs duty = 5.500 %
CGST Customs Duty = 9.495 %
SGST Customs Duty = 9.495 %
Total Customs Duty = 24.4900 %
General IGST = 18 %
General CGST = 9 %
General SGST = 9 %

S. No.	Description	Total cost without Taxes & duties (Cr.)	Taxes and duties		Total Taxes & Duties (Cr.)
			Total Customs Duty (Cr.)	Total GST (CGST & SGST) (Cr.)	
1	Alignment & Formation				
	Underground	820.51	40.19	118.15	158.34
	Elevated, at grade & entry to Depot	191.89		34.54	34.54
2	Station Buildings				
	Underground station - Civil works	812.60	39.80	117.01	156.82
	Underground station - E&M works	394.34	38.63	42.59	81.22
	Elevated station-Civil works and MMTI	154.62		27.83	27.83
	Elevated station-EM works	18.85	0.92	2.71	3.64
3	Depot				
	Civil works	73.65	3.61	10.61	14.21
	EM works	39.66	1.94	5.71	7.65
4	P-Way	115.81	5.67	16.68	22.35
5	Traction & Power Supply	256.63	25.14	27.72	52.86
6	Signalling and Telecom.				
a	Signalling	87.59	10.73	7.88	18.61
b	Telecom	68.04	8.33	6.12	14.46
c	AFC	65.76	8.05	5.92	13.97

S. No.	Description	Total cost without Taxes & duties (Cr.)	Taxes and duties		Total Taxes & Duties (Cr.)
			Total Customs Duty (Cr.)	Total GST (CGST & SGST) (Cr.)	
7	PSD	83.52	10.23	7.52	17.74
8	R & R hutments	44.66		8.04	8.04
9	Misc. Utilities, Staff Quarters & Security				
	Civil works	58.28	0.00	10.49	10.49
	EM works	42.98	0.00	7.74	7.74
10	Rolling stock	407.70	39.94	44.03	83.97
11	Rent on Temporary Land	8.63		1.55	1.55
12	General Consultancy charges	186.85		33.63	33.63
	Total	3932.57	233.18	536.48	769.66
	Total Taxes & Duties				769.66
Rate of Taxes & Duties on Total cost without Taxes & Duties					19.57%
Total Central GST & Basic Customs duty					411.01
Total State GST					358.64
Total Taxes & Duties					769.66

20 FINANCING OPTIONS, FARE STRUCTURE, FINANCIAL VIABILITY AND NON-FARE BOX REVENUE

The East – West Corridor of Lucknow Metro Rail Project from Charbagh to Vasantkunj (Phase-1B) is proposed to be constructed with an estimated cost of Rs.5034.55 crores with land cost and all taxes. The route length of the metro system and estimated cost at April-2022 price level with and without Land & Taxes is placed in table 0.26 as under:

Table 26 - Cost Details

Name of Corridor	Length (km)	No. of Stations	Estimated cost without land and taxes (Rs/Crore)	Estimated cost with all Taxes & Land cost (Rs/Crore)
Charbagh to Vasantkunj (Phase 1B)	11.165	12	3993.70	5034.55

20.1 Investment Cost

The estimated cost includes an amount of Rs.4.69 Crores as one-time charges towards cost of weapons, barricades and hand held & door frame metal detector machine etc. However, the recurring cost towards salary and allowances of security personnel have not taken in to account in the cost calculation since providing required security at metro stations shall be the responsibility of State Police.

For the purpose of calculating the Financial Internal Rate of Return (FIRR), the completion cost with all taxes has been calculated by taking escalation factor of 5% per annum on all items except Land.

The taxes and duties consist of Customs Duty (CD) and Goods & Services Tax (GST). It is assumed that the Metro Project will be eligible for availing concessional project import

duty under Chapter 98.01 of the Customs Tariff Act. The effective Customs Duty (CD) rate under project import scheme works out to 24.49% {Basic CD @ 5.5%, IGST @ 18% and cess} on the imported portions. The GST rate on supply of indigenously manufactured items and services has been considered @ 18% (CGST & SGST @ 9% each).

It is assumed that the construction work will start on 01.01.2023 and is expected to be completed by 30.06.2027 with Revenue Opening Date (ROD) as **1st July 2027** for the corridor. The total completion costs duly escalated and shown in the table 0.27 have been taken as the initial investment.

Table 27 - Year –wise Investment

Figures in Rs. Crore

Financial Year	Estimated Cost including cost of land and taxes at April 2022 Price Level	Completion Cost including cost of land and taxes
2022-2023	251.73	262.15
2023-2024	1,006.91	1,078.36
2024-2025	1,258.64	1,410.47
2025-2026	1,258.64	1,476.11
2026-2027	1,006.91	1,236.03
2027-2028	251.73	323.48
Total	5034.55	5786.60

20.2 Additional Investment

Total investment provided in the FIRR calculation towards requirement of additional rolling stock duly escalated @5% PA is placed in table below: -

Table 28 Additional Investment towards Rolling Stock

Financial Year	No. of Cars	Amount (Rs. Crore)
2030-31	6	96.86
2041-42	9	248.49
Total	15	345.35

20.3 Fare Structure

The fare structure of Lucknow Metro is divided into 7 zones based on number of stations travelled. The existing fare under each zone has been escalated @ 10% once in two years on the existing fare structure considering the increase in the Consumer Price Index (CPI) and input costs of operation as proposed by Lucknow Metro Rail Corporation Ltd. (LMRC) vide letter No. 422/LMRC/Adv/C/E-W Corr./Rev/2016 dated 12.03.2018. The existing and proposed fare structure in FY 2027-28 with an escalation @ 10% is shown in the table below:

Table 29: Fare Structure (Rs.)

Zone	No. of Stations Travelled	Fare Structure	Fare Structure in 2027
Zone 1	1 Station	10	13
Zone 2	2 Stations	15	19

Zone	No. of Stations Travelled	Fare Structure	Fare Structure in 2027
Zone 3	3-6 Stations	20	25
Zone 4	7-9 Stations	30	38
Zone 5	10-13 Stations	40	51
Zone 6	14-17 Stations	50	63
Zone 7	18 and above Stations	60	76

20.4 Non Fare Box Revenue

- **Income from property Business and Advertisement** - Other revenues from Property Business and advertisement have been assumed @ 20% of the fare box revenues during operations. Apart from development of property on metro stations and depot it is possible to raise resources through leasing of parking rights at stations, advertisement on trains and tickets, advertisements within stations and parking lots, advertisements on viaducts, columns and other metro structures, co-branding rights to corporate, naming rights, film shootings and special events on metro premises.
- **Non Fare Box Revenue from Transit Oriented Development (TOD) and Value Capture Financing (VCF)** – GoUP may ensure legal framework for flow of adequate revenue generated from VCF to UPMRC to maintain long term financial viability of the project. Total revenue from VCF considered in FIRR calculation is Rs.683.86 crores spread in 25 years i.e. 5% in first 5 years, 50% in next 10 years and balance 45% in the last 10 years. Annual escalation considered for VCF is 3% p.a.

Income from cess on Property tax and Stamp duty – The Government of Uttar Pradesh may explore the possibility of generating revenue from cess on Property tax and stamp duty to meet out the debt obligations during the operation.

20.5 Financial Internal Rate of Return (FIRR)

The Financial Internal Rate of Return (FIRR) obtained for 30 years life cycle business model including construction period without additional PD income and with additional PD income is **3.91%** and **11.02%** respectively.

The various sensitivities with regard to increase/decrease in capital costs, O&M costs and revenues with and without additional PD income are placed in **Tables below**:

Table 30.1 –FIRR Sensitivity without additional PD Income

CAPITAL COST			
20% increase in capital cost	10% increase in capital cost	10% decrease in capital cost	20% decrease in capital cost
2.70%	3.27%	4.62%	5.45%
REVENUE			
20% decrease in Fare Box revenue	10% decrease in Fare Box revenue	10% increase in Fare Box revenue	20% increase in Fare Box revenue
1.70%	2.88%	4.81%	5.63%
O&M COST			
10% increase in O&M cost		10% decrease in O&M cost	
3.43%		4.35%	

Table 30.2 –FIRR Sensitivity with additional PD Income

CAPITAL COST			
20% increase in capital cost	10% increase in capital cost	10% decrease in capital cost	20% decrease in capital cost
9.89%	10.43%	11.67%	12.41%
REVENUE			
20% decrease in Fare Box revenue	10% decrease in Fare Box revenue	10% increase in Fare Box revenue	20% increase in Fare Box revenue
10.33%	10.68%	11.35%	11.68%
O&M COST			
10% increase in O&M cost		10% decrease in O&M cost	
10.85%		11.18%	

These sensitivities have been carried out independently for each factor.

