



# **DELHI METRO RAIL CORPORATION LIMITED**

*(A Joint Venture of Govt. of India & GNCTD)*  
**MASS RAPID TRANSPORT SYSTEM -PHASE III**

*Manufacture, Supply, Installation, Testing And Commissioning of Signage And Graphics For Nine Underground And Nine Elevated Stations (Majlis Park, Azadpur, NS Place, Shalimar Bagh, Shakur Pur, Punjabi Bagh West, ESI Hospital, Rajouri Garden, Mayapuri, NarainaVihar, Delhi Cant, DurgabaiDesmukh South Campus, Sri VishweshvaraiahMotiBagh, BhikajiCama Place, Sarojini Nagar, INA, South Exten. and Lajpat Nagar) Of Line-7 Of Phase-III Of Delhi MRTS Project.*

## **CONTRACT: CASG-L7-LOT1**

### **TENDER DOCUMENTS**

### **VOLUME -1**

**NOTICE INVITING TENDER  
INSTRUCTION OF TENDERERS  
FORM OF TENDER**

**CONTRACT:CASG-L7-LOT1**  
**TENDER DOCUMENTS**

**VOLUME 1**

**NOTICE INVITING TENDER**

**NOTICE INVITING TENDER (NIT)****1.1 GENERAL****1.1.1 Name of Work:**

Delhi Metro Rail Corporation (DMRC) Ltd. invites open e-tenders from eligible applicants, who fulfill qualification criteria as stipulated in Clause 1.1.3 of NIT, for the work “Contract CASG-L7-LOT-1: **Manufacture, Supply, Installation, Testing And Commissioning Of Signage And Graphics For Nine Underground And Nine Elevated Stations (Majlis Park, Azadpur, NS Place, Shalimar Bagh, Shakur Pur, Punjabi Bagh West, ESI Hospital, Rajouri Garden, Mayapuri, NarainaVihar, Delhi Cant, DurgabaiDesmukh South Campus, Sri VishweshvaraiahMotiBagh, BhikajiCama Place, Sarojini Nagar, INA, South Exten. and Lajpat Nagar) Of Line-7 Of Phase-III Of Delhi MRTS Project.**”

The brief scope of the work and site information is provided in ITT Clause A1 (Volume-1) & Technical Specifications (Volume-3)

**1.1.2 Key details :**

|                               |  |
|-------------------------------|--|
| Approximate cost of work      | <b>Rs.3.18 Crores</b>  |
| Tender Security amount        | Amount of Tender Security:- 3.18 Lakhs<br>Validity of Tender Security: - <b>25.08.2017</b><br>Tender Security (in original) as per clause C18 of ITT shall be accepted only up to 1500 hrs on 12.12.2016 in the office of CPM-3, MayurVihar Phase-1, Metro station, New Delhi 110091   |
| Completion period of the Work | 08 months  |
| Tender documents on sale      | From <b>02.12.2016</b> to <b>29.12.2016</b> (upto 15:00 Hrs) on e-tendering website <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a><br><br>Tender document can only be obtained online after registration of tenderer on the website <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a> .<br><br>For further information in this regard bidders are advised to contact on +919910484343, +918527091819, +918826644800 |
| Cost of Tender documents      | <b>Rs. 21,000/- (Non-Refundable)</b><br><br>(Bank Draft / Bankers Cheque issued in favour of “Delhi Metro Rail Corporation Limited”, payable at “New Delhi”)<br><br>Cost of tender documents i.e, D.D. /   |

|  |  |
|--|--|
|  | Banker's cheque, in original, shall be accepted only upto 1500 hours on 12.12.2016 in the office of CPM-3, MayurVihar Phase-1, Metro station, New Delhi 110091 |
| Pre-bid Meeting  | <b>19.12.2016</b> at 11:00 Hrs   |
| Last date of Seeking Clarification   | <b>20.12.2016</b> upto 1700 Hrs  |
| Last date of issuing addendum  | <b>23.12.2016</b>  |
| Date & time of Submission of Tender  | Tender submission start date: <b>26.12.2016</b> (0900 hrs)<br>Tender submission end date: <b>29.12.2016</b> (1500hrs)  |
| Date & time of opening of Tender   | <b>30.12.2016</b> at 15:00 Hrs.  |
| Authority and place for submission of Tender Document cost & Tender Security, Pre-bid Meeting and seeking clarifications | Chief Project Manager-3,<br>MayurVihar Phase-1, Metro station, New Delhi 110091  |

