

NAME OF WORK : Proposed laying 1500 mm (I.D) Pre-Cast RCC encasing pipe for a length 73.75 m by Pipe jacking / pushing method across the Railway Track at km 7.996 and supply & laying of 500 mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard ( MAS – GDR Section).

CONTRACT NO : CNT/SEW/NCB/DEP/2019/2010-11

CHECK LIST FOR THE GUIDANCE OF THE CONTRACTOR

I		The Tender schedule for the above work consists of 24 pages as detailed below:
	(i)	Checklist for the guidance of the Contractors Page – 1 to 3
	(ii)	Notice Inviting Tender Page - 4 & 5
	(iii)	Letter of Tender 2 pages Page - 6 & 7
	(iv)	Price Schedule Page - 8 & 9
	(v)	Work schedule Page – 10 to 12
	(vi)	Eligibility criteria Page – 13
	(vi)	Special conditions of contract Page – 14to 17
	(vii)	Instructions and Specifications Page – 18 & 19
	(viii)	Safety precautions Page – 20 to 23
	(vi)	Mile stone Page - 24
II	1	The total number of items in the work schedule - 7 Nos. and the departmental value works out to Rs.76,23,500.00
	2.	Tenderers are requested to sign all pages in the tender schedule and must sign letter of tender. Tenders which do not have the Signature of the Tenderer in letter of tender will be rejected.
	3.	Technical specification of the equipment offered by the Bidders if any, and any other information related to the bid may be enclosed along with Tender Schedule after duly Signing in all the pages.
	4.	Bidders are requested to verify the number of pages in the work schedule and number of items in the work schedule. Any clarification and further information required may be obtained from the Office of the Contracts and Monitoring wing on any working day.
	5.	The present tender document contains detailed estimate and price schedule. The tenderers are requested to quote the percentage variation over the departmental value in words and figures in any one of the forms in price schedule. If there is any discrepancy between words and figures, the lower among the words and figures will be taken into account.
	6.	<u>Eligibility :</u> Contractors registered in Metro water in Class - I A and above i.e. those who are eligible to take up the work costing above Rs.75.00 lakh are eligible to tender for this work. Contractors registered in other departments and undertakings of the Central or State Government in the corresponding class for taking up such work, who have executed similar works of the same or higher magnitude are also eligible to tender for this work. Contractors not Registered in the Board and who intend to participate in the tender, subject to their eligibility as above are requested to obtain a copy of the Standard tender document from the Office of the Contracts wing before submitting their Tender. They should furnish Proof for their registration in the appropriate class and experience as indicated above while submitting their tenders, otherwise their tenders will be treated as non responsive. The tender received from ineligible contractors will be treated as non responsive. However the successful tenderer will have to get himself

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		registered in the Board in the appropriate class.
7.		EMD shall be in the form of Demand Draft or Banker's Cheque or Pay Order drawn from Nationalised / Scheduled Bank / TNSC Bank in favour of CMWSS Board.
8.		<b><u>SECURITY DEPOSIT</u></b> Security deposit will be collected from the successful Tenderer in the following form and manner within 14 days from the date of receipt of work order: Form in which S.D. collected. a). In the shape of NSC/NSS/KVP/Post office Time Deposits valid for the required contract period and pledged in favour of Managing Director, CMWSS Board and shall have the necessary transfer endorsement of the Post Office. ( OR ) Fixed Deposit for the required period from nationalized/schedule Bank/TNSC Bank in favour of Managing Director, CMWSS Board. ( OR ) Certified cheque/Bank Draft in favour of Managing Director, CMWSS Board payable at Chennai.
	b)	The value of S.D will be as follows:
	i)	for tenders with any plus percentage and upto (-)5% over departmental value – 2% of the contract value.
	ii)	for tenders between (-)5% to (-)15% over departmental value --- 4% of the contract value.
	iii)	for tenders, above (-)15% over departmental value --- 5% of the contract value.
9.		Milestone details for completion of works and details of penalty for the non completion of work are furnished in the Milestone at <b>Page No.24</b> . Tenderers are requested to take note of the details. The above details will be incorporated in the contract documents while executing agreement.
10		All duties, taxes such as VAT, Sales Tax and Service Tax other levies payable by the contractor under the contract or for any other cause shall be included in the rates, prices and total quoted rates submitted by the bidder. Any statutory variations in duties/taxes, which takes effect from a date subsequent to the due date for receipt of tender, shall be to CMWSS Board's Account.
11.		<b><u>Tender Validity</u></b> Tenders shall remain valid for a period of not less than ninety days (90 days) after the deadline date for bid submission. A tender valid for a shorter period shall be rejected by the Employer as non-responsive.
12.		No cheque will be accepted towards Earnest Money Deposit.
13.		Tenders with conditions are liable for rejection.
14.		All entries should be made legibly in ink. Writing the percentage in figures and words first in pencil and later over writing in ink should be avoided and also over writing the corrections should also be avoided.