20.6 Financing Options

Objectives of Funding: - The objective of funding metro systems is not necessarily enabling the availability of funds for construction but coupled with the objective of financial closure are other concerns, which are of no less importance: -

- Ensuring low Project cost
- Ensuring debt funds at low rates of interest
- Creating financially self-sustainable system in the long run by
 - Low infrastructure maintenance costs
 - Longer life span
 - Setting fares which minimise dependence on subsidies
- Recovering returns from both direct and indirect beneficiaries

Rail based mass transit systems are characterised by heavy capital investments coupled with long gestation period leading to low financial rates of return although the economic benefits to the society are immense. Such systems generate externalities, which do not get captured in monetary terms and, therefore, do not flow back to the system. However, experience all over the world reveals that both construction and operations of metro are highly subsidised. Government involvement in the funding of metro systems is a foregone conclusion. Singapore had a 100% capital contribution from the Government, Hong Kong 78% for the first three lines and 66% for the later 2 lines. The Delhi, Chennai and Bengaluru metros are also funded with a mixture of Equity and Debt (ODA) by GOI & concerned State Governments. This reflects the necessity and importance of Government funding to the metro rail projects.

20.7 Alternative Models of Financing

The financing option shall depend upon selection of the dedicated agency created to implement the Project. The prominent models are:

- (i) Special Purpose Vehicle under the State Government Control (Delhi Metro Rail Corporation /Bangalore Metro Rail Corporation /Chennai Metro Rail Corporation/Mumbai Metro Rail Corporation/Lucknow Metro Rail Corporation)
- (ii) Design-Build-Finance-Operate-Transfer (DBFOT), and

(iii) Public Private Partnership (PPP)

SPV Model: - A separate SPV in the name of Uttar Pradesh Metro Rail Corporation Ltd. (formerly Lucknow Metro Rail Corporation Ltd.), a Joint Venture Company of Government of India and Government of Uttar Pradesh is already in existence and executing the operation & maintenance of Phase-IA of Lucknow Metro project. The funding pattern under the SPV model is placed in table given below:

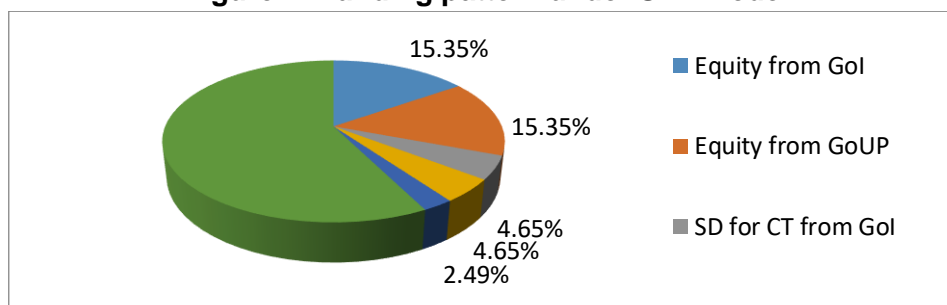
Table 31 - Funding pattern under SPV model

Particulars	With Taxes & Duties	
	Amount	% of contribution
Equity By Govt. of India (GOI)	769.59	15.35%
Equity By Government of Uttar Pradesh (GOUP)	769.59	15.35%
Subordinate Debt for Central Taxes by GOUP (50%)	233.38	4.65%
Subordinate Debt for Central Taxes by GOI (50%)	233.38	4.65%
Contribution by Local Authority	125.00	2.49%
Multilateral Loan/Market Borrowing	2883.93	57.51%
Sub-Total	5014.87	100.00%
Land Cost to be borne by GoUP	271.19	
State Taxes to be borne by GoUP	408.22	
Sub-Total	5694.28	
Concessionaire Fund for PPP Component	92.32	
Total Completion Cost	5786.60	
IDC on Loan and Front-end Fees to be borne by GoUP	14.45	
Grand Total	5801.05	

It has been assumed that the Government of Uttar Pradesh will provide the land for construction either free of cost or it shall provide funds in lieu thereof. The Interest Free Subordinate Debt is repayable in 5 equal yearly instalments after repayment of Multilateral Loan.

The funding pattern assumed under SPV model is depicted in the pie chart i.e., Figure 0.2 as under: -

Figure 2: Funding pattern under SPV Model



DBFOT Model: - In this model, the private firm will be responsible for financing, designing, building, operating and maintaining of the entire project for the period of concession. Ownership of the Project shall be transferred to Government after the concession period. The financing model is directly related to selection of a dedicated agency to implement the project. Apart from equity contribution from the promoters, it is assumed that the funding

for the project shall be achieved through market borrowings. The rate of interest on market borrowings is assumed at 12% p.a. and the repayment of the loan will start immediately after the commercial operations and repaid in 10 years. The metro being a social sector Project, not much private parties are available to bid for such a Project. Besides, quite expectedly, the private operator may demand assured Equity Internal Rate of Return (EIRR) in the range of 16% to 18% or a comfort of guaranteed ridership. Viability Gap Funding (VGF) shall be required from Govt. of India as well as Govt. of Uttar Pradesh to ensure an Equity IRR of approx. 16% for the Concessionaire. The funding pattern assumed under this model without additional PD income and with additional PD income is placed in tables given as under:

Table 32.1 Funding pattern under BOT (Without additional PD income)

Particulars	With Taxes & Duties	
	Amount	% contribution
VGF by GOI	1103.08	20.00%
VGF by GOUP	3205.73	58.12%
Equity by Concessionaire	402.20	7.29%
Concessionaire's Debt	804.40	14.58%
Sub-Total	5515.41	100.00%
Land including R&R free of cost by GOUP	271.19	
Sub-Total	5786.60	
Interest during construction (IDC) on Debt to be borne by Concessionaire	241.03	
Total	6027.63	

Table 32.2 Funding pattern under BOT (With additional PD income)

Particulars	With Taxes & Duties	
	Amount	% contribution
VGF by GOI	1103.08	20.00%
VGF by GOUP	1895.73	34.37%
Equity by Concessionaire	838.87	15.21%
Concessionaire's Debt	1677.73	30.42%
Sub-Total	5515.41	100.00%
Land including R&R free of cost by GOUP	271.19	
Sub-Total	5786.60	
Interest during construction (IDC) on Debt to be borne by Concessionaire	562.66	
Grand Total	6349.26	

20.8 Recommendations

The FIRR of Phase-1B corridor without and with additional PD income is 3.91% and 11.02% respectively and is financially viable. However, FIRR is not the only criteria to take up the metro Project. As per Metro Rail Policy 2017, issued by the Ministry of Housing and Urban Affairs (MoH&UA), GOI, apart from financial viability, the economic and social viability of the Project is also required to be assessed. The Economic Internal Rate of Return (EIRR) for any metro rail Project proposal should be 14% and above for consideration of its approval.

The total fund contribution of GOI & GOUP under various alternatives is tabulated in table 33 below.

Table 33: Fund Contribution

Rs. In crore

Particulars	SPV Model	DBFOT Model without Additional PD Income	DBFOT Model with Additional PD Income
GOI	1002.97	1103.08	1103.08
GOUP	1682.38	3476.92	2166.92
Total	2685.35	4580	3270

Considering the difference in total contribution by both the Governments, it is recommended to implement the Project under SPV model as per the funding pattern given in Table 0.31.

21 ECONOMIC APPRAISAL

Economic benefits are social and environmental benefits which are quantified and then converted into money cost and compared to the cost of construction and maintenance for deriving Economic Internal Rate of Return (EIRR). When actual revenue earned from fare collection, advertisement and property development are discounted against construction and maintenance cost, interest (to be paid) and depreciation cost, Financial Internal rate of Return (FIRR) is obtained. Therefore, EIRR is viewed from socio-economic angle while FIRR is an indicator of pure financial profitability and viability of any project.

Economic appraisal of a project starts from quantification of measurable economic benefits in economic money values, which are basically the savings of resource cost due to introduction of the Metro system. Economic savings are derived from the difference of the cost of the same benefit components under 'with' and 'without' Metro system.