**1.1.3 QUALIFICATION CRITERIA :**

**1.1.3.1 Eligible Applicants :**

- i. The tenders for this contract will be considered only from those tenderers (proprietorship firms, partnerships firms, companies, corporations, consortia or joint ventures) who meet requisite eligibility criteria prescribed in the sub-clauses of Clause 1.1.3 of NIT. In the case of a JV or Consortium, all members of the Group shall be jointly and severally liable for the performance of whole contract.
- ii. (a) A non-Indian firm is permitted to tender only in a joint venture or consortium arrangement with any other Indian firm having minimum participation interest of 26% or their wholly owned Indian subsidiary registered in India under Companies Act-1956 with minimum 26% participation.  
(b) A tenderer shall submit only one bid in the same tendering process, either individually as a tenderer or as a partner of a JV. 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. No tenderer can be a subcontractor while submitting a bid individually or as a partner of a JV in the same bidding process. A tenderer, if acting in the capacity of subcontractor in any bid, may participate in more than one bid, but only in that capacity.
- iii. Tenderers shall not have a conflict of interest. All Tenderers found to have a conflict of interest shall be disqualified. Tenderers shall be considered to have a conflict of interest with one or more parties in this bidding process, if:
  - (a) a tenderer has been engaged by the Employer to provide consulting services for the preparation related to procurement for on implementation of the project;

- (b) a tenderer is any associates/affiliates (inclusive of parent firms) mentioned in subparagraph (a) above; or
  - (c) a tenderer lends, or temporarily seconds its personnel to firms or organisations which are engaged in consulting services for the preparation related to procurement for on implementation of the project, if the personnel would be involved in any capacity on the same project.
- iv. A firm, who has purchased the tender document in their name, can submit the tender either as individual firm or in joint venture/Consortium. However, the lead partner in case of JV shall be one who has experience of supply, installation, testing and commissioning of transmission line system.
- v. Any Central / State government department / public sector undertaking / other government entity or local body must not have banned business with the tenderer (any member in case of JV) as on the date of tender submission. Also no contract of the tenderer should have been rescinded / terminated by DMRC/ Central or State Govt. Department / Public Sector Undertaking / Other Govt. entity or local body after award during last 5 years due to non-performance of the tenderer or any of JV/Consortium members. The tenderer should submit undertaking to this effect in **Appendix-19** of Form of Tender.

The overall performance of the tenderer (all members in case of JV/Consortium) shall be examined for all the ongoing similar works and works completed within last one year, of value more than 40% of NIT cost of work. The tenderer shall provide list of all such works in the prescribed Performa given in Appendix-19 A of the Form of Tender. In addition the tenderer shall also submit certificate issued by the client/Employer for satisfactory performance for all these works with respect to completion of work/execution of work (for running 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. The performance certificate issued by the client should not be older than one month from the last day of the previous month of tender submission.

If the tenderer or any of the constituent 'substantial member(s)' of JV/Consortium does not meet the criteria stated in the Appendix 19A, the tenderer including the constituent 'substantial member(s)' of JV/Consortium shall be considered ineligible for participation in tender process and they shall be considered ineligible applicants in terms Clause 1.1.3.1 of NIT.

- vi. Tenderer (any member in case of JV/consortium) must not have paid 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 tenderer should submit undertaking to this effect in **Appendix-20** of Form of Tender.
- vii. Tenderer (any member in case of JV/consortium) must not have suffered bankruptcy/ insolvency during the last 5 years. The tenderer should submit undertaking to this effect in **Appendix-21** of Form of Tender.
- viii. NON SUBSTANTIAL PARTNERS IN CASE OF JV/CONSORTIUM
- a. Lead partner must have a minimum of 26% participation in the JV/Consortium.
  - b. Partners having less than 26% participation will be termed as non-substantial partner and will not be considered for evaluation which means that their financial soundness and work experience shall not be considered for

evaluation of JV/Consortium.

