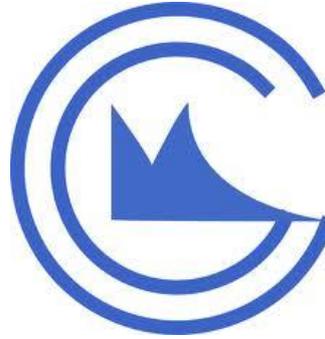


CHENNAI METRO RAIL LIMITED

Tender No: CMRL/RS/01/2020

Date-13.03.2020



TENDER FOR

DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS.

i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR OPERATIONS BETWEEN CORRIDOR 1 AND CORRIDOR 2

IT IS ALSO CALLED AS RAVIS (ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM)

Chennai Metro Rail Limited

**(A JV of Govt. of India and Govt. of Tamil Nadu)
CMRL Depot, Admin Building, Poonamallee High Road,
(Adjacent to Koyambedu Metro Station), Koyambedu,
Chennai – 600107. Tamil Nadu.**

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DEFINITIONS

Central Public Procurement (CPP) portal: The procurement of goods and services for CMRL will be done through e-procurement <http://eprocure.gov.in/eprocure/app>. This is implemented to ensure free & fair vendor participation, and to ensure greater transparency in procurement.

CMRL, Chennai Metro Rail and Chennai Metro wherever used means “Chennai Metro Rail Limited”, (a Joint Venture of Govt. of India and Govt. of Tamil Nadu) with Corporate Office at **Admin Building, CMRL Depot, Poonamallee High Road, (Adjacent to Koyambedu Metro Station), Koyambedu, Chennai- 600107.**

“Contract” means and includes the invitation to tender, instructions to Tenderers, acceptance of tender, General Conditions of Contract, Special Conditions of Contract, technical specifications its particulars and the other conditions specified in the acceptance of tender and includes a repeat order which has been accepted or acted upon by the Successful bidder and a formal agreement, if executed;

“Successful bidder or Contractor”:-The solution provider for automatic route related visual and audio based announcement system, who design, supply, install, test, commission, rectify issues, provide warranty support, update software and provide RAVIS system for CMRL in 52 trains. Also, mean the person / the firm / co-operative or company/consortium who/which tenders for the works and is technically qualified also the lowest bidder among all of the bidders of the tender.

“Successful bidder's Understanding”: It is understood and agreed that the Successful bidder has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the progress of the works, the general and local conditions, the labour conditions prevailing therein and all other matters which can in any way affect the provision of RAVIS under the contract.

“Contract period” means the duration starting from date of contract agreement to the completion of warranty period of all 52 trains as per the clauses mentioned in the contract documents SCC 1.1

“CMRL premises”: means the CMRL metro trains, metro stations - its non-paid and paid area including concourse level, platform level, Foot over Bridges (FoB) and CMRL maintenance depots including workshop area, stabling lines, stores, canteen area, etc. which are the property or which are operated by CMRL or by its authorized personnel/company.

“**CMRL PPIO**” means the representative of CMRL who is the responsible authority for sanctioning permit to work inside depot area and in trains when they are in depot.

“**CMRL Station Controller**” means the representative of CMRL who is the responsible authority of the particular station and sanctions permit to work in that station and in trains when they are in the particular station area.

“**Currency**”: The currency for the purpose of the proposal shall be Indian National Rupee (INR) only.

“**DRM**” – Dynamic Route Maps which dynamically shows the route map indications in the present fleet of rolling stock through LED.

“**EMD**”: Earnest Money Deposit which means Bid Security which needs to be submitted by all the bidders with the tender submission.

“**FD**” – Frontal Display of the rolling stock which indicates the route destination and other route related indications.

“**Language of Tender**”: The tender prepared by the bidder and all correspondence and documents relating to the tender shall be in English language only. Submitted documents will not be returned by CMRL to the bidder.

Law Governing the Contract: The contract shall be governed by the law in force in the Republic of India.

Jurisdiction: In case of any disputes related to the contract execution or other related activities of the contract shall be referred in Chennai itself.

“**LOA**”: Letter of Acceptance.

“**MVB**”- Multifunction Vehicle Bus is the communication channel throughout the rolling stock.

“**Notices and Instructions**”: Any notice or instructions to be given to the Successful bidder under the terms of the contract shall be deemed to have been served on him if it has been delivered to his authorized agent or representative at site or if it has been sent by registered post to the office, or to the address of the firm last furnished by the Successful bidder.

“**OCC**”: Operation control centre situated in CMRL Admin building in Koyambedu.

“**Omissions and Discrepancies**”: Should a tenderer find discrepancies in or omissions from the drawings or any of the tender forms or should he be in doubt as to their meaning, he should at once notify the authority inviting tenders who may send a written instruction to all tenderers. It shall be understood that every endeavour has been made to avoid any error which can materially affect the basis of tender and successful tenderer shall take upon himself and provide for the risk of any error which may subsequently be discovered and shall make no subsequent claim on account thereof.

“PACIS” – Public Announcement and Communication Interface System caters all the passenger information requirements inside and outside the rolling stock.

“RAVIS”: ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM, in CMRL trains respectively. It is the contract for providing DRM screen displays and integrating with the existing PACIS network of rolling stock for route related information and advertisements in the trains of CMRL phase 1 and Phase 1 Extension sections.

“Rolling stock or Train” means the CMRL metro train.

Car: Individual coach of metro train.

“Tenderer” or **“Bidder”** shall mean the person / the firm / co-operative or company/consortium who/which tenders for the works with a view to execute the works on contract with the CMRL and shall include their personal representatives, successors and permitted assigns.

“Tender Documents” means all documents whether containing words, figures or drawings which are, before the delivery of the Successful bidder’s tender and for the purposes of his tender, issued to him by or on behalf of CMRL or embodied by reference in such delivered documents or specified therein as being available for inspection by the Successful bidder.

Words importing the singular number shall also include the plural and vice versa where the context requires and similarly men shall also include women and vice versa where the context requires.

NOTICE INVITING TENDERERS



Chennai Metro Rail Limited, Chennai 600107, India.

NIT No: CMRL/RS/01/2020

CMRL invites online tenders through e-procurement portal from reputed suppliers on National Competitive Bidding (NCB) under Single Stage Two bid system for the following work:-

1	Name of Work	<p>DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS.</p> <p>i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR OPERATIONS BETWEEN CORRIDOR 1 AND CORRIDOR 2</p> <p>IT IS ALSO CALLED AS RAVIS (ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM)</p>
2	Details of Techno-Commercial and Financial bid	<p>Techno-Commercial Bid:-</p> <p>i. Cost of tender document (By online transaction)</p> <p>ii. EMD (By Bank guarantee)</p> <p>iii. Technical & Commercial documents with all Annexures except Annexure 23.</p> <p>Financial Bid:-</p> <p>i. Price Schedule in Excel format (Will be used for Evaluation of L1).</p> <p>ii. Breakup of cost for equipment and activities for complete RAVIS project.(Annexure 23)</p>
3	Earnest Money Deposit (EMD)	INR 15,60,000 (Indian Rupees Fifteen Lakhs sixty thousand only) in the form of Bank Guarantee from any Indian Public sector bank.
4	Tender validity	180 days from the date of opening of techno commercial bid.
6	Duration of the contract	As specified in SCC 1.1 of contract document
7	Opening of tender in e-procurement portal	13.03.2020 (D)
8	Cost of Tender Documents	<p>The cost of the tender document soft copy is INR 32,000/- (Indian Rupees Thirty Two Thousand only) including GST and all duties etc, which is non-refundable and shall be paid online through NEFT/RTGS to CMRL Bank Account mentioned in Sr. No.13 of this NIT. The UTR no. is required to be filled in mandatory information for eligibility of the bidder (Annexure -6), and the same need to be signed and submitted along within the Techno-Commercial Bid.</p> <p>The Tender Documents can be downloaded from CMRL website www.chennai-metro-rail.org. & CPP portal "http://eprocure.gov.in/eprocure/app".</p>
9	Tender Inviting Authority and place for Pre – Bid meeting.	<p>Chief Advisor (Systems & Operations)/ Director (Systems & Operations) In-Charge.</p> <p>Meeting schedule – at 10:00 hrs. on 30.03.2020 (D+18)</p> <p>Address - Chennai Metro Rail Limited. Admin Building, CMRL Depot, Poonamallee High Road, (Adjacent to Koyambedu Metro Station), Koyambedu, Chennai – 600107</p> <p>Email – jgmrs@cmrl.in</p>
10	Last date for seeking clarification (in writing)	31.03.2020 18:00 hrs. (D+19)
11	Last date for up-loading of Tender document in e-procurement portal	13.04.2020 up-to 15:00 hrs. (D+32)
12	Date and Time of Opening of Tender (Techno-Commercial Bid) in e-procurement portal	15.04.2020 at 10:00 hrs. (D+34)
13	Bank Account details of Chennai Metro Rail Ltd	<p>i. Beneficiary name : M/s Chennai Metro Rail Limited</p> <p>ii. Bank name : Canara Bank, Teynampet Branch, Chennai</p> <p>iii. Account no: 0416214000030</p>

		iv. IFSC Code : CNRB0000416
14	Bidders barred from bidding of this tender:-	Single or JV under suspension, debarred, black-listed by GOI, GOTN, PSUs, Metro Rail Corporations, CMRL or whose contracts were terminated as on date of submission of bid are ineligible to apply for this tender.

Note: If the date of submission of tenders happens to be a Public Holiday, then tender will be opened on the next working day at the same venue and time.

**Chief Advisor (Systems & Operations)/ Director (Systems & Operations) In-Charge.
Chennai Metro Rail Limited.**

INSTRUCTIONS TO TENDERERS

1	This tender document encompasses the scope of work, eligibility criteria, selection procedure, instructions, terms and conditions and other associated / related document(s) / Annexure(s).
2	This tender document does not purport to contain all the information that each bidder may require. Bidders are requested to conduct their own investigation / analysis and to check the accuracy, reliability and completeness of the information in this tender document before participating in the tender process. CMRL makes no representation or warranty and shall incur no liability under any law, statute, rules and regulations in this regard. Information provided in this tender document is only to the best of the knowledge of CMRL.
3	Bidders shall read carefully the contents of this document and to provide the required information. Each page of the tender document (including General Conditions of Contract), Addendum (if any), Reply to Query (if any) and other submissions, along with submission of the tender, shall be signed and stamped, as a token of acceptance of terms and conditions of the tender. Any unsigned and unstamped document will not be considered for evaluation. Signature is required to be done by the bidder himself / authorized signatory of the bidder for which a valid Power of Attorney shall be enclosed. All documents shall be submitted in English Language only.
4	Each Tenderer shall submit only one tender either by himself, or as a partner in a joint venture, or as a consortium. If a Tenderer submits, or if any one of the partners in a joint venture, or any one of the members of the consortium participates in more than one tender then all such tenders in which the bidder has participated will be considered invalid.
5	Bidders should provide all the required techno-commercial and associated information and attach supporting documents as earmarked / mentioned duly signed by the bidder / authorized signatory of the bidder and attested by the certified auditors wherever required.
6	For any query from the bidder, CMRL reserves the right not to offer clarifications on any issue raised in a query. No extension of any deadline will be granted if CMRL does not respond to any query or does not provide any clarification. All queries related to this tender shall be submitted in writing before or at the time specified in S.No. 10 of the NIT. No queries shall be entertained after this deadline.
7	Bidders may clearly note the date and time of submission of tender. Late or delayed tenders will not be accepted. Bidders are reminded that no supplementary material will be entertained by CMRL and techno-commercial evaluation will be carried out only on the basis of submissions received by CMRL by the date / time of the tender submission. However, CMRL may call for any supplementary information, if required.
8	Techno-Commercial Evaluation will help to assess whether the bidder possesses the earmarked techno-commercial / financial capabilities. Bidders will not be considered if they have a poor performance record such as abandoning works, not following statutory requirements, financial failure etc. CMRL reserves the right to approach previous clients of the bidders to verify / ascertain bidder's performance.
9	Separate techno-commercial and financial bids are required to be submitted through online for the tender.
10	Bidders shall note that CMRL will not discuss any aspect of the evaluation process. Bidders will deem to have understood and agreed that no explanation or justification of any aspect of the selection process will be given by CMRL and that CMRL's decisions are without any right of appeal / litigation whatsoever. Applicants may note that the selection process will entirely be at the discretion of CMRL.

11	Bidders will not be considered if they make any false or misleading representations in statements / attachments. If any submission is found false or misleading, even at later stage i.e. after completion of the tender process then also CMRL may annul the award, forfeit EMD (if any held with CMRL) and Performance Security (if any available). Further the bidder may be blacklisted for participation in any future tender(s) of CMRL.
12	CMRL will display the name of the successful bidder on CMRL’s website & on Central Public Procurement portal for information of all concerned.
13	Bidders are advised to remain vigilant and monitor the website http://chennaietrorail.org and http://eprocure.gov.in/eprocure/app for all updates on the tender document such as addendum(s), reply to query, postponement of any schedule etc. No claims or compensation will be entertained on account of the bidder having not read/noticed the updates.
14	In the event of the Successful bidder backing out/violation of the contract in the midway without any explicit consent of CMRL, the Successful bidder will be liable for the recovery of higher rates vis-a-vis contracted rates, which may have to be incurred by CMRL on procurement of said item by alternative means.
15	Late/delayed tenders by any means shall not be accepted by CPP portal. Any other means of tender submission will not be accepted by CMRL. It shall be the responsibility of the tenderer to ensure that his tender is submitted on time before the deadline of submission through CPP portal.
16	<p>Eligibility to participate in tender: Tenders are open to all eligible bidders. In order to submit the bid, the bidders have to get themselves registered on-line on the e-procurement portal (http://eprocure.gov.in/eprocure/app) with valid Class II/ III Digital Signature Certificate (DSC) issued from any agency authorized by Controller of Certifying Authority (CCA), Govt. of India.</p> <p>The on-line registration of the bidders on the portal will be free of cost and one time activity only. If the bidder is an individual person then he should register himself under “Individual” category and if the bidder is a proprietorship firm/partnership firm/Joint venture/company/consortium then registration should be under “Corporate” category. The registration must be in the name of bidder, whereas DSC holder may be either bidder himself or authorized person.</p>
17	<p>Enrolment: To participate in e-procurement all vendors must enroll themselves with the CPP portal. The procedure mentioned below is to be followed: Go to “http://eprocure.gov.in/eprocure/app” web site. Click on “Click here to enroll”. It will take you to ‘on line enrolment’ screen. Against User type, select either ‘individual’ or ‘corporate’. Specify your log in ID, indicated in the application while applying for DSC.</p> <p>Create your own password. Before creating, refer to ‘Password Policy’ that appears on the right side of the screen. Password should be in accordance with that policy. Confirm the password once again. Click on “Next”.</p> <p>You will see a screen which will have several fields. Please fill as many fields as possible, but keep in mind to fill all mandatory fields which are marked with an asterisk (*). After entering the fields, click on “Submit”.</p> <p>You will get a message that Log in ID registered successfully, that completes your entry.</p>

GENERAL CONDITIONS OF THE CONTRACT

1. Tender document

1.1.	<p><u>TENDER FOR</u></p> <p>DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS.</p> <p>i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR OPERATIONS BETWEEN CORRIDOR 1 AND CORRIDOR 2</p> <p>IT IS ALSO CALLED AS RAVIS (ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM)</p>
1.2.	General condition(s) and special condition(s) shall be read and understood thoroughly consistent with the tender document.
1.3.	<p>In the event of any ambiguity or conflict among general conditions, special conditions and scope of work, the order of precedence shall be as follows;</p> <ol style="list-style-type: none"> i. Special conditions of contract ii. Scope of work iii. General conditions of contract iv. Technical Specifications

2. Detailed instructions on procedure of submission of bid

2.1	The bidder shall submit the bids on line in the system available at the e-procurement portal (http://eprocure.gov.in/eprocure/app). The bidder has to agree to the on-line user portal agreement. Then only the system will permit the bidder to proceed further in the system.
2.2	The bidder shall fill all mandatory fields indicated by an asterisk (*). All documents indicated to be submitted in 'cover details' are to be enclosed without fail. These documents are to be uploaded only in .doc or .pdf or .jpg or .rar formats.
2.3	<p>Financial Bid:</p> <ol style="list-style-type: none"> a. The Financial bid containing the Price schedule will be in excel format and the bidder shall quote the rates, inclusive of all taxes, duties, any other charges, etc., for contract of RAVIS in that excel file only. Where, any row or column is not applicable, the bidder has to indicate '0' against this and no cells shall be left blank. b. Lowest bidder shall be chosen from the rate quoted which is inclusive of all taxes, duties, any other charges, etc. c. The bidder may modify and resubmit the bid on-line, if he wishes so, before the bid

	<p>submission date and time.</p> <p>d. The system will accept only the last submitted bid. Bidder can find out the status of his tender on line, any time after opening the bids.</p> <p>e. The bidder shall not rename the Price Schedule file or modify the format while uploading in the system. The file name should be the same as the file given in the tender.</p> <p>f. All bids are to be submitted on-line on the website (http://eprocure.gov.in/eprocure/app)</p>
2.4	Withdrawal of bid: The bidder may withdraw already submitted bid before the bid submission date and time.

3. EMD - Earnest Money Deposit

3.1	The EMD shall be made payable without any condition to the CMRL. An amount of INR 15, 60, 000 (Fifteen lakh sixty thousand Indian rupees only) is required to be taken in the form of Bank Guarantee from any Indian Public sector bank as bid security. The Bank Guarantee number is required to be filled in Mandatory Information for eligibility of the bid (Annexure -6) and same original bank guarantee need to be signed and submitted to CMRL at-least one day before tender opening date.
3.2	All bidders (including those who possess NSIC, SSIC, etc. certificate holders) shall submit proof of bank guarantee of EMD along with the bid documents. Any bid document submitted without the EMD in the approved form (Annexure 21) shall be summarily rejected. No interest is payable for the EMD amount.
3.3	Bid securities of the unsuccessful bidders will be returned on or before the 30 th day after the award of the contract.
3.4	The successful bidder's bid security will be returned after signing of contract by bidder & after receipt of performance security.
3.5	The EMD may be forfeited in below cases: - <ul style="list-style-type: none"> a. If the bidder withdraw/modify his tender during the period of tender validity. b. In case of a successful bidder fails to: - <ul style="list-style-type: none"> i. Furnish the necessary performance security within the prescribed time limit. ii. Commence the work as per terms and conditions of the Tender/CMRL instructions given in the Letter of Acceptance. iii. Enter into the contract agreement within the time limit.

