

असम ASSAM

C 325781

Contract Agreement

THIS AGREEMENT made the 6th day of September, 2011, between **Guwahati Metropolitan Development Authority, Government of Assam, Guwahati, Assam, India** (hereinafter "the Employer"), of the one part, and **M/s. IVRCL Infrastructure & Projects Ltd., "MIHIR" H.No. 8-2-350/5/A/24/1B, Road No – 2, Banjara Hills, Hyderabad, India** (hereinafter "the Contractor"), of the other part:

WHEREAS the Employer desires that the Works known as **Procurement of Works (Item Rate) for Supply, Installation, Construction and Commissioning of 1 (one) Pumping Station, M.S. Pipes and HDPE Pipes & Installation and commissioning of D.I. Pipes for Distribution Network in Geeta Nagar & Lechu Bagan area of South Central Zone (Contract Identification No. GWSP/LCB/C#06)** should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (i) the Letter of Acceptance;
 - (ii) the Letter of Technical Bid;
 - (iii) the Letter of Price Bid, Priced Bill of Quantities and Schedule of Adjustment data;
 - (iv) the addenda (following addenda as issued to the Bidders on the date mentioned);
Addendum #1: dated June 06, 2011
 - (v) the Particular Conditions;
 - (vi) the General Conditions;
 - (vii) the Specification (as issued to the Bidder on January 20, 2011 including addenda as above);




Chief Executive Officer
Guwahati Metropolitan Dev. Authority

- (viii) the Drawings (as issued to the Bidder on January 20, 2011 including addenda as above);
- (ix) the completed Schedules (as submitted by the Bidder in Technical Bid);
- (x) Acknowledgment of Compliance with Guidelines for Procurement under Japanese ODA Loans; and
- (xi) Forms:
 - a) Performance Security
 - b) Advance Payment Security
 - c) Retention Money Security

3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.


4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of India on the day, month and year indicated above.


Chief Executive Officer
Guwahati Metropolitan Dev. Authority

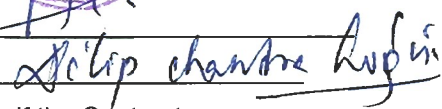
Signed by: Sri Preetom Saikia, CEO, GMDA
 for and on behalf of the Employer

in the presence of

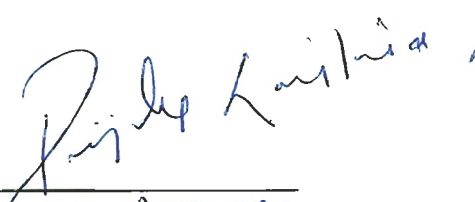
Signature: 
 Name: C. K. BHUYAN
 Designation: _____
 Date: 06/09/2011

Additional Project Director
Project Implementation Unit (P.I.U.)
JICA funded Guwahati Water Supply Project



Signed by: 
 for and on behalf the Contractor

in the presence of

Signature: 
 Name: J.S. PARIJAT
 Designation: ENGINEER
 Date: 6/9/2011

OFFICE OF THE CHIEF EXECUTIVE OFFICER
GUWAHATI METROPOLITAN DEVELOPMENT AUTHORITY
BHANGAGARH, GUWAHATI-5

Letter of Acceptance

No. GMDA/JICA/20/2011/ 5

August 26, 2011

To:

✓ **M/s. IVRCL Infrastructure & Projects Ltd.**
"MIHIR" H.No. 8-2-350/5/A/24/1B
Road No – 2, Banjara Hills
Hyderabad – 500 034 , India

This is to notify you that your Bid dated 27th June 2011 for execution of the **Works (Item Rate) for Supply, Installation, Construction and Commissioning of 1 (one) Pumping Station, M.S. Pipes and HDPE Pipes & Installation and commissioning of D.I. Pipes for Distribution Network in Geeta Nagar & Lechu Bagan area of South Central Zone (Contract Identification No. GWSP/LCB/C#06)** for the Accepted Contract Amount of the equivalent of **INR 572,047,698 (Rupees Five Hundred and Seventy Two Million Forty Seven Thousand Six Hundred and Ninety Eight Only)**, as corrected and modified in accordance with the Instructions to Bidders, is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms included in Section IX, Annexed to the Particular Conditions - Contract Forms, of the Bidding Document.

Authorized Signature: _____

PKS
(Preetom Saikia)

Name and Title of Signatory: **Mr. Preetom Saikia, Chief Executive Officer, GMDA**
Guwahati Metropolitan Dev. Authority

Name of Agency: **Guwahati Metropolitan Development Authority**

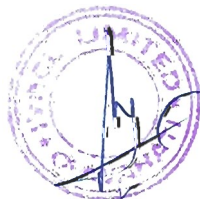
Attachment: Contract Agreement

No. GMDA/JICA/20/2011/ 5 - A

August 26, 2011

Copy to:

- 1) The Project Director, Project Implementation Unit, JICA assisted GWSP, Guwahati
- 2) Japan International Cooperation Agency, JICA India Office, New Delhi, India
- 3) Project Management Consultant, Guwahati, India



PKS
Chief Executive Officer
Guwahati Metropolitan Dev. Authority



We make it happen

Letter of Technical Bid

Date: 27/06/11
LoanNo.:/D-P201
Invitation for Bid No.: GWSP/LCB/C-06/10-11/

To:
The Chief Executive Officer,
JICA ODA Loan Project,
Guwahati Metropolitan Development Authority
1st Floor, STATFED Building, GMCH Road,
Misinggarh, Guwahati - 781005, Assam, India

We, the undersigned, declare that:

- (i) We have examined and have no reservations to the Bidding Document, including Addenda No.: 01 issued in accordance with Instructions to Bidders (ITB) 8;
- (ii) We offer to execute in conformity with the Bidding Document the following Works: Procurement of Works (Item rate) for Supply, Installation, Construction and Commissioning of 1 (one) Pumping Station, MS pipes & HDPE pipes & Installation and commissioning of D.I Pipes for Distribution Network in Geeta nagar & Lechu Bagan in South Central Zone (Contract Package No. C-06).
- (iii) Our bid consisting of the Technical Bid and the Price Bid shall be valid for a period of 120 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (iv) We, including any subcontractors or suppliers for any part of the contract, have or will have nationalities from eligible countries, in accordance with ITB 4.2;
- (v) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.3;
- (vi) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.3, other than alternative offers submitted in accordance with ITB 13;

Name: **Dilip Gogoi**

In the capacity of **IVRCL LIMITED**

Signed: 

Duly authorized to sign the bid for and on behalf of **IVRCL LIMITED**

Dated on: 27/06/11

IVRCL LIMITED

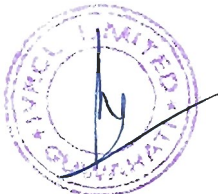
Guwahati Sub Regional Office : H. No. 3, Rupknowar Path, Chachal, VIP Road, Guwahati - 781022

Tel : 0361-213785, e-mail : guwahatioffice@ivrinfra.com

Kolkata Regional Office : Akash Tower, Unit 3-A, 3rd Floor, 781 - Anandapur, Kolkata - 700 107

Tel : 033-30131600, e-mail : ivrkolkata@ivrinfra.com

Head Office : "MIHIR", B-2-350/51A/24/1-3&2, Road # 2, Panchavati Colony, Banjara Hills, Hyderabad - 500 034. A P
Phone : 040-2335 6613/15/18/21/51 to 55, 30931111/1444 (60 line), Fax : 040-2335 6693




Chief Executive Officer
Guwahati Metropolitan Dev. Authority

Letter of Price Bid



Date: 27/06/2011
Loan No.: ID-P 201
Invitation for Bid No.: GWSP/LCB/C-06/10-11/

To:

The Chief Executive Officer,
JICA ODA Loan Project,
Guwahati Metropolitan Development Authority
3rd Floor, STATFED Building, GMCH Road,
Bhangagarh, Guwahati - 781005, Assam, India

Handwritten signature in red ink

We, the undersigned, declare that:

- We have examined and have no reservations to the Bidding Document, including Addenda No.1 issued in accordance with Instructions to Bidders (ITB) 8;
- We offer to execute in conformity with the Bidding Document and Technical Bid submitted for the following Works: Procurement of Works (Item rate) for Supply, Installation, Construction and Commissioning of 1 (one) Pumping Station, MS pipes & HDPE pipes & Installation and commissioning of D.I Pipes for Distribution Network in Geeta nagar & Lechu Bagan in South Central Zone.
- The total price of our bid, excluding any discounts offered in item (d) below is: Rs 57,20,476.98/-
(Rupees Fifty Seven Crores, Twenty Lacs, Forty Seven Thousand Six Hundred Ninety Eight Only)
- The discounts offered and the methodology for their application are: 11.06% applicable for all the quoted rates of BDO items.
- Our bid shall be valid for a period of 180 days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document;
- We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name: Dilip Gogoi
In the capacity of IVRCL LIMITED

Signed

Duly authorized to sign the bid for and on behalf of IVRCL LIMITED

Dated on : 27.6.2011

IVRCL LIMITED

Guwahati Sub Regional Office : H. No. 3, Rupkhowar Path, Charhal, VIP Road, Guwahati - 781022
Tel: 0361-213785, e-mail: guwahatioffice@ivrinfra.com

Kolkata Regional Office : Akash Tower, Unit 3-A, 3rd Floor, 781 - Anandapur, Kolkata - 700 107
Tel : 033-30131600, e-mail : ivrkokata@ivrinfra.com