- c. In case of JV/Consortium, change in constitution or percentage participation shall not be permitted at any stage after their submission of application otherwise the applicant shall be treated as non-responsive.

**1.1.3.2 Minimum Eligibility Criteria:**

**A. Work Experience:** The tenderers will be qualified only if they have completed work(s) during last 5 years ending **30.11.2016** as given below:

- (i) At least one “similar work” \* of value **INR 2.54crores** or more.

**OR**

- (ii) Two “similar works” \* each of value **INR 1.59 crores** or more.

**OR**

- (iii) Three “similar works” \* each of value **INR 1.27crores** or more.

*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 works of value **INR1.27crore or more** outside the country of the foreign partner.*

*\*The “**Similar works**” for this contract shall be a work of “Manufacture, supply, installation, testing and commissioning of signage and graphics)”.*

Notes:

- The tenderer shall submit details of works executed by them in the Performa of **Appendix-17 of FOT** 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. **The offers submitted without this documentary proof shall not be evaluated.** In case the work is executed for private client, copy of work order, bill of quantities, bill wise details of payment received certified by C.A., T.D.S certificates for all payments received and copy of final/last bill paid by client shall also be submitted.
- Value of successfully completed portion of any ongoing work up to **30.11.2016** will also be considered for qualification of work experience criteria.
- For completed works, value of work done shall be updated to **30.11.2016** 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 date of tender.
- In case of joint venture / Consortium, full value of the work, if done by the same joint venture shall be considered. However, 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.
- 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.

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

**Annual Turnover:**The average annual turnover from construction of last three financial years should be **≥Rs.3.816 crores**.

The average annual turnover of JV will be based on 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 
$$\frac{AM+BN}{100}$$

**Notes:**

- Financial data for latest last five audited financial years has to be submitted by the tenderer in **Appendix-18 of FOT** along with audited balance sheets. The financial data in the prescribed format shall be certified by Chartered Accountant with his stamp and signature. In case audited balance sheet of the last financial year is not made available by the bidder, he has to submit an affidavit 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 the last year is not submitted, the tender will be considered as non-responsive.
- Where a 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.

**1.1.3.3 Bid Capacity Criteria:**

**Bid Capacity:** The tenderers will be qualified only if their available bid capacity is more than the approximate cost of work as per NIT. Available bid capacity will be calculated based on the following formula:

Bid capacity will be calculated based on the following formula:

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

Where,

A = Maximum of the value of construction works executed in any one year during the last five financial years (updated to **30.11.2016** price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year).

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

B = Value of existing commitments (**as on 30.11.2016**) for on-going construction works during period of **08 months w.e.f. 01.12.2016**.

**Notes:**

- Financial data for latest last five financial years has to be submitted by the tenderer in **APPENDIX 15 of FOT** along with audited financial statements. The

financial data in the prescribed format shall be certified by the Chartered Accountant with his stamp and signature in original.

- Value of existing commitments for on-going construction works during period of **08 months** w.e.f. **01.12.2016** has to be submitted by the tenderer in **APPENDIX 16 OF FOT**. These data shall be certified by the Chartered Accountant with his stamp and signature.

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 % is not provided, equal participation will be assumed.

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

Suppose there are ‘P’ and ‘Q’ members of the JV / group with their participation in the JV / 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 / group shall be as under:

**Bid Capacity of the JV / group = 0.7X + 0.3Y**

- 1.1.3.4 The tender submission of tenderers, who do not qualify the minimum eligibility criteria stipulated in the clauses 1.1.3.2 above, shall not be considered for further evaluation and therefore rejected. The mere fact that the tenderer is qualified as mentioned in sub clause 1.1.3.2 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.