4. Authorized signatory and address of the Successful bidder

4.1	The signatory of the bidder shall attach an authorization certificate Annexure-3 mentioning: <ul style="list-style-type: none"> a. The proprietor in case of "Sole Proprietor" firm or constituted attorney of such sole proprietor. b. One of the partners in the case of a "Partnership" firm/Consortium, in which case he must have authority to refer to arbitration disputes concerning the business of the partnership either by virtue of the partnership agreement or a power of attorney. c. In the absence of such authority all partners shall sign the tender document. d. A director or the regional head in case of a limited company or an official of requisite
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	authority in the case of a Government institution, duly authorized by a resolution of the Board of Directors.
4.2	The bidder whether sole proprietor, a limited company or a partnership firm/consortium if they want to act through agent or individual partner(s) shall submit along with the tender, a power of attorney duly stamped (Rs.100) and authenticated by a Notary Public or by a Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person specifically authorizing him/them to submit the tender, sign the agreement (Annexure-4) receive money, compromise, settle, relinquish any claim(s) preferred by the firm and sign " No Claim Certificate " and refer all or any disputes to arbitration.

5. Tender opening & evaluation process

5.1.	All quotations will be evaluated and compared based on the substantial responsiveness to the technical specification and commercial conditions set out in the bidding documents and fully conforming to the terms and conditions.
5.2.	The tenderer has to completely fill all the spaces in price schedule in excel format and upload the same as financial bid.
5.3.	The techno-commercial bids will be decrypted and opened online, on or after the scheduled dates and time. Till such time, the bids will be only in the encrypted form. After the scheduled time, the bids will be opened by stipulated bid openers with their Digital Signature Certificates (DSC). The techno-commercial bids shall be evaluated based on the information furnished by bidders. If any clarification is required from bidder, CMRL will seek such clarifications.
5.4.	After evaluation of techno-commercial bids, only successful (both technically qualified and techno commercially qualified) bidders who have participated in the tender will be informed regarding the responsive tender eligible for financial bid opening. Thereafter, a system generated e-mail confirmation will be sent to the successful bidders communicating the date and time of opening of Financial-bid.
5.5.	The Financial-bid of the successful bidders (qualified in techno-commercial bid) will be decrypted and opened on-line, on or after the scheduled date and time by the bid openers with their Digital Signature Certificates (DSC).
5.6.	Techno-commercially qualified bids will be evaluated on the basis of the technical criteria submitted by Bidder which is Annexure 10, Annexure 20 and on the basis of the Eligibility criteria as per GCC 6.2
5.7.	The system in price schedule will generate a comparative statement on the basis of entry of single detail of total contract value. Therefore, all costs are to be indicated in the price schedule format. The successful bidders will get the information regarding the status of their financial bid (price bid) and ranking of bidders on website.
5.8.	The Letter Of Acceptance will be issued to the bidder with Lowest price bid who qualifies the techno-commercial bid as per tender subject to fulfilling other requirements specified in this tender document.
5.9.	No representations will be entertained in the matter of selection of the successful bidder.

5.10.	CMRL reserves the right to accept or reject any tender without assigning any reason thereof at any stage. CMRL reserves the right to alter the conditions of the tender schedule in appropriate cases, in the interest of CMRL.
5.11.	CMRL reserves the right not to return back or disclose any documents that are submitted along with this tender.
5.12.	If the submitted documents by the bidder do not meet the tender requirements including checklist as per Annexure 9 , then the financial bid (price bid) of the said bidder will not be considered for opening.

6. Eligibility criteria and evaluation criteria of bidders

Sl. No.	Criteria	Documents to be submitted
6.1	Average annual financial turnover during last 3 financial years should be at-least INR 4,68,00,000/- (Indian Rupees Four Crore Sixty Eight lakhs Only).	Chartered Accountant certified Balance Sheet & Profit loss statement for the year 2018 – 2019 2017 - 2018 2016 – 2017 (Annexure 6 Format 1)
6.2	<p><u>Work Experience for contract of RAVIS:-</u></p> <p>Work Experience of having completed similar works during last 7 years, either in India or outside India or both, ending last day of the previous month to which the tender is published.</p> <p>Similar work means “Design, supply, installation, testing & commissioning and warranty support for information system and advertisements using LED/ IPS-LCD/EPD/ TFT screen displays in a network within buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location” and</p> <p>i. Three similar completed works completed in total for 6.24 Cr INR worth LED/IPS-LCD/EFD/TFT displays in buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location (or)</p> <p>ii. Two similar works completed in total for 7.8 Cr INR LED/IPS-LCD/EFD/TFT displays in buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location (or)</p>	<p>Certificate (s) in the given format (Annexure -5) to be produced duly signed by the previous customer(s).</p> <p>Or</p> <p>LOA and Project Completion Certificate (Annexure 22)</p>

	iii. One similar work completed in total for 12.48 Cr INR LED/IPS-LCD/EFD/TFT displays in buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations/ in any commercial location	
6.3	<p>Note:-</p> <p>i. Relevant particulars of the tenderer for above mentioned eligibility criteria shall be submitted in ANNEXURE -5 and ANNEXURE -6 (format-1).</p> <p>ii. In case of Joint venture /Consortium/Partnership, at least one of the partners/ members should have required work experience as mentioned above.</p> <p>iii. The documents having the value, other than INR, will be converted and considered for evaluation as per the exchange rate applicable on tender opening date.</p>	
6.4	<p>Legal Status of the Bidder (Who can apply):-</p> <p>a. The bidder shall be a legally qualified person as per Indian Contract Act 1872. The Bidder shall be either an individual or a Company incorporated under the Companies Act 1956 or a Partnership Firm registered under the Partnership Act, 1932 or a group of entities (the ‘Consortium’) coming together to render desired services under and/or in relation to the contract.</p> <p>b. A bidder may be a Private Entity, Government owned entity, or any combination of them with all members of the consortium having a prior written arrangement viz. Joint Bidding Agreement (Annexure-2) or an existing agreement of a Joint Venture/Consortium.</p> <p>c. The said arrangement of the Members of Consortium agreement shall not be for less than ten(10) years and shall subsist during the term of the RAVIS contract.</p>	

7. Additional mandatory requirements

7.1	All other mandatory requirements have been enlisted at Annexure -6 of the bid document. This includes Permanent Account Number, GST Registration, ESIC (if applicable) and PF Registration (if applicable), undertaking by the bidder to conduct audit by CMRL at any time within the contract period (Annexure -7).
7.2	The bidder should have been a profit making entity for the preceding three financial years in which the annual turnover is calculated (Copy of statement of Profit and Loss Account certified by Chartered Accountant for each of the three financial years to be enclosed (Annexure-6 – Format-1)).

8. Consortium

Bids submitted by a consortium must comply with the following requirements:

8.1	The consortium shall furnish a Joint Bidding Agreement (Annexure-2) in non-judicial Stamp Paper of minimum Rs.100/- as per the format provided in this document, which
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	shall be legally binding on all the members of consortium.
8.2	The number of consortium members shall not exceed three.
8.3	The joint bidding agreement for the consortium shall state the responsibility regarding the techno-commercial and financial arrangements in respect of each member in the consortium.
8.4	The members of the consortium shall nominate one member as the “ Lead Member ” to act on behalf of the others as their representative to apply/bid for the award of the tender. This authorization shall be evidenced by submitting a Power of Attorney signed by legally authorized signatories of all the members as per format shown in this document (Annexure-4).
8.5	No change in the composition of a consortium shall be permitted after submission of bid.
8.6	A company or a firm can be a member in only one consortium. If a company or a firm participates in more than one bid, all bids of which it is a part shall be summarily rejected.
8.7	All members of the consortium shall be jointly and severally liable, for the obligations and responsibilities entailed by the contract agreement.
8.8	In the event of death of lead partner or other partner during the tenure of the contract, the legal heirs shall be permitted to continue for the unexpired period of contract, with the approval of CMRL. In the event of any of the partner withdrawing from the consortium, the contract will stand terminated.
8.9	At least one member of the consortium shall have a registered office or a group company office or a representative office in India as per Indian Companies Act - 1956 and shall have been in existence for at least 12 months.
8.10	All the members of the consortium shall comply with all the conditions of this contract GCC clause 6.4

9. Fraud and corrupt practices

a)	The bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the bidding process and subsequent to the issue of the LOA and during the subsistence of the contract agreement. Notwithstanding anything to the contrary contained herein, or in the LOA or the contract agreement, CMRL may reject a bid without being liable in any manner whatsoever to the bidder if it determines that the bidder, has directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the bidding process.
b)	In such an event, CMRL shall <ul style="list-style-type: none"> a. Forfeit and appropriate the Bid Security and/or Performance Security, as determined by CMRL, without prejudice to any other right or remedy that may be available to CMRL hereunder or otherwise. b. Debar the bidder to participate in any bid issued by CMRL for a period of 5 (five) years from the date of occurrence of such event.
9.3	For the purposes of this Clause 9.1 the following terms shall have the meaning hereinafter respectively assigned to them: <ul style="list-style-type: none"> a. “Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly of anything of value to influence the actions of any person connected with the bidding process (for avoidance of doubt, offering of employment to, or employing, or engaging in any manner whatsoever, directly or indirectly, any official of CMRL who is

	or has been associated in any manner, directly or indirectly, with the bidding process or the LOA or has dealt with matters concerning the contract agreement or arising thereof, before or after the execution thereof, any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of CMRL, shall be deemed to constitute influencing the actions of a person connected with the bidding process) ; or engaging in any manner whatsoever, whether during the bidding process or after the issue of the LOA or after the execution of the contract agreement, as the case may be, any person in respect of any matter relating to the award of contract or the LOA or the contract agreement, who at any time has been or is a legal, financial or Techno-Commercial adviser of CMRL in relation to any matter concerning the award of contract.
	b. “Fraudulent practice” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the bidding process.
	c. “Coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any person’s participation or action in the bidding process.
	d. “undesirable practice” means <ul style="list-style-type: none"> i. establishing contact with any person connected with or employed or engaged by CMRL with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the bidding process ; or ii. having a conflict of interest ; and
	e. “Restrictive practice” means forming a cartel or arriving at any understanding or arrangement among bidders with the objective of restricting or manipulating a full and fair competition in the bidding process.

10.Default

If the Successful bidder	
10.1	has abandoned the contract; or
10.2	is not executing the service in accordance with the contract or is persistently or flagrantly neglecting to carry out his obligations under the contract, then CMRL, after giving 7 (Seven) days’ notice in writing to the Successful bidder, may expel the Successful bidder from the premises without thereby releasing the Successful bidder from any of his other obligations or liabilities under the contract.

11.Bankruptcy

CMRL may at any time by notice in writing summarily terminate the contract without compensation on any of the following events:-	
11.1	If the Successful bidder shall at any time be adjudged bankrupt, or shall have a receiving order or order for administration of his estate made against him or shall instigate any proceedings for liquidation or composition under the relevant legislation for the time being in force, or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors, or purport so to do; or
11.2	If the Successful bidder, being a company, shall pass a resolution, or the court shall make an order for the liquidation of its affairs, a Receiver on behalf of the creditors shall be appointed. Provided always that such determination shall have not prejudice or affect any

	right of action or remedy which shall have accrue thereafter to CMRL.
11.3	In either of the cases or in any other case where in the opinion of CMRL, the Successful bidder is performing his duties unsatisfactorily, CMRL may employ and pay another Successful bidder to carry out and complete the work and may purchase all materials necessary for the carrying out of the work. In such cases, the value of the work done shall be assessed by CMRL and CMRL shall have the right to recover such sums from the Successful bidder.

12.Labour laws, Provident Fund, ESI, etc.

12.1	The Successful bidder shall obtain all applicable legal licenses and approvals before the commencement of work.
12.2	The staff engaged by the Successful bidder, if any, shall at no stage have any claim for employment in CMRL.
12.3	In the case of delay/default in payment of contribution under ESI Scheme and EPF Scheme, besides the recovery of the amounts due by the Successful bidder towards their contribution, penal interest and / or damages as may be levied by the ESI or PF Authorities, a penalty of 20% of the above amount would also be levied and recovered from their security deposit. In the event of cessation of the contract due to any reason whatsoever, the security deposit shall be refunded only after due satisfaction as regards the above payments.
12.4	If contract labours are deployed for execution of the said work, the Successful bidder shall produce certificate of Registration from the department of labour for engaging such contract labours.

13.Injury to persons

13.1	The Successful bidder shall be solely liable for and shall indemnify CMRL in respect of any liability, loss, claim or proceeding whatsoever, arising under any legislation in respect of personal injury to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the work whether or not due to his negligence and shall effect adequate insurance cover in respect of such risks and shall furnish CMRL with a copy of the insurance policy.
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14.Tender requirements

For the purpose of selection of Successful bidder, the tender document is divided into two parts viz. the Techno-Commercial Bid and the Financial Bid. The requirements for Techno-Commercial Bid are as under: -	
14.1	The bidder shall enclose (lead member in case of consortium) a copy of the tender document duly signed and stamped. All other associated / required documents to be duly numbered signed and stamped.
14.2	Power of attorney in the name of authorized signatory, in case the documents are signed by the authorized signatory of the bidder.
14.3	Each bidder (each member in the case of a consortium) shall be required to confirm and declare (in Annexure-8) with the tender submission that no agent, middleman or any

	intermediary has been, or will be, engaged by them to provide any services, or any other items or works related to the award and performance of the contract.
14.4	The bidder shall be required to enclose self-attested documents, as in Annexure-6 along with the Techno-Commercial Bid. The bidder shall be required to enclose the check list as in Annexure-9 of this tender document.
14.5	The bidder shall submit the initial filter criteria (Annexure-10) duly filled in, on the letter head of its company (each member in case of consortium). Bidder has to first qualify the initial filter criteria in order to be eligible for evaluation of their techno-commercial bid.

15. Tender clarification process

15.1	If the bidder for any reason, whatsoever, be in doubt about the meaning of anything contained in the tender document, he may seek clarifications in the form of query, in writing, from the Chief Advisor (Systems & Operations)/ Director (Systems & Operations) In-Charge, CMRL , as per schedule given in the Notice Inviting Tender. Reply to query, if any given by CMRL, shall form part of the tender document.
15.2	All queries related to this tender shall be submitted in writing before or at the time of pre-bid meeting. No queries will be entertained after the pre-bid meeting.
15.3	Except for written clarifications (Reply to query(s)) from the Chief Advisor (Systems & Operations)/ Director (Systems & Operations) In-Charge, CMRL , which is expressly stated to be an addendum to the tender document issued by CMRL, no written or verbal communication/ presentation/explanation by any other employee of CMRL shall be taken to bind or fetter CMRL under the tender/contract.

16. Cost of tendering

16.1	The bidder shall bear all costs associated with the preparation and submission of his tender and CMRL will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the tendering process.
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17. Tender validity

17.1	The tender shall remain valid and open for acceptance for a period of 180 days from the date of opening of techno-commercial bid. In exceptional circumstances, prior to the expiry of the tender validity period, CMRL may request the bidders for a specified extension in the period of tender validity. The request and the response thereto shall be made in writing or by telefax. Bidders may refuse the request without forfeiting their EMD. Bidders agreeing to the request for extension of tender validity period shall not be permitted to modify their tender but will be required to extend the validity of the period of the EMD correspondingly.
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18. Tender prices

18.1	The contract shall be for the whole work described in technical specification and in scope
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	of work. The bidder is required to quote his rates taking into account all the terms and conditions of the tender.
18.2	The prices shall be quoted in Indian Rupee (INR), failing which the bid would be rejected. The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
18.3	The bidder shall quote his rates inclusive of all taxes, duties, royalties, statutory minimum payments/contributions to be paid to and/or on behalf of the manpower supplied by the bidder, overheads, insurance, cost incurred for obtaining various licenses as per statutory requirements, etc.
18.4	Conditional bids will be summarily rejected.

19. Other tender guidelines

19.1	CMRL reserves the right not to proceed with the tender process at any time without any notice, justification or liability.
19.2	All tenders, documents and other information submitted by the bidders to CMRL shall become the property of CMRL. Bidders shall treat all information furnished as strictly confidential. CMRL will not return any submission.
19.3	The tender is not transferable under any circumstances.
19.4	Telegraphic, conditional or incomplete tenders will not be accepted. Canvassing of any kind, direct or indirect, shall lead to disqualification of the bidder.
19.5	Tender in any form other than the prescribed format issued by CMRL will not be entertained and will be summarily rejected.
19.6	Tenders with revised / modified rates / offer after opening of the tender shall be summarily rejected. In such a case, CMRL may forfeit the Earnest Money Deposit of the bidder submitted with the tender.
19.7	CMRL may not consider bidders who have poor performance records such as abandoning works, not following statutory requirements, financial failure, etc.
19.8	Bidders are advised to submit only one tender either by themselves, or as a partner in a joint venture, or as a consortium. If a bidder, or if any one of the partners in a joint venture, or any one of the members of the consortium participates, submits more than one tender, all the tenders in which the bidder has participated shall be considered invalid.