Head Office : "MIHIR", B-2-350/5/A/24/1-362, Road # 2, Panchavati Colony, Banjara Hills, Hyderabad - 500 034. A P
Phone : 040-2335 6613/15/18/21/51 to 55, 30931111/1444 (60 line), Fax : 040-2335 6693



Handwritten signature in blue ink
Chief Executive Officer
Guwahati Metropolitan Dev. Authority

C#06 : Procurement of Works (Item rate) for Supply, Installation and Commissioning of M.S. Pipes and HDPE Pipes & Installation and Commissioning of D.I. Pipes for Distribution Network in Leechu bagan and Geeta nagar of South Central Zone

Summary of Prices

Item No.	Item Description	Total Amount		Amount (including local transportation, transit insurance all taxes and other levies payable, etc.,) (Rs.)	
		Amount including local transportation, transit insurance etc., but (excluding all taxes and other levies payable, etc., (Rs.))	Amount all taxes and other levies payable, etc. (Rs.)		
		(1)	(2)	(3) = (1) + (2)	
				In Figure (Rs.)	In Words
1	Survey Work	2030340	0	2030340/-	(Rupees Twenty Lacs Thirty Thousand Three Hundred Forty Only)
2	Earth Work	70070140	0	70070140/-	(Rupees Seven Crores Seventy Thousand One Hundred Forty Only)
3	Pipelines, Specials and Appurtenances	49560490	160050	49720540/-	(Rupees Four Crores Ninety Seven Lacs Twenty Thousand Five Hundred Forty Only)
4	Trenchless technology	83832950	0	83832950/-	(Rupees Eight Crore Thirty Eight Lacs Thirty Two Thousand Nine Hundred Fifty Only)
5	Valves and Appurtenances	22623361	1454474	24077835/-	(Rupees Two Crores Forty Lacs Seventy Seven Thousand Eight Hundred Thirty Five Only)
6	Valve Chambers	46028799	0	46028799/-	(Rupees Four Crores Sixty Lacs Twenty Eight Thousand Seven Hundred Ninety Nine Only)
7	Miscellaneous Civil Work	14649130	0	14649130/-	(Rupees One Crore Forty Six Lacs Forty Nine Thousand One Hundred Thirty Only)
8	Road Restoration	322830100	0	322830100/-	(Rupees Thirty Two Crores Twenty Eight Lacs Thirty Thousand One Hundred Only)
9	Testing, Trial Runs and Commissioning	8881710	0	8881710/-	(Rupees Eight Eight Lacs Eighty One Thousand Seven Hundred Ten Only)
	Subtotal Pipeline (Items 1-9)	620507020	1614524	622121544/-	(Rupees Sixty Two Crores Twenty One Lacs Twenty One Thousand Five Hundred Forty Four Only)




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Guwahati Metropolitan Dev. Authority

Item No.	Item Description	Total Amount		Amount (including local transportation, transit insurance all taxes and other levies payable, etc.,) (Rs.)	
		Amount including local transportation, transit insurance etc., but (excluding all taxes and other levies payable, etc., (Rs.))	Amount all taxes and other levies payable, etc. (Rs.)		
		(1)	(2)	(3) = (1) + (2)	
	Geetanagar Pumping Station				
1	Civil Work	13372517	0	13372517/-	(Rupees One Crore Thirty Three Lacs Seventy Two Thousand Five Hundred Seventeen Only)
2	Mechanical Work	5466183	487007	5953190/-	(Rupees Fifty Nine Lacs Fifty Three Thousand One Hundred Ninety Only)
3	Electrical Work	672274	59835	732109/-	(Rupees Seven Lacs Thirty Two Thousand One Hundred Nine Only)
	Subtotal Pumping Station (Items 1-3)	19510974	546842	20057816/-	(Rupees Two Crores Fifty Seven Thousand Eight hundred Sixteen Only)
	Day works				
10	Labour	129520	0	129520/-	(Rupees One Lacs Twenty Nine Thousand Five Hundred Twenty Only)
11	Material	290880	0	290880/-	(Rupees Two Lacs Ninety Thousand Eight Hundred Eighty Only)
12	Equipment	584070	0	584070/-	(Rupees Five Lacs Eighty Four Thousand Seventy Only)
	Subtotal Day work (Items 10-13)	1004470	0	1004470/-	(Rupees Ten Lacs Four Thousand Four hundred Seventy Only)
	GRAND TOTAL	641022464	2161366	643183830	(Rupees Sixty Four Crores Thirty One Lacs Eighty Three Thousand Eight Hundred Thirty Only)
	Offered Discount (11.06%)	70,897,084.52	239,047.08	71,136,131.60	
	Discounted Price	570,125,379.48	1,922,318.92	572,047,698.40	



C#06 : Procurement of Works (Item rate) for Supply, Installation and Commissioning of M.S. Pipes and HDPE Pipes & Installation and Commissioning of D.I. Pipes for Distribution Network in Leechu bagan and Geeta nagar of South Central Zone

Priced Bill of Quantities								
Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
PIPELINE WORK								
1	SURVEY WORK							
1.1	Topographical survey work using Total Station as directed by the Employer's Representative, including preparation and finalization of survey drawings and CADD files .	km	40	34250	0	1370000	0	1370000
1.2	Preparation of working drawing including carrying out necessary survey and investigation as per specification and directed by Employer's representative	km	241	2740	0	660340	0	660340
Subtotal Item No. 1						2030340	0	2030340
2	EARTHWORK							
2.01	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of ordinary soils such as murum, sand, sandy silt, clay, kankar etc. or in combination. Excavation shall include the removal of WBM roadway surfaces, brick surfacing, including dressing, compaction of the bottoms of the excavation, shoring and strutting wherever required, dewatering whenever required, removal of the excavated soil, stockpiling and disposal of surplus excavated soil off-site as directed by the Employer's Representative.							
Excavation will be paid for in the following segments:								
(a)	0 to 1.5 m from GL	m3	203800	76	0	15488800	0	15488800
(b)	above 1.5 m to 3.0 m depth from GL	m3	24000	83	0	1992000	0	1992000
(c)	above 3.0 m to 4.5 m depth from GL	m3	12000	103	0	1236000	0	1236000



Chief Executive Officer
Guwahati Metropolitan Dev. Authority

Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
2.02	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of ordinary rock , Excavation shall include the removal of asphalt and concrete road surfacing, including dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.							
	Excavation will be paid for in the following segments:							
(a)	0 to 1.5 m from GL	m3	40750	253	0	10309750	0	10309750
(b)	above 1.5m to 3.0 m depth from GL	m3	4800	295	0	1416000	0	1416000
(c)	above 3.0 m to 4.5 m depth from GL	m3	2400	397	0	952800	0	952800
2.03	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of hard rock requiring blasting , Excavation shall include dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.							
	Excavation will be paid for in the following segments:							
(a)	0 to 1.5 m from GL	m3	2800	760	0	2128000	0	2128000
(b)	above 1.5m to 3.0 m depth from GL	m3	320	1000	0	320000	0	320000
(c)	above 3.0 m to 4.5 m depth from GL	m3	160	1274	0	203840	0	203840

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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
2.04	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of hard rock (blasting prohibited) , Excavation shall include dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.							
	Excavation will be paid for in the following segments:							
(a)	0 to 1.5 m from GL	m3	24500	959	0	23495500	0	23495500
(b)	above 1.5m to 3.0 m depth from GL	m3	3000	1302	0	3906000	0	3906000
(c)	above 3.0 m to 4.5 m depth from GL	m3	1500	1713	0	2569500	0	2569500
2.05	Backfilling of pipe trenches, foundations, etc. with approved graded excavated soil excluding rock, including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and as directed by the Employer's Representative.	m3	36000	37	0	1332000	0	1332000
2.06	Backfilling of pipe trenches, foundations, etc. with contractor's supplied approved graded sand , including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and as directed by the Employer's	m3	11750	373	0	4382750	0	4382750
2.07	Backfilling of pipe trenches, foundations, etc. with contractor's supplied approved graded Gravel , including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and as directed by the Employer's Representative.	m3	600	562	0	337200	0	337200
Subtotal Item No. 2						70070140	0	70070140



Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
3	PIPELINES, SPECIALS AND APPURTENANCES							
3.01	Supplying spirally welded MS pipe with internal lining and external coating as per the specification of the following internal diameters and wall thicknesses. The rate shall include third party inspection, transportation, freight charges, loading, unloading and stacking at the project site, with the cost of all labor, material, taxes and duties.							
(a)	700 mm ID 6 mm thick	m	600	9274	0	5564400	0	5564400
(b)	400 mm ID 20mm thick MS Pipe (for trenchle	m	300	13349	0	4004700	0	4004700
(c)	500 mm ID 20mm thick MS Pipe (for trenchle	m	100	16285	0	1628500	0	1628500
3.02	Supplying all types of MS Specials plain ended, socket ended and flanged as required with internal lining and external coating as per the specification, such as bends, tees, tapers, spool pieces, blind flanges, pieces for pipe connection, valve connections, dismantling joints, anchor bolts, straps, air vent pipe, etc. of different diameters, manufactured from Fe 410 grade steel. This item includes loading, transportation to the project site, unloading and stacking, etc. complete with cost of third party inspection, material, labor, taxes and duties.	MT	2	91395	0	182790	0	182790