**1.1.4 Tender Documents**

**The Tender documents consist of :**

Volume-1: Notice Inviting Tender (NIT)  
Instructions to Tenderers (ITT) including Annexure  
Form of Tender (FOT) including Appendices

Volume-2: General Conditions of Contracts (GCC)  
Special Conditions of Contract (SCC)

Volume-3: Tender Drawings & Technical Specifications

Volume-4: Condition of Contract on Safety, Health & Environment (SHE)  
Ver.-1.2

Volume-5: Bill of Quantities (BOQ)

- 1.1.5 The Tenderers may obtain further information/ clarification, if any, in respect of these tender documents from the authority defined in the Key details above.

- 1.1.6 The intending tenderers must be registered on e-tendering portal <https://eproure.gov.in/eprocure/app>. Those who are not registered on the e-tendering portal shall be required to get registered beforehand. If needed they can be imparted training on ‘online tendering process’. 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.

- 1.1.7 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 of the authorized signatory. However, the



tenderer shall upload their tender on <https://eprocure.gov.in/eprocure/appusing> class-II or class-III digital signature of the authorized signatory only.

- 1.1.8 Tender submissions shall be done online on <https://eprocure.gov.in/eprocure/app> after uploading the mandatory scanned documents towards cost of tender documents such as Demand Draft or Pay Order or Banker's Cheque from a Scheduled commercial bank based in India and towards Tender Security such as Bank Guarantee or Demand Draft or Pay Order or Banker's Cheque from a Scheduled commercial bank based in India and other documents as stated in the tender document.
- 1.1.9 All Tenderers are hereby cautioned that tenders containing any material deviation or reservations as described in Clause. **E 4.0** of "Instructions to Tenderers" and/or minor deviation without quoting the cost of withdrawal shall be considered as non-responsive and is liable to be rejected.
- 1.1.10 Submission of Tenders shall be closed on e-tendering website of DMRC at the date & time of submission prescribed in NIT after which no tender shall be accepted. It shall be the responsibility of the bidder / tenderer to ensure that his tender is submitted online on e-tendering website <https://eprocure.gov.in/eprocure/app> before the deadline of submission. DMRC will not be responsible for non-receipt of tender documents due to any delay and/or loss etc.
- 1.1.11 Tenders shall be valid for a period of **180 days** (both days inclusive i.e. the date of submission of tender and the last date of period of validity of the tender) from the latest date of submission of Tenders and shall be accompanied with a tender security of the requisite amount as per clause C18 of ITT.
- 1.1.12 DMRC 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 DMRC for rejection of his proposal.
- 1.1.13 All the uploaded files in tender submission should be named properly and arranged systematically.
- 1.1.14 The bidders are advised to keep in touch with e-tendering portal <https://eproure.gov.in/eprocure/app> for updates.
- 1.1.15 Contact details of CVO/DMRC  
Chief Vigilance Officer  
Delhi Metro Rail Corporation Limited,  
Fire Brigade Lane, Barakhamba Road  
Connaught Place, New Delhi-110001  
[Tel:- 011-23418406](tel:011-23418406)  
Email: [cvodmrc@gmail.com](mailto:cvodmrc@gmail.com)

**Chief project Manager-3**  
**MayurVihar Phase-1 Metro Station**  
**New Delhi, 110091**

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## **Instructions for Online Bid Submission**

The bidders 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 bidders 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://eprocure.gov.in/eprocure/app>.

### **REGISTRATION**

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “**Online bidder Enrollment**” on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders 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 bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder 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.

### **SEARCHING FOR TENDER DOCUMENTS**

- 1) There are various search options built in the CPP Portal, to facilitate bidders 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 bidders 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 bidders 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 bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder 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) Bidder 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) Bidder, 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. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) 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 bidders. Bidders 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) Bidder 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. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) Bidders 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 bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 6) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7) All the documents being submitted by the bidders 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. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

- 8) Upon the successful and timely submission of bids (ie 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.
- 9) 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.

**ASSISTANCE TO BIDDERS**

- 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 :

Mobile Numbers: 91 7878007972, 91 7878007973, 91 7574889871, 91 7574889874, 91 8826246593

Tel: The 24 x 7 Toll Free Telephonic Help Desk Number 1800 3070 2232. Other Tel: 0120-4200462, 0120-4001002.