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15.	Correction if any should be made by neatly score out the unwanted matter and rewriting legibly. Every such correction should be attested by the full signature of the tenderer.
16.	The defects liability period in respect of original civil works and pipe laying works is 5 years
17.	<b><u>Bonus for Advance completion of work:</u></b> Bonus as a incentive for advance completion of work may be introduced any work completed in advance by not less than 10% of agreement period can be considered and bonus of 1% on the value of actual quantum of works executed at the tendered rate may be paid.

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**CHENNAI METROPOLITAN WATER SUPPLY AND SEWERAGE BOARD**  
**NOTICE INVITING TENDER**

For and on behalf of Chennai Metropolitan Water Supply and Sewerage Board, separate open tenders in sealed covers in the prescribed form are invited by the Superintending Engineer(C&M) for the following work from the eligible contractors. The tenders will be received by the Superintending Engineer (Contracts and Monitoring) at his office at No.1, Pumping Station Road, Chintadripet, Chennai-600 002 upto 03.00 P.M. as per office clock. If the said date happens to be a holiday, the tenders will be received upto 03.00 P.M. on the next working day. The tenders will be opened immediately after 3.00 P.M. on the same day.

Sl. No	Name of Work & Contract No.	Due Date	Approximate value of tender Rs./lakhs	E.M.D. in Rs.	Tender schedule Available From-To	Eligibility	Contract period
1	Proposed laying 1500 mm (I.D) Pre-Cast RCC encasing pipe for a length 73.75 m by Pipe jacking / pushing method across the Railway Track at km 7.996 and supply & laying of 500 mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard (MAS – GDR Section).  CNT/SEW/NCB/DEP/2019/2010-11	10.08.2010	76.24	48,200/-	05.07.2010 To 09.08.2010	Eligibility in the Tender Schedule	7 months

Contractors registered in this Board under the Class indicated above are eligible to tender for this work. Contractors registered in other Departments and undertakings of the State or Central Government in the corresponding Class who has executed similar works of the same or higher magnitude is also eligible to tender for this work. However the successful Tenderer will have to get himself registered in the appropriate class in this Board.

Signature of Tenderer

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Tender schedules for the above work will be issued free of cost in the office of The Manager Customer Care at CMWSS Board Head Office from 10.00 A.M. to 5.45 P.M. on all the working days.

If the tender schedule is required to be sent by post, an amount of Rs.100/- (Rupees One Hundred only) shall be sent to Information Facilitation Officer, CMWSS Board. However, the CMWSS Board does not take any responsibility for the loss or delay if any in the transmission of the tender schedule sent by post. The tender schedule can also be freely downloaded from the website [www.tenders.tn.gov.in](http://www.tenders.tn.gov.in) and use it for tender submission at free of cost.

However, the bidders who have downloaded the tender schedules shall be solely responsible for checking the website for any addendum / amendment issued subsequently to the tender schedules and takes into consideration the same while preparing and submitting the tenders. The eligibility criteria and other terms and conditions as per the bid documents will be followed strictly.

Address: - (for information, Delivery & Opening of Bids)

SUPERINTENDING ENGINEER  
(CONTRACTS & MONITORING),  
CMWSS BOARD,  
NO. 1 PUMPING STATION ROAD  
CHINTADRIPET,  
CHENNAI-600 002

TELEPHONE: 044-28451300,  
FAX 044-28458181  
E-MAIL: [cmwssb@md2.vsnl.net.in](mailto:cmwssb@md2.vsnl.net.in)  
website: [www.chennaietrowater.tn.nic.in](http://www.chennaietrowater.tn.nic.in)  
Govt.Tenders portal - [www.tenders.tn.gov.in](http://www.tenders.tn.gov.in)

Address :- (For availability of Tender Documents)

INFORMATION FACILITATION OFFICER,  
CMWSS BOARD,  
NO. 1 PUMPING STATION ROAD  
CHINTADRIPET,  
CHENNAI-600 002

TELEPHONE: 044-2845 4336,  
Extn: 227

SUPERINTENDING ENGINEER  
(CONTRACTS & MONITORING)

Signature of Tenderer

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LETTER OF TENDER

To be delivered to the Superintending Engineer, C&M Chennai Metropolitan Water Supply and Sewerage Board at or before 3.00 P.M. on **10.08.2010**.