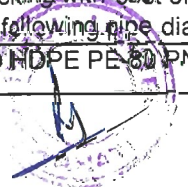
Chief Executive Officer
 Guwahati Metropolitan Dev. Authority

Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
3.03	Handling, aligning, laying and jointing MS pipes and specials to correct line and level in trenches. The item includes transportation of pipes and specials from the storeyard to the project site, stacking of pipe as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary, assembling, jointing, providing temporary supports, lining and coating at joints etc. for pipe of the following diameters and thicknesses. The rate also shall include radiography of field joints, field testing, etc. as specified and shown on the drawings and specification.							
(a)	700 mm ID 6 mm thick	m	600	606	0	363600	0	363600
3.04	Supplying DI Specials and fittings with plain, double socket, socket & flanged and double flanged end connections as required, with lining and coating as per the specification, and IS 9523 with EPDM rubber gaskets as per IS 5382 as required for successful completion of the work. This item includes third party inspection, transportation, freight, loading and unloading, stacking etc. all complete for various sizes of DI specials and fittings as noted with the following end connections.							
(a)	Tee's, Socket, collar, tail pieces, flanged tapers, socketed tapers, flanged spigot short pipes, flanged socket short piece, all bends, end caps, barrel piece, dismantling joints etc. required for suitable completion of the works.	MT	130	100000	0	13000000	0	13000000
(b)	Double flanged pipe pieces, required for River crossing and air vent.	MT	10	125000	0	1250000	0	1250000




 Chief Executive Officer
 Guwahati Metropolitan Dev. Authority

Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
3.05	Handling, aligning, laying and jointing of Employer furnished K-9 DI pipe to other pipe and to Contractor furnished fittings and specials , with EPDM rubber O-rings (as per IS 5382) and flange gaskets (as per IS 12288) and the specifications. This item includes clearing and grubbing right-of-way or alignment where necessary, transportation of pipes, specials and fittings from the storeyard to the project site, stacking of pipe and fittings as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary, assembling, jointing, providing temporary supports etc., all complete with approved equipment, for pipe of the following diameters. Maximum distance of the Employer's store from where DI pipes are to be lifted by the Contractor from the proposed distribution							
(a)	100mm ID DI-K9 pipe	m	187000	52	0	9724000	0	9724000
(b)	150 mm ID DI - K9 pipe	m	8100	68	0	550800	0	550800
(c)	200 mm ID DI - K9 pipe	m	8500	105	0	892500	0	892500
(d)	250 mm ID DI - K9 pipe	m	8200	128	0	1049600	0	1049600
(e)	300 mm ID DI - K9 pipe	m	3100	158	0	489800	0	489800
(f)	400 mm ID DI - K9 pipe	m	3600	196	0	705600	0	705600
(g)	500 mm ID DI - K9 pipe	m	3000	272	0	816000	0	816000
(h)	600 mm ID DI - K9 pipe	m	400	326	0	130400	0	130400
3.06	Supplying of HDPE (PE80) pipe including all specials confirming to IS 4984 and the specifications, including third party inspection, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material for following pipe diameters.							
(a)	110 mm OD HDPE PE 80 PN 6	m	18500	267	5	4939500	92500	5032000



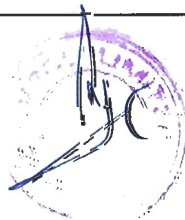
Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
(b)	110 mm OD HDPE PE-80 PN10 (for trenchless pipe laying)	m	2000	404	8	808000	16000	824000
(c)	160 mm OD HDPE PE80 PN 10 (for trenchless pipe laying)	m	1000	857	17	857000	17000	874000
(d)	225 mm OD HDPE PE80 PN 10 (for trenchless pipe laying)	m	50	1688	33	84400	1650	86050
(e)	250 mm OD HDPE PE80 PN 10 (for trenchless pipe laying)	m	300	2084	40	625200	12000	637200
(f)	315 mm OD HDPE PE80 PN 10 (for trenchless pipe laying)	m	200	3303	64	660600	12800	673400
(g)	355 mm OD HDPE PE80 PN 10 (for trenchless pipe laying)	m	100	4191	81	419100	8100	427200
3.07	Handling, aligning, laying and jointing of PN 6 HDPE (PE80) pipes with specials by butt welding / spigot joints confirming to IS and specifications. The item includes transportation of pipes and specials from store yard to site, stacking of pipe as per BIS, loading, unloading, hoisting, lowering, cutting and grinding wherever necessary, assembling, jointing, providing temporary supports etc., all complete with approved equipment, for pipes of following diameters.							
(a)	110 mm OD HDPE PE-80	m	18500	44	0	814000	0	814000
	Subtotal Item No. 3					49560490	160050	49720540
4 4.01	TRENCH LESS TECHNOLOGY Laying of pipe and jointing by trenchless technology including construction of pit with required accessories, all civil and mechanical works, disposal of excess earth, etc. all complete as per specification and instruction of Employer's representative.							
(a)	110 mm OD HDPE PE80 PN10	m	2000	11759	0	23518000	0	23518000
(b)	160 mm OD HDPE PE80 PN 10	m	1000	16995	0	16995000	0	16995000
(c)	225 mm OD HDPE PE80 PN 10	m	50	25719	0	1285950	0	1285950
(d)	250 mm OD HDPE PE80 PN 10	m	300	25719	0	7715700	0	7715700
(e)	315 mm OD HDPE PE80 PN 10	m	200	38690	0	7738000	0	7738000

Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
(f)	355 mm OD HDPE PE80 PN 10	m	100	38690	0	3869000	0	3869000
(g)	400 mm ID 20mm thick MS Pipe	m	300	54157	0	16247100	0	16247100
(h)	500 mm ID 20 mm thick MS Pipe	m	100	64642	0	6464200	0	6464200
Subtotal Item No.4						83832950	0	83832950
5	VALVES AND APPURTENANCES							
5.01	Supplying of following diameters Cast iron double flanged ends Sluice valve as per IS 14864 with end cap and all accessories required for fixing and jointing, and shall include anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to storeyard and stacking the same, with cost of all labour and material. The item shall be as per specification, drawing and as directed.							
A)	PN 2.5 Rating CI / DI							
(a)	250 mm dia	Nos.	3	44993	4028	134979	12084	147063
(b)	100 mmdia	Nos.	1	49466	6861	49466	6861	56327



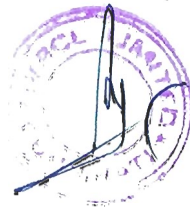

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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
B)	PN 1.6 Rating							
(a)	80 mm dia (for Fire hydrant)	Nos.	7	9143	834	64001	5838	69839
(b)	100 mm dia	Nos.	450	10330	1205	4648500	542250	5190750
(c)	150 mm dia	Nos.	15	18184	1869	272760	28035	300795
(d)	200 mm dia	Nos.	9	22251	3434	200259	30906	231165
(e)	250 mm dia	Nos.	2	30075	4623	60150	9246	69396
(f)	300 mm dia	Nos.	5	42020	5925	210100	29625	239725
C)	PN 1.0 Rating							
(a)	80 mm dia (for Fire hydrant)	Nos.	11	6409	582	70499	6402	76901
(b)	100 mm dia	Nos.	590	8340	758	4920600	447220	5367820
(c)	150 mm dia	Nos.	12	12031	1093	144372	13116	157488
(d)	200 mm dia	Nos.	10	20318	1943	203180	19430	222610
(e)	250 mm dia	Nos.	13	29664	2780	385632	36140	421772
(f)	300 mm dia	Nos.	5	37898	3558	189490	17790	207280
5.02	Handling, aligning and installing in true to line and level cast iron double flanged Sluice Valves (IS 14864) of the following diameters. This item includes transportation of valves and accessories from the storeyard to the project site, loading, unloading, hoisting, lowering, assembling and jointing including the cost of all jointing materials such as rubber gaskets, nuts, bolts, etc., and providing temporary supports, as per the specifications and drawings.							
(a)	80 mm dia (for Fire hydrant)	Nos.	18	1625	0	29250	0	29250
(b)	100 mm dia	Nos.	1041	2063	0	2147583	0	2147583
(c)	150 mm dia	Nos.	27	2750	0	74250	0	74250
(d)	200 mm dia	Nos.	19	3500	0	66500	0	66500
(e)	250 mm dia	Nos.	18	4250	0	76500	0	76500
(f)	300 mm dia	Nos.	10	5000	0	50000	0	50000



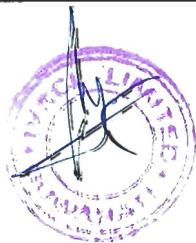
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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
5.03	Supplying of following diameters CI/DI Non return Check valves as per IS 5312 with all accessories, including approved anti-corrosive painting. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading, unloading, conveyance to storeyard and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.							
A)	PN 2.5 Rating CI / DI							
(a)	250 mm dia	Nos.	1	44993	4028	44993	4028	49021
5.04	Handling, aligning, and fixing in true to line and level following diameters and rating CI/DI Non return Check valves as per IS 5312 with all accessories, including cost of required jointing material such as rubber packing, nuts bolts etc. The item includes transportation of valves and accessories from store yard to site, loading, unloading, hoisting, lowering, grinding wherever necessary, assembling and jointing, providing temporary supports etc., all complete with approved equipment, for valves of following diameters, for all lead and lift. The item shall be as per specification, drawing and as directed.							
A)	PN 2.5 Rating CI / DI							
(a)	250 mm dia	Nos.	1	4250	0	4250	0	4250



