CHENNAI METRO RAIL LIMITED

CHENNAI METRO RAIL PROJECT PHASE II

CONTRACT – PHASE II – DDC/P2C5/ 03

(Tender Notice No CMRL/PHASE II/ DDC/P2C5/ 03/2018)

"ENGAGEMENT OF DETAILED DESIGN CONSULTANT (DDC) FOR THE WORKS AND SERVICES OF THE DETAILED DESIGN AND DRAWINGS FOR THE ALIGNMENT, CIVIL, STRUCTURAL, ARCHITECTURAL, MEP, TVS, VAC & TRACK WORKS COVERING THE ALIGNMENT, RAMP AND ELEVATED STATIONS FROM MADHAVARAM MILK COLONY TO SHASTRI NAGAR (EXCLUDING MADHAVARAM MILK COLONY UG STATION), RAMP AND UG STATIONS FROM RETTERI TO CMBT CH:(-)386 TO CH: 15,339 INCLUDING DEPOT AT MADHAVARAM, IN CORRIDOR 5 OF PHASE- II OF CHENNAI METRO RAIL PROJECT".

ADDENDUM – 1

MARCH 2018

CHENNAI METRO RAIL LIMITED
ADMINISTRATIVE BUILDING, CMRL DEPOT,
POONNAMALLEE HIGH ROAD,
KOYAMBEDU, CHENNAI – 600107.
INDIA

Sl. No	Reference	Available Para/Clause	Amendment
A	**Section 1: NIT**		
A1.	**Cl. 1.2 Key Details, Point No.14,**	**Bidders barred from bidding for this work,** The bidder or JV partners who have abandoned any contract executed for Government Metro Rail Corporation during the last 10 years are barred. None of the contracts executed by the bidder or JV partner should have been terminated by the Government Metro Rail Corporations in last 10 years prior to this bid submission.	***Replace with:*** **Bidders barred from bidding for this work,** Bidders who are currently blacklisted, barred or deregistered by the Central Government, any state Government, PSUs, any multilateral funding agency or any Metro Rail authority in India are ineligible.
A2.	**Cl. 2.5,**	Tenderers should not have been blacklisted or deregistered by the Central Government, Government of Tamil Nadu, any PSU of Central Government or Government of Tamil Nadu or any Public Sector Metro in India during the last 10 years. Also, the Tenderer must not have failed to take possession or to commence any Contract after the Award of Contract.	***Replace with:*** On the date of bid submission Bidders should not have been blacklisted or deregistered by the Central Government, any state Government, PSUs, any multilateral funding agency or any Metro Rail authority in India. Bidders to provide record of Blacklisting, Banning, and non-performance, deregistration, prolonged suspension including cases were they have failed to take possession or to commence any contract after the Award of contract (for last 10 years) in the Performa attached in ***Revised ELI 2: Undertaking For Not Being Blacklisted.*** CMRL reserves the right to accept or reject the bid on account of details furnished in the Performa. Any wrong or willful non-disclosure of information will be viewed seriously.
A3	**Cl. 1.2 Key Details, Point No. 5**	***Duration of Contract- 04 Years.***	***Replace with the following:*** Duration of Contract- 72 months from date of commencement of works.
A4	**Cl. 1.2 Key Details, Point No. 2**		***Add:*** In case of foreign bidders who are unable to submit GST details at the time of Bid submission, a declaration should be submitted that they will

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			submit the same subsequent to the award of works before the execution of contract agreement.
B	**Section 2: Instruction to Bidder**		
B1.	**3.1 Conflict of interest,**	*Please note that the DDC organization who will be awarded this work may be considered for general consultancy/ Project Management consultancy works for future CMRL contracts, only when subject organization shall be participating as a separate entity of its organization, maintaining separate key personnel and non-key personnel, not engaged in the work of these present DDC contracts (i.e. P2C3-01, P2C3-02 & P2C5-03). Non-compliance of the above will lead to stern action as appropriate including blacklisting of the subject consultant for future contracts of Chennai Metro Rail Limited.*	***Replace with:*** *Please note that the DDC organization who will be awarded this work may be considered for general consultancy/ Project Management consultancy works for future CMRL contracts, only when subject organization shall be participating as a separate* ***group*** *of its organization, maintaining separate key personnel and non-key personnel, not engaged in the work of these present DDC contracts (i.e. P2C3-01, P2C3-02 & P2C5-03). Non-compliance of the above will lead to stern action as appropriate including blacklisting of the subject consultant for future contracts of Chennai Metro Rail Limited.*
B2.	**3.2.4 One Bid per Bidder,**	Based on the "One Bid per Bidder" principle, which is to ensure fair competition, a Consultant, and any affiliate that directly or indirectly controls, is controlled by, or is under common control with that Consultant shall not be allowed to submit more than one proposal, either individually as a Consultant or as a member of a Joint Venture.	***Replace with:*** Based on the "One Bid per Bidder" principle, which is to ensure fair competition, a Consultant, and any affiliate that directly or indirectly controls, is controlled by, or is under common control with that Consultant shall not be allowed to submit more than one proposal, either individually as a Consultant or as a member of a Joint Venture **for the same package**.
B3.	**ITB 5.2**	Bidders should not have been blacklisted or deregistered by the Central Government, any state Government, PSUs or any Metro Rail authority in India	***Replace with:*** On the date of bid submission Bidders should not have been blacklisted or deregistered by the Central Government, any state Government,

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		during the last 10 years. Undertaking for not being blacklisted should be furnished. **(Form ELI-2)** Also, the Tenderer must not have failed to take possession or to commence any Contract after the Award of Contract**.** Tenderers should produce an undertaking in this regard for any such rescindment enforced by previous employer if the contract is terminated/ rescinded by client.	PSUs, any multilateral funding agency or any Metro Rail authority in India. Bidders to provide record of Blacklisting, Banning, and non-performance, deregistration, prolonged suspension including cases were they have failed to take possession or to commence any contract after the Award of contract (for last 10 years) in the Performa attached in ***Revised ELI 2: Undertaking For Not Being Blacklisted.*** CMRL reserves the right to accept or reject the bid on account of details furnished in the Performa. Any wrong or willful non-disclosure of information will be viewed seriously.
B4	Clause 10.1 (a), Contents of technical proposal	**Tender Security (EMD) along with tender document fee (applicable for downloaded tender documents from internet) in original in a separate sealed envelope. It must be noted that in case of a JV/Consortium, the Bank Guarantee (EMD in the form of Bank Guarantee) must be on behalf of the JV/consortium.**	***Add:*** The tender security for the amount mentioned in NIT, in the form of Bank guarantee (s) from Public sector undertaking bank (s) of India/ Demand draft (s) from any scheduled commercial bank of India is allowed.
B5	Clause 10.1 (g)		***Replace the following:*** *Bid documents shall be signed by the authorized representative of the bidder/ JV (who has been authorized by respective JV Partners by issue of PoA). Agreement executed after award of work including all documents that forms part of the contract shall be signed by all members of the JV.*
B6.	Clause 14.1	**Tender Security** A Tender Security in the form of a Bank Guarantee for the amount mentioned in NIT, from a Public sector undertaking bank based in India of contractor's choice will be required to be	**Replace with the following:** The tender security for the amount mentioned in NIT, in the form of Bank guarantee (s) from Public sector undertaking bank (s) of India with a validity period of 208 days from the

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		submitted with each tender, with a validity period of 208 days from the last date of submission of tender and with a provision that it shall be suitably extended on the request of CMRL.	last date of submission of tender with a provision for suitable extension/ Demand draft (s) from any scheduled commercial bank of India shall be accepted.
B7.	Clause 12.6 Submission, Receipt, and Opening of bids 1), Envelope -1	a) Bid Security (in accordance with ITB 21)	***Replace With:*** a) Bid Security (in accordance with ITB 14)
B8.	Clause 10.3.4	PER 3	***Kindly find enclosed performa for PER 3 in Enclosure 3***
B9.	Clause 10.3.7	PER 4	***Kindly find enclosed performa for PER 4 in Enclosure 4***
C.	**Section 3: Scope of Works**		
C1.	**Cl. No. 1.1, Para 1,**	The Employer has endeavored to delineate the scope of the Services to be provided by Detailed Design Consultant in this volume. Such descriptions are not intended to be comprehensive, it being understood that Design Consultant shall be required, without adjustment or addition to the fixed rates or maximum compensation agreed to herein, to provide any services, whether or not listed herein, that are within the scope of its field of professional practice and that are reasonably inferable as being necessary, or that would be customarily furnished by other providers of professional services of the type and nature provided for in this Agreement, to accomplish the Services set forth in this volume.	***Replace with:*** The Employer has endeavored to delineate the scope of the Services to be provided by Detailed Design Consultant in this volume. Such descriptions are not intended to be comprehensive, it being understood that Design Consultant shall be required, without adjustment or addition to the fixed rates or compensation agreed to herein, to provide any services, whether or not listed herein, that are within the scope of its field of professional practice and that are reasonably inferable as being necessary, or that would be customarily furnished by other providers of professional services of the type and nature provided for in this Agreement, to accomplish the Services set forth in this volume.

