दिल्ली मेट्रो रेल कॉरपोरेशन लिमिटेड
DELHI METRO RAIL CORPORATION LTD.

CONTRACT NO: CCW-48/2014

Provision of sewage treatment plant (Moving Bed Bio Reactor) of 40 KLD capacity at Metro Enclave, Pushp Vihar

Notice Inviting Tender (NIT)

Instructions to Tenderer (ITT)

General Conditions of Contract (GCC)

Special Conditions of Contract (SCC)

DELHI METRO RAIL CORPORATION LTD.

7TH FLOOR, C-WING, METRO BHAWAN,
FIRE BRIGADE LANE, BARAKHAMBA ROAD,
NEW DELHI 110001

SECTION 1
NOTICE INVITING TENDER

1.1 GENERAL

1.1.1 Delhi Metro Rail Corporation (DMRC) Ltd. invites open e-tenders in two bid packet system (Technical & Financial) for "**Provision of sewage treatment plant (Moving Bed Bio Reactor) of 40 KLD capacity at Metro Enclave, Pushp Vihar"** of DMRC LTD.

1.1.2 Delhi Metro Rail Corporation (DMRC) Ltd. invites open e-tenders in two bid packet system for the above-mentioned work (clause 1.1.1).

Approximate cost of work	**₹ 98,80,128/-(inclusive of all taxes)**
Tender Security Amount	**₹ 1,00,000/- (EMD in form of D.D., in original, to be submitted in the office of AGM/C&S up to 15:00 Hrs. on 13.01.2016)** **(Demand Draft /Banker's cheque) in favour of "Delhi Metro Rail Corporation Ltd" payable at New Delhi.)**
Completion period of the Work	**4 months for construction work and 180 months (Excluding 36 months maintenance under warranty) for operation after the completion of commissioning of plant**
Tender documents on sale	**14/12/2015 to 12/01/2016 (upto 17:00 hrs) on e-tendering website www.tenderwizard.com/DMRC** **Tender document can only be obtained after registration of tenderer on the website www.tenderwizard.com/DMRC. For further information on this regard bidders are advised to contact 011-49424307, 011-49424365 or 011-23417910**
Cost of Tender documents	**INR 5250/- (inclusive of 5% DVAT) Non-Refundable** **(Demand Draft /Banker's cheque) in favour of "Delhi Metro Rail Corporation Ltd" payable at New Delhi.)** **Cost of tender documents i.e, D.D./Banker's cheque, in original, shall be accepted only upto 15:00 hours on 13/01/2016 in the office of AGM/C&S at below mentioned address.**
Date & Time of Pre-Bid Meeting	**23/12/2015 at 15:00 Hrs.**
Last date of issuing addendum	**12/01/16 up to 15:00 Hrs.**
Last Date & time of Submission of Tender Documents (Technical & Financial)	**13/01/16 @ 15:00 Hrs.**
Date & time of opening of Tender (Technical Bid)	**13/01/16 @ 15:05 Hrs.**
Date & time of opening of Financial Bid	**Will be informed later on after the evaluation of Technical Bid (Only to the bidders who will successfully qualify the Technical Bid)**
Authority and place for Pre Bid meeting, seeking clarifications etc.	**AGM/C&S** **Delhi Metro Rail Corporation Ltd.,** **7nd floor, C-Wing, Metro Bhawan,** **Fire Brigade Lane, Barakhamba Road,** **New Delhi –110 001**

The tender documents (non-transferable) can only be downloaded after registration of tenderer on the website www.tenderwizard.com/DMRC. All Demand Draft/ Bankers Cheque should be drawn in favour of "Delhi Metro rail Corporation Ltd.", payable at New Delhi.

NOTE:

Any corrigendum, addendum etc issued shall be part of this tender document and shall be made available on DMRC website **www.tenderwizard.com/DMRC**

1.1.3 Minimum Eligibility Criteria

(a) Work Experience:

Experience of having satisfactorily completed similar works during last 5 years period ending last day of the month previous to the one in which the tenders are invited should be either of the following:

(i) Three similar completed works each costing not less than the amount equal to ₹39.52 lakh (40% of the estimated cost)

or

(ii) Two similar completed works each costing not less than the amount equal to ₹49.40 lakh (50% of the estimated cost)

or

(iii) One similar completed work costing not less than the amount equal to ₹79.04 lakh (80% of the estimated cost)

(b) Financial Standing (Annual Turnover) :

The annual turnover of applicant during each of last three audited financial years i.e. (2012-13, 2013-14 & 2014-15) should not be less than ₹79.04 lakh.