The sources from where economic savings occur are identified first. Although there are many kinds of primary, secondary and tertiary benefits, only the quantifiable components can be taken to measure the benefits. These components are quantified by linking with the number of passengers shifted and the passenger km saved by the trips which are shifted from road/rail-based modes to Metro system. It may be observed that first three (no 3-5, given in the table below) are direct benefits due to shifting of trips to Metro, but other secondary benefit components are due to decongestion effect on the road, reduction of emission, accident, saving of fuel and time by remaining road passengers and road maintenance cost.

Cost components are first estimated applying market values then distributed year wise after applying escalation factors. Tax components are also added for arriving at real completion cost. For financial analysis these exercises are necessary, but for economic analysis all additional cost components are to be removed.

Values of Benefit components are mostly Economic values except fuel and vehicle maintenance cost which are estimated from market cost. Economic factors as per Appraisal Guidelines for Metro Rail Project Proposals, 2017; which are used for each cost/benefit component are also given in the table below. Overall economic value of benefit components is 97.38% of the actual estimated value whereas overall economic value of cost components is 85.00% of the actual estimated cost for the study corridor.

Table 34: Cost/ Benefit Components due to Metro

S. No.	Cost/ Benefit Components	Economic Factors
1	Construction Cost	83%
2	Maintenance Cost	87%
3	Annual Time Cost Saved by Metro System Passengers	100%
4	Annual Fuel Cost Saved by Metro System Passengers	90%
5	Annual Vehicle Operating Cost Saved by Metro System Passengers	90%
6	Emission Saving Cost	100%
7	Accident Cost Saving	90%
8	Annual Time Cost Saved by Road Passengers	100%
9	Annual Fuel Cost Saved by Road Passengers	90%
10	Annual Infra Structure Maintenance Cost	87%

Source: Appraisal Guidelines for Metro Rail Project Proposals (MRPs), 2017

21.1 Economic Performance Indicators

After generating the cost and benefit stream table, values of economic indicators are derived and are given in the table below. Project period is 2022 to 2051. On the basis of economic cost, EIRR is 14.69%, B/C Ratio is 3.25 and NPV is Rs. 1,016 Crore. As per the Appraisal Guidelines for Metro Rail Project Proposals, a project is considered viable when the ENPV is 14% or above.

Table 35 - Economic Indicator Values (on 2051-52)

Economic Indicators	Economic Price
Total cumulative cost in Rs.	12,697
Total cumulative benefit in Rs.	41,317
Benefit Cost Ratio	3.25
NPV	1,016
EIRR	14.69%

22 TOD & VCF

India is urbanizing at a rapid pace with urban population rising much faster than its total population. Level of urbanisation has increased from 17.29% in 1951 to 31.6 % in 2011. India is competing with the fastest growing countries in the world. The urban population in India, which is nearly 377 million is poised to grow to 600 million by 2030. The urban population of India contributes 65% of country's Gross Domestic Product (GDP), which is expected to grow to 75% in the next 15 years. With India witnessing a high economic growth, Indian cities are growing at a rate faster than other cities in the world.

Urbanization has led to horizontal growth of the cities thus creating problems of urban sprawl. This has resulted in increase of trip lengths and higher usage of private vehicles, problems of pollution and increased demand of infrastructure. To address these issues, many cities have strengthened their public transport by developing mass rapid transit systems (MRTS) such as metro rails and Bus Rapid Transit Systems (BRTS). It is however, important to efficiently use these systems by integrating the land use with the transport infrastructure to make the cities livable, healthy and smart.

New Metro Rail Policy 2017 emphasizes that "Transit Oriented Development (TOD)" with proposed intermodal integration, universal accessibility, adequate walkways and pathways for Non-Motorized Transport (NMT), stations for public bike sharing, commensurate

parking lots for cycles and personal vehicles, as well as adequate arrangement for receiving and dispatch of feeder buses at all metro stations. The commitment by the State Government to adhere the guidelines issued by the central government w.r.t. TOD and adoption of VCF framework should be an integral part of the project proposal. The commitment should inter alia include commitment of transfer of the financial benefits accruing in the influence zone of the metro alignment on account of the TOD policies and VCF framework directly to the Special Purpose Vehicle (SPV)/agency implementing the metro rail project. The project report should specify the proposed quantum of such benefits being transferred to the project. This requirement would form a mandatory part of all metro rail project proposals.

Commercial/property development at stations and on other urban land has been used as a key instrument for maximizing revenues in metro rail/ railway systems in cities around the world. Notable examples are Hong Kong and Tokyo. Metro rail implementing agencies should endeavor to maximize revenue through commercial development at stations and on land allocated for this purpose.

The McKinsey report has estimated that around Rs. 325,000 crore of urban infrastructure investments are required annually. The High Powered Expert Committee Report 2011 projects urban infrastructure requirement at 0.75%, which will increase to 1.5% of the GDP by 2032 (Rs. 97,500 crore to Rs. 195,000 crore annually). Presently, national Urban Missions are investing about Rs. 32,500 crore annually leading to an investment gap of nearly Rs. 65,000 crore.

Ordinarily, own sources of revenue in ULBs can be classified into three categories, (a) taxes levied by the municipality, (b) user charges levied for provision of civic services, and (c) fees and fines levied for performance of regulatory and other statutory functions. Octroi, which was one of the main sources of own income of the ULBs has been abolished, resulting in a serious dent on ULBs' resources. On the other hand, property tax, which is at present the main source of own resources is underused and has issues related to its narrow tax base, exemptions, etc. Furthermore, the State Governments are increasingly fixing the rate for services being provided by ULBs, even though these functions are mandated to be performed by ULBs under the 74th Constitutional Amendment. Overall, this has led to increased dependency on State Governments and reduction in efforts made by ULBs to mobilize resources.

Land is the most fundamental asset that is owned and managed by the States/ULBs and is a resource to generate revenues. Traditionally, States/ULBs have relied on direct sale of lands to raise funds, which is a less efficient form of resource mobilization, as compared to value capture. It is not that States/ULBs have not used Value Capture methods to raise resources. In fact, States/ ULBs are using different Value Capture methods, especially in urban areas, such as impact fee, betterment charges, etc. For example, the Mumbai Metropolitan Region Development Authority (MMRDA) and City and Industrial Development Corporation Limited (CIDCO) of Maharashtra have used different Value Capture methods to finance infrastructure development in the urbanizing areas. Similarly, Haryana and Gujarat have successfully used land pooling schemes, where owners agree to exchange their lands for infrastructure services.

While States/ULBs have been developing and using some of the Value Capture Finance (VCF) methods, the Central Government Ministries/Departments have not yet

systematically used VCF methods as a revenue generation tool. One reason is that land is a State subject and VCF Policies have to be made by the concerned State Governments. A promising way is to link the location and construction of the projects by the Central Government Ministries and their agencies with the existing VCF Policy of the generated within the area of influence of the projects. Alternatively, the State VCF Policy could be revised whenever new projects are being planned in order to capture full value being generated due to proposed investment in projects.

There is an increasing focus on creation of infrastructure by Ministries/Departments of Government of India and their agencies. For example, the Ministry of Ports is constructing a series of projects as part of the Sagarmala program. Moreover, the Delhi-Mumbai Industrial Corridor (DMIC) is being developed by the Department of Industrial Policy and Promotion (DIPP) and the Metro Rail projects by the Ministry of Urban Development (MoUD). All these projects have an area of influence in which they lead to increase in value of lands and buildings, creating opportunities for using value capture methods to mop up additional resources.

22.1 Objectives of TOD Indicators

TOD integrates land use and transport planning to develop compact growth centers within the influence zone of 500-800 m on either side of the transit stations i.e. areas within walking distance, to achieve the following objectives:

- To promote the use of public transport by developing high density zones in the influence area, which would increase the share of transit and walk trips made by the residents/workers to meet the daily needs and also result in reduction in pollution and congestion in the influence area.
- To provide all the basic needs of work/ job, shopping, public amenities, entertainment in the influence zone with mixed land-use development which would reduce the need for travel.
- To establish a dense road network within the development area for safe and easy movement and connectivity of NMT and pedestrians between various uses as well as to transit stations.
- To achieve reduction in the private vehicle ownership, traffic and associated parking demand.
- To develop inclusive habitat in the influence area so that the people dependent on public transport can live in the livable communities within the walkable distance of transit stations.
- To integrate the Economically Weaker Sections (EWS) and affordable housing in the influence zone by allocating a prescribed proportion of built-up area for them in the total housing supply.
- To provide all kinds of recreational/entertainment/ open spaces, required for a good quality of life in the influence area.
- To ensure development of safe society with special attention to safety of women, children, senior citizen and differently abled by making necessary amendments to the building bye laws.