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C2.	**Cl. No. 1.4, (f)**	Proof checking of structural design and scheme of construction suggested by the Contractor for elevated & underground stations, ventilation, other shafts, ramps, sub-structure, tunnels, viaduct etc. as applicable for particular DDC package.	***Replace with:*** Proof checking of design of enabling works/ temporary works and scheme of construction suggested by the Contractor for elevated & underground stations, ventilation, other shafts, ramps, sub-structure, tunnels, viaduct etc. as applicable for particular DDC package.
C3.	**Cl. No. 1.4 (s)**	s) Prepare necessary documentation and obtain necessary planning and other required approvals for the integrated complex consisting of Station designs, Station layouts, space proofing, track supporting structures including E&M facilities and fire detection/ suppression system, conceptual layouts and drawings for property development, if any, from the relevant approving authority;	***Add the following:*** Prepare necessary documentation and obtain necessary planning and other required approvals for **Track design (RDSO/Railway board) approval**, the integrated complex consisting of Station designs, Station layouts, space proofing, track supporting structures including E&M facilities and fire detection/ suppression system, conceptual layouts and drawings for property development, if any, from the relevant approving authority;
C4.	**Cl.No.1.7,**	**Property Development**	***Add the following:*** *In the case of design of Property Development including Building services (including MEP, VAC, Fire-suppression/fighting) within station structures footprint (including concourse, platform, within entry/ exit*

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			structures) is within the scope of DDC and no additional payment in this regard will be made. *In the case of Property Development envisaged above/ below the station box and requiring design to be incorporated in the structures (D-walls, Columns, Beams, Slabs, Foundation, shear walls of station structures), the structural design of the same will not be paid as extra.* *DDC shall be compensated for the design of property development including Building services (including MEP, VAC, Fire- suppression/fighting) as standalone structures above/ below/outside adjacent/ around the station structures as described in price center.****(Section 6)***
C5.	**Clause 1.5, Review of alignment**		**Add the following:** Topographical surveys data will be provided by CMRL and as such the DDC is not required to carry out Topo survey for the present alignment. However, if there is a change in alignment either by CMRL or DDC, the DDC shall be required to carry out necessary Topo and other surveys for the changed alignment, without any additional costs to CMRL. Moreover, FMB (Field Measurement Book) sketches, block linked plan for Land-take is in the scope of DDC.
C6.	**Clause 2.10**	DDC shall conduct topographical surveys.	**Replace With the following:** Topographical surveys data will be provided by CMRL and as such the DDC is not required to carry out Topo survey for the present alignment. However, if there is a change in alignment either by CMRL or DDC, the DDC shall be required to carry out necessary Topo and other surveys for the changed alignment, without any

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			additional costs to CMRL. Moreover, FMB (Field Measurement Book) sketches, block linked plan for Land-take is in the scope of DDC.
C7.	**Clause 5.3, Serial No. 11**	Fabrication drawings for all steel structure works.	**Replace with:** Proof checking of fabrication drawings submitted by the contractor.
C8.	**Clause 5.10 Tracks works**		***Replace Clause 5.10 Scope of works for Tracks, as per Enclosure-8***
C9.	**Clause 6.5, (C)**	The consultant shall submit applications for permanent connection for utility services….	**Replace with:** The consultant shall submit required documents to CMRL for processing applications for permanent connection for utility services….
C10.	Section 3, Chapter 7, E&M, Plumbing works		**Refer Section I**
C11.	Section 3, Chapter 8, VAC works		**Refer Section H**
C12.	Chapter 16, Duties and responsibilities of consultant, a)	The duties of the consultant will be to properly supervise the works, approve the materials and workmanship of the works and facilitate the timely completion of the project. The consultant will administer the construction contracts and will ensure that the contractual clauses, whether related to quality or quantities of work, are complied with. The consultant shall have no authority to relieve the contractor of any of their duties or obligations under the contracts or to impose additional obligations not included in the contracts.	**Stands Deleted.**
D	**Section 4: Evaluation and Qualification Criterion**		
D1	EQC Table, Compliance Requirement, Joint Venture (existing or intended),	*All Parties*	**To be read as**: *All parties combined.*
D2	Clause 1. EVALUATION & QUALIFICATION CRITERIA, point	**Criteria 1.1, 1.2, 1.3 & 1.4:** If the work has been done by the foreign partner of JV and the work was done in the country	**Replace with:** **Criteria 1.1, 1.2, 1.3 & 1.4:** In case of foreign bidders (JV member),

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	(c)	of the foreign partner then in addition to this, the foreign partner must have done work equal to the work experience requirement outside the country of its origin.	DDC works done outside their country of origin shall be considered for evaluation (in equivalent INR). If the DDC work has been done by the foreign bidder (JV member) in their country of origin only, then in addition to this, the foreign partner must have done work equal to the work value (GC/PMC) outside the country of its origin, for considering their DDC work experience (in their country of origin) for evaluation.
D3	EQC Table, clause 1.2	Total value of DDC contract done in metro rail/ rapid transit/ mass transit/ MRTS or any other rail based transit system during last five years in India or abroad.	**Replace with:** Total value of DDC contract done in metro rail/ rapid transit/ mass transit/ MRTS or any other rail based transit system during last **Seven years** in India or abroad.
D4	EQC Table, clause 1.2	Joint Venture combined must meet requirement for 15 Marks. **(Note 5)**	**Replace with:** Joint Venture combined must meet requirement for 15 Marks. **(Note 5.1)**
D5	EQC Table, Clause 2.4, Profitability Pg. No. 8	Profitability in the last 3 years in which last 2 years should be positive	**Replace with:** Profitability in the last 5 years in which at least 2 years should be positive
D6	EQC Table, Clause 2.5, Bid-Capacity, Pg. No. 8	Documentation/ Submission requirements FIN-2	Documentation/ Submission requirements **Replace with:** Tech 2B & FIN-2
D7	EQC Table, Clause 3, 3.1 Professional experience of the Key- personnel proposed. & 3.2 Academic Qualification	**Technical and organizational capability- Key personnel (Max. 25 Marks)**	**Replace with:** **Technical and organizational capability- Key personnel (Max. 35 Marks)**
D8	Clause 5.4,	**48 months** w.e.f. ***31.12.2017***	**Replace with:** **72 months** w.e.f. ***31.03.2018)***
E	**Section 5: Technical Bidding Forms**		
E1	Tech 2B: Work Experience	***DDC works***	**Replace with:** Consultancy works

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E2	FIN 1: Financial Data, Point No. 10	***DDC works***	**Replace with:** Consultancy works
E3	FIN 2: Financial Data (EXISTING COMMITMENTS FOR ON-GOING DDC WORKS)		***Refer Enclosure 2 for Revised FIN 2***
F	**Section 6: Financial Bid**		
F1	Clause 1. Financial Bid summary		***Kindly refer Enclosure-7 for revised financial Bid form.***
G	**Section 7: CONDITIONS OF CONTRACT (PART-I & II) GENERAL & SPECIAL CONDITIONS OF CONTRACT & CONTRACT FORMS**		
G1.	**Chapter 1. Particular Condition and contract data,** Clause No. 38.8		**Add as Clause 38.8:** **EOT and payment during extended contract period:** **(1) Consultant's Primary Obligation** If the CRD (Construction Reference Drawings) are not finalized within the duration of contract, the consultant will not be eligible for additional cost compensation for the extended period beyond the Price center payments till the completion of CRD. (2) No compensation will be granted in cases the delay are attributable to the DDC on account of insufficient deployment of man-power or delay in design deliverables or delay in producing interfacing drawings or any such reason. However, the Employer may consider giving suitable extension of time as deemed fit to enable the DDC to complete the balanced work. (3) In all other cases where the delay is not attributable to the DDC the Employer shall grant EOT as deemed necessary and pay escalation or compensate for delay