Tenderer shall submit last three years audited financial statement (2012-13, 2013-14 & 2014-15) duly attested by certified Charted Accountant to work out net worth and turnover. The net worth must be positive.

(C) The tenderer should have minimum five years experience of similar works in any Central Govt./state Govt./PSU's/DMRC, (relevant documentary proof has to be submitted).

(d) Definition of similar work: The work defined in section 2 i.e. Scope of work.

(e) Applicant must not have been black listed or deregistered by any Govt. or Public sector undertaking during last 5 years the contractor has to submit an undertaking on Rs. 10 stamp paper duly attested by notary.

NOTE:

Any corrigendum, addendum etc issued shall be part of this tender document and shall be made available on DMRC website www.tenderwizard.com/DMRC

1.2 POINTS TO BE NOTED

1.2.1 Works envisaged under this contract are required to be executed in all respects within the period of completion mentioned above.

1.2.2 The mere fact that the tenderer is short listed as mentioned in sub clause 1.2.2 shall not imply that his bid shall automatically be accepted. The same should contain all technical, Financial & other details as required for the consideration of tender.

1.2.3 Tender document consists of the following:

a. Notice Inviting Tender - consisting of

i. Notice Inviting Tender

ii. Scope of Work
iii. Tender prices

b. Instructions to Tenderers

c. General Conditions of Contract

d. Special Conditions of Contract

e. Bill of Quantities.

1.2.4 The Contract shall be governed by the documents listed in para 1.2.3 above.

1.2.5 The tenderers may obtain further information in respect of these tender documents from the office of AGM/Civil, 7th floor, Metro Bhawan, Fire Brigade lane, Barakhamba Road, New Delhi-01

1.2.6 The intending bidders must be registered on e-tendering portal www.tenderwizard.com/DMRC. Those who are not registered on the e-tendering portal shall be required to get registered beforehand. If needed they can be imparted training on 'online tendering process'. After registration the tenderer will get user id and password. On login tenderer can participate in tendering process and can witness various activities of the process.

1.2.7 The authorized signatory of intending bidder, as per Power of Attorney (POA), must have valid class-III digital signature. The tender document can only be downloaded or uploaded using Class-III digital signature of the authorized signatory.

1.2.8 Tender submissions will be made online after uploading the mandatory scanned documents towards cost of tender documents such as Demand Draft or Pay Order or Banker's Cheque from a Scheduled commercial bank based in India and towards Tender Security such as Bank Guarantee or Demand Draft or Pay Order or Banker's Cheque from a Scheduled commercial bank based in India and other documents as stated in the tender document.

1.2.9 Late tenders (received after date and time of submission of bid) shall not be accepted under any circumstances.

1.2.10 All Tenderers are hereby cautioned that tenders containing any material deviation or reservation as described in Clause 24.0 of "Instructions to Tenderers" and / or minor deviation without quoting the cost of withdrawal shall be considered non-responsive & shall be summarily rejected.

1.2.11 DMRC reserves the right to accept or reject any or all proposals without assigning any reasons. No tenderer shall have any cause of action or claim against the DMRC for rejection of his proposal.

1.2.12 Bidders shall note that the maximum file size that can be uploaded is 5 MB. All the uploaded files in tender submission should be named properly and arrange systematically.

1.2.13 The bidders are advised to keep in touch with e-tendering portal www.tenderwizard.com/DMRC for updates.

AGM /Civil

DMRC, New Delhi

SECTION 2

SCOPE OF WORK

2.0 The contractor will execute the work i.e."**Provision of operation & maintenance of sewage treatment plant (Moving Bed Bio Reactor) of 40 KLD capacity at Metro Enclave, Pushp Vihar as per CPHEEO manual on sewerage & sewage treatment Part-A, Part-B & Part-C**" Contractor shall prepare the drawing for the approval of the DMRC as per requirement.

2.1 The above mentioned work should be carried out with contractors own material & labour as per the specification & drawing. The work includes supplying, installation, testing and commissioning of sewage treatment plant as per specification complete.

