EXECUTIVE ENGINEER MAHARASHTRA JEEVAN PRADHIKARAN
WATER MANAGEMENT DIVISON AMBERNATH
Minutes of the Pre-Bid Meeting

Name of Work : Augmentation to Kulgaon Badlapur Water Supply Scheme, Tal.Ambernath
Estimated Cost :- Rs.183,17,03,110/-
E-Tender Notice No. 68 for 2025-26 (2nd call)

Pre-Bid meeting held in the office of the Chief Engineer, MJP, Thane on 7th May 2026 at 15.00 hrs.
Following Officers and Contractor were present

Sr. No.	Name and Designation of officers	Name of Contractor and Representative
1	Shri Prashant Bhamare, Chief Engineer MJP Thane (Online)	1) Girish Khandagale M/s Girish Enterprises Pvt. Ltd.
2	Shri Tanmay Kamble, Superintending Engineer, MJP Circle, Thane (Online)	2) Shri. Sanjay Pawar, M/s Swastik constructions
3	Shri M.S.Deshpande, Ex.Engr. MJP WM Dn. Ambernath	3) Shri. Harshal Jadhav, Representative M/s Primove consultancy Pvt. Ltd., Pune
4	Shri. B. N. Parab, Ex.Engr. (Mech.) MJP circle Thane	4) Smt. Swapnika Chavan, Representative M/s Primove consultancy Pvt. Ltd., Pune
5	Shri. G. K. Danawe, Asst. Chief Engineer MJP Thane	
6.	Shri Santosh Jadhav, Div. Accountant, MJP WM Division, Ambernath	

A) Points raised by the contractor and clarification given by Department is as follows :-

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1		2	3	4	5
1	**M/s Jaideepraj Infrastructure Pvt Ltd, Mumbai**				
1.1		NIT Pg no.13 PQ condition		स्विकृत निविदेतील पृ.क्र. 13 वर उपांगनिहाय तांत्रिक पूर्व अर्हता अटी नमूद केलेल्या आहेत. त्या अटींमध्ये पंपिंग मशिनरी करीता Total Installed capacity not less than 2088 HP and Individual capacity of minimum 170 HP vertical turbine pump	As per NIT

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				and Total Installed capacity not less than 533 HP and Individual capacity of minimum 170 HP submercible non clock pump in single agreement असे नमूद केले आहे. या अटीबाबत असे नमूद करण्यात येते की, पंपिंग मशिनरीच्या तांत्रिक पूर्व अर्हता अटीमध्ये Individual Capacity of Minimum 170 HP vertical turbine pump /submercible non clock pump / submercible pump अशी सुधारणा करण्यावावत विनंती करण्यात येत आहे. जेणेकरुन या निविदेकरीता जास्तीच्या ठेकेदारांचा सहभाग होऊन कमीत कमी बोली प्राप्त होईल ज्यामुळे प्राधिकरणाचा पर्यायाने शासनाचा आर्थिक फायदा होऊ शकेल.	
1.2		NIT Pg no.23 Detail Tender Notice		सविस्तर निविदा सुचना पृ.क्र. 23 अट क्र.16 मध्ये Tender with stipulations for settlement of disput by reference to arbitration will not be entertained असे नमूद केले आहे. त्या अनुषंगाने विनंती करण्यात येते की, इतक्या मोठ्या किंमतीच्या निविदेची कामे पार पाडत असताना कुठे ना कुठे तरी एकमत होत नाही. सबब, निविदेकरीता जर काही प्रसंगी वादविवाद उद्भवल्यास Arbitrator नेमण्याची तरतूद करण्यात यावी.	As per NIT
1.3		NIT Pg.no 26 GC- 05		निविदेतील पृ.क्र.26 वरील अट क्र.05 मध्ये नमूद केल्यानुसार निविदेतर्गत समाविष्ट असलेल्या विविध उपागांची जसे की, Balancing Tank, Intake Well, Jack Well, Pump House, Water Treatment Plant (Hydraulic and structural), Sump, ESR, GSR, Thrust blocks/Anchor blocks इत्यादी उपांगाचे संकल्पन सादर करणेचो बाब नमूद करण्यात आली आहे. तथापि, Schdule-B मध्ये त्या बाबींच्या दरसूचीतील दरात याकरिता येणारा खर्च गृहीत धरणे अपेक्षित असून तो काही उपांगाकरीता धरलेला नसल्यामुळे या सर्व उपांगाकरिता संकल्पन सादर करणेची मागणी करणे अपेक्षित नाही. सबब, ज्या उपांगाकरीता दरसुचीतील दरानुसार संकल्पने तयार करणे अपेक्षित नाही ती वगळण्यात यावीत किंवा त्याकरिता वेगळ्याने अदायगी करण्यात येईल, अशी अटी नमूद करण्यात यावी. त्याचप्रमाणे पृ.क्र.27 वर असे नमूद केले आहे की, Preparation of System improvement Plan SIP within specified period and according to the contract conditions. SIP Preparation & Implementation shall include but not limited to the Survey & investigations of existing assets, distribution network, mapping, freezing selected DMA boundaries, Hydraulic Modelling, ascertain	As per NIT