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			solely accountable on CMRL account. The Employer will pay an escalation at the rate of 2% per annum for the certified balance amount under IPC on reducing basis, of the work to be done till the completion of the entire work. However, prior approval of deployment has to be taken from CMRL. (4) In cases where there have been concurrent delays by DDC during the period mentioned under the Para (b), above escalation will not be payable and only EOT will be granted.
G2.	Section 7, Part II, Clause 11, Limit of Liability	Limit of Liability: Two times of contract Value.	**To be read as:** Limit of Liability: Equal to the contract value
G3.	Clause 34, Professional Indemnity Insurance	The consultant shall effect…..equal to twice the contract value payable to the consultant,…..	**Replace with:** The consultant shall effect…..equal to the contract value payable to the consultant,…..
G4.	Clause 49, Extension of time, Serial No. (iii)	…..notice to the Employer of the circumstances of such delay within fourteen (30) Days after such circumstances…..	**To be read as:** …..notice to the Employer of the circumstances of such delay within fourteen (14) Days after such circumstances…..
G5.	Clause No. 38.4 Mobilization Advance	The advance shall bear an interest of 12% over existing market rate.	***Replace with:*** The advance shall bear an interest of 12% only.
G6.	Clause 38.6, Retention Money		***Replace with:*** Retention Money of 2.5% of the accepted contract value mentioned in the LOA shall be submitted as bank guarantee from public sector undertaking bank of India with validity up to issue of performance certificate. After the issue of performance certificate the BG shall be returned not withstanding that, at the time there may be outstanding claims.
G7.	Clause 52, Abandonment and	(ii) If CMRL considers that DDC is not discharging his	***Delete***

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	suspension	obligations CMRL can inform the DDC by notice stating grounds for the notice. If a satisfactory reply is not received within 07 days of receipt of the notice by DDC, CMRL can by further notice terminate the Agreement provided that such further notice is given within 30 days of the DMRC's former notice.	
G8.	Clause 52, Abandonment and suspension	(iii) If DDC is adjudged a bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a breach of the Agreement, then CMRL may terminate the Services of the DDC as per the procedure given in Clause 54 below. CMRL may complete the project by whatever method may be deemed expedient and the DDC shall not be entitled to receive any further payment.	***Delete***
G9.	Clause 52, Abandonment and Suspension	Should any event occur which prevents the performance of the Services (in whole or in part) required under this Agreement, and then those Services will be suspended until such time that it becomes practicable to recommence the Services.	**Replace with:** Should any event occur which prevents the performance of the Services (in whole or in part) required under this Agreement, those Services will be suspended until such time that it becomes practicable to recommence the Services.
G10.	**Clause 54, Termination**	**Complete clause**	**Replace With:** ***54.1 Notice to correct*** The Employer shall notify by issuing notice to correct (NTC) to the consultant when certain breach of terms

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			like delay, slow progress, etc. are foreseen or has occurred. The consultant shall respond to the NTC within 14 days of receipt of the same by stating corrective actions taken to address the same, failing which the Employer may terminate by issuing a notice of termination under 54.2. ***54.2 Termination by the Employer*** If the consultant: (i) Fails to remedy the breaches notified to it under 54.1 (ii) Fails to comply with any of the contractual requirements; (iii) Abandons work; (iv) Fails to proceed with work in accordance with the provisions of the contract; (v) If DDC is adjudged a bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a breach of the Agreement; (vi) Commits fraud or tries to obtain undue advantage; (vii) Failure to adhere to key dates. then the Employer may, after having given 14 days' notice to the consultant, terminate the consultant's employment under the contract. The consultant shall then deliver all the design documents made by or for him to the Employer. The consultant shall not be released from any of his obligations or liabilities under the contract. **54.3** On termination, the consultant will not

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			be paid any amount until all the costs of designs, etc. incurred by the Employer have been established . The Employer reserves the right to execute the balance works by any means whatsoever at the risk and cost of the terminated consultant. **54.4 Termination by the consultant** The consultant is entitled to terminate the contract 45 days after issue of Notice under the following conditions: (i) Prolonged suspension of work without due compensation being paid as mutually agreed; (ii) When the Employer becomes bankrupt / insolvent. (iii) Delay of 56 days occurred after the specified period for payment due in accordance with contract except for disputed items in any Invoice/IPC.
G11.	**Clause 55, Adjudication and arbitration, Contract Form, Appendix-2, Clause No. 13**	**Complete clause**	**Replace with:** Settlement of Disputes: ***55.1. Adjudication:*** 55.1.1. If a dispute (of any kind whatsoever) arises between the parties in connection with, or arising out of the contract or the execution of the works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the engineer, either party may refer the dispute in writing to the Dispute Board (DB) for its decision, with copies to the other Party and the Engineer. Such reference shall state that it is given under this sub-clause. 55.1.2. The DB shall comprise of three members. Managing Director of the Employer will give panel of 5 members and the contractors shall choose any three members to form the DB. Such members shall be professionals experienced in the relevant field of construction. The parties shall mutually

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			agree on one of members as the Chairman of the DB and designate so. 55.1.3. Such appointment of DB shall be made within 28 days of the commencement of work. 55.1.4. the remuneration payable to the adjudicators shall be mutually agreed to by the parties and shall be shared by both the parties equally. 55.1.5. If at any time the parties so agree, they may jointly refer a dispute or any matter to the DB for it to give its opinion. Neither party shall consult the DB on any matter without the agreement of the other party. 55.1.6. if any member of the DB decline to act or is unable to act as a result of death, disability, resignation or termination of appointment, a replacement shall be made in the same manner as the replaced person was appointed. 55.1.7. The appointment of any member may be terminated by mutual agreement of both parties, but not by the employer of the contractor action alone. 55.2. Obtaining Dispute Boards Decision: 55.2.1. For a DB of three persons, the DB shall be deemed to have received such reference on the date when it is received by the Chairman of the DB. 55.2.2. Both parties shall promptly make available to the DB all such additional information, further access to the site, and appropriate facilities as the DB may require for the purpose of making a decision on such dispute. The DB shall be deemed to be not acting as Arbitrator(s). 55.2.3. Within 84 days after receiving such reference, or within such other period as may be proposed by the DB and approved by both parties, the DB

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			shall give its decision, which shall be reasoned and shall state that it is given under this Sub-Clause. The decision shall be binding on the parties, who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the contract has already been abandoned, repudiated or terminated, the contractor shall continue to proceed with the works in accordance with the contract. 55.2.4. If either party is dissatisfied either the DB's decision, then either party may, within 28 days after receiving the decision, give a notice of Dissatisfaction to the other party indicating its dissatisfaction and intention to commence arbitration. If the DB fails to give its decision within the period of 84 days(or as otherwise approved) after receiving such reference, then either party may, within 28 days after this period has expired, give a notice of Dissatisfaction to the other party. 55.2.5. In either event, this notice of Dissatisfaction shall state that it is given under this Sub-Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in Sub-Clause 55.5 (Failure to Comply with Dispute Board's Decision) and Sub-Clause 55.6 (Expiry of Dispute Board's Appointment), neither party shall be entitled to commence arbitrated of a dispute unless a notice of Dissatisfaction has been given in accordance with this Sub-Clause. 55.2.6. If DB has given its decision as to a matter in dispute to both parties and no notice of Dissatisfaction has been given by either party within 28 days after it received the DB's decision,

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			then the decision shall become final and binding upon parties. 55.3. Amicable Settlement: Where a notice of Dissatisfaction has been given under Sub-Clause 55.2 above, both parties shall attempt to settle the dispute amicably before the commencement of arbitrated. However, unless both parties agree otherwise, the party giving a notice of Dissatisfaction in accordance with Sub-Clause 55.2 above should move to commence arbitrated after the fifty-sixth day from the day on which a notice of Dissatisfaction was given, even if no attempt at an amicable settlement has been made. 55.4. Arbitrated: 55.4.1. Any dispute between the parties arising out of or in connection with the Contract, not settled amicably in accordance with sub-clause 55.3 above, and in respect of which the DB's decision (if any) has not become final and binding, shall be finally settled by arbitration. The rules governing arbitration shall be as under:- (i) The dispute shall be referred to an Arbitral Tribunal comprising of three members. Either Party may propose to the other Party for referring the dispute to Arbitration. If the proposal is initiated by the Contractor, such proposal shall be addressed to the Employer and the Employer shall, within fifteen days from the date of receipt of the such proposal, send the Panel of Arbitrators maintained by the Employer to the Contractor. The Contractor shall nominate an arbitrator from the said Panel within fifteen days from the date of receipt of the Panel from the Employer. The Employer shall nominate its Arbitrator from the said Panel within 15 days thereafter.