To  
The Managing Director  
Chennai Metropolitan Water Supply & Sewerage Board  
Chennai- 600 002

Sir,

I/We the undersigned do hereby tender and undertake to perform, provide and execute all the works, materials matters and things described or mentioned in the Schedule (Bill of quantities) hereto annexed and the specifications thereto and drawings therein referred to (which have been produced to and carefully examined by me/us) in strict accordance with and under and subject to the terms, provisions and conditions set forth or mentioned in the said Schedule (Bills of Quantities) specifications and the drawings therein referred to, at the rates given and as stated in the Bills of quantities.

I/We herewith enclose D.D/B.C./P.O No..... dated .....for having remitted Rs..... into the Board's Cash Section as a guarantee for the due fulfillment of my/our tender, and if successful, undertake and agree to forward to the Board within fourteen days after the notification of the acceptance by the Board of this tender has been received by me/us, the sum as demanded in the Form and manner required as security for the due fulfillment of my/our contract.

I/we undertake and agree that I/We will not withdraw this tender during the period that will be required for intimation, acceptance or non/acceptance as stipulated in clause 15 on the Notice Inviting Tender or during such extended period as agreed to by me/us, such period to date from the last date by which tenders are due to be submitted to the Board and if I/We do so withdraw, I/We shall forfeit the Earnest Money Deposit to the Board.

I/We further undertake to produce the Income-tax Clearance Certificate and the certificate and the Sales Tax Verification Certificate from the Commercial Tax Department of this State and agree to execute at my/our cost the agreement attached and to sign the plans therein referred to within 14 days after the notification of the acceptance of my/our tender has been received by me/us. In the event of my/our failing to make the Security Deposit or to execute the agreement in the said manner and sign the plans within the time specified for the purpose, the sum of **Rs.48,200/-** accompanying this tender paid towards bid security shall be forfeited to the Board and this concluded contract shall in such case be considered, as having been cancelled or terminated and you may thereupon at such time or times, in such manner and on such terms as you may think fit, arrange either departmentally or by any other person or persons to carry out the works and provide, execute and do all works, materials, matters and things described or mentioned herein and I/We agree to be liable irrespective of the forfeiture aforesaid for all damages, losses, costs, charges and expenses arising from or by reason of such failure and arrangements.

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I/We undertake to assume full responsibility for the stability and soundness of the Works/structures that will be executed by me/us as per this contract.

I/We also undertake to do all extra or varied works which may be ordered as part of this contract upon the terms provided for in the conditions and specifications. The tenders shall be valid for a period of 90 days from the last date fixed for receipt of tenders. In case my/our tender for the work of **“Proposed laying 1500 mm (I.D) Pre-Cast RCC encasing pipe for a length 73.75 m by Pipe jacking / pushing method across the Railway Track at km 7.996 and supply & laying of 500 mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard ( MAS – GDR Section)”** is accepted, I/We agree and guarantee to commence the said works within a period of seven days from the date and complete the entire work within the stipulated period of **7 months** from the date on which the work order received by me/us. I/We also agree that time is the essence of contract. I/We have actually inspected the site of works and have tendered for the works only after such inspection.

#### UNDERTAKING

I/We have gone through the copy of standard tender document received from the Office of the Contracts and Monitoring wing and abide by the same for this contract also.

As witness my/our hand this.....day of.....2010.

Signature.....

Name and  
address:

Signature of Tenderer

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### PRICE SCHEDULE

1. This tender has been called for in the percentage tender system. In the work schedule, detailed items of works involved in the work with specifications along with the quantity, the departmental rates and amount for individual items are furnished. The total value of the work is also furnished.

2. The tenderers are requested to quote the percentage variation over the total departmental value, which will be applicable for all items of works, individually and uniformly at which they are willing to execute the works, in the following format. In case any discrepancy / correction are found between figures and words furnished for the percentage, then the LOWER percentage among them ALONE will be taken as correct.

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FILL UP ANYONE OF THE FORM NO:A, B or C  
STRIKE OUT THE FORM WHICH IS NOT APPLICABLE.

FORM NO:A

I / We agree to execute the work of “Proposed laying 1500 mm (I.D) Pre-Cast RCC encasing pipe for a length 73.75 m by Pipe jacking / pushing method across the Railway Track at km 7.996 and supply & laying of 500 mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard ( MAS – GDR Section) ” with a tender percentage of (-) Minus-----

------(in words) -----(in figures) over departmental value of Rs.76,23,500.00 as furnished in the work schedule which is also applicable for all items of works, individually and uniformly over the departmental rates, furnished in the work schedule.