- To prevent urban sprawl by accommodating the growing population in a compact area with access to the transit corridor, which would also consolidate investments and bring down the infrastructure cost for development.
- To reduce carbon footprints by shifting towards environmentally friendly travel options for the line haul as well as for access and egress trips.

23 CYBER SECURITY

23.1 Introduction

Strong cyber security is an important component of Digital Strategy enabling the effective use of emerging technologies and ensuring confidence in the services.

Cyber Security is becoming more important as cyber risk continues to evolve. It is becoming more challenging due to increased thrust on distribution which is increasing cyber connectivity.

Cyber security is a complex and multifaceted issue, where details relating to vulnerabilities, threat, risk, mitigation, or other factors are likely to be highlighted contextually to a specific organization and its operations.

23.2 Scope

The scope was designed to focus on metro-specific systems and cyber problems which could cause major (or exacerbate) disruption. Metro Rail system can be categorized into OT (Operation technology) system and IT (Information Technology) system.

- OT (Operation technology) system includes SCADA, CBTC, passenger information, maintenance management and other proprietary systems at the heart of metro operation.
- Information Technology (IT) systems include corporate computer networks, fare collection system, payment systems and ERP which are not unique to metros and general in nature.

23.3 Overview of Domain of Cyber Security

- Data Security - Protection of data from unauthorized, accidental or intentional modification, destruction, or disclosure.
- Physical Security - It describes security measures that are designed to deny unauthorized access to facilities, equipment and resources and to protect personnel and property from any damage or harm.
- Identity, Access and Privilege Management - It is about safeguarding data by protecting who has access to the systems; and what they are allowed to do.
- Application Security - It involves suitable application security measures to protect information of the organization which can be compromised or exposed if applications are not securely designed, developed, tested, configured and deployed.
- Network and Infrastructure Security - It is used to manage and restrict access to the network, application security, email security, firewalls, antivirus, intrusion prevention systems, and VPNs (Virtual Private Network) etc.
- Virtualization Security - It describes collective measures, procedures and processes that ensure the protection of a virtualized infrastructure / environment.
- Governance - It describes various security measures to ensure timely identification, prioritization and remediation of the security risks. Further, it lists guidelines for continuous monitoring of the implemented cyber security processes.

24 IMPLEMENTATION PLAN

On receipt of the Detailed Project Report, following action will be required for implementing the Lucknow Metro Phase-IB i.e. E-W corridor:

- Approval to the Detailed Project Report to be taken from Uttar Pradesh State Government (Cabinet approval).
- The DPR to be forwarded to the Ministry of Urban Development(GOI), NITI Aayog and Finance Ministry with the request for approving the Metro project and for financial participation through equity contribution in the UPMRC.
- Signing of an MOU between Uttar Pradesh State Government and Government of India giving all details of the Joint Venture bringing out the financial involvement of each party, liability for the loans raised, the administrative control in the SPV, policy in regard to fare structure, operational subsidy, if any, etc.
- UPMRC Ltd., the Special Purpose Vehicle (SPV) already set up for implementing the project and for its subsequent Operation & Maintenance.
- The Metro Railways (Amendment) Act-2009 can readily be made use of for implementation of Lucknow Metro.
- Request to GOI for a notification for making the Metro Railways (Amendment) Act 2009 applicable to Lucknow Metro if earlier it is available only for Phase-I A.
- In view of new Metro Rail Policy 2017, the State Government should formulate the funding plan unbundling of PPP component for executing this project and get the same approved by the Government of India. The loan portion of the funding will have to be tied up by State Government in consultation with the Government of India.
- The Government should freeze all developments along the corridors suggested. For any constructions within 50 m. of the proposed alignment a system of No Objection Certificate should be introduced so that infructuous expenditure at a later stage is avoided.
- In view of new metro policy Unified Metropolitan Transport Authority (UMTA) should be formed within one year of submission of proposal of any metro project to GoI.

24.1 Implementation on Delhi Metro/Chennai Metro Model

UPMRC has to take action for appointment of General Consultants for project management including preparation of tender documents. Till the General Consultants are in position, UPMRC should appoint an interim Consultant for all preliminary and enabling jobs such as land acquisition, detailed design of civil structures, utility diversions, etc.

The proposed date of commissioning of the corridor with suggested dates of important milestones is given in Table 0.36.

Table 36 - Implementation Schedule through DMRC model

S. No.	Item of Work	Completion Period
1	Submission of Final DPR to State Govt.	D
2	Approval of DPR by State Government	D + 0.5month
3	Submission of DPR for Approval of Ministry of Urban Development (MoUD).	D + 1month
4	Appoint interim Consultant for preliminary works	D + 3months
5	Approval of Project by Public Investment Board	D +3months
6	Sanction of Project by Government of India	D +6months

S. No.	Item of Work	Completion Period
7	Appoint General Consultant	D +9months
8	Tendering, Execution of works and Procurement of equipments, coaches and installations	D +58months
9	Testing and Commissioning	D +60months
10	Revenue Operation	D +60months

24.2 Organisational Set-up of UPMRC

UPMRC has implemented Lucknow Metro Phase-I A and is already operating and maintaining it i.e. N-S corridor. Lucknow Metro Phase-I B i.e. E-W corridor may also be implemented by the same organisation by augmenting the man power. However, it would be worthwhile considering a stake of the local body like UPSIDC, LDA, Lucknow Nagar Nigam, etc.

25 CONCLUSIONS AND RECOMMENDATIONS

25.1 Lucknow over the last few years has been growing with a spread of around 25 km radius. The major traffic attracting zones i.e. offices and commercial complexes are located in the central part of the city thereby congesting the central area. The growth of city in recent years has resulted in increased transport demand and motorized vehicles. However transport infrastructure in the city has not grown correspondingly and is inadequate to accommodate the traffic. The registered vehicles have grown at a rate of 40,000 vehicles per year in the past decade. The roads and parking spaces in the city have become extremely congested, especially during peak hours. The share of personalized modes has been increasing continuously due to inadequate supply of Public Transport along with its inadequate level of service.

At present the public bus transportation in the city operates with a fleet of 104 buses. The available multiple modes of public transport in the city are taxis, city buses, cycle rickshaws, auto rickshaws. As per 2021 Master Plan it is estimated that around 13.5 lakh residents will need public transport daily. Given the number of buses and the constraints of road network, it seems that it will not be possible to meet the travel demand through the current fleet of public buses or private taxis and three wheelers. The major traffic generating areas in Lucknow are Railway Station, Charbagh Bus Stand, Vidhan Sabha, Secretariat and the commercial areas in the central part of the city. Also with the absence of proper public transport system, many personalized modes have emerged in the city. Hence it was decided to plan for suitable mass transportation system to cater the future demand.

Studies have brought out that a Light Capacity Metro System consisting trains of three car length will be adequate to meet not only the traffic needs for the present but for the future 30 years also. A Light Metro System for E-W corridor from Charbagh to Vasantkunj at a completion cost of **Rs. 5801.05 Crores** (including Cost of Land, all taxes & duties, PPP Component and IDC) to be made operational as recommended in implementation chapter.

25.2 After examining the various options for execution of Lucknow Metro Project Phase-I B, it has been recommended that the project should be got executed through UPMRC Ltd. Implementation of this corridor is necessary in view of getting a metro route which will be complimenting to N-S Corridor. Moreover, ridership of N-S Corridor was projected considering this E-W Corridor in place and vice-versa. Hence, it is recommended to

implement this Corridor on priority basis.

- 25.3** 50% of the Central Taxes will be paid by GOI as subordinate Debt and balance 50% will be paid by the concerned State Government.
- 25.4** While the Financial Internal Rate of Return (FIRR) for the project has been assessed as **3.91% (without additional PD income) and 11.02% (with additional PD income)** and the Economic Internal Rate of Return (EIRR) works out to **14.69%**. Therefore, it is recommended to implement this corridor under SPV model, however AFC system will be provided through PPP mode.