20. Award of tender

20.1.	<p>CMRL in its sole discretion and without incurring any obligation or liability, reserves the right, at any time, to:</p> <ol style="list-style-type: none"> i. Suspend and / or cancel the bidding process and / or amend and / or supplement the bidding process or modify the dates or other terms and conditions relating thereto. ii. Consult with any bidder in order to receive clarification or further information. iii. retain any information and / or evidence submitted to CMRL by, on behalf of, and / or in relation to any bidder; and / or iv. Independently verify, disqualify, reject and / or accept any or all submissions or other information and / or evidence submitted by or on behalf of any bidder.
20.2	It shall be deemed that by submitting the bid, the bidder agrees and releases CMRL, its employees, agents and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related

	to or arising from the exercise of any rights and / or performance of any obligations hereunder and the bidding documents, pursuant hereto, and / or in connection with the bidding process, to the full extent permitted by applicable law, and waives any and all rights and / or claims it may have in this respect, whether actual or contingent, whether present or in future.
20.3	The disclaimer as stated in this document shall be deemed to be the part of this document.
20.4	The selected bidder shall have to execute a contract agreement with CMRL.
20.5	CMRL will award the contract to bidder whose bid has been determined to be substantially responsive, techno-commercially and financially suitable, complete and in accordance with the tender document.
20.6	Responsive bid is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviations, exceptions, objections, conditionality or reservation a. One that limits in any substantial way the scope, quality, or performance of the product/material/service. b. That limits, in any substantial way that is inconsistent with the tender documents, CMRL rights or the successful bidders' obligations under the contract; and c. One that the acceptance of which would unfairly affect the competitive position of other bidders who have submitted substantially responsive bids. If a bid is not substantially responsive, it will be rejected by CMRL and may not subsequently be made responsive by the bidder by correction of the nonconformity.
20.7	CMRL's determination of bid responsiveness will be based on the contents of bid itself and any written clarifications sought by CMRL in writing, the response to which shall also be in writing and no change in rates shall be sought, offered or permitted.
20.8	In case, two or more techno-commercially qualified bidders quote the same amounts in the financial bid which is the Lowest (L1) among all, then the tender would be awarded to the bidder who has the highest/higher average annual turnover for the last 3 financial years.
20.9	Prior to the expiry of the period of tender validity, CMRL will notify the successful bidder in writing, either through Letter of Intent or Letter of Acceptance, that his tender has been accepted.

21. Letter of Acceptance (LOA)

21.1	The Letter of Acceptance would be sent in duplicate to the successful bidder, who will return one copy to CMRL duly acknowledged, signed and stamped by the authorized signatory of the bidder, as an unconditional acceptance of the Letter of Acceptance, within seven days (07) from the date of issue of LOA.
21.2	Letter of Acceptance shall communicate the sum of the contract during various stages of the contract period, as chalked out in the terms and conditions of the contract, in consideration of the execution / completion of the works by the Successful bidder as prescribed in the contract agreement (hereinafter called 'the Contract Price').
21.3	No correspondence will be entertained by CMRL from the unsuccessful bidders.
21.4	Upon Letter of Acceptance being signed and returned by the successful bidder, CMRL will promptly notify the unsuccessful bidders and return their EMD thereof.

22. Cancellation of Letter of Acceptance

22.1	After issuance of the Letter of Acceptance, in case, the successful bidder fails to commence
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	the work, for whatsoever reasons, as per terms and conditions of tender then the LOA shall be cancelled and the EMD will be forfeited in favour of CMRL.
22.2	CMRL will reject the tender or rescind the contract if CMRL determines that the bidder / Successful bidder or the employees deployed by the Successful bidder for the performance of services are engaged in corrupt or fraudulent practices or other immoral activity.
22.3	CMRL will declare a Successful bidder ineligible, either indefinitely or for a stated period of time, to be awarded a contract(s) if it at any time determines that the Successful bidder has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
22.4	The successful bidder/Successful bidder shall apprise CMRL through Chief Vigilance Officer, CMRL of any fraud/suspected fraud as soon as it comes to their notice. Successful bidder shall be debarred from disputing the correctness of the items covered by "No Claim" Certificate or demanding a clearance to arbitration in respect thereof.

23. Performance security

23.1	To ensure due performance of the contract, performance security is to be taken by the successful bidder as a bank guarantee from any Indian Public sector bank.
23.2	Performance security bank guarantee will be 10% of the overall Project value including any taxes, duties and any other charges, etc. Performance security may be furnished in the form of a Bank guarantee from any Indian Public sector bank, in favour of "Chennai Metro Rail Limited".
23.3	Within 21 days from the issue of LOA by CMRL, the successful bidder shall furnish the performance security bank guarantee in accordance with the conditions of contract as per the prescribed format (Annexure -11).
23.4	Performance security bank guarantee shall remain valid for a period of 06 months beyond the last date of contract period. No interest will be paid for the performance security during the validity period.
23.5	The proceeds of the performance security shall be payable to the CMRL as compensation for any loss resulting from the Successful bidder's failure to complete his obligations under the contract.
23.6	Failure of the successful bidder to submit the required performance security bank guarantee shall constitute sufficient grounds for the annulment of the award of the tender and forfeiture of the EMD of that bidder.

24. Signing of contract agreement

24.1	CMRL shall prepare the contract agreement, duly incorporating all the terms and conditions of the tender.
24.2	For the purpose of preparing the contract agreement, the successful bidder shall be required to deposit 2 Non Judicial Stamp Papers each of Rs.100 value.

24.3	<p>Prior to signing of the contract agreement, the successful bidder shall be required to submit the following, within 21 days of issue of Letter of Acceptance to successful bidder:-</p> <ol style="list-style-type: none"> a. Performance security b. Commercial General Liability insurance and c. Professional Indemnity Insurance
24.4	<p>The contract agreement shall require to be executed within thirty days (30) from the date of issue of the Letter of Acceptance.</p>

25. Confidentiality

25.1	<p>The Successful bidder shall take all precautions not to disclose, divulge and / or disseminate to any third party any confidential information, proprietary information on the CMRL's business or security arrangements (including but not limited to the assignment instructions, schedules and other subsequent agreements) and/or business of the CMRL. The obligation is not limited to any scope and the Successful bidder shall be held responsible in case of breach of the confidentiality of CMRL's information.</p>
25.2	<p>If the Successful bidder receives enquiries from Press / News / Media/ Radio / Television or other bodies / persons, the same shall be referred by the Successful bidder to CMRL immediately on receipt of such queries and shall not divulge any information.</p>

26. Damage to CMRL property or private life and property

26.1	<p>The Successful bidder shall be responsible for all risk to the work and for trespass and shall make good at his own expense all loss or damage whether to the works themselves or to any other property of the CMRL or the lives, persons or property of others from whatsoever cause in connection with the works until they are taken over by the CMRL and this although all reasonable and proper precautions may have been taken by the Successful bidder, and in case the CMRL shall be called upon to make good any 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 to any person or persons sustaining damages as aforesaid by reason of any act, or any negligence or omissions on the part of the Successful bidder; the amount of any costs or charges including costs and charges in connection with legal proceedings, which the CMRL may incur in reference thereto, shall be charged to the Successful bidder. The CMRL 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 Successful bidder, to take such steps as may be considered necessary or desirable to ward off or mitigate the effect of such proceedings, charging to Successful bidder, 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 , defense or compromise, and the incurring of any such expenses shall not be called in question by the Successful bidder.</p>
26.2	<p>In all above such cases the liability of the Successful bidder shall not exceed 100 percentage of the value of Bank Guarantee.</p>

27.Right of way

27.1	Right of way (within CMRL premises) to the work site will be provided to the Successful bidder and his employees. They shall always carry their photo identity card jointly signed by the Successful bidder and authorized signatory of CMRL
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28.Co-ordination with other Successful bidders

28.1	The Successful bidder for this package shall plan and execute work in coordination and in co-operation with other Successful bidders working for operation and maintenance of rolling stock and operation and maintenance of Stations in CMRL.
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29.Specifications

29.1	The technical specifications also form part of this tender. The Successful bidder shall promptly inform CMRL of any error, omission, fault and other defects in the specifications, which are discovered when reviewing the tender documents.
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30.Payment

30.1	CMRL shall pay Successful bidder as per the schedule mentioned in the table 01 of section 30.2 of GCC.
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30.2	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Key Date</th> <th style="width: 10%;">Stage No.</th> <th style="width: 20%;">Activity</th> <th style="width: 10%;">Duration</th> <th style="width: 15%;">End of the Stage. Time line from CAD (Contract Agreement Date)</th> <th style="width: 35%;">Payment for the Stage</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="text-align: center;">KD 1</td> <td style="text-align: center;">STAGE 1</td> <td>Design approval phase</td> <td style="text-align: center;">03 weeks</td> <td style="text-align: center;">03 weeks + CAD</td> <td rowspan="3" style="text-align: center;">20% of Total Contract Value, After completion of KD 1</td> </tr> <tr> <td style="text-align: center;">STAGE 2</td> <td>Demonstration phase – Demonstration of Prototype in one train</td> <td style="text-align: center;">08 weeks</td> <td style="text-align: center;">11 weeks + CAD</td> </tr> <tr> <td style="text-align: center;">STAGE 3</td> <td>Monitoring Phase</td> <td style="text-align: center;">01 Weeks</td> <td style="text-align: center;">12 Weeks + CAD</td> </tr> <tr> <td style="text-align: center;">KD 2</td> <td rowspan="3" style="text-align: center;">STAGE 4</td> <td>Implementation phase in First Set of 10 train-sets</td> <td style="text-align: center;">06 Weeks</td> <td style="text-align: center;">18 Weeks + CAD</td> <td style="text-align: center;">10% of Total Contact value, After completion of KD 2</td> </tr> <tr> <td style="text-align: center;">KD 3</td> <td>Implementation phase in Second Set of 10 train--sets</td> <td style="text-align: center;">06 Weeks</td> <td style="text-align: center;">24 Weeks + CAD</td> <td style="text-align: center;">10% of Total Contact value, After completion of KD 3</td> </tr> <tr> <td style="text-align: center;">KD 4</td> <td>Implementation phase in Third Set of 10 train-sets</td> <td style="text-align: center;">06 Weeks</td> <td style="text-align: center;">30 Weeks + CAD</td> <td style="text-align: center;">10% of Total Contact value, After completion of KD 4</td> </tr> </tbody> </table>	Key Date	Stage No.	Activity	Duration	End of the Stage. Time line from CAD (Contract Agreement Date)	Payment for the Stage	KD 1	STAGE 1	Design approval phase	03 weeks	03 weeks + CAD	20% of Total Contract Value, After completion of KD 1	STAGE 2	Demonstration phase – Demonstration of Prototype in one train	08 weeks	11 weeks + CAD	STAGE 3	Monitoring Phase	01 Weeks	12 Weeks + CAD	KD 2	STAGE 4	Implementation phase in First Set of 10 train-sets	06 Weeks	18 Weeks + CAD	10% of Total Contact value, After completion of KD 2	KD 3	Implementation phase in Second Set of 10 train--sets	06 Weeks	24 Weeks + CAD	10% of Total Contact value, After completion of KD 3	KD 4	Implementation phase in Third Set of 10 train-sets	06 Weeks	30 Weeks + CAD	10% of Total Contact value, After completion of KD 4
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KD 5		Implementation phase in Forth Set of 10 train-sets	06 Weeks	36 Weeks + CAD	10% of Total Contact value, After completion of KD 5
KD 6		Implementation phase in Fifth Set of 11 train-sets	06 Weeks	42 Weeks + CAD	30% of Total Contact value, After completion of KD 6
KD 7	STAGE 5	Warranty Phase	104 Weeks	104 Weeks per train after successful implementation by successful bidder and after CMRL's acceptance as per Technical Specification clause 6.6 per train basis.	10% of Total Contract Value, After completion of KD 7

Table 01

*CAD – Contract Agreement Date

Note:

1. Successful Bidder shall submit bills to CMRL for a specific KD at a time after completion of complete activity in that KD.
2. Total contract value including taxes, duties and any other charges, etc.

Above table shall be considered by the bidders while quoting the total contract value during the tender submission. **Prices shall be filled in Price bid schedule only.** The values shall not be filled in Techno-commercial bid.

The Total Contract value mentioned by the bidder in price bid shall be utilized for evaluation of the Lowest bidder (**L1**).

30.3	The total amount quoted by the Successful bidder shall be inclusive of all taxes, duties, any other charges, etc.
30.4	Taxes and duties shall be paid by the Successful bidder. The total Contract Value quoted by the Successful bidder shall be inclusive of all taxes, duties, any other charges, etc.
30.5	The invoice shall be submitted along with work completion certificate duly certified by CMRL competent authority on each KD completion stage, the payment will be effected based on invoice from successful bidder, after due deduction of any taxes, penalties, any other dues applicable as per contract.
30.6	No advance shall be paid to contractor.
30.7	The billing will be made based on 100% completion of particular KD. The billing shall be submitted with support of work completion certificate duly signed by CMRL.

31. Security measures

31.1	Security arrangements for the work shall be in accordance with general requirements and the Successful bidder shall conform to such requirements and shall be held responsible for
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	the action or inaction on the part of his staff/employees. A fine of Rs.5000/- (Indian Rupees Five thousand) on each event shall be imposed on the Successful bidder plus recovery of cost of material in addition to the police action against the Successful bidder staff if any employee of Successful bidder is caught stealing or damaging CMRL property, The decision of CMRL shall be final.
31.2	Successful bidder's employees and representatives shall wear Identification Badges (cards), helmet, Safety shoes and other safety/protection wear as directed by CMRL, and to be provided by the Successful bidder. Badges shall identify the Successful bidder and show the employee's name and number and shall be worn at all times while on duty in CMRL premises.
31.3	All vehicles used by the Successful bidder in CMRL premises shall be clearly marked with the Successful bidder's name and logo and shall get prior approval from the competent authority of CMRL.

32.Carriage of materials

32.1	No Successful bidder's materials shall be carried through metro trains either in passenger or non-passenger service durations.
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33.Facilities for inspection

33.1	The Successful bidder shall afford CMRL and its representative every facility for entering in and upon every portion of the work at all hours for the purpose of inspection or otherwise and shall provide all labour, materials and things of every kind required for the purpose and the CMRL and its representative shall at all times have free access to every part of the works and to all places at which materials for the works are stored or being prepared.
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34.Safety of public/staff

34.1	The Successful bidder shall be responsible to take all precautions to ensure the safety of the public and staff whether on public or CMRL property and shall comply with regulations appertaining to the work carried by the successful bidder.
34.2	The Successful bidder shall ensure that his men are always being well-behaved and they do not involve in eve teasing and do not cause sexual harassment of women anywhere. Offenders shall be punishable under various provisions of The Sexual Harassment of Women at Work place (Prevention, Prohibition and Redressal) Act, 2013 (14 of 2013).

35. Workmanship and testing

35.1	The whole of the work specified and provided in the contract or that may be necessary to be done in order to form and complete any part thereof shall be executed in the best and most substantial practice, agreeable to the particulars contained in or implied by the technical specifications and as referred to in and represented by the drawings or in such other additional particulars, instructions and drawings may be found requisite to be given during the carrying on of the services and to the entire satisfaction of CMRL according to the instructions and directions which the Successful bidder may from time to time receive from CMRL
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36. Indemnity by Successful bidder

36.1	The Successful bidder shall indemnify and save harmless the CMRL from and against all actions, suit, proceedings, losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against the CMRL by reason of any act or omission of the Successful bidder, his agents or employees, in the execution of the works or in his guarding of the same. All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the actual loss or damage sustained, and whether or not any damage shall have been sustained.
36.2	The indemnity bond shall be in non-judicial Stamp Paper of minimum Rs.100/- value as per the format given in Annexure-12 .

37. Insurances

37.1	During the term of this agreement, the Successful bidder shall obtain and maintain at his own expense, adequate insurance with regards to all its obligations under this agreement including Commercial General Liability (CGL) Insurance, for Rs.12,50,000 (Indian Rupees twelve lakhs fifty thousand only) covering bodily injury or death suffered by third parties (including the CMRL's Personnel) and loss of or damage to property (including the CMRL's property), Professional Indemnity Insurance, for Rs.7,50,000 (Indian Rupees seven lakhs fifty thousand only) covering for the financial consequences of professional negligence, following a breach of professional duty by way of neglect, error or omission and workmen compensation (if applicable) in accordance with the statutory requirements applicable in the country where the facilities or any part thereof is executed.
37.2	The CMRL's name shall be mentioned under all insurance policies taken out by the Successful bidder except for Workmen Compensation Insurance. The Successful bidder's Sub-bidders name (if any) also to be named under all the insurance policies taken out by the Successful bidder.

38. Date of Delivery

38.1	The date specified in the contract General Conditions of Contract “Clause 30.2 of GCC” for the delivery of the each stages of contract for RAVIS shall be deemed to be the essence of the contract and delivery must be completed no later than the dates so specified in this clause.
38.2	<p><u>Failure and Termination</u></p> <p>If the Successful bidder fails to deliver the complete contract for RAVIS within the period fixed for such delivery in the contract or at any time repudiates the contract before the expiry of such period, the CMRL may terminate the contract without prejudice to its other rights.</p> <p>In case of termination of the contract by CMRL, the successful bidder shall restore back the previous functions of the CMRL systems which was as before the start of the contract work.</p>

39.Extension of date of delivery

39.1	If such failure as in the aforesaid clause 38.2, shall have arisen directly due to CMRL, CMRL may admit as reasonable grounds for extension of time and shall allow such additional time as it considers to be justified by the circumstances of the case and shall forego the whole or such part of loss or damage, as it may consider reasonable.
39.2	Any failure or delay on the part of successful bidder or other consortium members of successful bidder or their sub-suppliers shall not be admitted as a reasonable ground for any extension of time or for exempting the Successful bidder from liability for such loss or damage as aforesaid.