FORM NO:B

I / We agree to execute the work of “**Proposed laying 1500 mm (I.D) Pre-Cast RCC encasing pipe for a length 73.75 m by Pipe jacking / pushing method across the Railway Track at km 7.996 and supply & laying of 500 mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard (MAS – GDR Section)**” at the department value of Rs.76,23,500.00 for all items of work furnished in the schedule.

FORM NO:C

I / We agree to execute the work of “**Proposed laying 1500 mm (I.D) Pre-Cast RCC encasing pipe for a length 73.75 m by Pipe jacking / pushing method across the Railway Track at km 7.996 and supply & laying of 500 mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard ( MAS – GDR Section) ”** with a tender percentage of (+) Plus -----

------(in words) ----- (in figures) over departmental value of Rs.76,23,500.00 as furnished in the work schedule which is also applicable for all items of works, individually and uniformly over the departmental rates, furnished in the work schedule.

NOTE:

1. The tenderers are requested to strike out the forms which are not applicable
2. If any two or three forms are filled by the tenderers the LOWEST percentage quoted by the tenderer will be considered.
3. If there is any discrepancy in percentage quoted in words and in figures the lowest percentage quoted will be considered.
4. If the tenderer failed to fill/strike out any or all of the form, the department value will be taken as quoted price.

Signature of Tenderer

## WORK SCHEDULE

NAME OF WORK: Proposed laying 1500 mm (I.D) Pre-Cast RCC encasing pipe for a length 73.75 m by Pipe jacking / pushing method across the Railway Track at km 7.996 and supply & laying of 500 mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard ( MAS – GDR Section).

Contract No.CNT/SEW/NCB/DEP/2019/2010-11

Sl. No	Description of works	No. or Qty.	Unit	Rate	Per	Amount Rs. P.
1	Design and construction of driving pit, RCC thrust wall/thrust bed to the required size (to accommodate the jacks and equipments including working space) to push/jack 1500mm dia RCC encasing pipe to a length of 73.75m at a depth of 3.772m deep from the top of the rail level and convering the same in to valve cum inspection chamber of size 3.5 x 3.0 x 4.1 m with 30 cm thick RCC walls and 15 cm thick RCC cover slab including necessary steel reinforcement, centering, shoring, strutting, finishing, curing etc. complete. The cost includes earth work excavtion with all lead and lifts, providing timebring arrangements to trench, bailing out of water, restoring the site conditon after completion of the work and all cost of materials labour charges, tools and plants etc. complete to the satisfaction of Railways / Board officials.	1	No.	450000.00	Each	450000.00
2	Design and construction of receiving pit and platform to the required size to accommodate the equipment including working space to pull/receive 1500mm dia RCC encasing pipe cutting edge etc., to length of 73.75m at a depth of 3.772m deep from the top of the rail level and convering the same in to inspecting chamber of size 3.0 x 2.0 x 4.1 m with 30 cm thick RCC wall and 15 cm thick RCC cover slab including necessry steel reinforcement, centering, shoring, strutting, finishing, curing etc. complete The cost includes earth work excavation with all lead and lifts, providing timbering arrangements to trench, bailing out of water, restoring the site conditon after completion of the work and all cost of materials, labour charges tools and plants etc. complete to the satisfaction of Railways / Board officials.	1	No.	425000.00	Each	425000.00

Signature of Tenderer

Contract No.CNT/SEW/NCB/DEP/2019/2010-11

Sl. No	Description of works	No. or Qty.	Unit	Rate	Per	Amount Rs. P.
3	Manufacturing of 1500mm (internal diameter) of pre cast RCC encasing pipe of M 35 mix of length approximately 1.25m with socket and spicot ends conforming to IS-458-1961 etc. complete with wall thickness of 200mm as per the Railways approved drawings ( Type plan ) (All labour, materials, tools and plants, cement, reinforcement steel, shuttering materials, etc. are to be supplied by the tenders / constructor at his own cost only) and transporting the same from the casting yard to pushing location including loading, unloading etc as directed by the Engineer-in-charge.	75	mts.	35000.00	m	2625000.00
4	Laying of the manufactured pre cast RCC pipe units of 1500mm internal dia through soil mass below the Rly. Tracks by lowering the pipes into the drive pit by pipe pushing/jacking technique under traffic condition without infringing and without causing any hindrance to the movement of the trains using shield, hydraulic jacking system, driving rig etc. by excavating the earth from inside the pipe already laid and jointing the spicot and socket ends of pipe units with rubber ring manila rope of minimum 20mm dia and with soft board between concrete faces including bailing out of water from excavated trenches, pits etc. during construction by mechanically and as specified etc.,duly providing the intermediate jacking stations if required complete and as directed by the Engineers of Railways / Board (All labour, materials,tools plants and equipments to jacking, road vehicles, consumable stores, fuel and crew etc., are to be supplied by the tenderer/contractor at his own cost only).	75	mts.	40000.00	m	3000000.00