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			(ii) If the proposal for referring the dispute to Arbitration is made by the Employer to the Contractor, it shall forward such proposal to the Contractor along with the nomination of its Arbitrator from the said Panel. The Contractor shall, within fifteen days of receipt of the Panel from the Employer, nominate its arbitrator from the Panel. (iii) If either Party fails to nominate its Arbitrator within the prescribed time limit as mentioned above, after the nomination by the other Party, then such other Party, after the expiry of the prescribed time limit, has the right to nominate the arbitrator from the Panel, on behalf of the Party failing to nominate. (iv) The tow arbitrators nominated by the Contractor and the Employer as above, shall appoint the Presiding Arbitrator from the Panel referred above, by mutual consultation among themselves, within 15 days of the appointment of the second Arbitrator. (v) If no consensus is reached within 15 days regarding the appointment of the Presiding Arbitrator, either Party may apply to the Designated Court referred to in the Arbitration and Conciliation Act, 1996 as amended by the Arbitration and Conciliation (Amendment) Act 2015 for the appointment of the presiding Arbitrator. (vi) The Parties agree that the selection and nomination of Arbitrators from the Panel should be based on the nature and subject matter of dispute to be adjudicated upon, that is, the nominated Arbitrators shall have sufficient knowledge and experience to decide upon the disputed matter. It shall

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			also be ensured by the nomination Parties/Arbitrators, as the case may be, that at least one member of the Tribunal shall be a legal professional with a minimum of 20 years of experience. (vii) In the event of an arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason, it shall be lawful to appoint another arbitrator in place of the outgoing arbitrator in the manner aforesaid. (viii) Subject to aforesaid, the Arbitration and Conciliation Act, 1996 as amended from time to time, and the rules thereunder and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings under this clause. (ix) The venue of the arbitration shall be Chennai. The cost of Arbitration including the fees of the Arbitrators shall be borne equally by both the Parties. 55.4.2 The arbitrators shall have full power to open up, review and revise any certificate determination, instruction, opinion or valuation of the Engineer, and any decision of the DB relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Engineer from being called as a witness and giving evidence before the Arbitrators in any matter whatsoever relevant to the dispute. 55.4.3 Neither Party shall be limited in the proceedings before the arbitrators to the evidence or arguments previously put before the DB to obtain its decision, or to the reasons for dissatisfaction given in its Notice of Dissatisfaction. Any decision of the DB shall be admissible in the arbitration. Arbitration may be commenced prior to

Sl. No	Reference	Available Para/Clause	Amendment
			or after completion of the Works. The obligations of the Parties, the Engineer and the DB shall not be altered by the reason of any arbitration being conducted during the progress of the Works. 55.5 Failure to Comply with Dispute Board's Decision: In the event that a party fails to comply with a final and binding DB decision, then the other Party may without prejudice to any other rights it may have, refer the failure itself to Arbitration under Sub-Clause 55.4 [Arbitration], Sub-Clause 55.2 [Obtaining Dispute Board's Decision] and Sub-Clause 55.3 [Amicable Settlement] shall not apply to this reference. 55.6 Expiry of Dispute Board's Appointment: If a dispute arise between the parties in connection with, or arising out of the Contract or the execution of the Works and there is no DB in place, whether by reason of the expiry of the DB's appointment or otherwise: (a) Sub-Clause 55.2 [Obtaining Dispute Board's Decision] and Sub-Clause 55.3 [Amicable Settlement] shall not apply, and (b) The dispute may be referred directly to Arbitration under sub-clause 55.4 [Arbitration].
G12.	Clause 48.3, Liquidated Damages		**Add SP against 48.3** In case of Liquidated damages levied against non-achievement of particular KDs, the same shall be returned on achievement of subsequent KD (s).
G13.	Clause 1. Part-II, Particular conditions & contract data, Serial no. 10 & GC 35	**Complete Clause**	**Replace With:** CMRL will not entertain any cost implications & time impact claims during design & construction phase under any circumstances arising out of

Sl. No	Reference	Available Para/Clause	Amendment
			below works which is not defined as "change in scope" in this contract: I. Design alteration/modification arising out of system wide interface co-ordination till the preparation and issuance of “Good for construction” drawings. II. Design alteration/modification arising out of approval of samples, mock-ups, architectural finishes, building works, civil works, MEP, site constraints and any other works as stipulated in scope of works as stipulated in this contract or necessary for rectification of any defective design, gross negligence diagnosed later due to non-compliance with codes and standards leading to the updating and reproduction of designs and drawings during construction phase till operation of stations and till defect liability period . III. Any other requirements necessary and essential for ensuring passenger safety, security and surveillance, requirements of various civic infra authorities, government stakeholders available during design phases like: a. Highways b. Railways c. PWD (Public works Department) d. AAI (Airport Authority of India) e. CPCB/ TNPCB f. IAF (Indian Air Force)

Sl. No	Reference	Available Para/Clause	Amendment
			g. Fire Authority h. CMWSSB i. CMDA (Chennai Metropolitan Development Authority) j. Coastal Regulation Zones (CRZs) k. Greater Chennai Corporation l. TNEB/TANGEDCO m. Heritage conservation committees. Comments, suggestions or mandatory compliances of the above authorities along with stipulated compliances issued through government circulars, Gazetted notifications, office orders, guidelines issued by MoUD, Environment and forest departments, pollution control boards pertaining to public health, safety, amenities should be incorporated in the design. Consultant therefore should not hide any such requirement and make good of their designs, if the requirements are discovered by CMRL at later stage without any cost or time implications to CMRL at consultants cost.
GC14.	Clause 22, GC, Change in Legislation		**Add the following:** Requirements issued by government/ statutory bodies through change in legislation or made mandatory through government circulars, Gazetted notifications, office orders, guidelines issued by MoUD, Environment and forest departments, pollution control boards at later stage after the construction reference drawings may be considered as "change in scope" and the same shall be shared to the CMRL

Sl. No	Reference	Available Para/Clause	Amendment
			for processing time and cost impact.
GC15.	2. Table A: Key dates & Liquidated Damages, Sl. No. KD1, KD2, KD3, Liquidated Damages	**Liquidated Damages to be recovered in each IPC on non-attainment of Key Dates:** INR 1lakh/ Day	**Replace with:** **Liquidated Damages to be recovered in each IPC on non-attainment of Key Dates:** INR 50,000/ Day
GC16.	2. Table A: Key dates & Liquidated Damages, Sl. No. UG KD1, UG KD2, Liquidated Damages	**Liquidated Damages to be recovered in each IPC on non-attainment of Key Dates:** INR 1lakh/ Day	**Replace with:** **Liquidated Damages to be recovered in each IPC on non-attainment of Key Dates:** INR 50,000/ Day
GC17.	2. Table A: Key dates & Liquidated Damages, Sl. No. EL KD1, EL KD2, Liquidated Damages	**Liquidated Damages to be recovered in each IPC on non-attainment of Key Dates:** INR 1lakh/ Day	**Replace with:** **Liquidated Damages to be recovered in each IPC on non-attainment of Key Dates:** INR 50,000/ Day
GC18.	2. Table A: Key dates & Liquidated Damages, Sl. No. DS KD1, DS KD2, Liquidated Damages	**Liquidated Damages to be recovered in each IPC on non-attainment of Key Dates:** INR 1lakh/ Day	**Replace with:** **Liquidated Damages to be recovered in each IPC on non-attainment of Key Dates:** INR 50,000/ Day
GC 19.	3. KEY PERSONNEL LIST FOR P2C3-01 (UG)	**Complete Table**	***Kindly replace the table with Enclosure-6 for revised Key personnel tentative deployment list.***

S.No.	Reference	Page No	Clause/Para	Amendment
SECTION H				
1	Section 3, Chapter 8	3-49	8.1 a) The detailed design, layout, supply, installation and commissioning of Environmental Control System (ECS) including system sizing shall be undertaken by the consultant.	**Kindly read as:** 8.1 a) The detailed design and layout of Environmental Control System (ECS)/ VAC including system sizing shall be undertaken by the consultant.
2	Section 3, Chapter 8	3-49	8.1 c) It will be required in basement parking facilities and commercial/ office spaces. There are certain areas where require special Air conditioning.	**Kindly read as:** 8.1 c) The design of VAC System shall be considered for the basement parking facilities and commercial/ office spaces based on the station architetural drawings.
3	Section 3, Chapter 8	3-49	8.1 h) Ducting layout and plant room layout, AHU & ducting size calculations.	**Kindly read as:** 8.1 h) Ducting layout and plant room layout, AHU & ducting size, piping size calculations. Refrigerant piping layout shall be submitted along with software tool. Refrigerant gas leak detection sensor and system shall be provided to detect the leakage of refrigerant in copper pipe line above false ceiling, shaft, near ODU, IDU & AHUs (VAC equipment Room). Number of sensor should be proposed to suit the requirement. This should be the compatible with central controller of VRF system and SCADA System.
4	Section 3, Chapter 8	3-49	• Tender Drawings for Environmental Control System (ECS), Tunnel Ventilation System (TVS) and Building Management System (BMS);	**Kindly read as:** • Tender Drawings for Environmental Control System (ECS) / VAC , and Building Management System (BMS) / SCADA;
5	Section 3, Chapter 8	3-49	• Layout of the ECS & TVS Plant Rooms;	**Kindly read as:** • Layout of the ECS Plant Rooms;