UTTAR PRADESH METRO RAIL CORPORATION LIMITED

**LKGC (02)-01: GENERAL CONSULTANCY SERVICES
FOR LUCKNOW MRTS PROJECT, PHASE- 1B**

TENDER NO: LKGC (02)-01

TENDER DOCUMENTS

VOLUME 5

PRICING DOCUMENT/BOQ

**UTTAR PRADESH METRO RAIL CORPORATION LTD.
Administrative Building, Vipin Khand, Gomti Nagar
Near Dr. Bhimrao Ambedkar Samajik Parivartan Sthal,
Lucknow-226010, Uttar Pradesh, India**

TENDER NO: LKGC (02)-01

TENDER DOCUMENTS

VOLUME 5

PRICING DOCUMENT/BOQ

TABLE OF CONTENTS

S.No.	DESCRIPTION	PAGE No.
1	Preamble	3
2	Appendix –I Letter for submission of Financial Proposal	6
3	Appendix – II Summary of cost in Indian Rupees Only	7
4	Appendix – III Remuneration and Associated costs of GC Professionals	8
5	Appendix – IV Establishment Costs	9
6	Appendix – V Reimbursable Costs	10
Annexure 1		
7	I. Minimum Manpower required	11
8	II (a): Tentative Organization Chart for General Consultant	12
9	II (b): Tentative minimum organization chart for civil works	13
10	III. Minimum Facilities to be provided	14
11	IV. General Minimum Eligibility Criteria	19
12	V. Broad Classification of departments and positions	21

Preamble

A. The Pricing Document shall be read in conjunction with TOR, and other provisions of the Tender Documents, including Annexures, Appendices, Addendums / Corrigendum, if any and any other document forming part of the Tender Document. The financial proposal shall list all costs associated with the assignment. These include remuneration for staff (foreign and local, in the field and at headquarters), accommodation (per diem, housing, office space), transportation (international and local, for mobilization and demobilization), and equipment (vehicles, office equipment, furniture and supplies), printing of documents etc. The financial proposal should be prepared using, but not limited to, the formats attached in Appendix- I to V. The details of minimum such facilities to be provided in Annexure-I of Pricing Document.

The financial proposal must also take into account, all the tax /cess liabilities (except GST) and the cost of insurance of the general consultant both in India and abroad for the duties & work performance, related to this project. No tax liability (other than Goods & Services Tax) shall be borne by UPMRC. Goods & Services Tax as applicable on this consultancy contract is payable by UPMRC subject to production of proof. Further the cost of professional indemnity Insurance Policy for consultant's staff performance both in India and abroad for this project will be borne by general consultant. This professional indemnity insurance will be taken by general consultant and shall be in addition to the performance guarantee deposit/bank guarantees. However, any concession/exemption in the taxes, duties and cesses as are extended shall be passed on to UPMRC.

Tenderer's special attention is drawn towards Annexure-I of Pricing Document, Clause 9 & Clause 10 of General Conditions of Contract (GCC) and Clause 5.7 of Terms of Reference (TOR).

B. Consultants are requested to quote their rates inclusive of all taxes (except GST), duties, levies, cess, royalties, etc. and all other incidental charges including custom duty if any, required to fulfil the tender conditions. The Consultant is solely and directly responsible and liable for payment of all types of taxes, duties, levies, royalties etc. or any other statutory payments, by whatever name it is known, to the respective statutory Authorities/Departments. The Employer will not in any case be liable to or responsible for such payments to or any demand from the Statutory Authorities.

All costs (local and foreign) of the General Consultant should be considered and quoted accordingly in their proposal. The consultant should quote costs both for Indian staff/experts and expatriates and other expenses clearly in local currency (in Indian Rupees only) only. Tenders will be compared in Indian Rupees only. The final negotiated price will be payable in Indian Rupees only.

C. Goods and Services Tax (GST) is excluded in the contract price. The consultants shall maintain details of GST paid to 'Trade and Taxes' department and the same shall be reimbursed by employer based on submission of:

(i) Monthly Return of GST (GSTR-3B) of the consultants for the relevant period/periods along with detailed statement (GSTR 1 & GSTR 2) and copy of challans in regard to deposit of taxes for Employer project.

(ii) Certificate of the Chartered Accountant in regard to turnover of the consultants relating to Employer project and GST paid/adjusted through Input Tax Credit.

D. Any taxes, duties, levies cess, which are required / may be required to be paid by the

Employer in the fulfilment of the tender condition including on reverse charge basis should also be included by the tenderer in the Contract Price.

- E.** Taxes and duties paid to the sub-vendors shall not be paid separately and therefore are to be included in the price.
- F.** Tenderers shall submit an undertaking that neither they nor their sub-consultants / sub-vendors shall avail the deemed export benefit as the same shall be availed directly by Employer and retained.
- G.** All payments to both resident and non-resident consultants, sub-consultants etc. will be subject to deduction of tax/cess at source in accordance with the provisions of the Indian Income Tax Act and any other applicable law.

**I- Remuneration and Associated Cost of GC professionals & OVERHEAD-1 in
Appendix-III of Pricing Document**

- 1. For the Professionals (Key Staff and others), minimum eligibility viz. Educational Qualification, Experience etc is detailed below in Annexure 1 of Pricing Document.
- 2. No Price Variation is applicable.
- 3. "Overhead 1" of Pricing Document/ BOQ shall broadly cover Duty travel to site, cellular connectivity including cellular internet facility, Accommodation and Mobilization/Demobilization including Airfare, Luggage etc (for expats only).

However, the "Overhead 1" shall be deemed to cover all the facilities (minimum or else) that are required to be provided to the professionals for their mobilization - demobilization, conveyance, travel expenses domestic/overseas, site visits, duty travel to site and all other items of work, which even if not specifically mentioned, but required to be performed in order to complete the scope of work professionally and efficiently as per tender conditions/requirements.
- 4. An Indicative minimum facilities required to be provided by the GC is specified in Annexure 1 of Pricing Document.
- 5. Nothing extra than the quote shall be payable for performing the scope of work and conducting their businesses as per the tender conditions.
- 6. "Remuneration" and "Overhead 1" of Pricing Document/ BOQ of only the approved (as per the tender conditions) positions and professionals deployed, only for the duration of deployment at the designated places of deployment shall be payable.
- 7. "Remuneration" shall be payable only on the submission of monthly attendance record as specified in the tender conditions and for the period of presence only.
- 8. Maximum 100% of the quoted rate for "Overhead 1" shall be payable, subject to the cost actually incurred, only on the submission of documentary proof (viz. Invoices etc.) for Duty travel to site, cellular connectivity including cellular internet facility, Accommodation and Mobilization/Demobilization including Airfare, Luggage etc (for expats only) for the professionals deployed, only for the duration of deployment at the designated places of deployment.
- 9. Prior approval of UPMRC regarding Positions to be mobilized along with the facilities to be provided is needed.

II- Establishment Costs and OVERHEAD-2 in Appendix-III of Pricing Document

1. No Price Variation is applicable.
2. "Overhead 2" of Pricing Document/ BOQ shall broadly cover Rent for office spaces, Consumption of Power charges, Power Backup Charges, water charges, Security expenditures, House Keeping expenditures, Support Staff deployment expenditures, Office supplies-stationery, PPE safety kits, Transport facility, Office furniture including storage spaces, IT and Office Equipment - Servers, Software, license fees, printers, laptops, desktops plotters and including AMCs, Internet connection etc., Reports and Document Printing charges.
3. However, the "Overhead 2" of Pricing Document/ BOQ shall be deemed to cover all costs associated with all the facilities (minimum or else) that are required to be provided by the GC, which even if not specifically, mentioned, but required to be provided to ensure efficient operation and fulfil all its obligations/duties as per the tender conditions.
4. An Indicative minimum facilities required to be provided by the GC is specified in Annexure 1 of Pricing Document.
5. Nothing extra than the quote above shall be payable for performing the scope of work and conducting their businesses as per the tender conditions.
6. Maximum 100% of the quoted rate for "Overhead 2" of Pricing Document/ BOQ shall be payable, subject to the cost actually incurred, only on the submission of documentary proof (viz. Invoices etc) for Rent for office spaces, Consumption of Power charges, Power Backup Charges, water charges, Security expenditures, House Keeping expenditures, Support Staff deployment expenditures, Office supplies-stationery, PPE safety kits, Transport facility, Office furniture including storage spaces, IT and Office Equipment - Servers, Software, license fees, printers, laptops, desktops plotters and including AMCs, Internet connection etc., Reports and Document Printing charges.
7. Prior approval of UPMRC regarding Positions to be mobilized along with the facilities to be provided is needed.