E-Mail: [cppp-nic\[at\]nic\[dot\]in](mailto:cppp-nic[at]nic[dot]in)

## SCOPE OF WORK

### 2.0 GENERAL

The scope of work includes **Manufacture, Supply, Installation, Testing And Commissioning Of Signage And Graphics For Nine Underground And Nine Elevated Stations (Majlis Park, Azadpur, NS Place, Shalimar Bagh, Shakur Pur, Punjabi Bagh West, ESI Hospital, Rajouri Garden, Mayapuri, NarainaVihar, Delhi Cant, DurgabaiDesmukh South Campus, Sri VishweshvaraiahMotiBagh, BhikajiCama Place, Sarojini Nagar, INA, South Exten. And Lajpat Nagar) Of Line-7 Of Phase-III Of Delhi MRTS Project.**

### 2.1 WORK CONTENTS

2.1.1 The contractor will undertake the preparation of Signage GADs (General Arrangement Drawings) of all signage to be installed both inside and outside the premises. These GADs will required to be submitted for approval (both in editable soft copy and hard copy)

2.1.2 The contractor will undertake the preparation of Signage Artwork of all signage to be installed as per GADs. These artwork will required to be submitted for approval (both in editable soft copy and hard copy)

2.1.3 The contractor will undertake the preparation of fabrication drawings of all signage type to be installed as per BOQ. These drawings will required to be submitted for approval.(both in editable soft copy and hard copy)

2.1.4 The Contractor will undertake the Fabrication and Installation of Signage and Graphics based on the design and technical requirements provided by DMRC and will be responsible for coordinating all interfaces between adjacent and interfacing contract packages and disciplines.

2.1.5 The work under this contract shall consist of, but not limited to, all materials, labour, equipment's, tools, plants and necessary machinery as required to completely execute all the works relating to Signage and Graphics.

#### 2.1.5.1 Signage:

- a) Supply, manufacture and installation of a signage system in accordance with the BOQ, Signage's Schedules and Fabrication Drawings for the public and non public areas including community facilities signs, etc. for both internal and external areas of the stations and hinterland signs at road sides as per the General Arrangement Drawing including all necessary supports, suspenders, fixing, frame work, covers, sign faces, light fittings and fixtures, glazing and finishes as required.
- b) Provision and installation of sign graphics to sign faces adopting system wise pictograms, symbols and text as given in the signage schedule but not limited to silk-screened graphics, graphics applied in vinyl film to specified substrates and other specified applications.

- c) Provision and installation of required ducting/conduits, electrical work and cabling to power source associated with illuminated signage limited to the availability of power source within 5 m distance from the location of sign. All cabling, ducting and conduiting required up to 'Power Source' from external source including power fittings, boards, switches etc will not be in the scope of this contract. Here Power Source means the electrical board or switch where signage contractor is required to connect the cable /wire for electrical connection of illuminated signs.
- d) Minor civil works associated with foundations to signage and underground cabling or modifications required for installation of the signages and restoring to original (pre-work) structures/finishes.
- e) Final coordination of the station signage layouts given at tender stage with the civil and system wide contractors.
- f) Co-ordination with the Civil and system wide contractors on the mounting and the switching and power arrangements of the signage, both during preparation of shop drawing and production and installation phases of the contract.
- g) Programming of the manufacture and installation of the signage.
- h) Preparation of shop drawings and working drawings, fabrication methods, samples mockups and prototypes, and 'As installed' drawings.
- i) Testing and commissioning.
- k) **Supervise and protect all works related to the signage until handing over to the Employer.**
- l) Maintenance for specified period.

**2.1.5.2 Concrete Works:**

- a) Tools and plant: Contractor has to arrange Concrete mixer machine, Vibrator and proper Plywood shuttering to produce good quality of concrete foundation of all external signage works. Other required T&P will have to be provided as per the direction of 'Engineer' at site.
- b) Finishing: Finishing of all civil works has to be done properly as per the Technical specification and skilled masons have to be engaged by the contractor as per the satisfaction of 'Engineer'.