40.Dispute resolution

40.1	In the event of any dispute, controversy or claim of any kind or nature arising under or in connection with this agreement between the parties (“Disputers”), the parties shall firstly attempt to amicably resolve such disputes through the highest level of negotiations and discussions.
40.2	<p>In the event that disputes between the parties subsist beyond 30 days of negotiations between the parties, then the dispute shall be settled as per the provisions of Arbitration and Conciliation Amendment Act 2015 in line with the points mentioned below:</p> <p>A. Arbitration by a Sole Arbitrator and he shall be appointed by the Managing Director of CMRL. The CMRL Officer/Individual to be appointed as arbitrator however will not be one of those who had an opportunity to deal with the matters to which the contract relates or who in the course of their duties as CMRL servant have expressed views on all or any of the matters under dispute or difference.</p> <p>B. In the event of the arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, shall be lawful for the authority appointing the arbitrator to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid.</p> <p>C. Subject as aforesaid, the Arbitration and Conciliation Act, 2015 and the rules there under and any statutory modifications thereof for the time being in force shall be</p>

	<p>deemed to apply to the arbitration proceedings under this clause.</p> <p>D. The venue of the arbitration shall be in Chennai.</p> <p>E. In this clause the authority to appoint the arbitrator includes, if there be no such authority, the officer who is for the time being discharging the functions of that authority, whether in addition to other functions or otherwise.</p>
40.3	The award passed shall be final and binding and both parties waive the right to appeal or contest the arbitral award.
40.4	It is further clarified that during the resolution of the disputes, the Successful bidder shall be obligated for the continued performance of its obligations under the Agreement.

41. Force majeure

41.1	<p>In the event of any unforeseen event directly interfering with the execution of contract arising during this agreement period; such as war, insurrection, restraint imposed by the Government, act of legislature or other authority, explosion, act of public enemy, acts of God, sabotage, etc., the Successful bidder shall, within a week from the commencement thereof, notify the same in writing to the CMRL with reasonable evidence thereof. In such event of force majeure, the conditions of the contract will not be enforced by either party. Further, if mutually agreed by both parties, the tenure of this agreement may be further extended for the period during which contract was not operational.</p>
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SPECIAL CONDITIONS OF THE CONTRACT

1. Contract Period

1.1	Contract period is the duration starting from date of contract agreement (CAD) to the completion of warranty period per train basis as defined in the GCC 30.2. The warranty period shall be for 104 Weeks per train after successful implementation by successful bidder and after CMRL's acceptance as per Technical Specification clause 6.6 per train basis.
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2. Special System Requirements

2.1	The displays proposed in the contract of RAVIS shall be utilized for route related information and for advertisements for revenue generation.
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3. Content of Advertisements:

3.1	During execution of RAVIS contract, CMRL shall decide upon the number of displays which shall broadcast advertisements and shall work as per provisions of technical specification clause 6.12.
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4. Audit Requirements

4.1	CMRL shall randomly verify the correctness of route display information of contract of RAVIS in the entire stretch of CMRL sections in the operations specified in the technical specification.
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5. Trains availability for Revenue service

5.1	Trains availability for revenue service shall not be impacted due to the implementation or due to operation of RAVIS contract.
5.2	Successful bidder shall plan and execute the installation works of the RAVIS contract in the fleet of trains in line with the train availability in depot as per the Rolling stock maintenance schedules of CMRL.

6. Deviation from Scope

6.1	The Successful bidder shall not use the system for any other purpose other than the one specified under the scope of this tender.
6.2	The equipment used shall be solely utilized only for providing services as specified in this tender.
6.3	The Successful bidder shall not lease, rent or sublet the system and its connectivity to any third party.

7. Penalty

7.1	Successful bidder shall be able to rectify and re-install the corrected/new components for preparing the train fit for passenger operations within next revenue service of the specific faulty train availability in depot.
7.2	In case of with-hold of train in depot/mainline due to equipment failure or RAVIS system issue or non-availability of equipment for replacement for more than 3 continuous days, the warranty for the specific train shall be extended by one month.
7.3	In any case, train shall not be held in sick due to non-availability of man-power to rectify the issues.
7.4	In any case, successful bidder shall not remove components of a train and replace in another train for any reason whatsoever.

8. Default

8.1	The total contract period is as specified in SCC 1.1. The Successful bidder shall not abandon the contract at any point during the above mentioned contract period.
8.2	If the Successful bidder has abandoned the contract; or is not executing the service in accordance with the contract or is persistently or flagrantly neglecting to carry out his obligations under the contract, then CMRL, after giving 7 (Seven) days' notice in writing to the Successful bidder, may expel the Successful bidder from the premises without thereby releasing the Successful bidder from any of his other obligations or liabilities under the contract.
8.3	Further in case of default, CMRL will not allow the defaulted Successful bidder to remove RAVIS equipment from CMRL's premises.
8.4	If the Successful bidder is in default as per SCC 8.2, the performance guarantee of the Successful bidder shall be forfeited.
8.5	In such cases, the Successful bidder will be debarred from participating in any Central Public Procurement tenders.
8.6	CMRL will not issue completion / performance certificate to the defaulted Successful bidder.

9. Facilities

9.1	Electricity required for working of RAVIS equipment in trains will be provided free of cost by CMRL.
9.2	CMRL will provide space for spares and maintenance personnel in CMRL Koyambedu depot at free of cost as required by the Successful bidder. The size and location of such space will be at the discretion of CMRL.
9.3	CMRL does not hold any responsibility or liability on loss or damages caused to the personnel or equipment due to any reason during contract period.
9.4	The Successful bidder shall arrange at his own cost, the transportation of their personnel and equipment from one place to other for maintenance and repair to RAVIS contract.

9.5	The Successful bidder shall arrange facilities for movement of materials inside depot premises for installation, replacement and removal activities.
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10. Contract Agreement Date: (CAD)

10.1	The date of signing of the agreement for execution of the activity of the Contract of RAVIS is called as CAD (Contract Agreement Date)
10.2	All the stages of work execution mentioned in the tender technical specifications will be taken as reference from this Contract Agreement Date only.

TECHNICAL SPECIFICATION

6.1 OBJECTIVE

TENDER FOR

DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS.

i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR MOVEMENTS BETWEEN CORRIDOR 1 AND CORRIDOR 2

IT IS ALSO CALLED AS **RAVIS** (ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM)

6.2 PURPOSE OF MODIFICATION:

The successful bidder shall design the concept of displaying pictographic/ videographic route maps (with audio broadcasting on existing passive speakers), advertisements (without audio) on DRM displays inside the train to meet all the route related announcement requirements of existing corridors of CMRL phase-I project along with new extension of phase-I project i.e., Stations between Chennai Airport Metro to Wimco Nagar Metro; Chennai Central Metro to St. Thomas mount Metro and inter-corridor operations between Corridor 1 and Corridor 2 (CMRL route map is attached as Annexure 14).

6.3 ABOUT CHENNAI METRO PROJECT

Chennai Metro Rail Limited (CMRL) is a joint venture between Government of India and the Government of Tamil Nadu established under the Companies Act.

The following table shows the details of Phase 1 and Phase -1 extension sections of Chennai Metro Rail Limited.

S.No	Description	Total	Remarks
1	Corridor 1 (Airport Metro to Washermanpet)	17 stations	All 17 stations are operational.

	Metro)		
2	Corridor 2 (Chennai central to St. Thomas mount)	17 stations	All 17 stations are operational.
3	Depot	02 Depots	Koyambedu depot is operational and Wimco Nagar depot is under construction.
4	Train sets	52 train sets. Currently each train set has four cars, which can be expandable up to 6 cars in future.	All 52 train sets are available in CMRL premises.
5.	Interchange stations	02 (Alandur Metro and Chennai Central Metro)	These stations have one additional level than other stations.
6	Phase 1 extension corridor (After Washermanpet Metro to Wimco Nagar Metro)	8 Stations (After Washermanpet Metro to Wimco Nagar Metro)	These stations are under construction stages which are likely to be commissioned by June 2020 for revenue operations.

Table 02

CMRL rolling stock (train) is manufactured by consortium of Alstom Transport India Limited and Alstom Transport SA.

Each rolling stock of CMRL consists of 4 coaches in which two coaches are motorized and two are non-motorized.

6.4 SCOPE OF WORK

- i. The successful bidder shall provide 16 numbers of LED/IPS-LCD/EPD/TFT displays inside each of 52 train-sets (4 car train) (with 4 displays per car) for providing pictographic or video-graphic based automatic route related information and provision for advertisements.
- ii. Single Stretch display of 28 to 36 inches diagonal shall be proposed and accommodated the available space of DRM slot. Remaining space shall be concealed evenly in both sides.
- iii. Successful bidder need to continuously capture the automatic route related signalling & rolling stock information available in the train's Multifunction Vehicle Bus (MVB) and need to display pictographic or video-graphic content with audio for automatic route related information in the new DRMs, existing Frontal Displays and existing

Internal Displays. Also, broadcast the audio announcements inside the train in existing speakers based on the availability of the signals on MVB. For this purpose, the successful bidder needs to record and store the audio messages which need to be broadcasted in the train.

- iv. The successful bidder shall synchronize the route related information with the existing 2 numbers of Frontal LED dot matrix displays and 8 Internal LED dot matrix displays in each train with the required route and announcement related information.
- v. New Input output HMI (Human Machine Interface) console shall be mounted inside both driver cabs which will be accessed by Train operator for various functionalities such as playing pre-recorded audio announcements, recording and playback voice input and text to speech conversion for playback.
- vi. Existing RS485 based communication lines within each CAR could be utilized for new DRMs
- vii. Successful bidder shall ensure the utilization of existing speakers of 8 per CAR inside and 4 per CAR outside the train for the purpose of route related audio broadcasting.
- viii. Successful bidder shall utilize existing free terminals of the CAR to CAR jumper cable for audio communication lines.
- ix. Successful bidder shall study and propose the methodology for interconnection of Network communication between the Cars. Same can be implemented based on approval from CMRL.
- x. Successful bidder shall ensure the Proper synchronization of Pictographic or Video graphic content with Audio broadcasting.
- xi. Successful bidder shall be responsible for design, installation, commissioning, and successful testing of the proposed and approved solution. Detailed work flow shall be followed as per Stage implementation mentioned in technical Specification Clause **6.5.vii Table 04.**
- xii. Successful bidder shall make provision for the advertisements within the proposed LED/IPS-LCD/EPD/TFT DRM displays with route related information alongside. This shall be done in a cyclic manner or a portion of screen space can be utilised for advertisement ensuring top priority for train related information.
- xiii. Successful bidder shall provide training to CMRL personnel to edit/update the advertisements and route related information & announcements in the proposed solution. CMRL will perform the editing/updating activities after completion of the warranty period.

- xiv. Post warranty period, Successful bidder needs to provide required full version Licensed software tool with lifetime validity to CMRL for modifying the parameters in route related announcement files, database, advertisement files, etc., independently by CMRL personnel.
- xv. Successful bidder shall self-declare the critical requirements mentioned in Annexure 20 with Yes or No comments for evaluation of Techno-commercial Bid.

6.5. STAGES OF IMPLEMENTATION OF WORKING PROPOSAL:

- i. Stage 1: Design approval phase:** Initial draft concept of proposal shall be submitted by all the bidders with **Annexure 18 and Annexure 20** during this tender document submission. Annexure 20 shall be reviewed by CMRL during the Techno-commercial bid evaluation of the bidders. Complete Concept of proposal shall be submitted by the successful bidder to CMRL within **01 week** from the date of award of contract (CAD - contract agreement date). Successful bidder shall include all the details required for execution of the contract in their proposal. CMRL will review the concepts & details of proposal submitted by successful bidder and provide comments which need to be incorporated. Based on the CMRL comments, successful bidder shall re-submit the final design document satisfying all the contractual requirements. The entire process of stage 1 shall be completed within **03 weeks** from the date of award of contract (CAD - contract agreement date).
- ii. Stage 2: Demonstration phase:** After approval of the final design document by CMRL, Successful bidder shall demonstrate the complete working system of the approved proposal in one train. CMRL will validate the system functionality and provide comments for further incorporation in the system. This entire activity is to be completed in **11 weeks** from the date of award of contract (CAD - contract agreement date). Successful bidder shall get the approval from CMRL after demonstration of proposal.
- iii. Stage 3: Monitoring phase –** After completion of stage 2, the train with the working proposal will be put in monitoring in complete CMRL section in non-passenger and or passenger service hours for 1 week in revenue/Non-revenue hours. All design related failures if any, shall be rectified in this period. After completion of rectification, again monitoring phase as mentioned above will re-started. This stage will be approved by CMRL after successful completion of 1 week testing without any

failures. After this, approval will be given by CMRL for implementation of proposal in all the trains. In case of hardware or software failures during this monitoring period, Successful bidder shall promptly rectify the issues further which the monitoring period shall start again for one week.

- iv. **Stage 4: Implementation phase:** After approval of Stage 3 by CMRL, successful bidder shall implement the proposal in the entire fleet of 52 trains in a phase manner as mentioned in the Implementation schedule in **Annexure 13**. Successful bidder shall coordinate for the train availability with CMRL as per CMRL maintenance schedule. The implementation in the train will be mutually signed-off between successful bidder and CMRL in each train basis after successful demonstration of the working proposal.

Each train shall be dynamically tested in any corridor of CMRL for at-least 3 hours in Mainline in revenue/Non-revenue hours. Report **RAVIS/DOC 05** shall contain the observations of this testing. Successful Bidder shall provide the testing personnel to verify this activity as per description above.

- v. **Stage 5: Warranty phase** – Trains will be in Warranty support for duration of 104 weeks after completion of Stage 4 as per technical Specification **Clause 6.13**. Date of starting of Stage 5 will be according to the completion of schedule agreed by CMRL for every train. Warranty phase also includes the penalized extension period if any as mentioned in SCC clause 7.
- vi. **Stage 7: Handing over phase** – After completion of specified duration of stage 5, successful bidder shall hand over the entire system to CMRL. Successful bidder shall hand over any software/hardware tools to manage the announcements and advertisements.

vii. **PROJECT TIME LINE:**

Key Date	Stage No.	Activity	Duration	End of the Stage. Time line from CAD (Contract Agreement Date)	Payment for the Stage
KD 1	STAGE 1	Design approval phase	03 weeks	03 weeks + CAD	20% of Total Contract Value, After completion of KD 1
	STAGE 2	Demonstration phase – Demonstration of Prototype in one train	08 weeks	11 weeks + CAD	
	STAGE 3	Monitoring Phase	01 Weeks	12 Weeks + CAD	
KD 2	STAGE 4	Implementation phase in First Set of 10 train-	06 Weeks	18 Weeks + CAD	10% of Total Contact value,

		sets			After completion of KD 2
KD 3		Implementation phase in Second Set of 10 train—sets	06 Weeks	24 Weeks + CAD	10% of Total Contact value, After completion of KD 3
KD 4		Implementation phase in Third Set of 10 train-sets	06 Weeks	30 Weeks + CAD	10% of Total Contact value, After completion of KD 4
KD 5		Implementation phase in Forth Set of 10 train-sets	06 Weeks	36 Weeks + CAD	10% of Total Contact value, After completion of KD 5
KD 6		Implementation phase in Fifth Set of 11 train-sets	06 Weeks	42 Weeks + CAD	30% of Total Contact value, After completion of KD 6
KD 7	STAGE 5	Warranty Phase	104 Weeks	104 Weeks per train after successful implementation by successful bidder and after CMRL's acceptance as per Technical Specification clause 6.6 per train basis.	10% of Total Contract Value, After completion of KD 7

6.5.vii Table 04

*CAD – Contract Agreement Date

Note:

1. Successful Bidder shall submit bills to CMRL for a specific KD at a time after completion of complete activity in that KD.
2. Total contract value including taxes, duties and any other charges, etc.

Above table shall be considered by the bidders while quoting the total contract value during the tender submission. **Prices shall be filled in Price bid schedule only.** The values shall not be filled in Techno-commercial bid.

The Total Contract value mentioned by the bidder in price bid shall be utilized for evaluation of the Lowest bidder **(L1)**.

6.6. DOCUMENT SUBMISSION:

DOCUMENT NAME	DOCUMENT No
Design submission – initial	RAVIS/DOC 01
Final design submission	RAVIS/DOC 02

Procedure for testing the functionality of the working proposal after implementation in each train.	RAVIS/DOC 03
Operation and Maintenance Plan	RAVIS/DOC 04
<p>Reports of testing the functionality of the working proposal after implementation in each train.</p> <p>This report shall be submitted to CMRL for approval.</p> <p>Each train shall be tested in any corridor of CMRL for at-least 3 hours in Mainline in revenue/Non-revenue hours. Report shall contain the observations of this testing.</p>	RAVIS/DOC 05

Table 05

6.7 DRM DISPLAYS

6.7.1 Functionalities- New DRM Displays:

- i.** The new DRM displays shall showcase the route related information to Passengers inside the Train with add-on advertisements for future requirement.
- ii.** The functionalities of new DRM displays includes (but not limited to) following route related information to passengers:
 - a. direction of travel,
 - b. current dynamic location of the train,
 - c. current Metro station,
 - d. next Metro station,
 - e. destination Metro station,
 - f. skip station information,
 - g. distinguishing completed route with forthcoming route,
 - h. showing important landmark areas near to stations in geographical map view,
 - i. complete route of CMRL network,
 - j. location mapping and any other important information
 - k. Ambient train data such as running speed, temperature, humidity etc.,

6.7.2 REQUIREMENTS: - NEW DRM DISPLAYS:

- i.** Successful bidder shall propose new DRM display technology such as LED, IPS-LCD, EPD, TFT or other suitable monitor design, which comprises below mentioned requirements from CMRL.
- ii.** Successful bidder shall install these “New DRM displays” in dedicated space available for existing DRM in each car. Every car has provision for 4 new displays. Hence, 16 displays shall be accommodated in each train for all 52 trains.
- iii.** The layout and maximum suitable dimensions for the new displays are mentioned in annexure 15 of this tender document. The displays need to be mounted on the existing slots available for DRM.
- iv.** Successful bidder shall ensure all Displays to have proper passenger viewing in all conditions of interior lighting and during all times of the day and night. Displays shall be equipped with Automatic brightness adjustments by means of ambient light sensors. The display information shall be visible in a clear view in various conditions of exterior light brightness and interior light conditions.
- v.** Text on the displays shall be legible for 180 degree viewing angle.
- vi.** Passengers inside any location of train shall be able to clearly view the route information from the installed displays inside the train. The viewing angle of the displays needs to be such that the information is readable from all parts of the train interior.
- vii.** All new DRM screens should be scratch protected and crack protected for regular cleaning with cleaning agents, passenger access with bare hands.
- viii.** All new DRM screens shall be vermin resistant.
- ix.** Each Display Module including any fitment enclosures shall not exceed the weight of 10kgs while mounting on the existing FRP door panel.
- x.** All new DRM displays shall provide proper view to both seated and standee passengers even in case of exterior light glazing.
- xi.** The display need to be positioned inside the train in the existing slot for DRM.
- xii.** All new DRM displays should withstand train vibrations, existing train ride acceleration deceleration, exterior sunlight, Local environment and external temperature, etc.,
- xiii.** The remaining 4 locations which do not have DRMs need to be fitted with Static route map of complete Phase 1 and Phase 1 Extension section. The design of this map shall be submitted to CMRL for modifications and approval.