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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
5.05	Supplying of following diameters double flanged Butterfly valves (manually operated) as per IS 13095 with all accessories, including approved anti-corrosive painting. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading, unloading, conveyance to storeyard and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.							
A)	PN 1.6 Rating							
(a)	400 mm dia.	Nos.	1	71886	10125	71886	10125	82011
B)	PN 1.0 Rating							
(a)	400 mm dia.	Nos.	1	43263	7205	43263	7205	50468
5.06	Handling, aligning, and fixing in true to line and level following diameters and rating double flanged Butterfly valves (manually operated as per IS 13095) including cost of required jointing material such as rubber packing, nuts bolts etc. The item includes transportation of valves and accessories from store yard to site, loading, unloading, hoisting, lowering, grinding wherever necessary, assembling and jointing, providing temporary supports etc., all complete with approved equipment, for valves of following diameters, for all lead and lift. The item shall be as per specification, drawing and as							
(a)	400 mm diameter	Nos.	2	10000	0	20000	0	20000

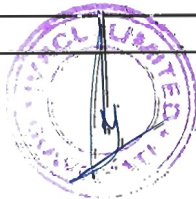


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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
5.07	Supplying of following diameters of Double chamber Air valves with in built sluice valve with flanged ends as per IS 14845, with all accessories required, including anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to store yard and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.							
A)	PN 2.5 Rating CI / DI							
(a)	80 mm dia CI/DI with inbuilt Sluice valves	Nos.	3	25177	2761	75531	8283	83814
B)	PN 1.6 Rating							
(a)	80 mm dia	Nos.	55	19195	1745	1055725	95975	1151700
(b)	100 mm dia	Nos.	1	24217	2201	24217	2201	26418
(c)	150 mm dia	Nos.	1	26584	3607	26584	3607	30191
B)	PN 1.0 Rating							
(a)	80 mm dia	Nos.	60	14356	1305	861360	78300	939660
(b)	100 mm dia	Nos.	1	18771	1706	18771	1706	20477
5.08	Handling, aligning, and installing in true to line and level following diameters Double chamber Air valves with in built sluice valve with all accessories and as per specifications and drawings. This item includes transportation of valves and accessories from the storeyard to the project site, loading, unloading, hoisting, assembling and jointing, including the cost of jointing materials such as rubber packing, nuts, bolts, etc., as per the specifications and drawings.							
(a)	80 mm diameter	Nos.	118	1625	0	191750	0	191750
(b)	100 mm diameter	Nos.	2	2063	0	4126	0	4126
(c)	150 mm dia	Nos.	1	2750	0	2750	0	2750

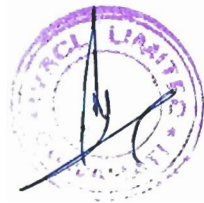


Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
5.09	Supplying of following diameters Pressure Reducing valve with double flanged ends and shall including anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to storeyard and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.							
A)	PN1.6Rating							
(a)	150mm dia	Nos.	5	413163	1869	2065815	9345	2075160
(b)	200mm dia	Nos.	4	766569	3434	3066276	13736	3080012
B)	PN 1.0 Rating							
(a)	250mm dia	Nos.	1	852243	2780	852243	2780	855023
5.10	Handling, aligning, and fixing in true to line and level following diameters Pressure Reducing valve double flanged ends. The item includes transportation of valves and accessories from store yard to site, loading, unloading, hoisting, lowering, grinding wherever necessary, assembling and jointing, including cost of jointing materials such as rubber packing, nuts bolts etc., providing temporary supports, all complete with approved equipment, for all leads and lifts. The item shall be as per specification, drawing and as directed.							
(a)	150mm dia	Nos.	5	2750	0	13750	0	13750
(b)	200mm dia	Nos.	4	3500	0	14000	0	14000
(c)	250mm dia	Nos.	1	4250	0	4250	0	4250



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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
5.11	Supplying Fire hydrants as per IS 909, consisting single flanged outlet oblique type hydrant valve, and shall include cost of anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to site and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.							
(a)	80mm dia., PN 1.6 Rating	Nos.	7	9143	834	64001	5838	69839
(b)	80mm dia., PN 1.0 Rating	Nos.	11	6409	582	70499	6402	76901
5.12	Handling, aligning, and fixing Fire hydrants true to line and level. The item includes transportation of valves and accessories from store yard to site, loading, unloading, hoisting, lowering, grinding wherever necessary, assembling and jointing with cost of jointing material such as rubber packing, nuts bolts, providing temporary supports etc., all complete with approved equipment, for all leads and lifts. The item shall be as per specification, drawing and as directed.	Nos.	18	1625	0	29250	0	29250
Subtotal Item No. 5						22623361	1454474	24077835



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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
6	VALVE CHAMBERS							
6.01	Supplying and Construction of RCC and Brick masonry chambers for valves, hydrants, flow meters etc. including cost of PCC and RCC work, cost of supply and bending and binding of steel with required shuttering, cost of brick work with plaster from inside and outside, precast slabs and supply and installation of SFRC frame and coves wherever required, cost of RCC drain pipes etc. including all the miscellaneous items of work, but excluding the supply and installation of pipes and specials, valves etc. The item shall be as per specification, drawing and as directed.							
(a)	Chamber for Sluice valve TYPE S1	Nos.	596	34756	0	20714576	0	20714576
(b)	Chamber for Sluice valve TYPE S2	Nos.	25	37757	0	943925	0	943925
(c)	Chamber for Wash out valve TYPE W1	Nos.	140	34756	0	4865840	0	4865840
(d)	Chamber for Wash out valve TYPE W2	Nos.	350	33084	0	11579400	0	11579400
(e)	Chamber for Butterfly valve TYPE B1	Nos.	2	100844	0	201688	0	201688
(f)	Chamber for Air valve TYPE A1	Nos.	112	46909	0	5253808	0	5253808
(g)	Chamber for Air valve TYPE A2	Nos.	2	70863	0	141726	0	141726
(h)	Chamber for Air valve TYPE A3	Nos.	1	90669	0	90669	0	90669
(i)	Chamber for Fire hydrant TYPE F	Nos.	18	34540	0	621720	0	621720
(j)	Chamber for Pressure reducing valve/ Flowmeter TYPE P1	Nos.	5	52093	0	260465	0	260465
(k)	Chamber for Pressure reducing valve/ Flowmeter TYPE P2	Nos.	7	110261	0	771827	0	771827
(l)	Chamber for Pressure reducing valve and flow meter TYPE P4	Nos.	9	64795	0	583155	0	583155
	Subtotal Item No.6					46028799	0	46028799



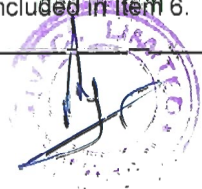

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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
7	MISCELLANEOUS CIVIL WORK							
7.01	Plain Cement Concrete Work							
	Providing and placing plain cement concrete (PCC) of one of the following grades for thrust blocks, anchor blocks, anti floatation blocks, etc. with 20-40mm stone aggregate (crusher broken) including finishing the surface, shuttering and staging, curing etc. as per the specifications and drawings and as directed by the Employer's Representative. This Work is not included in Item 6.							
(a)	Grade M15 concrete	m3	1710	6240	0	10670400	0	10670400
(b)	Grade M20 concrete	m3	20	8143	0	162860	0	162860
7.02	Reinforced Cement Concrete Work							
	Providing and placing reinforced cement concrete (RCC) of one of the following grades with 10-20 mm stone aggregate (crusher broken) including shuttering and staging, curing etc. as per the specifications and drawings and as directed by the Employer's Representative. This Work is not included in Item 6.							
(a)	Grade M20 concrete	m3	30	8143	0	244290	0	244290
(b)	Grade M25 concrete	m3	20	8443	0	168860	0	168860



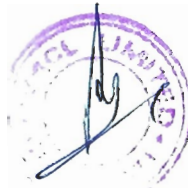

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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
7.03	Reinforcement steel							
	Providing and fabricating steel reinforcement with Fe 415 grade steel for RCC work including straightening, cutting, bending, placing in position and tying (including cost of tie wire) .taxes and duties, transportation etc. all complete, as per specifications and drawings and as directed by the Employer's Representative. This Work is not included in Item 6.	kg	4000	72	0	288000	0	288000
7.04	Brick Masonry Work							
	Supplying and construction of Brick Masonry for sub/superstructure of walls using cement mortar with a cement to sand ratio of 1:6. This item includes the cost of transportation of all materials, labor, scaffolding, curing etc. as per specifications and drawings and as directed by the Employer's Representative. This Work is not included in Item 6.	m ³	20	5727	0	114540	0	114540
7.05	Plastering Work							
(a)	Providing and applying cement sand plaster 12 mm thick in a single coat using cement mortar with a cement to sand ratio of 1:4 without neeru finish to concrete or brick surfaces including scaffolding and curing as directed by the Employer's Representative. This Work is not included in Item 6.	m ²	20	169	0	3380	0	3380
(b)	Providing and applying cement sand plaster 20 mm thick in a single coat using cement mortar with a cement to sand ratio of 1:4 without neeru finish to concrete or brick surfaces including scaffolding and curing as directed by the Employer's Representative. This is Work not included in Item 6.	m ²	20	237	0	4740	0	4740