Signature of Tenderer

Contract No.CNT/SEW/NCB/DEP/2019/2010-11

Sl. No	Description of works	No. or Qty.	Unit	Rate	Per	Amount Rs. P.
	NOTE: The cost includes (a)Mobilisation of all plants and equipments, MS shield jacking nos spacers, intermediate jacking station if necessary and other equipments and temporary installations as necessary for driving the pipe of 1500mm internal dia RCC pre cast pipe duly leading the same from the storage point to the pushing location with all lead and lift etc. complete and as directed by the Engineer-in charge.(b) Trucking out of the manufactured precast RCC pipes of 1500mm internal dia vide item No.1 above to the working site duly loading into contractors own road vehicles and unloading and stacking at nominated locations with all lead and lift etc. complete and as directed by the Engineer incharge.					
5	Supplying and Laying of 500 (16KSC)mm dia PSC pipe by pushing/jacking method in to the 1500mm RCC encasing pipe at the depth of 3.772m from the rail level under traffic condtion by using contractors crane, jacks and jacking equipments, genrator, welding machine and other tolls and equipments required for puhsing the pipe by using the skilled labour duly lowering the pipe in to the drive pit with rubber gaskets as directed by the Engineer in charge.	85	mts.	11000.00		935000.00
6	Laying of PCC of M20 mix to form a bench inside the 1500mm RCC encasing pipe to carry 500mm PSC pipe as directed by the Engineer in charge.	13	cu.m	7000.00	cu.m	91000.00
7	Disposal of excavated earth and rubbish from the driving/reception pits and from pipe portion duly loading into the contractor's own vehicles and disposing the same at nominated locations with all lead and lift etc. complete as specified and as directed by the Engineer (All labour, materials, tools and plants, road vehicles, with fuel and crew etc. are to be supplied by the tenderer/contractor only at his own cost.	325	cu.m	300.00	cu.m	97500.00
	<b>TOTAL</b>					<b>7623500.00</b>

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**ELIGIBILITY CRITERIA FOR THIS CONTRACT**

To qualify for award of the contract, each bidder should have performed / executed the following, during the period from 01.04.2000 to 31.03.2006 as detailed below :

Sl.No.	Description	Minimum required qualification
1.	Annual financial turn over achieved in any one financial year during 2004 - 2005 to 2008 - 2009 not less than the amount given (Rs. in lakh)	77.00
2.	Satisfactorily completed any single Railway / Highway Crossing Work using pipe jacking / pushing method of value not less than the amount (Rs. in lakh)	31.00
3.	Should have successfully supplied and laid not less than 750 mm dia MS / RCC pipe for Railway / Highway Crossing work adopting trenchless method to a minimum length in any single work (length in metre)	8

**ADDITIONAL INFORMATION TO BE FURNISHED BY THE BIDDER**

Sl. No.	Description	Quantity
1.	<p style="text-align: center;"><u>List of personnel to be engaged</u></p> <p>a. Skilled persons (to operate jacks, cranes, compressor and jack hammer etc.)</p> <p>b. Semi skilled persons</p> <p>c. Unskilled persons</p>	<p>8 Nos.</p> <p>8 Nos</p> <p>As required at site</p>
2.	<p style="text-align: center;"><u>Plant and Machinery</u></p> <p>a. Hydraulic jacks of minimum capacity</p> <p>b. Powered Power pack to operate jacks (minimum)</p> <p>c. Crane of minimum capacity</p> <p>d. Generator of minimum capacity</p> <p>e. Compressor and jack hammer (minimum)</p> <p>f. Mug trolley / bucket</p> <p>g. Welding Transformer</p> <p>h. Gas cutting set</p>	<p>200 Tonnes</p> <p>1 No.</p> <p>20 Tonnes</p> <p>20 KVA</p> <p>1 No.</p> <p>1 No.</p> <p>4 Nos.</p> <p>2 Sets</p>

Signature of Tenderer

**Annexure "C"**  
**SPECIAL CONDITIONS OF CONTRACT**

1. The work consists of manufacturing and laying of 1x1500mm (I.D) Pre-Cast RCC encasing pipe by Pipe jacking / pushing method across the Railway Tracks at km 7.996 and supplying and laying of 1x500mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard ( MAS – GDR Section) on deposit terms.

2. The tenderer/contractor should have executed at least one work of similar nature successfully i.e. pushing/jacking of 750 mm dia Pre-Cast RCC encasing pipe for a length of 8 m and supplying and laying of 1x500mm dia PSC sewer pipe inside the RCC encasing pipe for a length of 85m below railway track under traffic conditions.