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				the necessity and the extent of rehabilitation required. SIP submission for priority zones shall be within ३० days and other zones submission within ४५ days from the commencement date.	
				तथापि, याकरीता येणाऱ्या खर्चाची तरतूद निविदेमध्ये करण्यात आलेली दिसून येत नाही. सबब, याबाबीकरीता निविदेत वेगळ्याने तरतूद करण्यात यावी अथवा याबाबीकरीता येणारा खर्चाचा समावेश निविदेच्या मूल्यांकीत किंमतीत करुन त्या किंमतीस ठेकेदाराच्या देकाराची तुलना करण्यात यावी.	As per NIT
1.4		NIT pg no.32 ,GC-27		निविदेतील पृ.क्र.32 वरील अट क्र. 27 मध्ये असे नमूद केले आहे की, The successful tenderer should get the labour insurance done, on account of risk involved within a month from the date of work order, failing which as per labour law will be withheld from the R. A. bills of the work and it will not be refunded till labour insurance is done and a documentary evidence to this effect is produced by the contractor. परंतु ठेकेदाराने विमा पॉलिसी न काढल्यास त्याचे चालू देयकातून किती रक्कम विमा पॉलिसीपोटी अनामत म्हणून ठेवण्यात येईल हे नमूद करणे आवश्यक आहे.	Insurance is mandatory.
1.5		NIT Pg.no 33		निविदेतील पृ.क्र.33 वरील अनुक्रमांक 28 मध्ये असे नमुद करण्यात आले आहे की, In case any disput arises out during execution of works, no arbitrator shall be appointed for redressal of the dispute. त्या अनुषंगाने विनंती करण्यात येते की, इतक्या मोठ्या किंमतीच्या निविदेची कामे पार पाडत असताना कुठेना कुठे तरी एकमत होत नाही. सबब, निविदेकरीता जर काही प्रसंगी वादविवाद उद्भवल्यास Arbitator नेमण्याची तरतुद करण्यात यावी.	As per NIT
1.6		NIT Pg no.48		निविदेतील पृ.क्र. 48 वरील अटीमध्ये या निविदेत मोबोलायझेशन ॲडव्हान्स देण्यात येणार नाही, असे नमूद केले आहे. आता शासनामार्फत मोबोलायझेशन ॲडव्हान्स देण्यावावतचे निर्देश प्राप्त झाले आहेत. शासनाकडून प्राप्त झालेल्या निर्देशांच्या अनुषंगाने मोबोलायझेशन ॲडव्हान्सच्या अटी व शर्ती नमूद करणेविषयी विनंती आहे.	As per NIT
1.7		NIT pg no.53		निविदेतील पृ.क्र.53 वरील अटीमध्ये असे नमुद करण्यात आले आहे की, In case of any disputes raised between contractor and Engineer in charge during the course of contract regarding work, there shall be no provision for the appointment	As per NIT