2.2 The Scope of work is broadly mentioned in NDSR/BOQ and as per site requirement.

2.3 Time Schedule:

The contract period for execution of the above mentioned work is 4 months for construction work and 180 months (Excluding 36 months maintenance under warranty) for operation after the completion of commissioning of plant. The works should start immediately after issuance of work orders by the competent authority. However the emergency works arisen should be attended promptly.

The period of 180 months can be divided into 2 parts as follows:

(i) First 36 after commissioning shall be treated as warranty period.
(ii) Remaining 144 months after warranty period to be treated as operation and maintenance period.

No maintenance cost shall be admissible during warranty period. Only operation expenses shall be paid. After successful completion of warranty period complete operation and maintenance expenses (cost) shall be paid.

2.4 Basis of Design

The STP Is Designed To Treat The Sewage Having Following Parameters:

Flow Rate -40CUM/day Operation Time -20 Hr

SPECIFICATION

DESIGN CRITERIA & EFFLUENT CHARACTERISTICS		
Parameters	**Inlet**	**Outlet**
BOD(5,20)	250-350 mg/L	< 20 mg/L
COD	300-400mg/L	< 30 mg/L

TSS	400 mg/L	< 5 mg/L
Oil & Grease	10mg/L	< 10 mg/L
pH	6.5- 8.0	'7.0-8.0

CPWD Specifications/ IS code relevant CPHEEO Manual on sewerage & sewage treatment (Part-A, Part-B and Part-C) as applicable.

2.5: TENTATIVE PROCESS FLOW DIAGRAM

Raw Sewage → Equalization Tank → Primary Settlement → Aeration →

Secondary Settlement → Holding Pit → Treated Water Tank

↓

Activated carbon Filter/Chlorine Dosing

2.6 Technical Specifications for 40KLD Sewage Treatment Plant

	ITEMS		BRIEF DESCRIPTION	SCOPE
1.0	**BAR SCREEN**			
	Number off		ONE	
	SIZE		spacing 20 mm	
	M.O.C		SS -304	
	Position : Under Ground			
2.0	**OIL & GREASE TANK**			
	TYPE		ONE	
	TYPE		Under ground to receive Sewage below bar screen.	
	Capacity		1.5m3	
	Dimension		Suitable for 40KLD	
	M.O.C.		RCC/Brick Work	
	Position : Under Ground			
3.0	**EQUALIZATION TANK**			
	Number off		One	
	TYPE		under ground to receive Sewage below oil grease trap	
	Capacity		20m3	
	Dimension		Suitable at site	
	M.O.C		R.C.C/Brick Work	

	Position : Under Ground			
4.0	**TREADTED WATER TANK**			
	Number off		One	
	TYPE		under ground to receive Sewage below oil grease trap	
	Capacity		20m3	
	Dimension		Suitable at site	
	M.O.C		R.C.C/Brick Work	
	Position : Under Ground			
5.0	**AERATION TANK (MBBR 1 & 2)**			
	Number off		One	
	Capacity/Size		12m3	
	Media M.O.C.		R.C.C/Brick Work	
	Position : Under Ground			
6.0	**TUBE SETTLER**			
	Number off		One	
	Capacity/Size		6m3	
	Media M.O.C.		MS 6MM+ FRP	
	Position : Over Ground			
6.1	**SLUDGE HOLDING TANK**			
	Number off		One	
	Capacity/Size		2m3	
	Media M.O.C.		R.C.C/Brick Work	
	Position : Under Ground			
7.0	**CLARIFIED WATER TANK**			
	Number off		One	
	Capacity/Size		6m3	
	Media M.O.C.		R.C.C/Brick Work	
	Position : Under Ground			
8.0	**AIR BLOWER**			
	Number off		One (w) + One (sb), 2nos	
	Type		Twin Lobe	
	Make		Gurunanak /Everrest /Beta	
	Capacity		3HP	
9.0	**MULTIGRADE SAND FILTER (PSF)**			
	Number off		One	
	Type		Down flow.	
	Capacity/Size			
	Height		1.5 mtr	
	Dia		1 mtr.	
	Pressure (Working)		3.5 kg/cm2.	
	M.O.C.		MS, 5MM (Inner Rubber Lining)	
	Position : Over Ground			
10.0	**ACTIVATED CARBON FILTER (ACF)**			
	Number off		One	
	Type		Down flow	
	Height		1.5mtr.	
	Dia		1.5mtr.	