- xiv.** Among 52 trains, 42 trains have existing steel brackets for mounting of Dynamic Route Maps and Static Route Maps. For the last 10 trains (i.e., 43 to 52), steel brackets are fitted to FRP panel. These could to be utilized for fixing of new displays and new Static Route Map. Pictures of both SRM and DRM mounting are attached in annexure 19. Bidders could verify the actual panels during the pre-bid meeting date in trains.

6.7.3 SOFTWARE CONFIGURATIONS of NEW DRM DISPLAYS WITH RAVIS:

- i.** The Successful bidder need to continuously capture the automatic route related signalling & rolling stock information available in the train's Multifunction Vehicle Bus (MVB) and need to display pictographic/video-graphic automatic route related information in the above mentioned displays & broadcast the announcements inside the train based on the availability of the signals on MVB.
- ii.** The display graphics and display view need to be proposed by successful bidder in the initial proposal annexure 18 for CMRL approval. CMRL shall provide comments for modification of the display graphics during project implementation stage for better passenger viewing.
- iii.** All the display messages and audio broadcasting shall be in both Tamil and English languages.
- iv.** This route related information shall consist of map based location view, station name scrolling view and other interactive views of displaying the route information and shall be submitted to CMRL for approval.
- v.** The system shall also be capable of displaying ambient information such as the external and internal temperature, humidity, train speed, etc., which are available in MVB bus& any other information useful for passengers. The external and internal temperature, humidity and train speed information need to be captured from the train MVB information of the train. The details of these variables shall be informed by CMRL during project commissioning stage.
- vi.** Options to include any ambient information should be provisioned in user interface of the RAVIS.
- vii.** The display graphics need to be designed such that the information is clearly visible from any one of the display for the passengers located in any portion inside any car.

- viii. Proposal needs to include a provision enabling adding or removing or modifying of any route related details in the display screens by the successful bidder/CMRL trained personnel without any additional cost requirements. These modifications shall be conducted during any further phase extension. CMRL personnel shall be trained by the successful bidder to conduct the modifications in route related display announcements and audio broadcasting.
- ix. The direction of the displaying of the map needs to align with the direction of the train travel with respect to corridor directions. For example, DMC 1 of all trains is always facing towards Chennai central Metro in Corridor 2 & Inter-corridor operations and will face towards Wimco Nagar Metro in Corridor 1 operation. This direction of map alignment shall be maintained for all the interior displays with respect to the left and right sides of each coach.
- x. Route related information need to be automatically displayed on the screen. No displays inside the train should be left blank during train switched on condition.
- xi. Font sizes and display graphics needs to be compliant with Person with disability Act 1995, Rights of persons with disability act 2016 and American Disabilities Act guidelines.

6.8 FRONTAL DISPLAYS AND INTERNAL DISPLAYS:

6.8.1 FUNCTIONALITIES -FRONTAL AND INTERNAL DOT MATRIXDISPLAYS:

- i. Frontal displays, which are placed in exterior front facing direction of both Driver Motor Cars, are used for displaying the destination station for the particular route in which train travels.
- ii. Frontal displays are also used in case of activation of “Silent Alarm” push button from inside active driver cabin. During this time, the active cabin’s Frontal display shows “Train out of order” message.
- iii. Internal displays, two of which are placed inside each car are used for displaying synchronized scrolling Text format of the audio announcements and also for showing date & time in case of no announcements.
- iv. There are 2 No’s of Frontal displays per train and 8 No’s of Interior displays in each train.

- v. These displays are Dot matrix type which is connected with RS 485 network in the existing trains.
- vi. These existing Frontal and Interior displays shall be retained in the trains and the new proposal shall interface with these displays for implementation of RAVIS

6.8.2 REQUIREMENTS - FRONTAL AND INTERNAL DOT MATRIX DISPLAYS:

- i. Frontal Display shall display the details of the destination station and the details of the route through which the train will travel. Successful bidder shall get this data from the train Multifunction Vehicle Bus's (MVB) for achieving this purpose.
- ii. For displaying the Destination station indications in the Frontal Displays, the successful bidder shall utilize the existing RS 485 based LED matrix displays with converters or any other interface mechanism.
- iii. In case of activation of "Silent Alarm" push button from the cabin, train passenger warning message need to be displayed in Frontal display (FD) as it is in the existing trains. (The message to be displayed on Frontal Display is "TRAIN OUT OF ORDER"). This message shall be disappeared after train is restarted.
- iv. Interior Display shall contain the detail of the route related announcement, date & time. Successful bidder shall configure these internal dot matrix displays of each car for displaying visual announcements. For this purpose, the successful bidder shall utilize the existing RS 485 based LED matrix displays with converters or any other interface mechanism.
- v. Successful bidder shall study the protocol and communication from existing frontal and internal dot matrix LED display and can propose solution for integrating it with new RAVIS.
- vi. Font size and font type of the existing visual text messages shall be utilized by the successful bidder in the new system.
- vii. The scrolling speed on the internal and frontal displays shall be the same as of the existing visual text messages.

6.9 NEW TRAIN OPERATOR INPUT/OUTPUT CONSOLE DEVICE.

6.9.1 FUNCTIONALITIES - NEW TRAIN OPERATOR INPUT/OUTPUT CONSOLE DEVICE.

- i. The functionalities of new console device for Train operator will include the following
 - a) Playing pre-recorded audio and text announcements inside all the interior and exterior speakers in coordination with text messages on internal displays. These messages shall be scrolled in the new DRM displays when Train Operator selects the message from console.
 - b) Storage of new Recordings and text announcements for future broadcasting.
 - c) Text to speech conversion for new announcements for storage and further usage of message broadcasting.
 - d) Viewing brief Errors/ failures of RAVIS.

6.9.2 Requirements - New Input Output (I/O) Console/Tab for Train Operator:

- i. Successful bidder shall provide a special message selection I/O Console Tablet inside both cabins of all the 52 trains.
- ii. The console device should withstand train vibrations, existing train ride acceleration deceleration, exterior sunlight and with proper view with exterior light glazing, local environmental and external temperature, etc.,
- iii. It shall be possible to add pre-record Special announcement & text in the system in future for special occasions such as festival, etc. or including new route related information or including inter modal information, etc. Based on the operational requirements of CMRL, these special announcements could be modified in future.
- iv. The selected messages from this screen will be displayed in the new DRM displays, Interior displays and broadcasted in the speakers of the train.
- v. The console shall enable to select and test the displays and audio devices for regular maintenance activities on the equipment of RAVIS system. This shall enable to test audio test on all speakers and display function test for all displays.
- vi. Console shall have option to select the exterior or interior speakers for the purpose of test and for broadcast of announcements of Train operator/DDU announcements.

6.9.3 Software Configurations - New Train Operator Input Output (I/O) Console/Tab with RAVIS:

- i. Successful bidder shall ensure any input for new Text messages and Audio messages to be synced and displayed in both I/O console devices of a train.

- ii. Successful bidder shall ensure I/O console device should display failures/errors in complete RAVIS of train with valid error codes and troubleshooting steps.
- iii. Console of active cabin shall be in use. Based on the cabin active signal from MVB network, the monitor of inactive cabin shall be automatically switched off.

6.10 AUDIO SYSTEM:

6.10.1 Functionalities – Audio System:

- i. The Audio system in train include following functionalities in interior and exterior speakers.
 - a. Playing automatic Route related Audio announcements
 - b. Playing special, emergency pre-recorded messages through Train operator I/O console.
 - c. Driver PA via Microphone in driver desk
 - d. OCC live announcements
 - e. Door Close warning tone
 - f. Passenger Emergency Ingress voice communication between Driver and Passenger in a localized area.
 - g. Cab to Cab communication.

6.10.2 Requirements– Audio System:

- i. The RAVIS shall be interfaced with existing speakers of the train. Each car is equipped with 8 interior speakers and 4 exterior speakers.
- ii. These new audio configurations shall ensure to balance acoustics throughout the train interiors.
- iii. Volume levels of the route related announcements need to be controlled at various levels with respect to passenger load and train speed. This needs to be controlled automatically during the passenger service. The details of speed and train weight are to be gathered from MVB information of train by the successful bidder. Volume of announcements should not cause dis-comfort to passengers. In case of any passenger complaints, CMRL reserves the right to decide whether to increase or to decrease volume settings.
- iv. Successful bidder shall demonstrate the volume levels inside the train during commissioning of the system for CMRL approval.

- v. The working proposal should have the hardware/software for storing all audio files in memory of controller/server for broadcasting of all route related announcements (also called as pre-recorded announcements) based upon availability of signals in MVB.
- vi. Audio recording for all the route related information and any special information in CMRL phase 1 and Phase 1 extension sections need to be conducted by the successful bidder. Messages shall be recorded using a professional recording studio, or alternative method, subject to CMRL approval.
- vii. Text of announcements shall be provided by CMRL during the design stage of the project.
- viii. Proposed solution shall have the storage for these recorded announcements. Audio recordings need to be done in both English and Tamil languages.
- ix. In case of modifications in the route related information or in special information in future, the successful bidder shall update/modify the necessary systems.
- x. Successful bidder shall record the audio files for the special announcements in both Tamil and English languages.

6.10.3 SOFTWARE CONFIGURATIONS OF AUDIO SYSTEM WITH RAVIS:

- i. All existing passenger announcements, train operator announcements, announcements from Operational Control centre through train equipment need to be broadcasted even after the modification. Successful bidder's proposal should have the automatic selection of priorities as per current announcement scenario in the train. The existing priorities between announcements are attached in annexure 17. This need to be followed by Successful bidder for the RAVIS contract.
- ii. In case of other priority announcements from TCMS or any other external parameters such as Public Announcement by Train operator or LIVE OCC announcement or Special announcements selected from the I/O Console by the train operator, the audio of the route related announcements or lesser priority announcements in these displays need to be muted off. In this case, the audio system of the train should broadcast the desired announcement. This logic for priority in new audio system need to be implemented by the successful bidder. Table of priorities for the announcements mentioned in annexure 17 shall be followed.
- iii. Successful bidder shall place priority for door close warning tone while doors are being closed. For this purpose, information for door close command shall be picked

from MVB channel/ door close push buttons placed in the cabins. Priority chart of Annexure 17 shall be followed.

6.10.4 SYNCHRONIZATION OF AUDIO AND VISUAL ANNOUNCEMENTS:

- i.** Audio-visual route announcement need to be made available for the display panels in fonts of Tamil and English languages. Font types and text size of new DRM displays shall be proposed by successful bidder for CMRL approval.
- ii.** The audio announcements and the display information shall be synchronized. This need to be in-line for both Tamil and English languages.

6.11 WIRING AND FITMENT:

- iii.** Successful bidder shall use existing RS485 based network inside each cars for new DRM display connectivity. Necessary interfacing with RAVIS shall be configured by the successful bidder.
- iv.** Successful bidder shall study the possible connectivity between Cars of trains and feasible proposal with respect to hardware and network shall be submitted to CMRL for approval during tendering in Annexure 18.
- v.** Existing Car to Car jumper cables free terminals and free space in conduits can be utilized for this purpose upon detailed study.
- vi.** All the cables and wiring which shall be installed in train need to be fitted considering the proper bending radius and proper cable routing procedures.
- vii.** The successful bidder shall do the fitment of new DRM displays by bringing their own equipment/Spares in CMRL premises. The successful bidder shall ensure the commissioning on their own without aid of CMRL.
- viii.** The successful bidder shall mount the I/O console inside the trains' FRP cabins with necessary fittings intact.
- ix.** Successful bidder shall ensure that all the wiring done for the modification shall be concealed from passengers' view and shall be aesthetically placed inside the train.
- x.** All the new equipment which will be placed inside the train for the proposal shall be designed and placed considering the existing aesthetical appearance of the train interiors.

- xi.** IP conflict or any other network interference between existing equipment of train shall be avoided
- xii.** IP conflict or any other network interference between other network devices outside train shall be avoided.

6.12 PROVISION FOR VISUAL ADVERTISEMENTS

- i.** Successful bidder shall make provision for visual advertisements in new DRM displays of all trains. This provision could be utilized by CMRL whenever required in future.
- ii.** Successful bidder shall design new DRM display with capability of switching between advertisement and route related information.
- iii.** Successful bidder shall ensure at any given time, Route related information takes top priority over advertisement data.
- iv.** User interface shall be provided to CMRL for enabling/disabling advertisement and adding new advertisements with upload content option which needs to be done at a single point per train basis by connecting to the main controller in train through wired/wireless means in Depot.
- v.** Separate memory space shall be allocated in RAVIS for advertisement content.

6.13 WARRANTY

- i.** Successful bidder shall cover Warranty support for the period of 104 weeks from the date of Completion and after the approval from CMRL per train basis. The Warranty supports are liable to following Terms and conditions with no cost implications to CMRL.
- ii.** Liability of the equipment & related systems installed by the successful bidder lies with the successful bidder until the closure of the warranty period as specified in **SCC 1.1.**
- iii.** However, CMRL will absorb the cost in case of damages due to passenger vandalism of this equipment in revenue service only. Any damage of the equipment or related systems due to the successful bidder and their staff shall be rectified by the successful bidder itself.

- iv. During all the stages of contract until closure of warranty period, successful bidder shall be responsible for conducting the replacement or modification of the equipment in case of failures at the cost of Successful bidder.
- v. Successful bidder shall be able to rectify and re-install the corrected/new components for preparing the train fit for passenger operations within the non-revenue hours on the same day in depot/mainline.
- vi. Any design related changes or additional requirement from CMRL in software perspective during prototype implementation and monitoring stages shall be implemented within 15 days from the time of request.
- vii. Any bugs or errors in software shall be studied and rectified with a fix within 7 days from the time of identification/ complaint.
- viii. Individual equipment reliability details shall be submitted to CMRL as part of annexure 18 during tendering stage itself. Based on which of the displays and other equipment shall be monitored for sustainability.
- ix. Necessary software tools required for this purpose shall be provided to CMRL during and after the warranty period without any additional license fee with change in period.
- x. For any scope of work during warranty period, the successful bidder shall be responsible for any cost implications.

6.14 TRAININGS:

- i. Successful bidder need to provide training to CMRL on how to modify the volume levels of announcements during the project implementation stage.
- ii. All route related announcements need to be accessible to CMRL for future modifications after completion of warranty period.
- iii. Successful bidder shall provide training to CMRL personnel to edit/update the advertisements and route related information & announcements in the proposed solution. CMRL will do the edit/update during/after completion of the warranty period.
- iv. During project implementation stage, the successful bidder shall provide hands-on training to CMRL Rolling stock staff regarding changing and installation of hardware & software, adding of new advertisements & removing advertisements, adding new maps and route related information, replacing of spares, access to the variables in MVB of train for getting route related information, periodic maintenance of installed

new LED screen displays etc., in such a way that CMRL staffs shall carry out the related modifications without the aid of successful bidder after completion of contract period with the successful bidder. Any software tools required to conduct these modifications need to be provided to CMRL without further cost implications.

- v. Successful bidder shall provide training to CMRL staffs for creating/ modifying new user log-on in I/O console.
- vi. Successful bidder shall provide both hardcopies and soft copies of Operation manual, Troubleshooting manual and any other maintenance manual to CMRL.

6.15 MAINTENANCE

- i. During warranty period, Successful bidder shall be reachable via Phone call and Email 24X7 for any issues, failures or mishaps in RAVIS. Upon fault intimation, Successful bidder shall be available in CMRL premises for corrective action. For reporting such faults, successful bidder shall share the Support Phone number and Email ID.
- ii. Successful bidder shall submit the operation and maintenance plan for the systems for proper planning of the train availability. The plan shall be submitted for CMRL approval in the Stage 1 of the project execution. Any recommendations of CMRL shall be incorporated in the plan by the successful bidder.
- iii. The Operation and Maintenance plan shall contain the details of equipment preventive maintenance schedules, basic verification details for trouble-shooting of equipment, pin diagrams and network parameters, etc.
- iv. The Operation and Maintenance plan shall match with the CMRL's regular train maintenance plan. This plan shall include the maintenance schedules of the proposal.
- v. Successful bidder shall be able to rectify and re-install the corrected/new components for preparing the train fit for passenger operations within next revenue service of the specific faulty train availability in depot.
- vi. Successful bidder shall conduct the periodic maintenance and any corrective actions for the system installed.

6.16 GENERAL REQUIREMENTS:

- i.** The Successful bidder shall manage with adequate spares for replacement of equipment in case of failure of equipment until completion of Warranty stage of the contract per train basis.
- ii.** All the details of proposed components and its Original Equipment Manufacturer details shall be shared with CMRL. CMRL shall procure any equipment directly from OEMs after completion of warranty in trains.
- iii.** Any new device that has to be mounted inside train shall be placed in designated place identified mutually with the approval of CMRL.
- iv.** The successful bidder shall test the functioning of all the devices at their premises and provide certificate of confirmation before installation inside the train.
- v.** The system shall be compatible for update/modification in future in all the newly proposed extension sections apart from phase 1 or phase1 extension or any other if any in these 52 trains.
- vi.** Successful bidder shall do the complete Planning, installation and commissioning activities necessary for the on-time completion of the project. The successful bidder shall install all the hardware, supporting brackets, harness, wiring and other related accessories, etc., required for working of the system in all trains.
- vii.** The entire display graphics formats need to be done by successful bidder with approval of CMRL. During or after implementation of entire proposal, there should not be any impact on the general functioning of the train.
- viii.** During the proposed activities, Successful bidder shall remove the existing DRM & SRM in phase 1 trains and same shall be handed over to CMRL. Annexure 19 has existing DRM & SRM mounting brackets pictures for reference.
- ix.** The successful bidder should not alter or damage any of train's FRP panels, structure and related equipment thereof. In case of any alteration or damage to panels or damage to structure or for related equipment, it is the sole responsibility of successful bidder to restore/repair the damage that includes procuring of equipment/spares necessary for rectification.
- x.** Successful bidder will be responsible for any material damages occurred during the installation & removal of new proposed panels and during removal & re-installation of existing panels from the train. In case of any damages, successful bidder needs to re-install the good working material without change of original functionality at the cost of successful bidder.