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				of an Arbitrator. त्या अनुषंगाने विनंती करण्यात येते की, इतक्या मोठ्या किंमतीच्या निविदेची कामे पार पाडत असताना कुठेना कुठे तरी एकमत होत नाही. सबब, निविदेकरीता जर काही प्रसंगी वादविवाद उद्भवल्यास Arbitator नेमण्याची तरतुद करण्यात यावी	
1.8		NIT pg no.53		निविदेतील पृ.क्र.5३ वरील अ.क्र. 14 मध्ये Rates for all types of materials are excluding of GST and all taxes levied by Central Govt., State Govt. or Local bodies. Rates for supply of specials and valves are inclusive of Excise duty (Central) GST, Third party indpection charges, Storage charges, overhead charges and traportation of material up to site and stacking. Rate mentioned in the tender are inclusive of all central Government, State Government & Local taxes, duties and cess etc. या अनुषंगाने असे कळविण्यात येते की मजीप्राच्या दरसुचीत समाविष्ट दर हे जीएसटी विरहीत असल्यामुळे त्यादरात कोणत्याही प्रकारचा GST Central Government, State Government & Local taxes, duties and cess etc. यांचा समावेश करण्यात आलेला नाही. तरी या अटीबाबत प्राधिकरण स्तरावर खातरजमा करण्यात येवून सदर अट वगळण्यात यावी.	Tender rates are inclusive all taxes and exculding GST.
1.9		NIT Pg no.52		निविदेतील पृ.क्र.54 वरील अटीमध्ये असे नमुद करण्यात आले आहे की, नगरविकास विभागाचा शासन निर्णय दिनांक नमुद करणे आवश्यक असून सदर शासन निर्णयाचा समावेश निविदा प्रपत्रात करणे आवश्यक आहे. त्याचप्रमाणे योजनेची कामे ठराविक मुदतीत पुर्ण करण्याच्या दृष्टीने कामे एकाचवेळी सुरू करणे आवश्यक असल्याने सदर अट वगळण्यात यावी.	As per NIT
1.10		NIT pg no.54		निविदेतील पृ.क्र.54 वर या निविदेच्या प्रथम पुकाऱ्याच्या वेळी असलेली या योजनेची कामे मुदतपूर्व पुर्ण केल्यास Incentive Bonus देण्याची अट वगळण्यात आली आहे. तथापि, महाराष्ट्र शासनाच्या नगरविकास विभागाने शासन निर्णय क्र. अमृत-2024/प्र.क्र.201/नवि-33. दि.13.03.2024 अन्वये केंद्र पुरस्कृत अमृत 2.0 अभियाना अंतर्गत व नगरोत्थान महाअभियाना अंतर्गत प्रकल्पांच्या निविदा प्रक्रियेसाठी सुधारीत आदर्श निविदा पुस्तिका (Model DTP) उपलब्ध करुन देण्यात आली असून सुधारीत आदर्श निविदा पुस्तिकेनूसार केंद्र पुरस्कृत अमृत 2.0 अभियाना अंतर्गत व नगरोत्थान महाअभियाना अंतर्गत मंजूर पाणी पुरवठा, मलः निसारण, सरोवर पुर्नरुजीवन व हरीतक्षेत्र	As per NIT

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				विकासाच्या प्रकल्पांची निविदा प्रक्रिया राबविण्यावावत निर्देश दिले आहेत. या आदर्श निविदा पुस्तिकेमध्ये पृ.क्र.55 अट क्र.19 अंतर्गत योजनेकरीता Incentive Bonus देण्याच्या अटीचा समावेश करण्यात आला आहे. सबब, या निविदेकरीता सुध्दा महानगरविकास विभागाच्या दि.13.03.2024 च्या शासन निर्णयासोबत उपलब्ध करुन देण्यात आलेल्या आदर्श निविदा पुस्तिकेनूसार Incentive Bonus देण्याच्या अटीचा समावेश करण्यात यावा.	
1.11		NIT pg no. 65		निविदेतील पृ.क्र.65 वरील अटीमध्ये असे नमुद केले आहे की, Unless otherwise specifically mentioned in the tender item, the tendered rate for all items in tender shall cover all lifts and leads encountered for the executions of the work as directed. सद्यःस्थितीत महाराष्ट्र राज्यामध्ये गौण खनिजाच्या लिलाव होत नसल्याने कार्यक्षेत्राजवळ गौण खनिजे उपलब्ध होणेस अडचण होऊ शकते त्याचप्रमाणे मजीप्राच्या दरसुचीमध्ये गौण खनिजा संबंधातील बाबींमध्ये गौण खनिज वाहतुक खर्च 5 कि. मी. गृहीत धरण्यात आली आहे. तथापी, नगरपरिषदेने या कामाकरीता earth, sand, stone, murum, metal etc. ही गौण खनिजे कार्यक्षेत्रापासून किती अंतरावर उपलब्ध होतील हे स्पष्ट करणे आवश्यक आहे. त्याचप्रमाणे या गौण खनिजाचा 5 कि.मी. पेक्षा जास्तीचा वाहतुक खर्च संबंधित बाबीमध्ये गृहीत धरल्याचे दिसून येत नाही. तरी नगरपरिषदेचे स्पष्टीकरण आवश्यक आहे.	Please refer page no. 102 of schedule B. In case if artificial sand is approved by competent authority as per MJP Circular No. 210 Dated:- 09/04/2018, reduced rate will be applicable. (MJP Circular No. 210 Dated:- 09/04/2018 is attached herewith)
1.12		NIT pg no.113 Clause no.62		निविदेतील पृ.क्र. 113 वरील क्लॉज 62 मध्ये असे नमुद केले आहे की, During execution of work excavation is required to be carried out for various sub-works for which royalty is required is to be paid by the contractor. या अनुषंगाने असे कळविण्यात येते की, सदर निविदा ही मजीप्राच्या दरसुचीवर आधारीत असून मजीप्रा दरसुचीमध्ये खोदाईच्या बाबीत Royalty चा समावेश करण्यात आलेला नाही. सबब, Excavation च्या बाबी करीता Royalty देय झाल्यास Royalty ची वेगळी अदायगी नगरपरीषदेने करणे आवश्यक आहे.	As per NIT