S.No.	Reference	Page No	Clause/Para	Amendment
6	Section 3, Chapter 8	3-49	• Detailed designs for Air-conditioning Scheme, Smoke Management, Tunnel Ventilation, Ventilation of Plant Rooms and Auxiliary areas, Stand by Air-conditioning for certain Plant Rooms and Electrical requirement for ECS and TVS Works along with layout;	**Kindly read as:** • Detailed designs for Air-conditioning Scheme, Smoke Management, Ventilation of Plant Rooms and Auxiliary areas, Stand by Air-conditioning for certain Plant Rooms and Electrical requirement for ECS Works along with layout;
7	Section 3, Chapter 8	3-50	• Tunnel ventilation system	**Stands Deleted**
8	Section 3, Chapter 8	3-50	• The design for station VAC system and tunnel ventilation system shall be based on the results of the CFD / Subway Environmental Simulation analysis using SES (Ver. 4.1) program, which will be performed by CMRL DDC and results shall be provided to DDC CMRL. CFD analysis, if required, shall be performed by the DDC.	**Kindly read as:** • The design of station VAC system for fire / smoke conditions shall be based on the results of the 1D and 3D CFD analysis / Simulation by using latest version of software, which will be performed by DDC and results shall be provided to CMRL.
9	Section 3, Chapter 8	3-50	• Produced detailed combined services drawings (CSDs) and provide structural electrical/Mechanical drawings (SEM) showing all openings for ECS and Tunnel Ventilation System.	**Kindly read as:** • Produced detailed combined services drawings (CSDs) and provide structural electrical/Mechanical drawings (SEM) showing all openings for ECS System.

S.No.	Reference	Page No	Clause/Para	Amendment
10	Section 3, Chapter 8	3-49	Design Drawings (Preliminary / Detailed Design)	**Add The following next to Design Drawings (Preliminary / Detailed Design):** • The space for VAC equipment room and VRF outdoor unit area shall be optimised. VRF outdoor unit area shall be proposed at street level above the lift shaft, vent shaft, firemen stairs etc.,in order to save the foot print area at street level. • The distance between the AHU and VRF outdoor unit shall be optimised in order to optimise the length of refrigerant piping and cabling. The location of AHU and VRF outdoor unit shall be designed accordingly. • The distance between the MCC panel and AHU / VRF outdoor unit shall be optimised in order to optimise the length of the cabling. • DDC shall also conduct value engineering studies for optimizing VAC system capital and operational cost.
11	Section 3, Chapter 8	3-51	8.8 & 8.9	DB should be read as DBT, Dry Bulb should be read as Dry Bulb Temperature, WB should be read as WBT and Wet Bulb should be read as Wet Bulb Temperature
12	Section 3, Chapter 8	3-51	8.10 Internal Load: Occupant Load,	**Add The following:** Lighting load and equipment heat generation load shall be taken into consideration
13	Section 3, Chapter 8	3-51	8.11 Occupancy load Criteria shall be taken into considerations according to contract and global / international practice are as follows:	**Delete the following:** according to contract and global / international practice are as follows
14	Section 3, Chapter 8	3-51	8.12 Minimum Fresh Air Ventilation	**Add The following:** shall be taken into consideration.

S.No.	Reference	Page No	Clause/Para	Amendment
15	Section 3, Chapter 8	3-53	Table-1 (Internal Design Conditions for Rooms) **Note:** a) Station rooms will be served by dedicated Variable refrigerant Flow (VRF) indoor and outdoor units during revenue and non-revenue hours.	**Add The following:** a) Station rooms will be served by dedicated Variable refrigerant Flow (VRF) indoor and outdoor units during revenue and non-revenue hours. **However, DDC shall propose the best available air conditioning system considering the latest technology at the point of floating tender. a1) The above rooms mentioned are preliminary reference only.**
16	Section 3, Chapter 8	3-53	Table-1 (Internal Design Conditions for Rooms) **Note:** h) Fresh air in public areas (Concourse & Platform) will be supplied by fresh air fans. This fresh air will mix with return air and then enter the air handling unit (AHU with VFD). Fresh air fan will be proposed with variable frequency drive (VFD).	**Add The following:** Note h) Fresh air in public areas (Concourse & Platform) will be supplied by fresh air fans. This fresh air will mix with return air and then enter the air handling unit (AHU with VFD). Fresh air fan will be proposed with variable frequency drive (VFD) **which will be used to control the Carbon dioxide level of public area.**
17	Section 3, Chapter 8	3-53	Table-1 (Internal Design Conditions for Rooms) **Note:** i)Exhaust duct and grill with motorized damper will be provided to extract gas after flooding of fire suppression system. This exhaust duct will be connected with smoke extract / return air fan of public area. Normally motorized damper will be closed and it will be opened after flooding of fire suppression system to extract the residual gas from the room.	**Add The following: Note i) Gas Suppression Room:** Exhaust duct and grill with motorized damper will be provided to extract gas after flooding of fire suppression system. This exhaust duct will be connected with smoke extract / return air fan of public area. Normally motorized damper will be closed and it will be opened after flooding of fire suppression system to extract the residual gas from the room.
18	Section 3, Chapter 8	3-53	8.15 PD (Property Development) area Design Criteria	**Add The following:** If PD area is more than 100 Sq.m then smoke extraction system shall be considered. **All VAC equipment associated ducting/ refrigerant piping shall be considered for the PD area. DDC shall propose a**

S.No.	Reference	Page No	Clause/Para	Amendment
				suitable standard and design for the smoke extraction system for the PD area.
19	Section 3, Chapter 8	3-53	**8.16 Station smoke control / Management System** The design of the system shall be complied with SFSRTS and NFPA 130 whichever is stringent. The baggage fire load in the station shall be considered with 2 MW Smoke control shall be provided for the station public area, BOH corridor and long entrances	**Kindly Read as: 8.16 Station smoke control / Management System** The design of the system shall be complied with SFSRTS / NFPA 130 / NBC whichever is stringent. Smoke control shall be provided for the station platform and concourse public area including entrances and BOH corridors. The baggage fire load in the station shall be considered with 2 MW and design the smoke extraction system. In addition DDC shall design based on the number of air changes per hours (ACPH) to design the smoke extraction system. Finally, the selection will be done based on the result of higher capacity. Smoke extraction fan will have 100% working and 100% standby to extract the smoke in emergency or fire mode operation.
20	Section 3, Chapter 8	3-53	**8.17 Staircase Pressurization** "…….pressurized by 50 Pa …… NBC 2005 latest version…..".Pressure relief damper shall also be provided.	**Add the following: "…….**pressurized by 50 Pa **during door closed condition…… NBC latest version…..".**Pressure relief damper shall also be provided **in the firemen and fire escape stairs.**
21	Section 3, Chapter 8	3-55	Table-2 (Station Ventilation Design Criteria)**Note:**	**Add the following after a):** a1) The above rooms mentioned are for preliminary reference only.

S.No.	Reference	Page No	Clause/Para	Amendment
22	Section 3, Chapter 8	3-55	**Table-2 (Station Ventilation Design Criteria)Note: d)**Long entrances (more than 60 m in length) will be proposed with dedicated exhaust fan. This fan will be installed in fan room and are connected with ducts & grille. Also, exhaust fans will have 100 % working & 100% Standby to safe egress of passengers in emergency / fire mode operation. Makeup / replacement air will come through entry /exit entrances .	**Kindly Read as: Table-2 (Station Ventilation Design Criteria) Note: d)** Long entrances (more than 60 m in length) will be proposed with dedicated exhaust fan. This fan will be installed in fan room and are connected with ducts & grille. Also, exhaust fans **will act as smoke extraction fan during fire/ smoke condition. The smoke extraction fan will have** 100 % working & 100% Standby to safe egress of passengers in emergency / fire mode operation. Makeup / replacement air will come through entry /exit entrances **or mechanical ventilation supply fan shall be considered based on the entrance architectural design.**
23	Section 3, Chapter 8	3-56	8.19 Noise Criteria	**Add the following:** For all fans and silencers, acoustic & Vibration calculations/ analysis to demonstrate that the sound pressure level does not exceed the noise criteria specified in performance requirement.
24	Section 3, Chapter 8	3-57	8.25 Energy Efficiency Measures	**Add the following:** Energy management study and analysis document shall be submitted by DDC to Employer / ER for notice of no objection.
25	Section 3, Chapter 8	3-57	8.26 Computational Fluid Dynamics (CFD)	**Add the following:** CFD analysis shall be performed by DDC to meet environmental tenability criteria as per NFPA 130 **for the entire station with different fire scenarios.** **Smoke barrier / Smoke curtain location shall be designed based on the CFD analysis.**