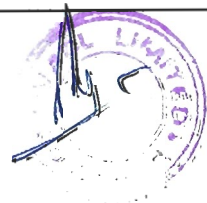
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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
7.06	Providing and laying boulder soling with boulders 100-200mm size in foundation, packing with locally-available mooram and sand, including watering, dressing and leveling, all complete as per drawing and specification and as directed.	m ³	20	1370	0	27400	0	27400
7.07	Providing and laying 100 mm thick brick soling for foundations and under flooring with best quality jhama brick, sand packed and laid to level after preparing the subgrade including all labor and materials and dewatering if necessary, complete and as per the specifications and drawings and as directed by the Employer's Representative. This Work is not included in Item 6.	m ²	100	1941	0	194100	0	194100
7.08	Structural Steel Work							
	Providing and fabricating structural steel work in rolled sections including joists, channels, angles, beams, etc. including cutting, fabricating, grinding, hoisting, erecting, fixing in position making bolted/welded connections, applying coatings etc., as per the specifications and drawings and as directed by the Employer's Representative.	MT	30	92352	0	2770560	0	2770560
Subtotal Item No. 7						14649130	0	14649130



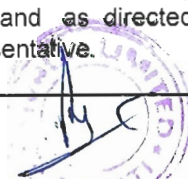
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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
8	ROAD RESTORATION							
8.01	Reconstruction of Bituminous Asphalt Roads							
a)	Providing and laying of Granular sub base (GSB), as per specification drawing and as directed	m ³	30000	1745	0	52350000	0	52350000
b)	Providing and laying of Prime Coat, as per specification drawing and as directed	m ²	116600	39	0	4547400	0	4547400
0	Providing and laying of Wet mix macadam (WMM) , as per specification drawing and as directed	m ³	46000	2321	0	106766000	0	106766000
d)	Providing and laying of Dense graded bituminous macadam (DBM), as per specification drawing and as directed	m ³	800	9844	0	7875200	0	7875200
e)	Providing and laying of Semi dense bituminous concrete (SDBC), as per specification drawing and as directed	m ³	400	10266	0	4106400	0	4106400
f)	Providing and laying of Tack coat (TC), as per specification drawing and as directed	m ²	9400	14	0	131600	0	131600
g)	Providing and laying of Bituminous macadam (BM), as per specification drawing and as directed	m ³	2400	8458	0	20299200	0	20299200
h)	Providing and laying of Premix carpet (PC), as per specification drawing and as directed	m ²	950	218	0	207100	0	207100
8.02	Reconstruction of WBM Roads							
a)	Providing , laying ,spreading and compacting stone aggregates of specific sizes as per specification and drawing to water bound macadam including spreading in uniform thickness, hand packing, rolling with vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of stone screenings & binding material, and completer as per specification drawing and as directed.	m ³	42000	2682	0	112644000	0	112644000

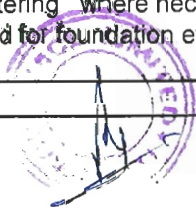


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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
8.03	Reconstruction of Concrete Roads Providing, placing and finishing Cement Concrete roads to match the existing roadway which was removed, if directed by the Employer's Representative . Grade M20 concrete shall be used and placed to the same depth as the existing roadway surface. A screeded finish shall be applied.	m ³	1300	8568	0	11138400	0	11138400
8.04	Reconstruction of Brick Roads Providing and laying of bricks on edge for road restoration on earth subgrade. The bricks shall be on edge, diagonally placed, and gap filled up with sand, all complete, as per specification and drawings.	m ²	3200	864	0	2764800	0	2764800
	Subtotal Item No. 8					322830100	0	322830100
9	TESTING, DISINFECTING, TRIAL RUNS AND COMMISSIONING							
9.01	Hydraulic testing of the distribution system piping of the following diameters in segments at the required test pressures. This item includes the costs of water, labor, pumping, etc. all complete, as per the specifications and as directed by the Employer's Representative.							
(a)	100 mm - 200mm diameter	km	222	13700	0	3041400	0	3041400
(b)	Above 200 mm - 300 mm diameter	km	11	34250	0	376750	0	376750
(c)	Above 300 mm - 500 mm diameter	km	7	47950	0	335650	0	335650
(d)	Above 500 mm - 800 mm diameter	km	1	68500	0	68500	0	68500
9.02	Disinfecting pipeline including flushing complete as per specification.							
(a)	100 mm - 200mm diameter	km	222	6850	0	1520700	0	1520700
(b)	Above 200 mm - 300 mm diameter	km	11	10960	0	120560	0	120560
(c)	Above 300 mm - 500 mm diameter	km	7	13700	0	95900	0	95900
(d)	Above 500 mm - 800 mm diameter	km	1	20550	0	20550	0	20550
9.03	Trial Runs and Commissioning including the cost of labor, electricity, etc., all complete as per specification and as directed by the Employer's Representative.	km	241	13700	0	3301700	0	3301700

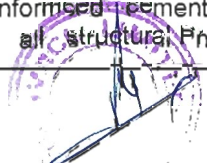


Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
	Subtotal Item No. 9					8881710	0	8881710
	GRAND TOTAL (Items 1-9)					620507020	1614524	622121544
Bill of quantity - Pumping Station								
Item No.	Description	Unit	Quantity					
1. CIVIL WORKS			(D)					
1.01	Site clearance by cleaning and grubbing Reservoir area including uprooting rank vegetation including grass, shrubs, bushes, removing temporary structure, removing all trees coming in the alignment with all contractor's machinery, labour, tools & plants, including obtaining permission from concerned departments with all lead and lift complete as directed by Engineer and as per standard specification in the pntirp nrrnrxiel area	LS	1	137000	0	137000	0	137000
1.02	Excavation for foundation / pipe trenches in earth, soils of all types, sand, gravel and soft murum, including removing the excavated material from the site and stacking and spreading as directed, including dewatering where necessary, preparing the bed for foundation etc. complete.							
a	Upto all lift	m ³	800	123	0	98400	0	98400
1.03	Excavation for foundation / pipe trenches in soft rock or rippable rock at all levels and depth below ground including removing the excavated materials from the site and stacking and spreading as directed, including dewatering where necessary, preparing the bed for foundation etc. complete.							
a	Upto all lift	m ³	200	322	0	64400	0	64400



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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
1.04	Excavation for foundation / pipe trenches in hard rock or non rippable rock at all levels and depth below ground including removing the excavated materials from the site and stacking and spreading as directed including dewatering where necessary, preparing the bed for foundation etc. complete.							
a	Upto all lift	m ³	50	1034	0	51700	0	51700
1.05	Providing and laying cement concrete (M-20) including curing, compaction etc. using hard broken stone aggregate 20 mm nominal size under the foundation and plinth, including cost of shuttering, complete. (For all Non structural Concrete)	m ³	20	8143	0	162860	0	162860
1.06	Providing and laying in position compacted gravel bedding All work up to plinth level for Reservoir and Service building as per drawing and specifications.	m ³	120	562	0	67440	0	67440
1.07	Filling with excavated soil including watering, ramming, consolidating and dressing complete and disposal of surplus excavated materials to a place identified by the Contractor and approved by the Engineer including loading, unloading, stacking etc complete as per drawing and specifications.	m ³	150	37	0	5550	0	5550
1.08	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, including the cost of centering, Shuttering, including curing, compaction, finishing and making good the joints and admixtures in recommended proportions as per IS 9103. M-30grade reinforced cement concrete. (For all structural elements)							



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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
i	Foundaton base slab, Sump Walls upto base slab of reservoir							
a	For Reservoir	m ³	120	7809	0	937080	0	937080
b	For Control Room	m ³	30	7809	0	234270	0	234270
ii	In walls, columns, roof slab, beams, lintels, chhajjas, ventilators and stair etc.							
a	For Reservoir	m ³	350	9165	0	3207750	0	3207750
b	For Control Room	m ³	100	9165	0	916500	0	916500
1.09	Providing and fixing in position steel bar reinforcement (Tor Steel Fe-415 Grade) of various diameters for RCC footings, foundations, slabs, beams, columns, Retaining wall, newels, chajjas, lintels, copings, chairs and accessories, rebars in service building, Brick work etc. as per specification and drawings; including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required, etc. complete, (including cost of binding wire).							
a	For Reservoir	Kg.	42000	72	0	3024000	0	3024000
b	For Control Room	Kg.	11000	72	0	792000	0	792000




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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
1.10	B/W in Control room							
	Providing & Construction of Brick masonry for super structure of 300 mm thick walls in CM (1:6) prop.using first class best quality table moulded bricks including cost and conveyance of all materials, labour, scaffolding, Curing etc., complet for finihsed item of work as per specification and drawing and as directed by the Engineer-in-Charge							
	For Control Room	m ³	20	5727	0	114540	0	114540
1.11	Plastering work							
	Providing and applying plaster of 12mm thick in CM(1:4) prop, to ceiling, internal and external walls of control building, including cost and conveyance of all materials to site, scaffolding,screening of sand curing and labour charges etc, complete for finished item of work as per specification and drawing and as directed by the Engineer-in-charge.	m ²	120	169	0	20280	0	20280
1.12	Providing and placing in position suitable PVC water Stops confirming to IS:12200 for construction joints between two RCC members.	m	190	411	0	78090	0	78090
1.13	Flooring							
a	Providing and laying ceramic tile over concrete flooring with M:30 concrete laid to proper level and slope including compacting, finishing smooth and curing complete as per specification and drawing and as directed by the Engineer-in-charge,	m ²	27	795	0	21465	0	21465
1.14	Providing and fixing steel frame 14 inch Roof ventilator including complete in all respect including welding, painting, finishing etc. complete and as per specification and as directed by the Engineer-in-charge.	No.	10	5480	0	54800	0	54800