- xi.** The successful bidder shall ensure that there should not be any interference in train functionality and safety in any manner due to installation and operation of new displays and new system.
- xii.** In case of identification of any failures/issues related to the working proposal in hardware or software during implementation period or monitoring period, the successful bidder need to rectify the issues before completion of the monitoring period itself. In case of any failures observed during the warranty period, the successful bidder shall take a prompt action for rectification.
- xiii.** In case of with-hold of train in depot/mainline due to equipment failure or RAVIS system issue or non-availability of equipment for replacement for more than 3 days in a specific month, the warranty for the specific train shall be extended by one month.
- xiv.** The modification should not impact the normal working of the PACIS software in trains during and after the modification.
- xv.** In any case, existing functioning of the train (either hardware or software) should not be impacted due to the implementation of the successful bidder's proposal. Successful bidder need to restore any functionality impacted due to the implementation of the proposal.
- xvi.** Any removed material from the train during the modification needs to be handed over to CMRL authorities in good condition at Koyambedu depot.
- xvii.** The operating voltage of all new screen displays, LED matrix displays and audio equipment should be designed to match with the existing operating voltage range and voltage regulation specifications of train during all modes of operation of the train. The design should consider providing voltage surge protection for all electrical and electronic equipment of the train during all modes of operation of train.
- xviii.** The power consumption rating of all displays and related equipment should adhere to the existing circuit breakers ratings available in trains.
- xix.** Train control voltage is 110 V DC (min. 77 V to max.137.5 V) during train ON condition and when operating with battery alone. All the equipment in the proposal shall adhere to this voltage requirement.
- xx.** Current loading for all the proposed equipment shall be within the existing circuit breaker ratings of the train. The proposed equipment shall be protected with separate circuit breaker for each car. In case of tripping of the circuit breaker of this system, it shall not cause any impact to the normal functioning of the train operation.

- xxi.** Failures within the system shall not impact the function of other equipment of the train.
- xxii.** All displays and other hardware proposed should be properly provided with earthing and grounding during installation itself. Both circuit earthing and equipment earthing need to be provided. Existing grounding points of the train could be used for this purpose.
- xxiii.** Successful bidder shall submit the power ratings of each device which are proposed to be connected in power source of the train. The details shall be shared in annexure 18.
- xxiv.** All the display panels and equipment to be installed need to withstand temperature and other operational conditions in the train.
- xxv.** Only the approved station names need to be used in the route related announcements. The details of approved station names the text of route related announcement will be provided by CMRL during the Stage 1 of the project execution.
- xxvi.** Train in passenger service shall not be impacted due to failure of any single equipment in the new working proposal of RAVIS.
- xxvii.** In no scenario, passenger announcements or display information shall become faulty in complete train during passenger operation.
- xxviii.** Prospective bidders could visit the CMRL stations, Koyambedu depot and trains on a written prior permission from CMRL for getting the full idea of the corridor information and train information.
- xxix.** All new equipment inside train including new DRM display, Media controllers, servers, train operator console shall withstand any voltage induction during pantograph rising and lowering action.
- xxx.** Physical visualization of train schematic, jumper cable terminals, connectors can be done during pre-bid meeting with prior approval from CMRL.
- xxxi.** Provision for downloading Logs from RAVIS shall be done through maintenance tool. These logs shall provide details on any errors, failures and abnormalities in the system.
- xxxii.** The Successful bidder shall demonstrate the Concept of RAVIS in any one train of CMRL. Same shall be validated for its performance and stability during monitoring period.
- xxxiii.** Monitoring period will be 1 week after demonstration stage. During this period, the successful bidder and CMRL shall monitor the complete design and functionalities of RAVIS and it is subjected to fix the discrepancies if any.

- xxxiv.** For any major functionality/ design issues in demonstration stage, CMRL has authority to extend the monitoring period.
- xxxv.** Successful bidder shall follow uniform documentation pattern and same shall be submitted to CMRL during various stages of approvals and validations.
- xxxvi.** Post warranty period, The Successful bidder shall provide on-call support to CMRL for any issues with Hardware and Software tools for free of cost.

DISCLAIMER

1. CMRL does not make any representation or warranty as to the accuracy, reliability or completeness of the information in this Bid Document. Therefore, each Bidder should conduct their own investigations and analysis and check the accuracy, reliability and completeness of the information in this Bid Document and obtain independent advice from appropriate sources. The Bidder shall bear all its costs associated with the preparation and submission of its Bid including expenses associated with any clarifications, which may be required by CMRL or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and CMRL shall not be liable in any manner.
2. CMRL will have no liability to any bidder or any other person under the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise from or be incurred or suffered in connection with anything contained in this bid document, any matter deemed to form part of this bid document, the award of the contract, the information and any other information supplied by or on behalf of CMRL or otherwise arising in any way from the selection process of the contract.
3. The issue of this document does not imply that CMRL is bound to select the bidder or to appoint the selected bidder. CMRL reserves the right to reject any or all of the bids submitted in response to this bid document at any stage without assigning any reasons whatsoever. CMRL also reserves the right to withhold or withdraw the process at any stage with intimation to all bidders who have submitted the bid.
4. CMRL reserves the right to change / modify / amend any or all of the provisions of this tender document at any stage. Such changes shall not be notified to all bidders who have bought the tender document.

TECHNO –COMMERCIAL BID

Covering letter comprising the Bid

Dated:

To,
Chief Advisor (Systems & Operations)/ Director (Systems & Operations) In-Charge,
Chennai Metro Rail Limited, Admin Building,
CMRL Depot, Poonamallee High Road,
(Adjacent to Koyambedu Metro Station),
Koyambedu, Chennai – 600107.

Dear Sir,

1. With reference to your bid document for CMRL/RS/01/2020, I/we, having examined the bid documents and understood its contents, hereby submit my/our bid along with the bid for the award of contract. The letter and the bid are unconditional and unqualified.
2. I/ We acknowledge that CMRL will be relying on the information provided in the bid and the documents accompanying this bid for qualification of the bidder(s) for the award of contract, and I/we certify that all information provided in the bid and its annexures are true and correct.
3. I/We understand that the submission of bid/offer does not guarantee the award of the said contract.
4. I/ We shall make available to CMRL any additional information it may find necessary or require to supplement or authenticate the bid.
5. I/ We recognize that CMRL has the right to accept/reject our bid without assigning any reason.
6. I/ We declare that:
 - a. I/We have examined and have no reservations to the bidding documents, including any addendum issued by CMRL;
 - b. I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice as where defined in the bid document, in respect of any bid or request for proposal issued by or any agreement entered into with CMRL;
 - c. I/We hereby certify that we have taken steps to ensure that in conformity with the bid document, no person acting for us or on our behalf has engaged or will engage in any

corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

7. I/ We understand that CMRL may cancel the bidding process at any time and that CMRL is neither bound to accept any bid that CMRL may receive nor to invite the bidders to bid for the award of contract, without incurring any liability to the bidders, in accordance with the bid document.
8. I/ We declare that we/any member of the consortium are not a member of a/any other consortium submitting a bid for the award of contract.
9. I/ We undertake that in case due to any change in facts or circumstances during the bidding process, we are attracted by the provisions of disqualification in terms of the provisions of the bid document; we shall intimate CMRL of the same immediately.
10. I/We understand that on account of non-acceptance of LOA or on account of not fulfilling the conditions of the bid document, I/We shall be debarred by CMRL for further participation in the similar future contracts/licenses of CMRL for a period of nine (9) years.
11. The power of attorney for signing of bid and the power of attorney for lead member of consortium, as per format provided at techno-commercial bid of the bid document, are also enclosed. The power of attorney shall be in non-judicial stamp paper of minimum Rs. 100/- value as per the format given.
12. In the event of my/our being declared as the selected bidder, I/We agree to enter into a contract agreement in accordance with the draft that has been provided to me/us prior to the bid due date. We agree not to seek any changes in the aforesaid draft and agree to abide by the same.
13. I/We have studied all the bidding documents carefully and we understand that except to the extent as expressly set-forth in the contract agreement, we shall have no claim, right or title arising out of any documents or information provided to us by CMRL or in respect of any matter arising out of or concerning or relating to the bidding process including the award of contract.
14. The techno-commercial and price bid has been submitted by me/us after taking into consideration all the terms and conditions stated in the bid document, my/our estimates of costs and all the conditions that may affect the bid.
15. The online transaction details of the cost of the tender document and details of Bank Guarantee of Earnest Money deposit shall be furnished in **Annexure – 6**.
16. I/We confirm that, the full payment has been made through online transaction for tender fee and provided the bank guarantee for EMD. I/We understand that, in case CMRL did not

receive the above mentioned payment and EMD bank guarantee before the bid opening date then the tender will be summarily rejected.

17. I/We agree and understand that the bid is subject to the provision of the bidding documents. In no case, I/We have any claim or right of whatsoever nature if the contract is not awarded to me/us or my/our bid is not opened.
18. I/We agree to keep my/our bid valid for 180 days from the bid due date specified in the bid document.
19. I/ We agree and undertake to abide by all the terms and conditions of the bid document.
20. We agree and undertake to be jointly and severally liable for all the obligations of the Successful bidder under the contract agreement till the expiry/termination of the contract agreement.

In witness thereof, I/ we submit this bid along with our bid under and in accordance with the terms of the bid document.

Yours faithfully,

(Signature)

Name and designation of the Authorized Signatory)

Name and seal of the Bidder/ Lead Member

Date:

Place:

JOINT BIDDING AGREEMENT

(To be executed on stamp paper having value Rs.100/-)

THIS JOINT BIDDING AGREEMENT is entered into on this the day of 20... AMONGST

1. {..... Limited, a company incorporated under the Companies Act, 1956 or registered under the Partnership, Act 1932} and having its registered office at..... (Hereinafter referred to as the

“First Part”

which expression shall, unless repugnant to the context include its successors and permitted assigns)

AND

2. {..... Limited, a company incorporated under the Companies Act, 1956 or registered under the Partnership, Act 1932} and having its registered office at..... (hereinafter referred to as the

“Second Part”

Which expression shall, unless repugnant to the context include its successors and permitted assigns)

AND

3. {..... Limited, a company incorporated under the Companies Act, 1956 or registered under the Partnership, Act 1932} and having its registered office at..... (Hereinafter referred to as the

“Third Part”

which expression shall, unless repugnant to the context include its successors and permitted assigns)}

The above mentioned parties of the FIRST, SECOND and THIRD PART are collectively referred to as the “Parties” and each is individually referred to as a “Party”

WHEREAS:

A. CMRL has invited bids by its bid document dated _____ (the “document”) for submission of bids for the award of contract for

DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS.

i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR OPERATIONS BETWEEN

CORRIDOR 1 AND CORRIDOR 2. IT IS ALSO CALLED AS RAVIS (ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM)

B. The parties are interested in jointly bidding for the award of contract as members of a consortium and in accordance with the terms and conditions of the document and other bid documents in respect of the award of contract.

C. It is a necessary condition under the document that the members of the consortium shall enter into a joint bidding agreement and furnish a copy thereof with the Bid.

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. Definitions and interpretations in this agreement, the capitalized terms shall, unless the context otherwise requires, have the meaning ascribed thereto under the document.

2. Consortium: The number of parties will be shown here, as applicable, however subject to a maximum of three.

2.1 The parties do hereby irrevocably constitute a consortium (the “consortium”) for the purposes of jointly participating in the bidding process forward of the contract.

2.2 The parties hereby undertake to participate in the bidding process only through this consortium and not individually and/ or through any other consortium constituted for the award of contract, either directly or indirectly or through any of their associates.

3. Role of the Parties

The Parties hereby undertake to perform the roles and responsibilities as described below:

- a. Party of the first part shall be the lead member of the consortium and shall have the power of attorney from all parties for conducting all business for and on behalf of the consortium during the bidding process and until the appointed date under the contract agreement when all the obligations of the consortium shall become effective;

4. Joint and Several Liabilities

The parties do hereby undertake to be jointly and severally responsible for all obligations and liabilities relating to the award of contract and the services desired under the contract in accordance with the terms of the document and the contract agreement.

5. Representation of the Parties

Each party represents to the other parties as of the date of this agreement that:

- a. Such Party is duly organized, validly existing and in good standing under the laws of its incorporation and has all requisite power and authority to enter into this agreement;
- b. The execution, delivery and performance by such party of this agreement has been authorized by all necessary and appropriate corporate or governmental action and a copy of the extract of the charter documents and board resolution/ power of attorney in favour of the person executing this agreement for the delegation of power and authority to execute this agreement on behalf of the consortium member is annexed to this agreement, and will not, to the best of its knowledge:
 - i. Require any consent or approval not already obtained;
 - ii. Violate any applicable law presently in effect and having its applicability.
 - iii. Violate the memorandum and articles of association, by-laws or other applicable organizational documents thereof;
 - iv. Violate any clearance, permit, grant, license or other governmental authorization, approval, judgment, order or decree or any mortgage agreement, indenture or any other instrument to which such party is a party or by which such party or any of its properties or assets are bound or that is otherwise applicable to such party; or
 - v. Create or impose any liens, mortgages, pledges, claims, security interests, charges or encumbrances or obligations to create a lien, charge, pledge, security interest, encumbrances or mortgage in or on the property of such party, except for encumbrances that would not, individually or in the aggregate, have a material adverse effect on the financial condition or prospects or business of such party so as to prevent such party from fulfilling its obligations under this agreement;
- c. This agreement is the legal and binding obligation of such Party, enforceable in accordance with its terms against it; and
- d. There is no litigation pending or, to the best of such party's knowledge, threatened to which it or any of its affiliates is a party that presently affects or which would have a material adverse effect on the financial condition or prospects or business of such party in the fulfilment of its obligations under this agreement.

1. Termination:

This agreement shall be effective from the date hereof and shall continue in full force and effect until the expiry/termination of the contract agreement, in case the contract is awarded to the consortium. However, in case the consortium is not awarded the contract, the agreement will stand terminated upon return of the earnest money by CMRL to the bidder, as the case may be

2. Miscellaneous

a. This joint bidding agreement shall be governed by laws of India.

The parties acknowledge and accept that this agreement shall not be amended by the parties without the prior written consent of CMRL.

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

For and on behalf of
LEAD MEMBER by:
(Signature)
(Name)
(Designation)
(Address)

For and on behalf of
SECOND PARTNER
(Signature)
(Name)
(Designation)
(Address)

Notes:

1. The mode of the execution of the joint bidding agreement should be in accordance with the procedure, if any, lay 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.

2. Each joint bidding agreement should attach a copy of the extract of the charter documents and documents such as resolution / power of attorney in favour of the person executing this agreement for the delegation of power and authority to execute this agreement on behalf of the consortium members.

POWER OF ATTORNEY FOR SIGNING OF BID

(To be executed on stamp paper having value Rs.100/-)

Know all men by these presents, we _____
_____ (name of the firm and address of the Registered Office) do hereby irrevocably constitute, nominate, appoint and authorize Mr. / Ms. (name), _____ son / daughter / wife of _____ and presently residing at _____, who is presently employed with us / the Lead Member of our Consortium and holding the position of _____, as our true and lawful Attorney (hereinafter referred to as the “Attorney”) to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our bid for the award of the contract for “DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS.

i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR OPERATIONS BETWEEN CORRIDOR 1 AND CORRIDOR 2.

IT IS ALSO CALLED AS RAVIS (ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM).” for which proposals are invited by Chennai Metro Rail Limited, (CMRL) including but not limited to signing and submission of all bids and other documents and writings, participate in bidders and other conferences and providing information / responses to Chennai Metro Rail Limited (CMRL), representing us in all matters before Chennai Metro Rail Limited, (CMRL) signing and execution of all contracts including the contract agreement and undertakings consequent to acceptance of our bid and generally dealing with CMRL in all matters in connection with or relating to or arising out of our bid for the award of contract to us and / or till the entering into of the contract Agreement with CMRL.

AND

we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said attorney pursuant to and in exercise of the powers conferred by this power of attorney and that all acts, deeds and things done by our

said attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, _____ THE ABOVE NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____ 20____

For _____ (Signature, name, designation and address)

Witnesses:

(Notarized)

1.

2.

Accepted

_____ (Signature)

(Name, Title and Address of the Attorney)

Notes:

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 executants(s) and when

It is so required; the same should be under common seal affixed in accordance with the required procedure.

The bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution / power of attorney in favour of the person executing this power of attorney for the delegation of power hereunder on behalf of the bidder along with bid document at the time of executing the agreement.

POWER OF ATTORNEY FOR LEAD MEMBER OF CONSORTIUM

WHEREAS CHENNAI METRO RAIL LIMITED (CMRL) has invited Bids from interested parties for the “DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS. i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR OPERATIONS BETWEEN CORRIDOR 1 AND CORRIDOR 2. IT IS ALSO CALLED AS RAVIS (ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM)”, whereas, _____ and _____ (collectively the “Consortium”) being members of the consortium are interested in bidding for the award of contract for the “DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS. i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR OPERATIONS BETWEEN CORRIDOR 1 AND CORRIDOR 2. IT IS ALSO CALLED AS RAVIS (ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM).”, in accordance with the terms and conditions of the bid document dated _____ and other connected documents in respect of the award of contract, and

Whereas, it is necessary 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 bid for the award of contract and the execution of the contract agreement.