S.No.	Reference	Page No	Clause/Para	Amendment
26	Section 3, Chapter 8	3-58	8.30 Station VAC System **Normal Mode: Para 3**	**Add the following after Para 3:** The above is provided for preliminary reference only. However, DDC shall propose the best available air conditioning system considering the latest technology at the point of floating tender.
27	Section 3, Chapter 8	3-58	8.30 Station VAC System **Emergency Mode : Para 1**	**Add the following after Para 1:** Smoke extraction fans will have 100% working and 100% standby to extract the smoke in the emergency/ fire mode operation.
28	Section 3, Chapter 8	3-60	8.32 Any other Crucial Details / Experience earned from Present Phase-1 **Point 1.** Variable refrigerant flow (VRF) unit is proposed instead of water cooled chiller system considering the following:	**Delete :** "instead of water cooled chiller system" **Kindly Read As:** 8.32 Any other Crucial Details / Experience earned from Present Phase-1 **Point 1.** Variable refrigerant flow (VRF) unit is proposed considering the following:
29	Section 3, Chapter 8	3-60	8.32 Any other Crucial Details / Experience earned from Present Phase-1 Point 1. e	**Add the following after clause e):** f) However, DDC shall propose the best available air conditioning system considering the latest technology at the point of floating tender.
30	Section 3, Chapter 8	3-60	8.32 Point no. 2	**Add the following in point no. 2:** The design criteria of vent shaft / louvers for VAC system shall be complied with SFSRTS / local standard / any other international standard whichever is stringent and the same shall be submitted to Employer or ER for notice of no objection.
SECTION I				
31	Section 3, Chapter 7 E&M, Plumbing works	3-41	Clause 7.1 Point 37	**Delete Point 37**

S.No.	Reference	Page No	Clause/Para	Amendment
32	Section 3, Chapter 7 E&M, Plumbing works	3-41	7.2 Low voltage (LVSGR, Low side equipment) Requirement :	**Kindly read as following: "……..**Calculation notes for low voltage (station electrical loads, short circuit, cables, lighting, **Lighting control system, SCADA system, Lightning protection**…),……."
33	Section 3, Chapter 7 E&M, Plumbing works	3-42	7.3 For the underground stations the following systems will be defined:	**Add the following after:** Water consumption and requirements for tanks, **Drainage arrangement and sump requirements**
34	Section 3, Chapter 7 E&M, Plumbing works	3-43	7.4 E&M services the DDC shall prepare:n) Hydraulics / drainage system design and layout (including pipe work, drains, sump etc.),	**Add the following :** n) Hydraulics / drainage system design and layout (including pipe work, drains, sump etc.), **Water supply and Drainage arrangement for entire station and ancillary building**
35	Section 3, Chapter 7 E&M, Plumbing works	3-43	7.4 E&M services the DDC shall prepare:r) VESDA system	**Add the following :**r) VESDA system, **Aspiration smoke detection system**
36	Section 3, Chapter 7 E&M, Plumbing works	3-46	7.4 E&M services the DDC shall prepare: Drainage, plumbing and sewerage;	**Add the following :** Drainage, plumbing and sewerage; **STP, ETP etc.**
37	Section 3, Chapter 7 E&M, Plumbing works	3-47	7.8 Functional requirement of Mechanical & Plumbing works: Drinking water supplies or non-drinking water supplies:	**Kindly read as following**: Drinking water supplies or non-drinking water supplies: **Required number of Borewells and STP, ETP requirements to be established and designed station specific requirements.**
38	Section 3, Chapter 7 E&M, Plumbing works	3-48	7.8 Functional requirement of Mechanical & Plumbing works: Storm Water Systems	**Replace with the following:** During a rain or storm event rain water falls on building roofs, parking lots, and green spaces. The water from the rain is collected in the storm water system. Options on methods to

S.No.	Reference	Page No	Clause/Para	Amendment
				handle storm water should be discussed early in the design process and the same should be suitably addressed.
39	Section 3, Chapter 7 E&M, Plumbing works		***Clause 7.1.34 & Clause 7.1.37***	***Delete:*** "In Laboratory."
40	Section 3, Chapter 7 E&M, Plumbing works		***Clause 7.3*** ***Escalators and Elevators***	***Replace with:*** Relevant civil and MEP provisions for escalators and elevators

Encl:

1. ***ENCLOSURE-1: Revised ELI 2: Undertaking For Not Being Blacklisted***
2. ***ENCLOSURE-2: Revised Form FIN -2: FINANCIAL DATA***
3. ***ENCLOSURE-3: PER-3: Organization Chart***
4. ***ENCLOSURE-4: PER-4: Overall work programme***
5. ***ENCLOSURE-5: Revised Key Personnel List***
6. ***ENCLOSURE-6: Revised Key Personnel Tentative Deployment List***
7. ***ENCLOSURE-7: Revised Financial Bid Form***
8. ***ENCLOSURE- 8: Revised scope of works for Tracks***

Enclosure: 1

Form ELI-2:

Undertaking For Not Being Blacklisted

We do hereby undertake that we have not been blacklisted or deregistered by the Central Government; any state Government, PSUs, multilateral funding agency or any Metro Rail authority in India as per ***clause 5.2 of Instruction to Bidders (ITB)***, on the date of bid submission.

We hereby, furnishing the record of Blacklisting, Banning, non-performance, rescindment by the client after award of contract, deregistration, prolonged suspension including cases were we have failed to take possession or to commence any contract after the Award of contract (for last 10 years):

S. No.	**Organization/ work involved**	**Category Fill: (**Blacklisting/ Banning/ non-performance/ abandonment/deregistration/ prolonged suspension/)	**Duration**	**Current status**	**Attach proof including notices, documents, and orders etc. to substantiate facts.**

We declare that the above shall have no impact of affecting or compromising the delivery of the services as required under this contract.

STAMP & SIGNATURE OF AUTHORIZED SIGNATORY

NOTE:

1 In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.

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

Enclosure: 2

Form FIN - 2: FINANCIAL DATA

(EXISTING COMMITMENTS FOR ON GOING CONSULTANCY WORKS)

NAME OF THE TENDERER (CONSTITUENT MEMBER IN CASE OF JV/CONSORTIUM) ***(All amounts in Rupees in Crores)***

Name and brief particulars of contracts for on- going DDC/GC/ PMC works	Contract Value	Value of balance work yet to be done (as on ***31.03.2018***)	Estimated Completion Date	Value of existing commitments for on-going DDC works during period **72 months**					
				2018-19	**2019-20**	**2020-2021**	**2021-2022**	**2022-2023**	**2023-2024**
1	2	3	4	5	6	7	8	9	10
TOTAL (FOR ALL ONGOING WORKS)									

NOTE:

1. Separate Performa shall be used for each member in case of JV/Consortium.

2. Tenderer or member in case of JV/Consortium should provide information on their current commitments for all contracts that have been awarded or for which a letter of intent or acceptance has been received or for contracts approaching completion but for which a completion certificate is yet to be issued even if completion of such works spills over beyond completion period of this contract.

3. The financial data in above prescribed format shall be certified by Chartered Accountant / Company Auditor under his signature & stamp.