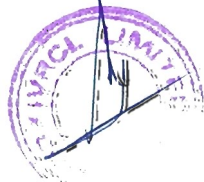
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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
1.15	Providing and erecting 3.0 m. high chain link fencing with chain link having hole size 65 mm x 65 mm supported on M.S. angle post of size 50 mm x 50 mm x 6 mm at 2.40 m c/c including excavating pits for foundation fixing post in M 20 concrete of size 45 cm x 45 cm x 45 cm fixing chain link with 3.25 mm (10 guage) G.I. wire at top and bottom and with oil paint etc. complete and Providing and fixing steel frame 4.0 m wide Double leaf Entrance gate (exterior) complete in all respect including welding, painting, finishing etc. complete and as per drawings and specification..	m	630	2740	0	1726200	0	1726200




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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
1.16	Water proofing on Roof Providing and laying three layers of cold bituminous paint with two layers of polyester felt and gravel to roof and parapet walls for water proofing.							
a	For Reservoir	m ²	200	651	0	130200	0	130200
b	For Control Room	m ²	30	651	0	19530	0	19530
1.17	Painting Providing and applying priming coat on concrete/masonry/ surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and sand papering as required as per specification.							
a		m ²	250	48	0	12000	0	12000
b	Providing and applying Two coat waterproof cement based paint of approved make and shade over primer coat external surface to give an uniform shade including scaffolding, etc. complete.	m ²	250	92	0	23000	0	23000
c	Providing and applying Two coat Oil bond distemper of approved make and shade over primer coat internal surface to give an uniform shade including scaffolding, etc. complete.	m ²	60	97	0	5820	0	5820
d	Providing painting two coats over a primary coat with synthetic enamel paint of first quality of approved make to iron work including cost and conveyance of all materials like primer, synthetic enamel paint, sand paper, brushes etc, to site including all taxes, all labour charges for preparation of the surface, painting etc., complete for finished item of work and as directed by the Engineer-in-charge.	m ²	20	233	0	4660	0	4660



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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
1.18	Door and Window							
a	Providing and fixing steel frame 4.0 m wide Double leaf Entrance gate (exterior) complete in all respect including welding, painting, finishing etc. complete and as per drawings and specification..	m ²	12	6850	0	82200	0	82200
b	Providing and fixing steel frame of door (Internal like Bathroom) including complete in all respect and size as per drawings and specification .	m ²	5	6850	0	34250	0	34250
c	a) Providing and fixing in position steel windows with openable / sliding aluminium frame, 5 mm thick plain sheet glass shutter, glazing clips / neoprene / rubber / PVC Gasket of approved quality, chromium plated brass wigs, other aluminium fixture and fastenings, handle, stopper etc. complete and as per drawings and specification.	m ²	3	6165	0	18495	0	18495
1.19	Ladder and Hand rail							
a	Providing, fabricating and fixing in position Stainless Steel ladder inside the reservoir including cost of material and labour involved, welding, cages, anchoring and applying with 2 coats of enamel paint over a cost of primer complete and as per drawings and specification and as directed by engineer- in-charge.	Nos.	1	6850	0	6850	0	6850
b	Providing, fabricating and fixing in position stainless Hand rail (Horizontal as well as vertical poles) as per drawings and specification, fabricating and welding, grinding corners, fixing in position by making holes in the concreting and grouting in position with cement concrete M20 as per drawing and finishing for the exposed face with 2 coats of enamel paint over a cost of primer.	Nos.	1	34250	0	34250	0	34250

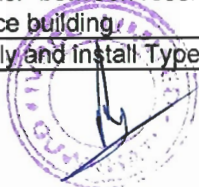


Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
1.20	Paved area							
a	Providing, Laying, compacting Subgrade with selected job excavated material in paved area and access road within the fence line from existing subgrade to the underside of the base course as per drawings and specification.	m ³	130	2039	0	265070	0	265070
b	Providing, Laying, compacting Base course 500 mm thick in paved area and access road within fence line as per drawings and specification.	m ³	120	1644	0	197280	0	197280
c	Providing, Laying, compacting asphalt concrete binder course 50 mm thick of paved area as per drawings and specification.	m ³	15	3425	0	51375	0	51375
d	Providing, Laying, compacting Asphalt concrete surface course 30 mm thick of paved area as per drawings and specification.	m ³	10	4795	0	47950	0	47950
1.21	Providing, Fixing and installation of all sanitary fixtures related Plumbing for the bath room / sanitation facilities with all accessories ISI marked fittings and Connections including cost of labour and material and preparation of plumbing shop drawings as per specification.	LS	1	68500	0	68500	0	68500
1.22	Providing, Fixing and installation of local water supply from the inlet valve chamber for the bathroom and reservoir cleaning . Inlet to Reservoir will be established on site.	LS	1	137000	0	137000	0	137000
1.23	Providing, Fixing and installation of Waste water pipe and manholes from the bathroom to the septic tank including cost of labour and material as per drawings and specifications.	LS	1	6850	0	6850	0	6850
1.24	Providing, Fixing and installation of Septic tank and absorption pit as per drawings and specification including cost of labour and material.	LS	1	68500	0	68500	0	68500



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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
1.25	Providing and laying Storm water / roof drain system of the reservoir including Manholes. Rates also include excavation, concreting, shuttering, steel, specials, pipes, fittings, etc complete in all respect as per drawings and specification .	LS	1	68500	0	68500	0	68500
1.26	Providing and laying 300 mm dia Pipe to washout and headwall including labour, material etc complete in all respect as per drawings and specification.	LS	1	13700	0	13700	0	13700
1.27	To Clean reservoir, supply Potable water, including Transportation, Equipment, Manpower, Level measuring device fill reservoir and perform leakage testing of Reservoir (Hydro test) as per specification for water tightness including cleaning Reservoir full after disinfection.							
a	Reservoir	LS	1	68500	0	68500	0	68500
b	All yard piping	LS	1	34250	0	34250	0	34250
1.28	To supply manpower, equipment, chemicals, testing and disinfect the reservoir including all inlet, outlet, piping according as per specification.							
a	Reservoir	LS	1	20550	0	20550	0	20550
b	All yard piping	LS	1	13700	0	13700	0	13700
1.29	Supplying all materials etc. and constructing culvert crossing including boulders at inlet and outlet but excluding asphalt surface per drawing and specification and as directed by Engineer- in-charge.	LS	1	47950	0	47950	0	47950
1.30	Supply and install polyethylene sheeting between gravel and PCC under reservoir (sump) and control building.	m3	230	480	0	110400	0	110400
1.31	Supply and install building paper/bomb breaker between reservoir (sump) and service building.	m3	14	343	0	4802	0	4802
1.32	Supply and install Type A traffic barrier	m	20	34	0	680	0	680



Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
1.33	Supply and install poluurethane joint sealant between reservoir (sump) and control building.	m	8	480	0	3840	0	3840
1.34	Supply and install external access ladder (steel) pre standard drawings, with two coats (minimum) anticorrosion paint and final deorative coat - color to be agreed with client.	LS	1	13700	0	13700	0	13700
1.35	Supply and install roof vent per standard drawings	LS	4	4110	0	16440	0	16440
1.36	Supply and install 6mm steel plate bolted in place over slots for future pumps	LS	2	6850	0	13700	0	13700
1.37	Supply and install access hatch to sump per standard drawings	LS	1	13700	0	13700	0	13700
SUB TOTAL						13372517	0	13372517



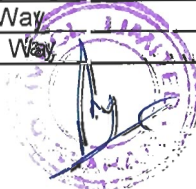

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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
2.0 MECHANICAL WORKS								
	Supplying & installing Mechanical Equipment including, but no limited to, safe storage, protection, erection, installation, pre-commissioning & commissioning testing as per specification and drawing for following items.							
2.01	Pump & Motor							
	Providing, Fixing, installation and commissioning & third party inspection of Vertical Turbine pump including Motor in all respect as per specification and drawings.	Nos	3	1279850	114023	3839550	342069	4181619
2.02	Inlet pipes							
	Supplying, installing, commissioning & third party inspection of 300 dia DI inlet pipe from fence line to the bell mouth inside the Reservoir , Butterfly valve, pipe supports, bell mouth, sleeve coupling etc complete in all respect and as per specification and Drawings.	LS	1	429000	38220	429000	38220	467220
2.03	Out let pipes							
	supplying, installing, commissioning & third party inspection of 300 dia DI Outlet pipe from bell mouth in Reservoir to fence line including fittings, Butterfly valve, specials like EMF Meter, Wall piece, Well mouth, Tee, pipe support , Reducer Sleeve coupling etc complete in all respect and as per specification and drawings.	LS	1	536250	47775	536250	47775	584025