**2.1.5.3 Fixing of Signage using HILTI Fasteners or Equivalent:**

Fixing of Signage over floor, wall and column using HILTI Fasteners or equivalent is to be done under supervision and certification from fasteners supplying agency. Contractor is to make arrangement for this.

**2.1.5.4 Contractor's Site Office:**

Deleted

#### 2.1.5.5 Testing of the materials:

Contractor has to arrange testing of material / signage samples in the laboratory as specified in Annexure-10 of "Instructions to Tenderers."

#### 2.1.5.6 Quality

All materials used in the works shall be of the best quality of their respective kinds as specified herein, obtained from sources and suppliers approved by the Engineer and shall comply strictly with the tests prescribed in the Technical Specifications/Codes of Practice.

#### Sampling and Testing

In addition to test certificates, samples of all materials proposed to be employed in permanent works shall be submitted to the Engineer when called for. In such cases, materials will not be brought to the site without prior approval of the Engineer.

Samples provided to the Engineer are to be labelled in boxes suitable for storage. Materials or workmanship, not corresponding in character and quality with approved samples, will be rejected by the Engineer.

Samples required for approval and testing must be supplied at least 45 days in advance to allow for testing & approval. Delay to the works arising from the late submission of samples will not be acceptable as a reason for delay in completion of the works.

The contractor will bear all expenses for sampling and testing, whether at the manufacturer's premises at source, at site or at any testing laboratory or institution as directed by the Engineer. In case of field tests, 10% of the samples shall be tested in approved outside laboratory as directed by the engineer. No payment shall be made on this account.

#### 2.1.5.7 Rejection

Any materials that have been found not to conform to the specifications will be rejected forthwith and shall be removed from the site by the contractor at his own cost.

#### 2.1.5.8 Workmanship

All works shall be true to level, plumb and square and the corner, edges and arises in all cases shall be unbroken and neat and shall be as per provisions in the relevant Technical Specifications / Standard Codes of Practices. Contractor shall also submit Methods Statements within 30 days of acceptance of tender for approval of the Engineer. The approved Method Statements will form the basis for quality control and checklist for strict adherence during the work.

Any work not as per satisfaction of the Engineer or his representative will be rejected and the same shall be rectified, or removed and replaced with work of required standard of workmanship at no extra cost.

#### 2.1.5.9 As installed Drawings:

Contractor has to provide as installed drawings on completion of work in 5 set hard copies and 5 soft copies in compact diskette with the provision as mentioned below.

- a) The drawings submitted for approval should be in any one of the standard sizes - AO, A1, A2, A3 or A4, in accordance with Indian standards and as directed by the Engineer.

b) All drawings shall show the following particulars in the lower right hand corner in addition to the Contractor's name. Standard format to produce drawings will be obtained from the Employer's Representative and the same shall be used by the Contractor for all drawings with following information.

- Name of the Owner.
- Project Title.
- Contract No.
- Title of Drawing.
- Scale
- Date of Drawing.
- Contractor's Drawing Number.
- Space for the Engineer's drawing number.
- Name of the Engineer.
- Name of Architect.
- Name of Review Consultant.
- This drawing is based on Drawing No. (s).
- Reference Good for Construction Drawing No.
- Further detail is given on Drawing No.(s).
- Space for Revision No. and Date

d) All dimensions on drawings shall be metric units, unless otherwise specified. However, all levels shall be in meters.

## **2.2 INTERFACE WORKS:**

### **2.2.1 Co-ordination/co-operation with other contractors:**

1. The contractor shall cooperate with the other contractors appointed by the Employer so that the work proceeds smoothly to the satisfaction of Engineer. The contractor shall plan & execute the works with proper interfacing with other contractors.
2. The contractor shall attend regular coordination meetings convened by the Employer/Engineer for interface and adhere to the decisions taken in the meeting.
3. Access will be provided to the staff of the other Contractor appointed by the Employer for carrying out their works and bringing materials and equipments at the site. However, the security of materials and Equipments brought at the site will be the responsibility of the respective Contractors.
4. The contractor shall, in carrying out his coordination responsibility, raise in good time and provide sufficient information for the Employer to decide on any disagreement with other contractor. If the contractor despite having taken all reasonable efforts cannot resolve such disagreement then the decision of the Engineer shall be final and binding on the contractor.