Enclosure: 3

Form PER - 3:

Organization Chart

[Organization chart in accordance with ITB 10.3.4 to be furnished by the bidder]

Enclosure: 4

Form PER - 4:

Overall Work Programme

[Detailed overall work programme with Bar-chart. including deployment schedule should be furnished by the bidder in accordance with 10.3.7]

Enclosure: 5

3. PROJECT TEAM OF THE CONSULTANT- KEY PERSONNEL (P2C503)

S. No.	Key- Personnel	Nos.	Max. Marks	Experience	Distribution of marks
1.	**Project Manager**	**1**	**4**	**Total Design Experience** – 20 Years or more	**1**
				10 Years or more (2 marks) **<Relevant Design Experience in the role of project manager/ Deputy Project manager in Metros works<** 5 years (1 mark)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification- Civil engineering Graduate from a reputed institution. **Desirable Educational Qualification-** Postgraduate Structures from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**
2.	**Lead Designer/ Underground (stations & Tunnels)**	**1**	**3**	**Total Design Experience** – 15 Years or more	**1**
				10 Years or more (1 marks) **<Relevant Design Experience in the role of Lead designer for underground structures or Senior structural engineer in field of underground structures in Metros works<** 5 years (0.5 mark)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification- Civil engineering Graduate from a reputed institution. **Desirable Educational Qualification-** Postgraduate Structures from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**
3.	**Lead Designer/ Elevated (stations & Viaduct)**	**1**	**3**	10 Years or more (1 marks) **<Relevant Design Experience in the role of Lead designer or Senior structural engineer in field of Lead designer for Elevated (stations, Viaduct/ Bridges) Metro Railway structures <** 5 years (0.5 marks)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification- Civil engineering Graduate from a reputed institution. **Desirable Educational Qualification-** Postgraduate Structures from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**
4.	**Lead Designer/ Depot (Including Depot Machine)**	**1**	**3**	10 Years or more (1 marks) **<Relevant Design Experience in the role of Lead designer or Senior structural engineer in field Depot structures/ Industrial units/ Factory workshop structures design <** 5 years (0.5 marks)	***Marks will be given on pro-rata basis.***

				Minimum Educational Qualification- Civil engineering Graduate from a reputed institution. **Desirable Educational Qualification-** Postgraduate Structures from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**
5.	**Lead Designer/ Tracks**	**1**	**2**	10 Years or more (1 marks) **<Relevant Design Experience in the role of Lead designer for tracks or Senior structural engineer in field of track design in Metros/ railways works<** 5 years (0.5 mark)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification- Civil engineering Graduate from a reputed institution. **Desirable Educational Qualification-** Postgraduate Structures from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**
6.	**Lead Designer/ Architect**	**1**	**3**	**Total Design Experience** – 15 Years or more	**1**
				10 Years or more (1 marks) **<Relevant Design Experience in the role of Lead designer for underground stations or Senior architect in field of Metros <** 5 years (0.5 mark)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification- Graduate in Architecture from a reputed institution. **Desirable Educational Qualification-** Postgraduate from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**
7.	**Lead Designer/ MEP**	**1**	**3**	**Total Design Experience** – 15 Years or more	**1**
				10 Years or more (1 marks) **<Relevant Design Experience in the role of Lead designer or Senior MEP engineer in field of MEP works in Metros/ Heavy Infra/ Industrial <** 5 years (0.5 marks)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification- Graduate in Electrical Engineering from a reputed institution. **Desirable Educational Qualification-** Postgraduate from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**
8.	**Lead Designer/ TVS & VAC systems**	**1**	**2**	10 Years or more (1 marks) **<Relevant Design Experience in the role of Lead designer or Senior VAC/TVS engineer in field of TVS/VAC works in Metros/ Heavy Infra/ Industrial <** 5 years (0.5 marks)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification- Graduate in Mechanical Engineering from a reputed institution. **Desirable Educational Qualification-** Postgraduate from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**

9.	**Geotechnical Expert**	**1**	**2**	10 Years or more (1 marks) **<Relevant Experience in the role of geotechnical expert in the similar works <** 5 years (0.5 marks)	***Marks will be given on pro-rata basis.***
				Desirable Educational Qualification- Postgraduate in Geotechnical Engineering from a reputed institution.	**Postgraduate or higher- 1 Mark**
10.	**Senior quantity surveyor-cum-bid manager**	**1**	**2**	10 Years or more (1 marks) **<Relevant similar Experience in large/ heavy infrastructure projects <** 5 years (0.5 marks)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification - Diploma in civil Engineering from a reputed institution. **Desirable Educational Qualification** - Degree in civil Engineering from a reputed institution.	**Diploma- 0.5 Marks** **Graduate or higher- 1 Mark**
11.	**Senior Interface Manager**	**1**	**2**	10 Years or more (1 mark) **<Relevant similar Experience in large/ heavy infrastructure projects <** 5 years (0.5 marks)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification - Degree in Civil/ Electrical/ Mechanical Engineering from a reputed institution.	**Graduate- 0.5 Marks** **Postgraduate or higher- 1 Mark**
12.	**BIM Coordinator**	**1**	**3**	7 Years or more (2 marks) **<Relevant similar Experience in large/ heavy infrastructure projects < 3** years (1 marks)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification - Degree in Civil/ Architecture/Electrical/ Mechanical Engineering from a reputed institution.	**Degree- 0.5 Marks** **Postgraduate or higher - 1 Marks**
13.	**Alignment Expert**	**1**	**3**	10 Years or more (2 marks) **<Relevant similar Experience in Metro/ Railways projects <** 5 years (1 mark)	***Marks will be given on pro-rata basis.***
				Minimum Educational Qualification - Degree in civil Engineering from a reputed institution.	**Degree- 0.5 Marks** **Postgraduate or higher - 1 Marks**

Enclosure: 6

1. KEY PERSONNEL LIST FOR P2C5-03 (UG, ELEVATED & DEPOT) (P2C503)

S. No.	Key- Personnel*	Nos.	Tentative Deployment
1.	**Project Manager**	**1**	Entire Duration of the contract.
2.	**Lead Designer/ Underground (stations & Tunnels)**	**1**	Entire Duration of the contract.
3.	**Lead Designer/ Elevated (stations, Viaduct/ Bridges)**	**1**	Entire Duration of the contract.
4.	**Lead Designer/ Depot structures**	**1**	Entire Duration of the contract.
5.	**Lead Designer/ Tracks**	**1**	As and when required by the Employer.**
6.	**Lead Designer/ Architect**	**1**	As and when required by the Employer.**
7.	**Lead Designer/ MEP**	**1**	As and when required by the Employer.
8.	**Lead Designer/ TVS & VAC systems**	**1**	As and when required by the Employer.**
9.	**Geotechnical Expert**	**1**	As and when required by the Employer.**
10.	**Senior quantity surveyor-cum- bid manager**		As and when required by the Employer.**
11.	**Senior Interface Manager**	**1**	As and when required by the Employer.**
12.	**BIM Coordinator**	**1**	Entire Duration of the contract.
13.	**Alignment Expert**	**1**	As and when required by the Employer.**
Note*	A penalty of INR 4lakhs per month per key personnel shall be imposed for non-deployment of key personnel as per agreed deployment schedule.		
Note**	The Key-staff are permitted to work from their headquarters in addition to Chennai office. But they have to be available to meet the requirements of CMRL as & when required.		

Enclosure: 7 (P2C503)

1. **Financial bid summary:** The Lump Sum Price of: (The tenderer should quote his offer in Indian Rupees Only)

Sl.No.	Description	Unit	Quantity	Unit Rate in INR to be quoted by the bidder in figures	Unit Rate in INR to be quoted by the bidder in words	Total amount in INR in figures
1.	**UG section Tunneling by TBM/ NATM etc. excluding station lengths (civil & Structural)** (including cut & cover portion, launching shafts, retrieving shafts, mid- shafts and allied structures etc.	R. Km	8.79			
2.	**Cross-passages by NATM etc. including drainage systems, sumps, etc.**	Each	40 Nos			
3.	**Ramp (Cut and cover & Switch over, box & U-Section) complete in all respects**	R.Km	1.49			
4	**Entry to Depot**					
4a.	**(Corridor 5, Madhavaram Milk colony UG station to Depot) (Cut and cover & Switch over, box &**	R.KM	0.38			

	U-Section) complete in all respects					
4b.	**(Corridor 3, from Venugopal nagar, At Grade station to Depot) complete in all respects**	R.KM	0.50			
5.	**Underground stations,Type-A, upto 190m length, with 2 levels**					
5.a	Civil, Structural and Architectural	Each	4 Nos			
5.b	Architectural Finishes	Each	4 Nos			
5.c	MEP works	Each	4 Nos			
6.	**Underground stations, Type-B, upto 150m length, with 2 levels**					
6.a	Civil, Structural and Architectural	Each	2 Nos			
6.b	Architectural Finishes	Each	2 Nos			
6.c	MEP works	Each	2 Nos			
7.	**Underground stations Type-C, upto 150m length, with 3 or more levels**					
7.a	Civil, Structural and Architectural	Each	5 Nos			
7.b	Architectural Finishes	Each	5 Nos			
7.c	MEP works	Each	5 Nos			
8.	**MEP Works for Underground tunnel section including cross**	R. Km	8.79			

	passages etc					
9.	**TVS works for Underground Section**	LS	1 No			
10.	**VAC works for Underground Section**	LS	1 No			
11.	**Elevated Viaduct excluidng station length complete in all respects**					
11.a	Civil and Structural	R.Km	4.24			
11.b	MEP works	R.Km	4.24			
12.	**Elevated stations**					
12.a	Civil , Structural and Architectural	Each	5 Nos			
12.b	Architectural Finishes	Each	5 Nos			
12.c	MEP & VAC works	Each	5 Nos			
13	**At-Grade Station**					
13.a	Civil , Structural and Architectural	Each	1 No			
13.b	Architectural Finishes	Each	1 No			
13.c	MEP & VAC works	Each	1 No			
14.	**Depot at Madhavaram including OCC building complete in all respects**					