3. The rates quoted by the tenderer/contractor shall be deemed to be inclusive of the sales tax on all the materials that he will have to purchase for performance of this contract.

4. The tenderer/contractor should have necessary plants and equipments such as high capacity jacks and the list of such plant and equipment proposed to be utilized for the work shall be specified along with the tender.

5. The tenderer/contractor have to submit necessary designs and drawings for the RCC encasing pipe, driving/reception pit, inspection chambers to railways for approval which include reinforcement details cement concrete mix design etc. and only on approval the contractor has to commence the work.

6. The bidder is to ascertain the soil condition at site while bidding.

7. The contractor shall submit the details regarding the design of RCC encasing pipe, reception pit, drive pit, inspection chambers etc. before the commencement of the work.

8. Casting of pre cast RCC pipe units of 1500 mm internal dia encasing pipe shall conform to IS 458-1961. The pre cast RCC pipes shall be designed to with stand all dead loads including self weight and live loads as per revised MBG loading of 1987 of bridge rules/Indian Railway standards as approved by the Railway. They shall also with stand all the loads coming on its during the jacking process. The concrete used for the pipe shall be of minimum M 30 grade with a 28 days cube strength of not less than 300 Kg/cm<sup>2</sup>. The contractor shall have to make suitable number of cubes as per the instructions of Engineer in charge and shall have to get them tested for 7 days and

days cube strength and shall have to furnish the test report to the Engineer in charge for his approval before a particular pipe can be allowed to used in the permanent work. The testing of concrete as mentioned above is the part of the contract and no extra payment will be made for the same. If a pipe is found to develop cracks or other deformations during the jacking, it shall be repaired/replaced suitably at the cost of contractor and no extra payment will be made for the same.

9. Construction of drive pit with RCC thrust wall with requisite thickness as per the approved drawing shall be by open excavation and the drive pit is to be adequately protected from collapse by providing necessary shoring, steel sheeting etc. sheet piling if necessary.

10. Construction of reception pit shall be of suitable dimension at the far end of the pipe line for salvaging the front shield as per the approved drawing shall be of open excavation with timber or other suitable shoring at the front of the jacked pipe.

11. RCC inspection chamber shall be constructed at the both ends of the RCC encasing pipe to size and design as per the approved drawings with M 25 mix with necessary pre cast RCC covering slab and CI steps etc. complete.

12. Driving of pre cast RCC pipe should be done by hydraulic jacking method with suitable rubber ring between joints of adjacent pipe units under traffic conditions without causing any hindrance to the movement of running traffic. Providing of an intermediate jacking station if necessary for laying of the RCC pre cast pipe below the railway tracks has to be included within the quoted rates of the tenderer. The jacking load on the driving rig and the walls can be reduced by the use of intermediate jacking station if provided the jack shall be removed at the end of drive and the gap between the pipes shall be removed at the end of drive and the gap between the pipes shall be closed by pushing rear pipe or by pre cast or in situ concrete giving proper attention to make the joints leak proof.

13. The hole to be drilled for pushing the RCC encasing pipe should be to accommodate the RCC encasing pipe only and the casing pipe should be pushed simultaneously in to the drilled earth as it progresses to keep the formation supported and to prevent any settlement of track under no circumstances, bored earth should be left without casing pipe.

14. The RCC encasing pipe should be laid in even bearing/level throughout its length.

15. Mobilization of all necessary plants and equipments like shield, jacking rig, hydraulic jack spacers etc as well as all temporary services and installations in connection with the work shall be arranged by the tenderer/contractor at his own cost. All such plants, equipments, installations etc. which are owned by the contractor shall be removed from the site after successful completion of the work.

16. The tenderers rates shall include excavations as necessary in all kinds of soil for completion of the work. Excavation shall also be required to be carried out from inside the pipes and shield while laying the pipes. The contractor shall provide necessary arrangements for such excavation work. Stabilization of ground during excavation by any method for safety of the railway tracks/embankment shall be included in the tenderers offer. All surplus excavated soil shall be disposed off the site in a place directed by the Engineer in charge.

17. Dewatering of water from all trenches, pits shall be done by mechanically. CMWSSB will not entertain any extra on account of dewatering of such soil water by use of special dewatering techniques such as well point system or by any other method except otherwise mentioned any where contrary to it.

18. The excavated earth should be disposed off cleared off from railway land or dumped in the low lying areas as specified and as directed by the Engineer in charge.