## **2.3 REFERENCE TO THE STANDARD CODES OF PRACTICE**

- 2.3.1 All Standards, Technical Specifications and Codes of practice referred to shall be latest editions including all applicable official amendments and revisions. The Contractor shall make available at site all relevant Indian Standard Codes of practice, IRSC, MORTH & IRC Codes and CPWD specifications as applicable.
- 2.3.2 Wherever Indian Standards do not cover some particular aspects of design/ construction; relevant British German Standards will be referred to. The Contractor shall make available at site such standard codes of practice.
- 2.3.3 In case of discrepancy among Standard codes of practice and provisions in sub clauses in this NIT, the order of precedence will be as below:
- i. Provision in NIT
  - ii. CPWD specifications
  - iii. Standard Codes of Practice.
  - iv. MORTH Specifications

## **2.4 DIMENSIONS**

- 2.4.1 As regards errors, omissions and discrepancies in Specifications and Drawings, relevant clause of Special Conditions of Contract will apply.
- 2.4.2 The levels, measurements and other information concerning the existing site as shown on the conceptual / layout drawings are believed to be correct, but the Contractor should verify them for himself and also examine the nature of the ground as no claim or allowance whatsoever will be entertained on account of any errors or omissions in the levels or strata turning out different from what is shown on the drawings.

## **2.5 ASSOCIATED WORKS**

Works to be performed shall also include all general works preparatory to the construction and works of any kind necessary for the due and satisfactory construction, completion and maintenance of the works to the intent and meaning of the drawings adopted and technical specifications, to best Engineering standards and orders that may be issued by the Engineer from time to time, compliance by the agency with all Conditions of Contract, supply of all materials, apparatus, plants, equipment, tools, fuel, water, strutting, timbering, transport, offices, stores, workshop, staff, labour and the provision of proper and sufficient protective works, diversion, temporary fencing, lighting and watching required for the safety of the public and protection of works on adjoining land; first-aid equipment, sanitary accommodation for the staff and workmen, effecting and maintenance of all insurances, the payment of all wages, salaries, fees, royalties, duties or the other charges arising out of the erection of works and the regular clearance of rubbish, clearing up, leaving the site perfect and tidy on completion.

## **2.6 CONSTRUCTION DEPOT**

The area to the extent available, at the discretion of DMRC will be allocated to the contractor for his stores, offices & other activities at or near the site.

## **2.7.1 TIME SCHEDULE**

The agency shall submit with the tender "Time Schedule" for completion of various portions of works. This schedule is to be within the overall completion period of **08 months**.

## **2.8 TENDER PRICE**

The tender price as mentioned in Clause C 2.5 of ITT shall include all the above listed items in the scope of the work (Clause 2.1 to 2.9).

## **SITE INFORMATION**

### **3.1 WORK SITE**

**3.1.1** The project site is primarily in Delhi. The location of the work and the general site particulars are shown in the General Arrangements Drawings enclosed in the tender documents.

**3.1.2** The proposed work falls on Line-7 corridor of Phase-III of Delhi MRTS Project in Delhi and NCR territory.

**3.1.3** The Contractor shall plan his works keeping in view restriction of approach and availability of space and time.

### **3.2 General Climatic Conditions**

**3.2.1** The recorded highest and lowest temperatures in the past 10 years are 47 degree Celsius and 2.4 degree Celsius respectively.

**3.2.2** Summer season is from April to June and winter season is from November to March.

**3.2.3** Mean average annual rainfall in the area over a five-year period is of the order of 735 mm, a good portion of which is concentrated during July to mid-September, when about 75% of the annual rainfall occurs. The heaviest rainfall recorded during 24-hour period is 191 mm.

### **3.3 Seismic Zone**

Delhi falls in Seismic Zone IV. Earthquake of maximum magnitude VIII on Modified Mercalli scale has been experienced in the past, in the region.