14.a	Civil , Structural and architectural	Each	1 No			
14.b	Architectural finishes	Each	1 No			
14.c	E&M, Small machinery & HVAC works in Depot	Each	1 No			
15.	**P. Way for UG/ Elevated & Depot section (Including Station Length, depot structures, entry to depot, ballast, Ballast less etc.)**					
15.a	Ballasted Track	R.Km	23			
15.b	Ballast less Track	R.Km	18.05			
16.	**Software (Licenses) (Sum-total of Table 2, below)**	L.S	1 No			
17.	**Property Development***	Per sq.ft.	1 Lakh Sq.Ft.			
18.	**Total Contract price excluding tax ****	(In words)				
19.	GST @ 18% of the Total Contract price***	(In words)				
	Grand Total (including GST)	(In words)				
*	**Variation limit does not apply for Property Development works.**					
**	**Evaluation will be based on amount quoted excluding GST**					
***	**In case of any change in GST rate the same will be corrected after Gazette notification.**					

Table 2: In line with Chapter 17- Software supports. Contractor should quote unit rate for each software license. Payment will be made only for the items supplied as required by CMRL as per actuals as detailed below:

S. No.	Purpose	Software Proposed	No. Of User Licenses in the name of CMRL valid for the duration of the contract.	Unit rate in INR	Amount in INR
	Software for Civil, Structural, Architectural, Tracks,				
i.	Programme design/ construction, Project plan/ control etc.	Primavera P6 (now Oracle PPM)	1		
ii.	Signage Design	Corel Draw	1		
iii.	Graphic Presentation/ sheets	Adobe illustrator	1		
iv.	Building Information Modelling*	AEC Package for civil, structural, architectural, MEP, Clash detection etc. Autodesk/ Bentley etc.	3 User licenses		
v.	Tracks	Bentely	1		
vi.	Architectural	AutoCAD	1		
vii.	Structural design	Stadd Pro,	1		
viii.		Wallap,	1		
ix.		Plaxis,	1		
x.		Revit Structural	1		

	Specific Software to TVS/ VAC only				
xi.	Cooling Load calculation	HAP Software	1		
xii.	RAMS Tool	FRACAS tool	1		
xiii.	CFD Analysis	3D (CFD) Analysis software	1		
		1 D Analysis Software			
	TOTAL				

Enclosure: 8

S.No.	Reference	Clause/paragraph	Amendment
1	Section 3, Chapter -5, Page 3-30	**5.10 Scope of Services for Track works** The Scope of Services consists of preparation and submission of the following design calculations & Documentation and drawings following design specifications and appropriate standards. The exclusions in scope of work of the Consultant are separately referred. Detailed Design of Track Alignment o Detailed geometric alignment as plan and profile drawings for the whole stretch. • **Ballastless Track Design** o Documents (DBR & DCN) of track in elevated, at grade and underground section with MSS or without MSS. o Preliminary and detailed design drawings. o Interfacing with other systems engineers for a holistic design approach. o RSI study, which is required to propose measures to mitigate horizontal movement. RSI Study shall be proposed for the entire stretch.	**5.10 Scope of Services for Track works** The Scope of Services consists of preparation and submission of the following design calculations & Documentation and drawings following design specifications and appropriate standards. • **Detailed Design of Track Alignment** o The initial vertical and horizontal alignment of center-line of via-duct/tunnel drawings will be provided by the Employer/Employee Representatives. o DDC has to design and submit vertical and horizontal alignment for the both up and down lines indicating horizontal and vertical curves, gradients, Turnouts, crossover, Buffer stops and any other important structures to be designed as per RDSO/Railway Board specifications. o Review and modification in alignment based on the as-built condition supplied by the civil. o Submission of preliminary drawings. o On approval of preliminary submission, submission of Tender drawings. o Submission of Good for construction drawings. • **Ballast/Ballastless Track structure Design:** o Design of Ballast/Ballastless track structure in elevated, at grade and underground section with MSS or without MSS and submission of Documents (DBR & DCN) of track in elevated, at grade and underground section with MSS or without MSS.

		• Technical reports (Ballastless track)
		  ○ Use of CWR in the lowest identified radius in mainline.
		• Technical reports (Depot track)
		  ○ Documents of track at grade for embedded track and special tracks in depot including inspection bay pit track, washing track, access ramps and transition slab. (DBR & DCN).
		  ○ Preliminary and detailed design drawings.
		  ○ Co-ordination with systems engineer to have a holistic approach in design
		• **Regarding Track Accessories, the followings shall be submitted:**
		  ○ Acceptable tolerances.
		  ○ Review of supplier design documents.
		  ○ CWR (International codes will be followed for designing).
		  ○ Requirements for earthing, bonding and corrosion protection.
		• Preparation or assisting in preparation of Tender Documents in track design for all mainline and depot track that will include the followings.
		  ○ BOQ for track in both mainline and depot.
		  ○ Special Technical Specifications, requirements specific for this
			○ Submission of Preliminary and detailed design drawings.
			○ Interfacing with other civil/systems engineers for a holistic design approach.
			○ RSI study, which is required to propose measures to mitigate horizontal movement. RSI Study shall be proposed for the entire stretch.
			○ Study of Noise and vibration mitigation throughout the alignment, locate the area which needs mitigation measures and propose the method of mitigation. Also design of track structure, submission of DBR and proposal of materials specification to the Employer/Employee Representatives to issue notice of no objection.
			• **Technical reports (Tracks in Mainline)**
			○ Use of CWR in the lowest identified radius in mainline as per CMRL SOD.
			○ Technical specification required for the fastenings, Rails, Turnouts, IRJ's, etc. the components required for the track works to be submitted for the Employer/Employee Representative to issue notice of no objection.
			○ On approval, technical specification to be submitted for calling of track tender.
			○ Inspection and Test plan (ITP) for the materials like fastenings, Rails and Turnouts and materials to be used during construction to be submitted to the Employer/Employee Representatives to issue notice of no objection.
			• **Technical reports (Depot track)**
			○ Design and submission of documents on track at grade for embedded track and special tracks in depot

		tender in track work for mainline and depot. ○ Special conditions of contract, in case any deviation from General Condition of Contract is to be updated for specific purposes of the tender. ○ Cost Estimates will be prepared for track work in both mainline and depot. • Quality Control Plan shall be submitted. • Regarding Construction drawings, the followings shall be submitted in stages: ○ Concept Drawing ○ Preliminary Drawings for approval ○ Construction Reference Drawings ○ Good for Construction Drawings • Interface requirement and site meetings. • All designs and drawings produced in our scope of works will be proof checked by suitably qualified person(s) who will act as lead design checker (LDC). Our quoted fees is inclusive of the LDC fees. • Review of As-built drawings	including inspection bay pit track, washing track, access ramps and transition slab. (DBR & DCN) to the Employer/Employee Representative to issue notice of no objection. ○ Submission of Preliminary and detailed design drawings. ○ Co-ordination with civil/systems engineer to have a holistic approach in design. ○ Technical specification required for the fastenings, Rails, Turnouts, IRJ's, etc. the components required for the track works to be submitted for the Employer/Employee Representative to issue notice of no objection. ○ On approval, technical specification to be submitted for calling of track tender. ○ Inspection and Test plan (ITP) for the materials like fastenings, Rails and Turnouts and materials to be used during construction to be submitted to the Employer/Employee Representatives to issue notice of no objection. • **Regarding Track Accessories, the followings shall be submitted:** ○ Submission of acceptable tolerances for the track components and structures with appropriate standards and specification to substantiate the tolerances limits. ○ Review of supplier design documents. ○ CWR (International codes will be followed for designing). ○ Requirements for earthing, bonding and corrosion protection. • **Preparation of Track Tender documents for all mainline and depot track that will include the followings.**

			○ BOQ for track in both mainline and depot. ○ Technical Specifications, requirements specific for this tenders in track for mainline and depot. ○ Special conditions of contract, in case any deviation from General Condition of Contract is to be updated for specific purposes of the tender. ○ Cost Estimates for track tenders. • Quality Control Plan shall be submitted. • Regarding Construction drawings, the followings shall be submitted in stages: ○ Concept Drawing ○ Preliminary Drawings for approval ○ Construction Reference Drawings ○ Good for Construction Drawings • Interface requirement and attending of site meetings. • All designs and drawings produced in scope of works will be proof checked by suitably qualified person(s) who will act as lead design checker (LDC). • Review and issuance of design conformity certificate of As-built drawings.