19. The tenderer/contractor should arrange the required power supply and water supply at his own cost.

20. The payment will be made only for the actual length of encasing pipe line laid in good condition.

21. The rates quoted should include the cost of cement and steel required including labour etc. complete for this work.

22. The work should be carried out to the correct alignment and depth as specified by the railway.

23. The work shall be completed within seven months.

24. The contractor shall be responsible for coordinating with various departments of Railways for getting necessary clearance etc. for completion of this work.

25. The contractor shall have documentation during the execution by videograph and produce the same in soft and hard copy along with as constructed plan.

**26. Price Variation:**

The prices quoted by the tenderers shall remain firm throughout the period of execution of the contact. Under no circumstances any escalation of the accepted rates shall be permissible. The tenderers shall keep this in view while quoting their rates.

### **Instructions and Specifications:**

These instructions and specifications should be read in conjunction with the General conditions of contract.

1. This tender consists of schedule Bill of quantities and the quantities shown therein are approximate and intended for the guidance of the Tenderer/contractor to quote their rates.

2. This schedule Bill of quantities consists of items of works that are not covered by the schedule of rates. The rates quoted for this schedule should be inclusive of all lead and lift etc, and cover all labour charges etc. complete. The quantities furnished are approximate. The rate and amount of columns should be filled both in figures and words by the Tenderer/Contractor. Payment of works come this schedule will be made at the accepted rate for each item of work.

3. The CMWSSB shall be indemnified against any loss of damage caused to person during execution of work.

4. No approach road will be laid by the Department for conveyance of materials to site of works. Tenderer/Contractor will have to take his their own arrangements for this.

5. It is the responsibility of the contractor for the safe loading from site of collections to the site of loading and any loss of damage caused to adjacent Railway property will have to be made good by the contractor at his own cost.

6. Accident if any, to persons will be met by the Contractor and Railway will not be responsible for any damage of compensation thereof.

7. The Tenderer/Contractor will have to adhere to the workmen compensation act Motor Vehicles etc., and any infringement should be at Tenderer/Contractors own cost.

8. The Tenderer/Contractor is required to inspect the site of works and satisfy himself of the facilities available before requesting his rates.

9. The Tenderer/Contractor shall take special care while moving the materials along side the Railway track and take necessary precautions to prevent accident to Railway Staff and property.

10. The operation of any of the items in connection with this will rest entirely on the discretion of the Railway and no claims so over of any kind will be entertained for the non-operation of other items.

11. The Tenderer may inspect the site and accustom himself with the nature and magnitude of the job to be done and the other facilities required to be arranged by him.

**12. TIME:**

As the time for completion of the entire work is the essence of the contract. Suitable arrangements should be made for speedy progress of this work so that the entire work is executed within seven months from the date of issue of letter of acceptance of the Tender. The contractor is liable to pay liquidated damages as indicated in page 24 for any delay in the work.

13. As per Tamil Nadu General Tax Act 1959 by Tamil Nadu Act 15 of 1999, 2% sales tax will be recovered from running bills.

SPECIAL CONDITIONS OF CONTRACT FOR MOVEMENT OF VEHICLES NEAR  
RAILWAY TRACK

**Safety precautions**

1. No lorry or road vehicles shall be operated so as to affect the safety of trains. They should be allowed to work well outside the moving dimensions. At each of the locations where road vehicle machinery are working, an authorized responsible railway official should be posted as in charge to ensure that the road vehicle machinery do not infringe the schedules, moving dip engines any item and protect the track in case of emergency. To facilitate the driver to whistle, a whistle board will have to be provided at the appropriate place.
2. At vulnerable locations where construction activity is in progress adjacent to existing railway lines should be cordoned off with proper barricades. The most vulnerable locations shall be barricaded with rail barricades projecting at least in above the ground. At all other locations barricades of not less than 1.5m height consisting of bamboo, casuarinas poles and supported horizontally with similar bamboo, casuarinas poles should be provided.
3. All the barricades are to be painted or stuck on with road luminous paint strip at suitable intervals.
4. The entry to new banks which run along side the existing track should be protected by barriers which can be closed and opened when necessary.
5. At locations which are not vulnerable provision of barricade can be with (i) 6.6m wide and 0.3m deep trenches or (ii) stones of minimum size 30 cm x 15 cm at 1m intervals and projecting 0.3m above ground level and painted white. Trenches should be allowed only in those locations where they do not lead to subsidence to railway track as may be assessed by the SE/P.way.