	Pressure (Working)		3.5 kg/cm2.	
	M.O.C.		MS, 5MM (Inner Rubber Lining)	
	Position : Over Ground			
11.0	**SEWAGE LIFTING PUMPS**			
	Number off		One (w) + One (sb), 2nos	
	Capacity		2.5 m3/hr at 15-20 m head, 3HP	
	Type		Positive Displacement	
	M.O.C.		CI	
	Make		Kirlosker/ CRI/Eq.	
12.0	**FILTER FEED PUMPS**			
	Number off		One (w) + One (sb), 2nos	
	Capacity		2.5 m3/hr at 15-20 m head, 3HP	
	Type		Positive Displacement	
	M.O.C.		CI	
	Make		Kirlosker/ CRI/Eq.	
	Position : Over Ground			
13.0	**FILTER PRESS**			
	Numbers off		1	
	Capacity/Size		18Plates (18 inch x18 inch) with suitable filters	
	Make		Kausik/Pharmatech/Eq.	
14.0	**SCREW PUMP**			
	Numbers off		One (w) + One (sb), 2nos	
	Capacity		2HP	
	Make		Kirlosker/ CRI/ Digital/Eq.	
15.0	**AUTOMATIC ELECTIC CONTROL PANEL**			
	Number off		ONE LOT	
	Components		L&T Make	
16.0	**PIPE &FITTING**		ONE LOT	
	M.O.C.		MS	
	Make		Jindal /prince/Tata	
17.0	**FAB Media for Aeration**			
	Number off		1 lot, Suitable for 40KLD STP Plant	
	Type		Floating bio filter media	
	M.O.C		PP	
	M.O.C		Coolduck /w2p/MM aqua	
18.0	**Tube Settler Media**			
	Number off		1 lot , Suitable for 40KLD STP Plant	
	Type		Inclined at 40Deg.	
	M.O.C		PP	
	M.O.C		MM aqua/eq	
19.0	**Dosing Pump (Capacity 0-6lph),**		One Aster/Digital/Hana/eq	

	1Nos.			
20.0	**Dosing Tank Capacity 100 Ltr), 1Nos. PVC**			
21.1	**Air Diffusers (8 Nos) size 900 x900 MM**		MM Aqua/Kausik/equ	
22.0	**Carbon 700 KG, ID-900**		For ACF	
23.0	**Different Size pebble & Gravels, 700KG, for PSF**			
24.0	**STP MS Staircase & its platform included all Masson work etc. (Concrete/ Brick work).**			
25.0	**Exclusive Operation Maintenance of the STP plant for the period of 12 years, with one skilled STP operator deputed based on 8 hour shift, with every 15 days senior supervisor visit to the plant**			

2.7 Inclusions:

(i) All civil and structural units.
(ii) Sewage Transfer Pumps with Motor.
(iii) Filter Feed Pumps with Motor.
(iv) MCC, Power Cabling, Control Cabling, Cable Tray, Equipment Earth Strip/cables are excluded from the scope of supply.
(v) All interconnecting pipe work connect all major equipments.
(vi) Consumables, chemicals, lubricants, etc. Including first charge during commissioning.
(vii) Labour/Tools & Tackles
(viii)Loading, Unloading & Handling equipment at sites.
(ix) Any pollution control approval consent to operate etc., Electrical inspection, Factory inspection, Quality assurance, Audit inspection, Third party Insurance etc.
(x) Suitable measures for odour control and nuisance etc. at site through out the period of operation.

2.8 WARRANTY:

The material/plant supplied shall remain under warranty for a period of 36 months from the date of commissioning.

2.9 SUPERVISION FOR ERECTION AND COMMISSIONING:

No supervision charges for erection and commissioning shall be paid. The plant shall be made fully operational.

SECTION 3

TENDER PRICES AND SCHEDULE OF PAYMENT

3.1 **Tender Prices**

3.1.1 a. Unless explicitly stated otherwise in the Tender Documents, the contractors shall be responsible for the whole works, based on the work orders issued by the competent authority and payment shall be as per accepted rates based on the items carried out as per the work orders issued by the competent authority as and when required.

b. The rate quoted by the tenderer is inclusive of all duties, taxes, fees, octroi and other levies, materials, labour etc.

3.1.2 **Schedule of Payment**

The payment will be made on actual basis as per the accepted rates based on the activities carried out as per the work orders issued by the competent authority as and when required. The payment will be made as per measurement recorded in the measurement sheet & on account bill submitted by the contractor and verified by the engineer.