III- Reimbursable Cost in Appendix-III of Pricing Document

1. No separate Rates are to be quoted by the tenderer. Ceiling limit of 1% of combined cost of "I – Remuneration and associated cost of GC professionals and overhead-1 in Appendix-III of pricing document" and "II – Establishment costs and overhead-2 in Appendix-IV of pricing document", excluding GST shall be applicable.
2. It shall be payable on actual and only on the submission of documentary proofs (viz. Invoices etc) duly substantiated by GC's PD.
3. Prior approval of UPMRC of the work along with budget shall be mandatory.
4. Consultant shall notify the employer as soon as cumulative charges incurred have reached 75% of the ceiling.

APPENDIX-I

LETTER FOR SUBMISSION OF FINANCIAL PROPOSAL

FROM

TO

Sir,

Subject: General Consultancy Services for Lucknow Metro Rail Project.

Regarding Financial Proposal

I/We_____Consultant/consultancy firm herewith enclose Financial Proposal for selection of my/our firm/ organization as General Consultant for Lucknow Metro Rail Project.

Yours faithfully,

Signature_____

Full name_____

Designation_____

Address_____

(Authorized Representative)

Note : Appendix II, III, IV & V have been attached in Excel Format in Financial Package. Bidders are advised to quote their offers in Excel Format in Financial Package only.

Annexure 1 of Pricing Document : I. Minimum Manpower Required				
SN	Position	Designation	Minimum Numbers	Minimum Man-months
1	K1 E	Project Director (EXPAT)	1	50
2	K1D	Dy. Project Director (Civil)	1	50
3	K1D	Dy. Project Director (Systems)	1	50
4	K1 E	Head of Departments (Expat)	0	0
5	K1	Head of Departments	3	118
6	K2	Senior Experts	23	952
7	K3	Experts	37	1406
8	K4	Senior Engineer	58	2088
9	K5	Engineer	44	1545
10	A1	Cad Engineers/Drafters/ Support technical Staffs/Document Controller	5	238
Minimum Total Man-months				6497

Annexure 1 of Pricing Document : II (a). Tentative Organization Chart for General Consultant							
PD (K1-Expat)							
DPD Civil (K1-Local)				DPD Systems (K1-Local)			
1. C&C and Stations Execution (To be headed by K2)		1. Planning & Co-ordination (Interface) Department (To be headed by K1)		1. Traction Department (To be headed by K2)			
2. Tunnel TBM Department (To be headed by K2)		2. Contract, Cost and Finance Department (To be headed by K1)		2. Signalling Department (To be headed by K2)			
3. Safety Department (To be headed by K2)		3. BIM Department (To be headed by K2)		3. Telecom Department (To be headed by K2)			
4. Quality Department (To be headed by K2)				4. AFC Department (To be headed by K2)			
5. Environment & Social Department (To be headed by K2)		Other Support Departments		5. VAC Department (To be headed by K2)			
6. Track Department (To be headed by K2)				6. Illumination, Lift & Escalator Department (To be headed by K2)			
7. Architecture Department (To be headed by K3)				7. Rolling Stock Department (To be headed by K2)			
8. Geotechnical Department (To be headed by K2)							
9. Surveying Department		Testing & Commissioning Department					
		Document Controller Department					
		Admin & Support Staff Department					

Annexure 1 of Pricing Document : II (b). Tentative Minimum Organization Chart for Civil Works

Underground Section																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
---------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Annexure 1 of Pricing Document : III. Minimum Facilities to be Provided	
1.0 Minimum Facilities to be provided by General Consultant	
S. N	Facilities Description
1	The GC office will have its headquarters in Lucknow. The office should ideally be situated within a 5 km radius of the Client Office to ensure proximity to the client's establishment. The GC office will be equipped with power connections, including backup facilities, along with security, housekeeping, and other essential services to maintain a safe, secure, and comfortable working environment. The office infrastructure will include necessary furniture and equipment such as workstations, executive tables, chairs, sofas, conference tables, meeting rooms, and reception desks.
2	Deployment of GC personnel, as approved by the UPMRC, will be required at the GC office and project execution sites. This deployment must include seating arrangements (workstations) and other essential facilities like drinking water and HVAC systems to ensure efficient operations.
3	A biometric or IT-enabled system must be implemented at the designated deployment location to record attendance. The system should automatically capture the date, time, name, designation, and location of deployed personnel, ensuring accuracy without human intervention.
4	The consultant must ensure adequate cellular connectivity, internet access, and any other communication facilities required by deployed personnel to efficiently perform designated tasks. These facilities must meet prevalent industry standards. If specific details are outlined elsewhere in the tender documents, the superior facility will be required.
5	Transport facilities must be arranged for deployed personnel to carry out tasks efficiently. These should also adhere to industry norms, with better provisions taking precedence if specified elsewhere in the tender.
6	Secure storage spaces, such as almirahs, should be provided for storing project documents and records. These must ensure safe, secure, and easily accessible storage during the contract period, with proper handover to designated UPMRC officials afterward.
7	GC Professionals and the GC office must be provided/equipped with IT resources, including laptops, desktops, scanners, printers, plotters, servers, switches, firewalls, and software such as MS Office, AutoCAD, BIM software and setup, antivirus tools, and PDF readers. All necessary IT facilities —including servers, systems, softwares etc - includes license fees, maintenance and renewal costs and must comply with industry standards.
8	Office supplies such as paper, pens, pencils, notebooks, diaries, files, measuring tapes, DVDs, pen drives, hard disks, and other consumables required for efficient task execution must be provided as needed.

9	PPE safety kits, including hard hats, safety glasses, construction vests, safety shoes, earplugs, and gloves etc. must be supplied based on site conditions and work requirements.
10	While the above list covers major facilities, there may be items or services not explicitly mentioned but necessary for efficient work execution per tender conditions. The consultant is required to thoroughly review tender documents to identify such needs. Any additional requirements must be brought to the employer's attention and will be deemed included in the scope. In case of disputes, the employer's decision will be final.
1.1 Minimum Facilities to be provided by GC to each of the Project Execution Sites (designated place of deployment)	
S. N	Facilities Description
1	Deployment of GC personnel, as approved by UPMRC, at the project execution sites. This deployment must include essential facilities like drinking water etc. to ensure efficient operations.
2	A biometric or IT-enabled system must be implemented at the designated deployment location to record attendance. The system should automatically capture the date, time, name, designation, and location of deployed personnel, ensuring accuracy without human intervention.
3	Transport facilities must be arranged for deployed personnel to carry out tasks efficiently. Minimum 01 numbers of vehicle (5 seater Sedan) per project
4	PPE safety kits, including hard hats, safety glasses, construction vests, safety shoes, earplugs, and gloves etc must be supplied based on site conditions and work requirements to all GC Staff deputed or visiting the site.
1.2 Minimum Facilities to be provided by GC at its Office(s).	
S. N	Facilities Description
1	The GC head office should ideally be situated within a 5 km radius of the Client Office to ensure proximity to the client's establishment. The GC office will be equipped with power connections, including backup facilities, along with security, housekeeping, and other essential services to maintain a safe, secure, and comfortable working environment. The office infrastructure will include necessary furniture and equipment such as workstations, executive tables, chairs, sofas, conference tables, meeting rooms, and reception desks.
2	Deployment of GC personnel, as approved by the UPMRC, will be required at the GC offices. This deployment must include seating arrangements (workstations) and other essential facilities like drinking water and HVAC systems to ensure efficient operations.

3	A biometric or IT-enabled system must be implemented at the designated deployment location to record attendance. The system should automatically capture the date, time, name, designation, and location of deployed personnel, ensuring accuracy without human intervention.
4	Transport facilities must be arranged for deployed personnel to carry out tasks efficiently. Minimum 01 number of vehicle (8 seater).
5	Secure storage spaces, such as almirahs, should be provided for storing project documents and records. These must ensure safe, secure, and easily accessible storage during the contract period, with proper handover to designated UPMRC officials afterward.
6	GC Professionals and the GC office must be provided/equipped with IT resources, including laptops, desktops, scanners, printers, plotters, servers, switches, firewalls, and software such as MS Office, AutoCAD, antivirus tools, and PDF readers. All necessary IT facilities and maintenance—including servers, license fees, and renewal costs—must comply with industry standards.
7	Office supplies such as paper, pens, pencils, notebooks, diaries, files, measuring tapes, DVDs, pen drives, hard disks, and other consumables required for efficient task execution must be provided as needed.
8	GC should ensure deployment of adequate number of support staff, administrative staff, housekeeping and pantry services staff to ensure efficient operations. Minimum numbers are specified below: 1. Receptionist - 1 no. 2. IT Manager - 1 no. 3. Office Manager cum HR Manager - 1 no. 4. Cad Operator - 1 no. 5. Logistics, Admin & Transport Manager - 1 no. 6. Office Assistant - 2 nos. 7. Accountants - 2 nos. 8. Secretary - 1 no. for PD, Dy. PD, Departments (K1 and K1 Expat) or as per GC's requirement 9. Document Controller - 2 nos. 10. Office boys - 2 nos.
1.3 Minimum IT and CAD Facilities to be provided by GC.	
S. N	Facilities Description
1	A biometric or IT-enabled system must be implemented at the designated deployment location to record attendance. The system should automatically capture the date, time, name, designation, and location of deployed personnel, ensuring accuracy without human intervention.
2	The GC is responsible for providing IT infrastructure support and facilities, including laptops, desktops, scanners, printers, plotters, servers, switches, firewalls, and software tools such as MS Office, AutoCAD, BIM software and setup, antivirus programs, and PDF readers.