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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
2.04	Wash out pipes supplying, installing, commissioning of Wash out pipe from Washout sump in the Reservoir to Washout manhole including all fittings, cone, encasement etc complete in all respect and as per specification and drawings.	LS	1	143000	12740	143000	12740	155740
2.05	Over Flow supplying, installing, commissioning of Reservoir over flow from inside Reservoir to Manhole including all fittings etc complete in all respect and as per specification and drawings.	LS	1	143000	12740	143000	12740	155740
2.06	Inlet valve chamber Supplying , fixing and installation in position true to line and level, inlet valve chamber and its contents and related fitting and associated valves, ball valve, sleeve couplings, excavation, concreting, shuttering, steel and specials and pipe support , rungs, etc complete in all respect and as per drawing and specification.	LS	1	89383	7963	89383	7963	97346
2.07	Supplying, installing, commissioning of Wash out/Overflow/Storm water pipe from fenceline to offsite disposal point including all fittings, cone, encasement etc complete in all respect and as per specification. (See site plan for pipe size)	m	100	2860	255	286000	25500	311500
	SUB TOTAL					5466183	487007	5953190
3. ELECTRICAL SYSTEM								
Service Buildings Internal Lighting System								
3.01	Manufacturing, inspection, delivery, installation, testing, commissioning of Lighting Distribution Board (DB)							
a	4 Way	Nos	1	50050	4459	50050	4459	54509
b	12 Way	Nos	1	92950	8281	92950	8281	101231

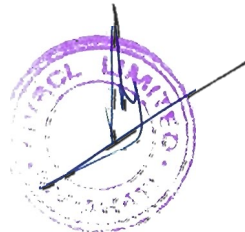



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Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
3.02	Providing & Fixing , Testing and comissioning of industrial fluourescent tube fitting with reflector fabricated from CRCA sheet and finished with powder coating / stove enamelled paint complete with accessories like Electronic Ballast, starter, terminal block duly prewired with copper conductor including making connection, testing etc. as required.							
a	2 X 28 Watts T5 lamp	Nos.	10	3146	280	31460	2800	34260
b	1 X 28 Watts T5 lamp	Nos.	9	2145	191	19305	1719	21024
c	Providing & Fixing , Testing and comissioning of Bulk Head fittings along with 100 W lamp	Nos.	6	2145	191	12870	1146	14016
d	Providing & Fixing , Testing and comissioning of Switches, Junction boxes, Ceiling rose, modular fittings for switches & sockets, Receptacles etc on as required basis	Lot	1	21450	1911	21450	1911	23361
3.03	Providing & Fixing , Testing and comissioning of double ball bearing capacitor start ceiling fan of approved make complete with regulator and other accessories as required.							
a	1200 mm sweep	Nos.	2	2288	204	4576	408	4984
b	1400 mm sweep	Nos.	1	2574	229	2574	229	2803
3.04	Point Wiring along with heavy duty PVC conduit complete with fittings, clasmps, nut bolts, etc.							
a	(a) Short point (upto 3m)	Per Point	20	1144	102	22880	2040	24920
b	(b) Medium point (upto 6m)	Per Point	12	1716	153	20592	1836	22428

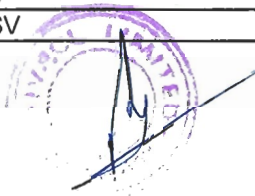
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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
3.05	Pipe Earthing for SB's as per IS:3043 with perforated 3.0 Mtr. Long, 40 mm dia.' B ' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance as required.	Nos.	1	12155	1083	12155	1083	13238
3.06	Supply & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection etc. as required.							
a	8 SWG G.I. Wire	m	150	29	3	4350	450	4800
3.07	Providing & Fixing , Testing and comissioning of metal clad industrial plug top & socket unit with pin and sleeve type contact on porcelain/ Bakelite base in sheet steel enclosure with MCB including making connections with lugs, testing etc.as required for use as weldina socket.							
a	Three phase (Five pin) 20A	Nos.	1	1144	102	1144	102	1246



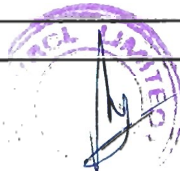
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Item No	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
Service Buildings Out-Side Lighting System								
3.08	Supply, erection, Testing and comissioning of 7 mtr high Mild steel swaged tubular pole conforming to IS: 2713-1980 (part I to 11) with galvanised base plate of size 400mm x 400mm x 7mm in position including excavation of the pit and filling the same with C.C. of M-10 grade (1:3:6) from base plate to 50cm above ground level, with the help of steel frame not less than 40 cm dia up to 114.3mm outer dia and 50 cm beyond 114.3mm outer dia around the pole. Duly finished with cement plaster, earthing terminals , cable entry, GI cable sleeve complete as required. The pole shall be galvanised using ISI mark seamless tube for structural purpose.	Nos.	8	14300	1274	114400	10192	124592
3.09	Supply, erection, Testing and comissioning of IP-54 protected street light luminaire suitable for HPSV/ MH lamp, made out from powder coated single piece die cast aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector, UV stabilised acrylic bowl cover/toughened glass cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required.							
a	70 Watt HPSV	Nos.	6	6435	573	38610	3438	42048
b	150 Watt HPSV	Nos.	2	7865	701	15730	1402	17132



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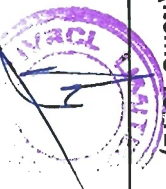
Item No.	Description	Unit	Quantity	Unit Rate		Amount		
				Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Basic Rate (CIP)	Applicable Taxes, Duties, etc.	Total
3.10	Supply, erection, Testing and commissioning IP65 protected decorative lighting luminaire Post top suitable for following lamps, made of powder coated cast aluminium housing, moulded acrylic lamp compartment with built in anodized aluminium louvers for lamp shielding and glare control, metallic lid top cover, including the cost of control gear complete in all respect. Bollards are including cost of decorative base pipe/plate.							
a	70 Watt HPSV	Nos.	2	6435	573	12870	1146	14016
3.11	Supply & Laying XLPE insulated & P.V.C. sheathed cable of 1.1KV grade with aluminium conductor armoured of IS:7098-I approved make in ground as per IS: 1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand. In class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.							
a	4/CX 25 mm ²	m	200	215	19	43000	3800	46800
b	4/CX 16 mm ²	m	600	215	19	129000	11400	140400
3.12	Supplying and making end terminations with heavy duty single compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.							
a	4/CX 25 mm ²	Nos.	4	572	51	2288	204	2492
b	4/CX 16 mm ²	Nos.	18	715	64	12870	1152	14022
3.13	Feeder Pillar	Nos.	1	7150	637	7150	637	7787
	SUB TOTAL					672274	59835	732109
	GRAND TOTAL					19510974	546842	20057816



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C#06 : Procurement of Works (Item rate) for Supply, Installation and Commissioning of M.S. Pipes and HDPE Pipes & Installation and Commissioning of D.I. Pipes for Distribution Network in Leechu bagan and Geeta nagar of South Central Zone

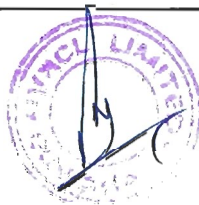
Bill of Quantities - Daywork		Quantity	Unit	Quoted	
Item No	Description			Unit Rate	Amount
			Local	Local	
10	Daywork - Labor				
10.01	Skilled Labor	50	man days	548	27400
10.02	Unskilled Labor	50	man days	343	17150
10.03	Carpenter	20	man days	617	12340
10.04	Blacksmith	20	man days	617	12340
10.05	Mason	20	man days	685	13700
10.06	Pipelayer / Fitter	50	man days	685	34250
10.07	Welder	20	man days	617	12340
	Subtotal Item No. 10				129520
11	Daywork - Material				
11.01	Cement - ordinary/Portland type (43 Grade) in 50 kg bags	50	bags	411	20550
11.02	Provide Fe 415 steel reinforcing bars up to 20 mm diameter as per the specification	2000	kg	61	122000
11.03	Fine aggregate for concrete as per the specification	20	m ³	1644	32880
11.04	Coarse aggregate for concrete as per the specification	20	m ³	1713	34260
11.05	First class bricks as per the specification	250	No.	8	2000
11.06	Primer paint as per the specification	10	liters	110	1100
11.07	Epoxy paint as per the specification	10	liters	274	2740
11.08	Welding rods	10	packs	7535	75350
	Subtotal Item No. 11				290880
12	Day work - Equipment				
12.01	Dump Truck (min capacity 4 m ³)	20	days	4110	82200
12.02	Water tank truck (min capacity 11,000 liters)	20	days	2740	54800
12.03	Mobile crane (up to 10 ton capacity)	10	days	4567	45670
12.04	Wheeled bucket excavator (min capacity 0.45 m ³)	20	days	9133	182660
12.05	Wheeled front-end loader (min capacity 0.75 m ³)	10	days	6850	68500
12.06	Compressor (at least 3.2 m ³ /minute capacity)	10	days	4567	45670
12.07	Generator (at least 15 kw capacity)	20	days	2283	45660
12.08	Dewatering Pump (at least 60 m ³ /hour capacity and 100 mm diameter discharge) with piping and valving	10	days	1096	10960
12.09	Concrete Mixer (at least 0.25 m ³ capacity)	20	days	2055	41100
12.10	Portable vibratory plate or ramming compactor	10	days	685	6850
	Subtotal Item No. 12				584070
	GRAND TOTAL (Items 10-12)				1004470



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C#06: Schedule of Adjustment Factors