6. Barriers shall also be provided in the case of doublings, particularly at the existing formation. These barriers are to be opened only for the movement of railway contractors authorized vehicle or other railway vehicles.
7. Railway vehicles employed by the contractor should have the certificate for its road worthiness and each vehicle
8. Wherever the work requires the movement of road vehicles within a distance of 3.5 to 6m from the center line of the nearest track, such work shall be done only in the presence of railway employees authorized by the Engineer in charge. No part of the road vehicles will be allowed at less than 3.5m from tack center. Cost of such railway employees shall be borne by the Railway.
9. No movement of road vehicles within 6m of railway track shall be permitted unless the driver of the vehicles is assisted by a helper with a whistle who shall guide him and ensure safety.
10. The driver of the vehicles shall always face the track. When reversing the vehicles and whenever he cannot face the track for whatever reason, he shall invariably be assisted by the helper with a whistle who should guide him and ensure safety.
11. All work shall be supervised by the contractor representative as also a representative of the Railway organization. The contractor's representative shall be issued with a certificate by ZEN/ADEN to the effect that they have acquired sufficient knowledge about the safety precautions that are needed to be followed while working near the track. Whenever work of playing of road vehicles within 6m zone is actually in progress look out men should invariably be available. Look out men will have to be provided by the contractor from out of the list of persons who are authorized to carry out these duties. Authorization will be issued to the individuals by the Engineer in charge. One supervisor who shall be

permanent staff (Trackman) loaned to JE/W/CN from the respective gangs and in whose beat the work is in progress (to be spared by the respective SE/P.way) will monitor the availability and alertness of the lookout men. In case of non availability of look out men, the Railway supervisor shall stop further activities of plying of road vehicles. Even no work is executed in the night, look out men shall patrol the beat as identified by the representative of the CN Organization to ensure the safety of the running trains especially from infringements.

12. Working along side the track during night hours is normally prohibited. Such work can be done in the night only with the written permission of the Engineer of the construction activity. Where night work is permitted, lighting of the work site as required should be done.
13. The contractor shall be fully responsible against loss or damage arising from working of lorries and machinery adjacent to the running track and making the contractor safety responsible for any loss or damage which the Railway or the contractor or any 3rd party may suffer.
14. The contractor shall be fully responsible for ensuring safety at all times and shall bear the cost of all damages in cases of accidents unusual occurrences resulting in damage to railway property and passengers.
15. Supervisor and operator of the work executive agencies working at or near Railway track should undergo specified training on matter to safe working along and on the tack salient features of observing moving dimensions and clearances which may be imparted to such supervisors at Zonal/Divisional Training School and the cost of such training shall be borne by the contractor, which will be Rs. 220/- per trainee per day for the year 2009 with a 10% escalation p.a. with an expected duration of the course of about 3 days so as to ensure that they get acquainted with safety precautions that are required to be taken while executing works which have bearing on the safety of the running trains.

16. The supervisors mentioned in para 9 above should be trained in protection rules and supplied with minimum equipment for protecting the track. Such staff should also be provided with basic communication facility (a waikie talkie with communication facility to the nearest Station Master or adjacent site) so as to communicate with the nearest station in case of emergencies/unusual occurrences. Till is made available, the supervisor shall use the nearest LC gate telephone or other means of communications to relate the incident most speedily.

NAME OF WORK : Proposed laying 1500 mm (I.D) Pre-Cast RCC encasing pipe for a length 73.75 m by Pipe jacking / pushing method across the Railway Track at km 7.996 and supply & laying of 500 mm dia PSC sewer pipe inside the RCC encasing pipe near Thiruvottiyur Yard ( MAS – GDR Section).

CONTRACT NO : CNT/SEW/NCB/DEP/2019/2010-11

MILESTONE

Sl. No.	Description of work	Period from Start date			
		Milestone I (2 months)	Milestone II (4months)	Milestone III (6 months)	Milestone IV (7 months)
(i)	Manufacturing and Supplying of 1500mm (internal diameter) of pre cast RCC encasing pipe (75m).	60%	100%		
(ii)	Construction of drive pit, RCC thrust wall/thrust bed to the required size	50%	100%		
(iii)	Laying of the manufactured pre cast RCC pipe units of 1500mm internal dia by pipe pushing/jacking technique (75m).	30%	100%		
(iv)	Laying of PCC of M20 mix to form a bench inside the 1500mm RCC encasing pipe to carry 500mm PSC pipe (75m).			100%	
(v)	Supplying and Laying of 500 (16KSC)mm dia PSC pipe by pushing/jacking method in to the 1500mm RCC encasing pipe (85m).			100%	
(vi)	Construction of receiving pit and platform to the required size.			50%	100%
(vii)	Testing , commissioning and trial running				100%

LIQUIDATED DAMAGES FOR NON-COMPLIANCE OF WORK

I Mile Stone	-	Rs. 1000.00 per day
II Mile Stone	-	Rs. 1000.00 per day
III Mile Stone	-	Rs. 800.00 per day
IV Mile Stone	-	Rs. 1000.00 per day

Signature of Tenderer