3	IT facilities, including servers, systems, and software, must comply with industry standards and include provisions for license fees, maintenance, renewal costs, as well as safety and security measures.
4	Secure servers and storage spaces must be provided to store documents and records in soft format, ensuring no data loss. Proper handover of these records to designated UPMRC officials must occur after the project period.
5	A document control system must be established to regulate, issue, and maintain the chronological records generated from the work as per tender conditions.
2.0 Minimum Facilities to be provided by GC to its deployed staff	
S. N	Facilities Description
A	PD & Dy. PDs
1	1 no. 8 seater vehicle to each
2	1 no. Secretary to each
3	Adequate cellular connectivity, internet access, and any other communication facilities along with IT resources as laptops etc. required to efficiently perform designated tasks.
4	Office supplies such as paper, pens, pencils, notebooks, diaries, files, measuring tapes, DVDs, pen drives, hard disks, and other consumables required for efficient task execution as needed.
5	All other facilities necessary for their Mobilization and Demobilization including Air fare, luggage, Living Allowance, Rent etc.
B	K1 E (Expatriate Staffs)
1	1 no. 5 seater Sedan to each
2	1 no. Secretary to each
3	Adequate cellular connectivity, internet access, and any other communication facilities along with IT resources as laptops etc. required to efficiently perform designated tasks.
4	Office supplies such as paper, pens, pencils, notebooks, diaries, files, measuring tapes, DVDs, pen drives, hard disks, and other consumables required for efficient task execution as needed.
5	All other facilities necessary for their Mobilization and Demobilization including Air fare, luggage, Living Allowance, Rent etc.
C	K1
1	1 no. 5 seater Sedan to each
2	1 no. Secretary to each

3	Adequate cellular connectivity, internet access, and any other communication facilities along with IT resources as laptops etc. required to efficiently perform designated tasks.
4	Office supplies such as paper, pens, pencils, notebooks, diaries, files, measuring tapes, DVDs, pen drives, hard disks, and other consumables required for efficient task execution as needed.
5	All other facilities necessary for their Mobilization and Demobilization including Air fare, luggage, Living Allowance, Rent etc.
D	K2
1	1 no. 5 seater Sedan on twin sharing basis
2	Adequate cellular connectivity, internet access, and any other communication facilities along with IT resources as laptops etc. required to efficiently perform designated tasks.
3	Office supplies such as paper, pens, pencils, notebooks, diaries, files, measuring tapes, DVDs, pen drives, hard disks, and other consumables required for efficient task execution as needed.
4	All other facilities necessary for their Mobilization and Demobilization including Air fare, luggage, Living Allowance, Rent etc.
E	K3, K4 & K5
1	1 no. 5 seater Sedan on Quadruple sharing basis
2	Adequate cellular connectivity, internet access, and any other communication facilities along with IT resources as laptops etc. required to efficiently perform designated tasks.
3	Office supplies such as paper, pens, pencils, notebooks, diaries, files, measuring tapes, DVDs, pen drives, hard disks, and other consumables required for efficient task execution as needed.
4	All other facilities necessary for their Mobilization and Demobilization including Air fare, luggage, Living Allowance, Rent etc.
F	A1
1	Adequate cellular connectivity, internet access, and any other communication facilities along with IT resources as laptops etc. required to efficiently perform designated tasks.
2	Office supplies such as paper, pens, pencils, notebooks, diaries, files, measuring tapes, DVDs, pen drives, hard disks, and other consumables required for efficient task execution as needed.
3	All other facilities necessary for their Mobilization and Demobilization including Air fare, luggage, Living Allowance, Rent etc.

Annexure 1 of Pricing Document : IV. General Minimum Eligibility Criteria			
SN	Position	Designation	Minimum Eligibility Criteria
1	K1 E	Project Director (Expat)	Overall incharge of GC. Should be a Graduate in Civil Engineering or related. Must have minimum 25 years of Experience in railway or railway related industry, out of which minimum 10 years in Metro/RRTS/High Speed unless otherwise mentioned
2	K1D	Dy. Project Director (Civil)	Overall incharge of GC at the place of posting except for the works assigned to Dy. PD (Systems). Should be a Graduate in Civil Engineering or related. Must have minimum 22 years of Experience in railway or railway related industry, out of which minimum 10 years in Metro/RRTS/High Speed unless otherwise mentioned
3	K1D	Dy. Project Director (Systems)	Overall incharge of GC works as per Scope related to all systems department. Should be a Graduate in Electrical/ Mechanical/Electronics Engineering. Must have minimum 22 years of Experience in railway or railway related industry, out of which minimum 10 years in Metro/RRTS/High Speed unless otherwise mentioned
4	K1 E	Head of Departments (Expat)	Overall incharge of the department. Should be Graduate in respective field unless otherwise mentioned. Must have minimum 18 years of Experience in railway or railway related industry, out of which minimum 7 years in Metro/RRTS/High Speed unless otherwise mentioned
5	K1	Head of Departments	Overall incharge of the department. Should be Graduate in respective field unless otherwise mentioned. Must have minimum 18 years of Experience in railway or railway related industry, out of which minimum 7 years in Metro/RRTS/High Speed unless otherwise mentioned
6	K2	Senior Experts	Deputy/assisting position. He is next in hierarchy and could deputize for K1 whenever required. Should be Graduate in respective field unless otherwise mentioned. Must have minimum 15 years of Experience in railway or railway related industry, out of which minimum 7 years in Metro/RRTS/High Speed unless otherwise mentioned

7	K3	Experts	Experts of the field, capable of working at site as per requirement and should be able to independently Assess, Check & Certify technical requirements and parameters. Graduate Engineer in respective field unless otherwise mentioned with minimum 12 years of Experience or Diploma in respective field unless otherwise mentioned with minimum 15 years of Experience in railway or railway related industry, out of which minimum 5 years in Metro/RRTS/High Speed unless otherwise mentioned
8	K4	Senior Engineer	Senior Engineers of the field, capable of working at site as per requirement and should be able to Check, Certify technical requirements and parameters. Graduate Engineer in respective field unless otherwise mentioned with minimum 07 years of Experience or Diploma in respective field unless otherwise mentioned with minimum 12 years of Experience in railway or railway related industry, out of which minimum 3 years in Metro/RRTS/High Speed unless otherwise mentioned
9	K5	Engineer	Engineers of the field, capable of working at site as per requirement and should be able to Check technical requirements and parameters. Graduate Engineer in respective field unless otherwise mentioned with minimum 05 years of Experience or Diploma in respective field unless otherwise mentioned with minimum 07 years of Experience in railway or railway related industry, out of which minimum 2 years in Metro/RRTS/High Speed unless otherwise mentioned 35% of K5 personnel being operated in a department can be Graduate freshers with experience less than 05 years.
10	A1	Cad Engineers/Drafters/Support technical Staffs/Document Controller	Graduate/Diploma/ITI with minimum 03 years of Experience in CAD Drafting tools (for Cad Drafters) or Document Control (for document controller). Must be conversant in required softwares viz Cad Drafters - Autocad and other drafting tools, Document Control - Iris gio etc.
NOTE:			
1	Specific requirements in addition to above is mentioned in IV. GC Organization - Broad Classification of Departments and Positions		