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS

We, _____ having our registered office at _____, M/s. _____ having our registered office at _____, M/s. _____ having our registered office at _____ and _____ having our registered office at _____ (hereinafter collectively referred to as the “**Principals**”) do hereby irrevocably designate, nominate, constitute, appoint and authorize M/s. _____ having its registered Office _____ being one of the members

of the consortium as the lead member and true and lawful attorney of the consortium (hereinafter referred to as the “Attorney”). We hereby irrevocably authorize the attorney to conduct all business for and on behalf of the consortium and any one of us during the bidding process and in the event the consortium is awarded the contract, during the terms of the contract and in this regard, to do on our behalf and on behalf of the consortium, all or any of such acts, deeds, or things as are necessary or required or incidental to the submission of its bid for the award of contract, including but not limited to signing and submission of all bids, bids and other documents and writings, participate in bidders and other conferences, respond to queries, submit information / documents, sign and execute contracts and undertakings consequent to acceptance of the bid of the consortium and generally to represent the consortium in all its dealings with CMRL and / or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Consortium’s bid for the award of contract till the contract agreement is entered into with CMRL.

AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said attorney pursuant to and in exercise of the powers conferred by this power of attorney and that all acts, deeds and things done by our said attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us / consortium.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____ 20____

For _____
(Signature)

For _____
(Signature)

(Name and Title)
Witness:

(Name and Title)

- 1.
- 2.

Notes:

The mode of execution of the power of attorney should be in accordance with the procedure, if any, lay down by the applicable law and the charter documents of the executants(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.

Wherever required, the bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders’ resolution / power of attorney in favour of the person executing this power of attorney for the delegation of power hereunder on behalf of the bidder.

(With reference to GCC 6.2, Bidder has to submit either of Annexure 5 or Annexure 22 for evaluation)

CUSTOMER SATISFACTION CERTIFICATE

To be submitted on the customer Letter head

Date:

To

Chief Advisor (Systems & Operations)/ Director (Systems & Operations) In-Charge)
Chennai Metro Rail Limited
Chennai-107

This is to certify that M/s. _____ has been awarded the following contract/s:

S. No	Scope of the work	Fleet Size (No. of buses/trains/ aircrafts/ hotels/ airports/ railway stations/ bus stations / in any commercial location) and Cost of the project.	Fleet owner details (Where exactly the fleet is being used)	Contract awarded date and completed date	Working since (from the date of completion of installation)
1					

I, the undersigned, declare that the above mentioned system was implemented by M/s. _____ and the system is working satisfactorily.

Yours Sincerely,

MANDATORY INFORMATION FOR ELIGIBILITY OF THE BID

1. The form below should be filled by bidder along with all supporting documents as stipulated in the relevant rows. Failure to adhere to the format will lead to rejection of Bid.

2. For JV / Consortium, all partners to provide the details

S. No.	Techno-Commercial Criteria	Details (to be filled by the bidder)	Pg. Nos.
1	Name of the Bidder		
2	Contact person of the Bidder designated for the bid along with Telephone, Fax No. and email ID.	Name: _____ Contact no. _____ Email: _____ Fax No. _____	
3	Full address of the Bidder with Telephone No. and Fax No.	Address. _____ _____ Contact no. _____ Fax No. _____	
4	Details of online transaction (UTR No.) of cost of tender document (Soft copy) including GST for an amount of INR.32,000/-	UTR No. _____	
5	Details of Bank Guarantee of EMD for an amount of INR. 15,60,000/-	Bank Guarantee No. _____	
6	Specify the legal status of bidder : company / partnership firm / individual		
7	In case of company, please enclose memorandum and articles of association along with certificates of incorporation and date of commencement of business		
8	In case of Firm, registered under the Partnership Act 1932, please enclose details of Partners along with Certificate of Registration, details of		

	their business and partnership deed, etc. Duly attested by Notary.		
9	Name of the member in consortium registered office or a group company office or a representative office in India as per Indian Companies Act - 1956 having existence for at least 12 months. Enclose attested certificate of registration.	Name _____ of _____ the member: _____ Registered from: _____	
10	PAN of the bidder (Please enclose the attested photocopy of PAN card issued by Income Tax Department)		
11	Bank account details	Bank Name: _____ Address: _____ Beneficiary: _____ Acc. No. _____ IFSC code. _____	
12	GST Number of the bidder (Please enclose the attested photocopy of GST Registration Certificate issued by relevant authorities)		
13	PF Registration of the bidder (Please enclose attested photocopy of Provident Fund Commissioner) , if applicable		
14	Copy of license under Contract Labour Act, 1970 (If applicable)		
15	ESI Registration (Please enclose attested photocopy) , if applicable.		
16	Turnover of the bidder for the preceding three years, viz.2016-17, 2017-18 and 2018-19 (Please enclose a statement duly certified by Chartered Accountant) Annexure-6 , Format– 1:		
17	Profit and Loss statement for three years, viz. 2016-17, 2017-18 and 2018-2019 (Please enclose a statement duly certified by Chartered Accountant) Annexure-6 , Format– 1		

Note:

1. The details as required in must be submitted with supporting documents as applicable. Failure to submit details is a **disqualification**.

2. Bids with alterations shall be attested by the bidder.

I/We _____ do hereby declare that the entries made are true to the best of my/our knowledge and also that we shall be bound by the acts of my/our duly constituted attorney.

I/We further understand that in case of any information submitted by me / us being found to be incorrect either before or even after the award of license, CMRL will have the right to summarily reject the bid, cancel the contract or revoke the same at any time without assigning any reason whatsoever.

(Signature of the Bidder)

SEAL

Date:

Name:

Address:

1. The form below should be filled by bidder along-with all supporting documents as stipulated in the relevant rows.
2. For JV / Consortium; all partners to provide the details of annual revenues for each head, as applicable, for the last 3 financial years.

ANNEXURE – 6, FORMAT– 1:

Turnover of the bidder(s):

Name of bidder	2016-2017	2017-2018	2018-2019	Average of all three financial years

Profit – Loss before taxes of the bidder(s):

Name of bidder	2016-2017	2017-2018	2018-2019

(Chartered Accountant's Signature & Date)

Bidder's signature and Name

Name of the CA:

Name of the Authorized Signatory

Chartered Accountant's Seal

Bidder's Seal

CA Registration Number:

CA's Address:

CA's Telephone / Fax Number

UNDERTAKING BY THE BIDDER TO CONDUCT AUDIT BY CMRL.

TO WHOMSOEVER IT MAY CONCERN

Ref: Tender Document No: CMRL/RS/01/2020

I / We,hereby affirm, after careful study of the tender documents confirm, the rights of CMRL to have an audit in the course of the contract period and the result of such audit is binding on us.

Authorized Signatory

Name : _____

Seal: _____

Date: _____

Place: _____

CERTIFICATION FOR NON-ENGAGEMENT OF MIDDLEMEN OR AGENT
TO WHOMSOEVER IT MAY CONCERN

Ref: Tender Document No: CMRL/RS/01/2020

This is to confirm and certify that I / We, in the process of bidding this tender, not have engaged any middleman or agency to advance our tender.

Authorized Signatory

Name : _____

Seal: _____

Date: _____

Place: _____

CHECKLIST OF DETAILS/DOCUMENTS TO BE SUBMITTED

S. No.	Details / Documents submitted	Whether complied – please indicate ‘Yes’ or ‘No’.	Page Number
1	Have you filled the online transaction details (UTR no.) of cost of tender document in Annexure – 6		
2	Have you filled the details of Bank Guarantee of EMD in Annexure – 6		
3	Have you submitted Covering letter for Techno-Commercial Bid in your letter head as in proforma. (Annexure 1)		
4	Have you attached Power of Attorney for signing the Tender Document as in proforma given in Annexure-3.		
5	Have you attached details of Techno Commercial experience as in Annexure-5 (or Annexure 22) and Annexure -6 along with details furnished as in Format-1.		
6	Have you attached mandatory information’s for eligibility of the Bid with all certified copies as stated vide Annexure-6.		
7	Have you attached undertaking for Third Party Audit agreement as per proforma in Annexure-7		
8	Have you attached Certification for non-engagement of middlemen or agent as per proforma in Annexure-8		
9	Have you signed all pages of the tender document? (To be signed by the authorized signatory as per the Power Attorney given in Annexure-3).		
10	Have you filled in the required cells in Price Schedule (Financial bid)?		
11	Have you submitted the original hard copy of Bank guarantee of EMD to CMRL management one day before the Tender Opening Date?		
12	Soft copy of Bank Guarantee of EMD to be attached with techno-commercial bid (Annexure 16)		
13	Have you submitted the Initial draft concept of proposal in Annexure 18		
14	Have you filled and submitted Initial Filter Criteria Annexure 10		

15	Have you submitted Criteria for Techno-Commercial Evaluation of Bidders - Annexure 20		
16	Have you submitted Form of Bank Guarantee for Bid Security - Annexure 21		
17	Have you submitted Cost breakup for all equipment and all activities for RAVIS project - Annexure 23 along with price bid only.		

1. The details as required in Annexure 9 must be submitted as applicable. Failure to submit details is a **disqualification**.

Seal of the Bidder

Signature:.....

Name of the Authorized signatory:.....

INITIAL FILTER CRITERIA
(On Company's letter head {in member in case of consortium})

S.No.	Criteria	Yes	No
1	Has the bidder abandoned any work in the last five years?		
2	Has the Bidder's contract with any organization ever been terminated due to poor performance?		
3	Has the Bidder's Performance Security for any contract has ever been forfeited in any Government / Semi-government/ PSUs/ Metro Railways?		
4	Has the Bidder been involved in frequent litigations in last five years?		
5	Has the Bidder suffered insolvency/bankruptcy in the last five years?		
6	Has the Bidder been blacklisted by any organization?		
7	Has any misleading information is given in the tender?		
8	Is the Bidder is financially not sound to perform the work?		
9	Is the Bidder's net worth negative?		
10	Has the Bidder failed to certify that no middlemen has been or will be engaged or that any commission has been or will be paid?		
11	Do the documents submitted reveal that any commission has been or will be paid?		

Note: 'Yes' answer to any of the above 1 to 11 points shall disqualify the Bidder. The Bidder should also enclose the following undertaking on **Rs.100/-** Non-Judicial stamp Paper duly notarized as per the format given below along with the Techno-Commercial Bid.

[ON NON-JUDICIAL STAMP PAPER OF RS.100/- DULY NOTARIZED]

UNDERTAKING FOR INITIAL FILTER CRITERIA
(Each member in case of Consortium)

Sub: - TENDER FOR

DESIGN, SUPPLY, INSTALLATION, TESTING & COMMISSIONING AND WARRANTY SERVICE OF DIGITAL DISPLAY SCREENS AND RELATED EQUIPMENT IN ALL 52 TRAINS OF CMRL FOR PROVIDING VISUAL AND AUDIO BROADCASTING OF AUTOMATIC ROUTE RELATED INFORMATION & ADVERTISEMENTS IN CMRL PHASE 1 AND PHASE 1 EXTENSION SECTIONS.

i.e., AIRPORT METRO TO WIMCO NAGAR METRO, CHENNAI CENTRAL METRO TO St. THOMAS MOUNT METRO AND THEIR INTER-CORRIDOR OPERATIONS BETWEEN CORRIDOR 1 AND CORRIDOR 2. IT IS ALSO CALLED AS RAVIS (CONTRACT FOR ROUTE RELATED AUDIO AND VISUAL INFORMATION SYSTEM).

1 I, Mr./Ms. _____ (Authorized Signatory) on behalf of _____ (Company's Name) having its registered office at _____, hereby confirm, declare and undertake that the information given in the Initial filter Criteria is true and nothing has been concealed or misrepresented.

2 CMRL is free to verify the information given by the undersigned in the Initial Filter Criteria. If any submission by us is found false or misleading at a later stage, even after completion of the tender process, then CMRL may annul the award and forfeit our EMD (if any held with CMRL) and Performance Security (if any available with CMRL). Further, in such a case, we may be banned for future tenders of CMRL.

Signature of Authorized Signatory _____

Name of Authorized Signatory _____

Seal of the Authorized Signatory

PERFORMANCE BANK GUARANTEE BOND

Managing Director,
Chennai Metro Rail Limited

1. In consideration of the “Chennai Metro Rail Limited (CMRL)”having agreed to accept from _____ (hereinafter called “the said Successful bidder/s with address), under the terms and conditions of an Agreement/Acceptance letter dated _____ made between _____ and _____ (hereinafter called “ the said contract agreement”) the Performance Guarantee for the due fulfillment by the Successful bidder/s of the terms and conditions in the said Agreement on production of Bank Guarantee for Rs. _____ (Rs. _____ only) we, _____ (indicate the name of the Bank hereinafter referred to as “the Bank”) at the request of _____ Successful bidder/s do hereby undertake to pay the CMRL an amount not exceeding Rs. _____ against any loss or damage caused to or suffered by or would be caused to or suffered by the CMRL by reason of any breach by the said Successful bidder (s) of any of the terms or conditions contained in the said Agreement.

2. We _____ (indicate the name and address of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on demand from the CMRL stating that the amount claimed is by way of loss or damage caused to or suffered by the CMRL by reason of breach by the said Successful bidder/s of any of the terms or conditions contained in the said agreement or by reason of the Successful bidder/s failure to perform the Agreement, any such demand made on the bank shall be conclusive as regards the amount due and payable to CMRL under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

3. We undertake to pay to the CMRL any money so demanded notwithstanding any dispute or disputes raised by the Successful bidder(s)/successful bidder (s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute any unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Successful bidder (s)/successful bidders (s) shall have no claim against us for making such payment.

4. We, _____ (indicate the name and address of the bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement, including Maintenance/Warranty Period, and that it shall continue to be enforceable till the dues of the CMRL under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till _____ office/Department CMRL certifies that the terms and conditions of the Agreement have been fully and properly carried out by the said Successful bidder (s) and accordingly discharged this guarantee, unless a demand or claim under this guarantee is made on us in writing on or before

_____ (date of completion + 6 months) we shall discharged from all liability under this guarantee thereafter.

5. We, _____ (indicate the name and address of the Bank) further agree with the CMRL that the CMRL shall have the full liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Successful bidder (s) from time to time or to postpone from any time or from time to time any of the powers exercisable by the CMRL against the said contract and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the Successful bidder/s or for any forbearance act or omission on the part of the CMRL or indulgence by the CMRL to the said Successful bidder(s) or such any matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This Guarantee will not be discharged due to the change in the constitution of the bank or the Successful bidder(s) Successful bidder(s).

7. We, _____ (indicate the name and address of Bank) undertake not to revoke this guarantee during its currency except with the previous consent of the CMRL in writing. This Bankers Guarantee payable at a designated Bank Branch located in Chennai.

Date this _____ day of _____ 2020.

For _____

(The name of Bank)

Seal of the Bank

Witness 1: Name and address

Witness 2: Name and address

INDEMNITY BOND

This Indemnity is made and executed at _____ on this _____ day of _____ 2020 by

M/s. [Thiru./Tmt./Selvi.] _____ represented by its Managing Director, _____, son of _____ having administrative Office at _____ hereinafter called INDEMNIFIER – SUCCESSFUL BIDDER AND IN FAVOUR OF (name and address) _____ hereinafter called INDEMNIFIED –Chennai Metro Rail Limited (CMRL),

The terms ‘INDEMNIFIER-SUCCESSFUL BIDDER’ and the ‘INDEMNIFIED – CMRL’ unless repugnant to the context shall mean and include legal representatives, successors, executors and administrators.

I hereby **irrevocably agree to indemnify and keep harmless** the CMRL from and against all claims and proceedings, actions, suits, claims, damages, losses, expenses and demands of every nature and description, by reasons of any act or omission by myself or by my representative or by my employees in the execution of the works. This indemnification obligation include but not to be limited to claims, damages, losses, damage-proceedings, charges and expenses which are attributable to

- a. Sickness or disease or death or injury to any person, and
- b. Loss of, or damage to, or destruction of any property including consequential loss or use, and
- c. Loss or damage or costs arising from the carriage of materials, or any sub Successful bidder or any tier.

All sums payable by way of compensation under these conditions shall be considered reasonable compensation payable to CMRL without reference to actual loss or damage sustained and whether or not any damage shall have been sustained. The decision of CMRL as to compensation claimed shall be final and binding.

IN WITNESS whereof, the Successful bidders have put their signatures in the presence of the witnesses.