Pipeline Works							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
2.0	EARTHWORK						
2.1	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of ordinary soils such as murum, sand, sandy silt, clay, kankar etc. or in combination. Excavation shall include the removal of WBM roadway surfaces, brick surfacing, including dressing, compaction of the bottoms of the excavation, shoring and strutting wherever required, dewatering whenever required, removal of the excavated soil, stockpiling and disposal of surplus excavated soil off-site as directed by the Employer's Representative.						
	Excavation will be paid for in the following segments:						
(a)	0 to 1.5 m from GL		25%	20%		40%	15%
(b)	above 1.5 m to 3.0 m depth from GL		25%	20%		40%	15%
(c)	above 3.0 m to 4.5 m depth from GL		25%	20%		40%	15%
2.2	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, masonry work, etc. in all kinds of ordinary rock, Excavation shall include the removal of asphalt and concrete road surfacing, including dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.						
	Excavation will be paid for in the following segments:						
(a)	0 to 1.5 m from GL		25%	20%		40%	15%
(b)	above 1.5m to 3.0 m depth from GL		25%	20%		40%	15%
(c)	above 3.0 m to 4.5 m depth from GL		25%	20%		40%	15%




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C#06: Schedule of Adjustment Factors

Pipeline Works							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
2.3	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of hard rock requiring blasting, Excavation shall include dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.						
	Excavation will be paid for in the following segments:						
(a)	0 to 1.5 m from GL		25%	20%		40%	15%
(b)	above 1.5m to 3.0 m depth from GL		25%	20%		40%	15%
(c)	above 3.0 m to 4.5 m depth from GL		25%	20%		40%	15%
2.4	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of hard rock (blasting prohibited), Excavation shall include dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.						
	Excavation will be paid for in the following segments:						
(a)	0 to 1.5 m from GL		25%	20%		40%	15%
(b)	above 1.5m to 3.0 m depth from GL		25%	20%		40%	15%
(c)	above 3.0 m to 4.5 m depth from GL		25%	20%		40%	15%
2.5	Backfilling of pipe trenches, foundations, etc. with approved graded excavated soil (excluding rock), including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and as directed by the Employer's Representative.		25%	20%		40%	15%
2.6	Backfilling of pipe trenches, foundations, etc. with approved graded sand, including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and as directed by the Employer's Representative.		25%	20%		40%	15%



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C#06: Schedule of Adjustment Factors

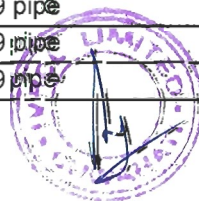
Pipeline Works							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
2.7	Backfilling of pipe trenches, foundations, etc. with approved graded gravel, including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and standard drawings and as directed by the Employer's Representative.		25%	20%		40%	15%
Subtotal							
3.0	PIPELINES, SPECIALS AND APPURTENANCES						
3.1	Supplying spirally welded MS pipe with internal lining and external						
(a)	300 mm ND 6 mm thick (at NH crossing)		25%	3.75%	63.75%	0%	7.5%
(b)	700 mm ND 6 mm thick		25%	3.75%	63.75%	0%	7.5%
(c)	700 mm ND 20 mm thick (t NH crossing)		25%	3.75%	63.75%	0%	7.5%
(d)	1000 mm ND 8 mm thick		25%	3.75%	63.75%	0%	7.5%
3.2	Supplying all types of MS Specials plain ended, socket ended and flanged as required with internal lining and external coating as per the specification, such as bends, tees, tapers, spool pieces, blind flanges, pieces for pipe connection, valve connections, dismantling joints, anchor bolts, straps, air vent pipe, etc. of different diameters, manufactured from Fe 410 grade steel. This item includes loading, transportation to the project site, unloading and stacking, etc. complete with cost of third party inspection, material, labor, taxes and duties.		25%	3.75%	63.75%	0%	7.5%
3.3	Handling, aligning, laying and jointing MS pipes and specials to correct line and level in trenches. The item includes transportation of pipes and specials from the storeyard to the project site, stacking of pipe as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary, assembling, jointing, providing temporary supports, lining and coating at joints etc. for pipe of the following diameters and thicknesses. The rate also shall include radiography of field joints, field testing, etc. as specified and shown on the drawings and specification.						




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C#06: Schedule of Adjustment Factors

Pipeline Works							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
(a)	300 mm ID 6 mm thick (at NH crossing)		25%	20%		40%	15%
(b)	700 mm ID 6 mm thick		25%	20%		40%	15%
(c)	700 mm ID 20 mm thick (at NH crossing)		25%	20%		40%	15%
(d)	1000 mm ID 8 mm thick		25%	20%		40%	15%
3.4	Supplying DI Specials and fittings with plain, double socket, socket & flanged and double flanged end connections as required, with lining and coating as per the specification, and IS 9523 with EPDM rubber gaskets as per IS 5382 as required for successful completion of the work. This item includes third party inspection, transportation, freight, loading and unloading, stacking etc. all complete for various sizes of DI specials and fittings as noted with the following end connections.						
(a)	Tee's, Socket, collar, tail pieces, flanged tapers, socketed tapers, flanged spigot short pipes, flanged socket short piece, all bends, end caps, barrel piece, dismantling joints etc. required for suitable completion of the works.		25%	3.75%	63.75%	0%	7.5%
(b)	Double flanged pipe pieces, required for suitable completion of works.		25%	3.75%	63.75%	0%	7.5%
3.5	Handling, aligning, laying and jointing of K-9 DI pipe (Push-on Joint) to other pipe at fittings and specials, with EPDM rubber O-rings (as per IS 5382) and flange gaskets (as per IS 12288) as per specifications. This item includes transport of pipes, specials and fittings from the storeyard to the project site, stacking of pipe and fittings as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary, assembling, jointing, providing temporary supports etc., all complete with approved equipment, for pipe of the following diameters.						
(a)	100 mm DN DI - K9 pipe		25%	20%		40%	15%
(b)	150 mm DN DI - K9 pipe		25%	20%		40%	15%
(c)	200 mm DN DI - K9 pipe		25%	20%		40%	15%
(d)	250 mm DN DI - K9 pipe		25%	20%		40%	15%
(e)	300 mm DN DI - K9 pipe		25%	20%		40%	15%
(f)	400 mm DN DI - K9 pipe		25%	20%		40%	15%

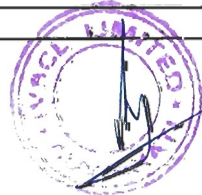


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C#06: Schedule of Adjustment Factors

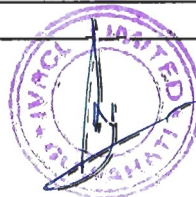
Pipeline Works							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
(g)	500 mm DN DI - K9 pipe		25%	20%		40%	15%
(h)	600 mm DN DI - K9 pipe		25%	20%		40%	15%
3.6	Supplying of PN10 HDPE (PE80) pipe including all specials confirming to IS 4984 and the specifications, including third party inspection, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material for following pipe diameters.						
(a)	110 mm OD HDPE PE-80		25%	3.75%	0%	63.75%	7.5%
(b)	125 mm OD HDPE PE-80		25%	3.75%	0%	63.75%	7.5%
(c)	160 mm OD HDPE PE-80		25%	3.75%	0%	63.75%	7.5%
(d)	200 mm OD HDPE PE-80		25%	3.75%	0%	63.75%	7.5%
(e)	250 mm OD HDPE PE-80		25%	3.75%	0%	63.75%	7.5%
(f)	315 mm OD HDPE PE-80		25%	3.75%	0%	63.75%	7.5%
(g)	355 mm OD HDPE PE-80		25%	3.75%	0%	63.75%	7.5%
3.7	Handling, aligning, laying and jointing of HDPE (PE80) pipes with specials by butt welding / spigot joints confirming to IS and specifications. The item includes transportation of pipes and specials from store yard to site, stacking of pipe as per BIS, loading, unloading, hoisting, lowering, cutting and grinding wherever necessary, assembling, jointing, providing temporary supports etc., all complete with approved equipment, for pipes of following diameters.						
(a)	110 mm OD HDPE PE-80 PN6		25%	20%		40%	15%
(b)	160 mm OD HDPE PE-80 PN6		25%	20%		40%	15%
(c)	110 mm OD HDPE PE-80 PN10		25%	20%		40%	15%
(d)	160 mm OD HDPE PE-80 PN10		25%	20%		40%	15%
(e)	225 mm OD HDPE PE-80 PN10		25%	20%		40%	15%
Subtotal							



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Pipeline Works							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
4.0	PIPE JACKING						
4.1	Pipe jack for railway crossing with Jacking and Pushing metod. The item include pushing jointing following daimeter MS pipe of required length, construction of Receiving and Jacking pit with suitable shoring and strutting (if required), including instillation of jacking platform, thrust resistant arrangement of required capacity including, hydraulic jacking with required accessories, required excavation inside the jacking pipe and disposal the same, etc. all complete as per drawing, specifiction and as directed.						
(a)	Jacking and pushing of 700 mm ID 20 mm thick MS pipe		25%	20.00%		40%	15.0%
	Subtotal						
5.0	VALVES AND APPURTENANCES						
5.1	Providing and supplying of following diameters Cast iron double flanged ends Sluice valve PN 1.6 as per IS 14864 with end cap and all accessories required for fixing and jointing, and shall include anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to storeyard and stacking the same, with cost of all labour and material. The item shall be as per specification, drawing and as directed.						
(a)	80 mm dia (for Fire hydrant)		25%	3.75%	63.75%	0%	7.5%
(b)	100 mm dia		25%	3.75%	63.75%	0%	7.5%
(c)	150 mm dia		25%	3.75%	63.75%	0%	7.5%
(d)	200 mm dia		25%	3.75%	63.75%	0%	7.5%
(e)	250 mm dia		25%	3.75%	63.75%	0%	7.5%
(f)	300 mm dia		25%	3.75%	63.75%	0%	7.5%




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