Annexure 1 of Pricing Document : V. GC Organization - Broad Classification of Departments and Positions				
S.No.	Position	Department	Designation	Specific Requirements
1. PROJECT MANAGEMENT				
(A) PD & DPD's				
1.A.1	K1E		Project Director (EXPAT)	
1.A.2	K1D		Dy. Project Director (Civil)	
1.A.3	K1D		Dy. Project Director (Systems)	
1.A.4	K3		Project Management Officer	
1.A.5	K4		Alignment Engineer	Degree/Diploma in Civil Engineering
(B) Planning & Co-ordination (Interface) Department				
1.B.1	K1	Planning & Co-ordination (Interface)	Chief Planning & Co-ordination (Interface) Expert	Graduate in Civil/Electrical Engineering
1.B.2	K2	Planning	Senior Program Expert	
1.B.3	K2	Interface	Senior Interface Expert	
1.B.4	K3	Interface	Senior Interface Engineer	
1.B.5	K3	Planning	Project Planning Manager (System)	Graduate in Electrical Engineering
1.B.6	K4	Planning	Senior Program Engineer (Civil)	
1.B.7	K4	Planning	Senior Program Engineer (Systems)	
(C) Contract, Cost and Finance Department				
1.C.1	K1	Contract, Cost & Finance	Chief Contract, Cost & Finance Expert	Graduate in Civil/Electrical Engineering or Degree in C.A
1.C.2	K2	Cost & Finance	Senior Cost Control Expert	Graduate in Civil/Electrical Engineering or Degree in C.A
1.C.3	K2	Contract	Senior Contract Expert	Graduate in Civil Engineering
1.C.4	K3	Contract	Contracts Engineer	
1.C.5	K3	Cost & Finance	Sr. Quantity Surveyor	

1.C.6	K4	Cost & Finance	Quantity Surveyor	
(D)BIM Department				
1.D.1	K2	BIM	BIM Expert	Should be Graduate. Must have minimum 15 years of experience in Civil Engineering projects with minimum 10 years of experience in handling BIM related works.
1.D.2	K3	BIM	Senior BIM Manager	Graduate with 12 years of experience or Diploma with 15 years of experience in civil engineering projects with minimum 07 years of experience in handling BIM related works.
1.D.3	K4	BIM	BIM Manager	Graduate with 07 years of experience or Diploma with 12 years of experience in civil engineering projects with minimum 03 years of experience in handling BIM related works and conversant with BIM software, modelling and drafting.
2. CIVIL DEPARTMENT				
(A) Architecture Department				
2.A.1	K3	Architecture	Architectural Expert	Engineering graduates Architecture
2.A.2	K4	Architecture	Sr. Architectural Engineer	Engineering graduates Architecture
2.A.3	A1	Architecture	CAD Engineer -1	Engineering graduates Architecture
(B) Geotechnical Department				
2.B.1	K2	Geotech	Chief Geotechnical Expert	Engineering Graduate in Civil Engineering with Master's degree in Geotechnical Engineering
2.B.2	K3	Geotech	Geotechnical Engineer (I&M)	Degree/Diploma in Civil Engineering
2.B.3	K4	Geotech	Geotechnical Engineer	Degree/Diploma in Civil Engineering

2.B.4	K4	Geotech	Geotechnical Engineer (I&M)	Degree/Diploma in Civil Engineering
(C) Surveying Department				
2.C.1	K4	Survey	Surveying Engineer	
(D) Project Execution (C&C and stations) Department				
2.D.1	K2	Execution- UG	Senior Project Manager C&C	Graduate in Civil Engineering
2.D.2	K3	Execution- UG	Resident Engineer	Degree/Diploma in Civil Engineering
2.D.3	K4	Execution- UG	Supervision Engineer	Degree/Diploma in Civil Engineering
2.D.4	K5	Execution- UG	Engineer	Degree/Diploma in Civil Engineering
(E) Project Execution - Tunnel TBM Department				
2.E.1	K2	Execution- Tunnel	Chief/Senior Project Manager (TBM)	Graduate in Civil Engineering
2.E.2	K3	Execution- Tunnel	Senior TBM Engineer	Degree/Diploma in Civil Engineering
2.E.3	K4	Execution- Tunnel	Supervision Engineer	Degree/Diploma in Civil Engineering
2.E.4	K5	Execution- Casting Yard	Casting Engineer	Degree/Diploma in Civil Engineering
(F) Quality Department				
2.F.1	K2	Quality	Chief/Senior QA Expert	Graduate in Civil Engineering
2.F.2	K3	Quality	Senior Engg Quality - Execution	
2.F.4	K4	Quality	Engineer Quality - Execution	
2.F.5	K5	Quality	Engineer Quality - Execution	
(G) Safety Department				
2.G.1	K2	Safety	Senior Safety Expert	Engineering Graduate with specialization in safety including International qualifications (such as CSP, NEBOSH/OHSAS etc.)
2.G.2	K3	Safety	Senior Engineer Safety - Execution	
2.G.3	K4	Safety	Senior Engineer Safety	

2.G.4	K5	Safety	Engineer Safety	
(H) Environment & Social Department				
2.H.1	K2	Environment	Chief Environmental Expert	Environment Engineering Graduate or Post graduate with specialization in Environment related fields
2.H.2	K2	Social	Senior Social Expert	Post Graduate in Social Works
2.H.3	K3	Environment	Forest Officer	
2.H.4	K4	Environment/Social	Social Expert / Environ Engg.	
(I) Track Department				
2.I.1	K2	Track	Chief Track Expert	Graduate in Civil Engineering
2.I.2	K3	Track	Resident Engineer Track	
2.I.3	K4	Track	Senior Engineer - Track	
2.I.4	K5	Track	Engineer Track	
2.I.5	K5	Track	Track Survey	
3. SYSTEMS DEPARTMENT				
(A) Traction Department				
3.A.1	K2	Traction	Senior Traction Power Expert	Graduate in Electrical Engineering
3.A.2	K2	Traction	Senior Traction Distribution, SCADA, MMIC Panel integration Expert	Graduate in Electrical Engineering
3.A.3	K3	Traction	Sr Engineer Traction Power	
3.A.4	K3	Traction	Sr Engineer Traction Distribution	
3.A.5	K4	Traction	Sr Engineer Traction Power	
3.A.6	K4	Traction	Sr Engineer Traction Distribution	
(B) Signalling Department				
3.B.1	K2	Signalling	Senior Signalling Expert	Graduate in Electrical or Electronics Engineering

3.B.2	K3	Signalling	Senior Signalling Manager	
3.B.3	K4	Signalling	Senior Engineer	
(C) Telecom Department				
3.C.1	K2	Telecom	Senior Telecom Expert	Graduate in Electronics/Telecommunication Engineering
3.C.2	K3	Telecom	Senior Telecom Manager	
3.C.3	K4	Telecom	Sr. Engineer - Telecom	
(D) AFC Department				
3.D.1	K2	AFC	Senior AFC Expert	
3.D.2	K3	AFC	Senior AFC Manager	
3.D.3	K4	AFC	Sr. Engineer - AFC	
(E) VAC Department				
3.E.1	K2	VAC	Senior VAC Expert	
3.E.2	K3	VAC	Senior VAC Manager	
3.E.3	K4	VAC	Sr. Engineer - VAC	
(F) Illumination, Lift & Escalator Department				
3.F.1	K2	IL&E	Senior IL&E Expert	Graduate in Electrical or Electronics Engineering
3.F.2	K3	IL&E	Senior IL&E Manager	
3.F.3	K4	IL&E	Sr. Engineer - IL&E	
(G) Rolling Stock Department				
3.G.1	K2	Rolling Stock	Senior Rolling Stock Expert - Electrical & Mechanical	Graduate in Electrical Engineering Graduate in Mechanical Engineering
3.G.2	K2	Rolling Stock	Senior Rolling Stock Expert - Manufacturing unit	Graduate in Mechanical Engineering
3.G.3	K4	Rolling Stock	Rolling Stock Expert - Electrical	
3.G.4	K4	Rolling Stock	Rolling Stock Expert - Manufacturing unit	
4. MISCELLANEOUS				

(A) Personal Relation Department				
4.A.1	K3	PR	PR officer	
4.A.2	K4	PR	PR officer	
(B) Property Development Department				
4.B.1	K3	PD	Property Development	
(C) Testing & Commissioning Department				
4.C.1	K1	T&C	Chief T&C Expert	
4.C.2	K3	T&C	Engineer (Systems)	
4.C.3	K5	T&C	Engineer (Systems)	
(D) Document Controller Department				
4.D.1	A1		Document Controller	
4.D.2	A1		Document Controller	
4.D.3	A1		Document Controller	