(Name, signature of Managing Director/Managing Partner, date& address of Successful bidder)

1. WITNESS: NAME & ADDRESS

2. WITNESS: NAME & ADDRESS

IMPLEMENTATION SCHEDULE

Technical specification 6.5.vii - Project Time line:

Key Date	Stage No.	Activity	Duration	End of the Stage. Time line from CAD (Contract Agreement Date)	Payment for the Stage
KD 1	STAGE 1	Design approval phase	03 weeks	03 weeks + CAD	20% of Total Contract Value, After completion of KD 1
	STAGE 2	Demonstration phase – Demonstration of Prototype in one train	08 weeks	11 weeks + CAD	
	STAGE 3	Monitoring Phase	01 Weeks	12 Weeks + CAD	
KD 2	STAGE 4	Implementation phase in First Set of 10 train-sets	06 Weeks	18 Weeks + CAD	10% of Total Contact value, After completion of KD 2
KD 3		Implementation phase in Second Set of 10 train--sets	06 Weeks	24 Weeks + CAD	10% of Total Contact value, After completion of KD 3
KD 4		Implementation phase in Third Set of 10 train-sets	06 Weeks	30 Weeks + CAD	10% of Total Contact value, After completion of KD 4
KD 5		Implementation phase in Forth Set of 10 train-sets	06 Weeks	36 Weeks + CAD	10% of Total Contact value, After completion of KD 5
KD 6		Implementation phase in Fifth Set of 11 train-sets	06 Weeks	42 Weeks + CAD	30% of Total Contact value, After completion of KD 6
KD 7	STAGE 5	Warranty Phase	104 Weeks	104 Weeks per train after successful implementation by successful bidder and after CMRL’s acceptance as per Technical Specification clause 6.6 per train basis.	10% of Total Contract Value, After completion of KD 7

*CAD – Contract Agreement Date

Note:

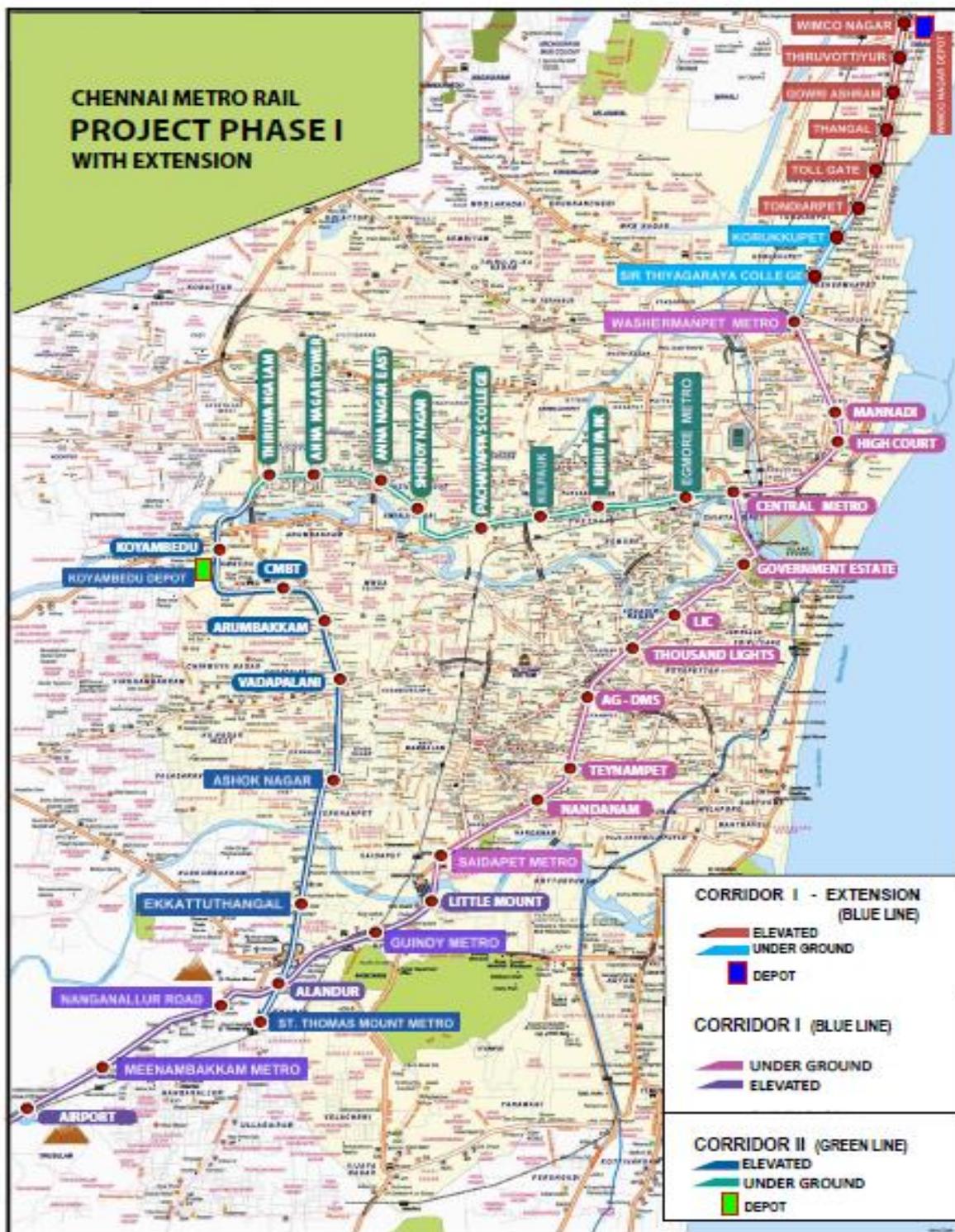
1. Successful Bidder shall submit bills to CMRL for a specific KD at a time after completion of complete activity in that KD.
2. Total contract value including taxes, duties and any other charges, etc.

Above table shall be considered by the bidders while quoting the total contract value during the tender submission. **Prices shall be filled in Price bid schedule only.** The values shall not be filled in Techno-commercial bid.

The Total Contract value mentioned by the bidder in price bid shall be utilized for evaluation of the lowest bidder **(L1)**.

**ROUTE MAP OF CMRL PHASE 1 AND
PHASE 1 EXTENSION (ADDITIONAL STATIONS FROM WASHERMANPET
METRO TO WIMCO NAGAR)**

Note: Change in Names of Stations shall be communicated by CMRL during contract execution.



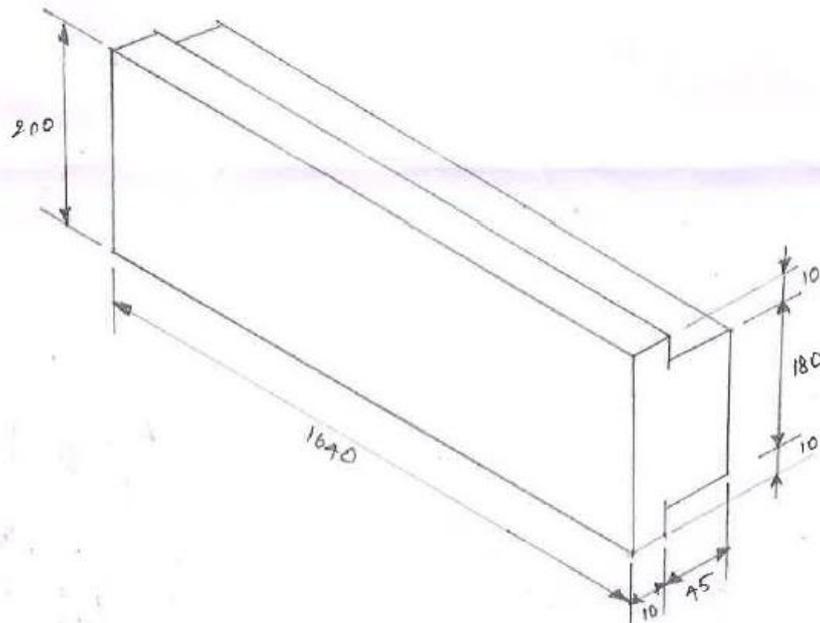
LAYOUT FOR INSTALLING THE DISPLAY SCREENS

Single Stretch display of 28 – 36 inches diagonal shall be accommodated the available space of DRM slot. Remaining space shall be concealed evenly in both sides.

Bidders are advised to check the dimensions of the slot physically in train during pre-bid meeting.

DRM DIMENSIONS

Weight : 10.05 kg



Dimensions in mm

SOFT COPY OF EMD BANK GUARANTEE

**BIDDER HAS TO ATTACH THE SOFT COPY OF THE EMD BANK
GUARANTEE IN THIS ANNEXURE 16 AND TO SUBMIT WITH THE BID
SUBMISSION**

TABLE OF PRIORITY FOR ANNOUNCEMENTS IN TRAIN

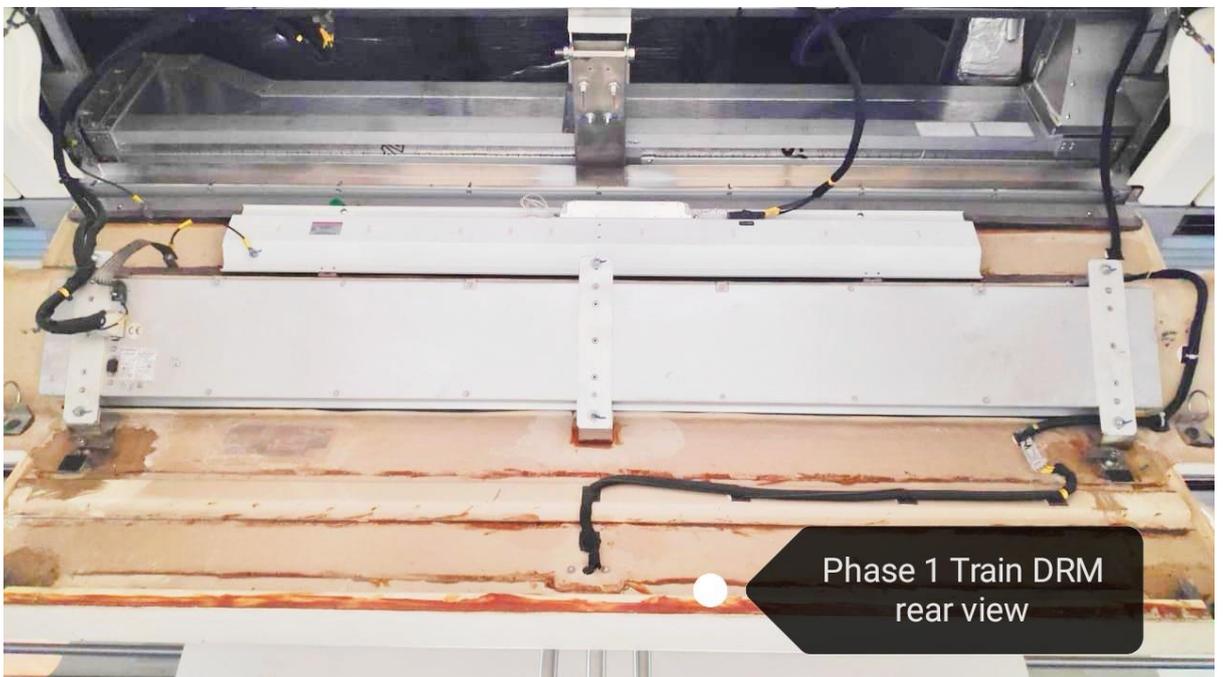
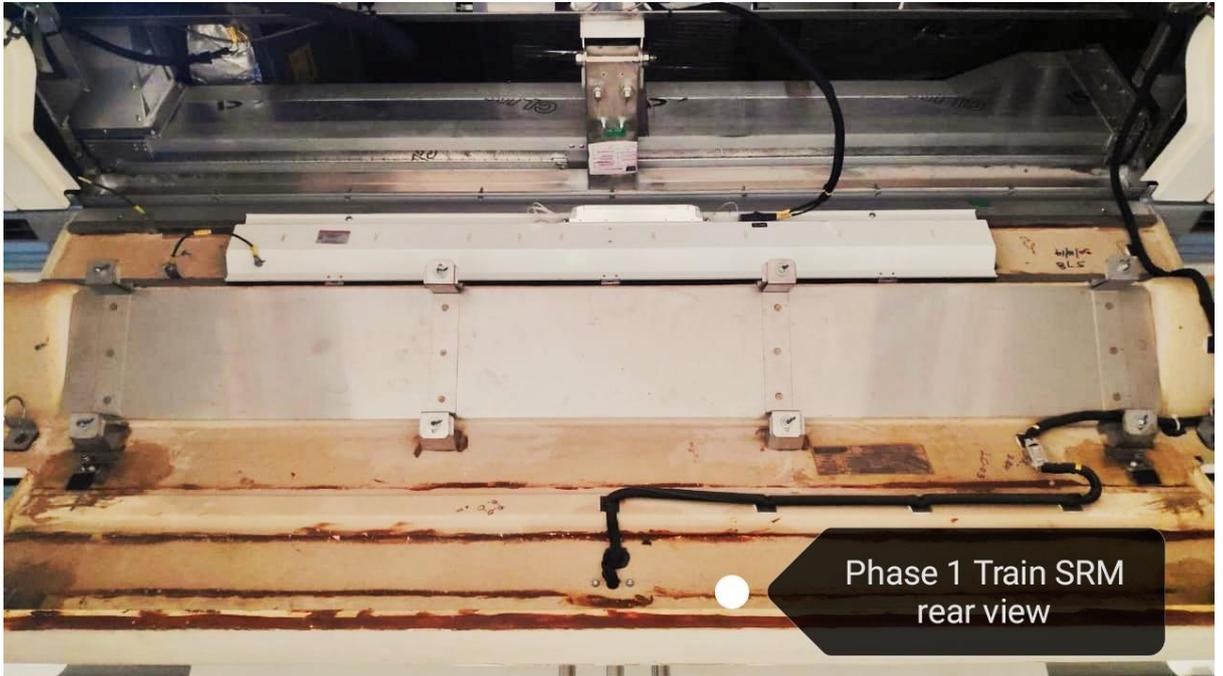
Service requested Service in progress	Passenger- Driver Intercom	Cab to Cab Intercom	PA from OCC	PA From Driver	Door Closing Warning tone	(DVA) Pre-defined Message
Passenger- Driver Intercom	Request pending until accepted by Driver Service maintained until terminated by Driver	Service ignored Service maintained	Concurrent	Impossible. Driver must end current service before requesting an other service.	Concurrent	Concurrent
Cab to Cab Intercom	Request pending until accepted by Driver Service maintained until terminated by Driver	Impossible	Concurrent	Impossible	Concurrent	Concurrent
PA from OCC	Concurrent	Concurrent	Impossible	Service ignored Service maintained	Concurrent	Service ignored Service maintained
PA from Driver	Request pending until accepted by Driver Service maintained until terminated by Driver	Request pending until accepted by Driver Service maintained until terminated by Driver	Service established Service terminated	Impossible	Concurrent	Service ignored Service maintained
Door Closing Warning tone	Concurrent	Concurrent	Concurrent	Concurrent	Impossible	Concurrent
(DVA) Pre-defined Message	Concurrent	Concurrent	Service established Service terminated	Service established Service terminated	Concurrent	Impossible

INITIAL DRAFT CONCEPT AND DESIGN PROPOSAL OF BIDDER

Successful bidder shall provide the complete design proposal and drawings of RAVIS system with Hardware, Network architecture and Software configurations for CMRL. This shall be submitted with bid documents. Following are the required details.

- i. Design Proposal and drawings of RAVIS system.
- ii. Electrical scheme with detailed wiring information.
- iii. List of hardware and software configurations.
- iv. All Equipment technical specification with dimensions.
- v. Reliability documents for every Equipment.
- vi. Details of Power ratings for all equipment.
- vii. Any further technical detail which the bidder opts to share to CMRL

PICTURES OF DRM AND SRM SLOT





Phase 1 extension Train SRM slot rear view



Pahase 1 extension Train DRM slot rear view.

CRITERIA FOR TECHNO-COMMERICAL EVALUATION OF BIDDERS

S.No.	Criteria	Yes	No
1	Has the bidder understood the purpose and working of the RAVIS tender?		
2	Is the Bidder competent to design the RAVIS system within 4 CAR train?		
3	Is the Bidder competent to execute the RAVIS system until warranty completion period as specified in tender documents		
4	Is the Bidder competent to rectify the hardware issues in RAVIS system as per the time periods mentioned in Tender documents?		
5	Is the Bidder competent to rectify the software issues in the RAVIS system as per the time periods mentioned in Tender documents?		

Note: ‘No’ answer to any of the above 1 to 05 points shall disqualify the Bidder in Techno-commercial Bid evaluation.

Seal of the Bidder

Signature:.....

Name of the Authorized signatory:.....

FORM OF BANK GUARANTEE FOR BID SECURITY

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

KNOW ALL MEN by these presents that we _____ (Name of Bank) having our registered office at _____ (hereinafter called "the Bank") are bound unto CHENNAI METRO RAIL LIMITED (hereinafter called "the Employer") in sum of _____ for which payment will and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents. WHEREAS _____ (Name of Bidder) (hereinafter called "the Bidder") has submitted his bid dated _____ for "Contract for RAVIS" (hereinafter called "the Bid").

WHEREAS the Bidder is required to furnish a Bank Guarantee for the sum of _____ as Bid Guarantee against the Bidder's offer as aforesaid.

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

We further agree as follows:

- (i) That the Employer may without affecting this guarantee grant time or other indulgence to or negotiate further with the Bidder in regard to the conditions contained in the said bid and thereby modify these conditions or add thereto any further conditions as may be mutually agreed upon between the Employer and the Bidder.
- (ii) That the guarantee herein before contained shall not be affected by any change in constitution of our Bank or in the constitution of the Bidder.
- (iii) That this guarantee commences from the date hereof and shall remain in force till:
 - a. The Bidder, in case his bid is accepted by the Employer, executes a formal agreement after furnishing the Performance Guarantee issued by an Indian Public sector bank (excluding Cooperative Banks) or from a schedule Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule.

OR

- b. Twenty-eight days after the date of validity or the extended date of validity of the Bid, as the case maybe;

whichever is earlier.

(iv) That the expression "the Bidder" and "the Bank" herein used shall, unless such an interpretation is repugnant to the subject or context, include their respective successors and assigns.

THE CONDITIONS of this obligation are:

- (i) If the Bidder withdraws his Bid during the period of Bid validity specified in the Form of Bid, or
- (ii) If the Bidder refuses to accept the corrections of errors in his Bid, or
- (iii) If the Bidder having been notified of the acceptance of his Bid by the Employer during the period of bid validity:
 - a. fails or refuses to furnish the Performance Guarantee within the time limit specified in para 23.3 of the "General Conditions of Contract" and/or
 - b. fails or refuses to enter into a Contract within the time limit specified in para 24.4 of the "General Conditions of Contract".

We undertake to pay to the Employer up to 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 (i), (ii),(iii)a or (iii)b mentioned above, specifying the occurred condition or conditions.

Signature of

Authorised Official

Of the Bank: _____

SIGNATURE OF WITNESS

NAME OF WITNESS

Address of witness

Name of Official: _____

Designation _____

STAMP/SEAL OF BANK

LETTER OF ACCEPTANCE AND PROJECT COMPLETION CERTIFICATE.

With reference to GCC 6.2, Bidder has to submit either of Annexure 5 or Annexure 22 for evaluation.

Annexure 22 shall have the below mentioned details.

- a. Letter of Acceptance (Signed by both Client and contractor)
- b. Project completion certificate (Signed by Client)

COST BREAKUP FOR EQUIPMENT AND ACTIVITIES FOR COMPLETE RAVIS PROJECT.

Bidder shall provide the below details as part of financial bid.

- i. Breakup of cost for complete equipment and all activities of RAVIS project.