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1.13				निविदेनुसार गौण खनिज रॉयल्टी भरण्याची जबाबदारी कंत्राटदाराची आहे. निविदेमधील दर प्राधिकरणाच्या ज्या दरसुचीवर आधारित आहेत त्या दरसुचीतील दरांचे पृथःकरण करत असतांना, गौण खनिजाकरीता रॉयल्टीचा दर प्रती ब्रास रु. 400/- असा गृहीत धरला असल्याचे प्राधिकरणातील दरसूचीतील सर्वसाधारण टिप्पणीमध्ये (General Note) नमूद केले आहे. तथापि, आता शासनाच्या निर्देशानुसार तो दर रु.600/- प्रती ब्रास इतका वाढलेला आहे. सबब, या निविदेतील कामाचे चालू दराने मुल्यांकन करतांना या वाढीव दराचा विचार केला जाणार आहे किंवा कसे?	Difference in royalty rate will be considered during evaluation.
1.14		NIT pg no.121		निविदेतोल पृ.क्र.121 वरील General Specification मुद्दा क्र. GS1 मध्ये The contractor will have to pay the royalties and municipal taxes, if charged by the Maharashtra Jeevan Pradhikaran. The same will not be refunded. असे नमुद केले आहे. तरी प्राधिकरणाने Municipal Taxes बाबत स्पष्टीकरण देणे आवश्यक असून त्यानुसार कंत्राटदारास आपला देकार सादर करणे सुलभ होईल.	As per NIT
1.15		NIT pg no.73		निविदेतील पृ.क्र.122 वरील General Specification मुद्दा क्र. GS1 मध्ये The contractor shall be responsible for obtaining permission from Government local bodies, private party for storing, stacking of materials required for execution of work असे नमुद केले आहे. या योजनेतील उपांगाची कामे करण्याकरीता इतर विभागांच्या आवश्यक त्या सर्व परवानग्या ह्या योजनेचे मालक या नात्याने आपले प्राधिकरणामार्फत अथवा या योजनेच्या कामाचे प्रकल्प व्यवस्थापक व सल्लागार यांचेमार्फत प्राप्त करून घेवून कंत्राटदारांना देणे आवश्यक आहे. सबब, परवानग्या प्राप्त करून घेण्याची सदरची अट वगळण्यात यावी ही विनंती.	As per NIT
1.16		NIT pg no.123		निविदेतील पृ.क्र.123 वरील अ.क्र.GS-4 मध्ये The foundation depth shall be considered as minimum ३.०० m below G.L. for the construction of BPT, MBR & ESR असे नमुद केले आहे. तरी Schedule-B मधील जलकुंभांच्या उपांगांच्या खर्चात कमीत कमी 3 मी. खोलीपर्यंत येणाऱ्या वेगवेगळया भुस्तरामधील तरतुद केली असल्याबाबत प्राधिकरणाने खातरजमा करणे आवश्यक आहे.	As per NIT
1.17		NIT pg no.157		निविदेतील पृ.क्र.157 वरील Cofferdam च्या Specification मध्ये Land या सदराखाली The contractor shall be allowed if possible and convenient to the	As per NIT

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				Department, to make use of the Department land free or royalties, rents, etc. complete. असे नमुद केले आहे. निविदेतील नमूद Cofferdam बाबीच्या तपशिलात Royalties व Rented Land बाबत कोणत्याही प्रकारचा उल्लेख आलेला नाही. जर Cofferdam करीता Department ने जागा उपलब्ध करून न दिल्यास जागेचे भाडे तसेच Cofferdam करीता खोदाई केलेल्या मातीकरीता महसुल विभागाने Royalty लागू कल्यास सदर अदायगी बाबीच्या दरापेक्षा वेगळी देण्यात येणार किंवा कसे हे प्राधिकरणाने स्पष्ट करणे आवश्यक आहे.	
1.18		NIT pg no.159		निविदेतील पृष्ठ क्र. 159 वर सदर योजना चाचणी तत्वावर चालविण्यासाठी आवश्यक असलेला पदनिहाय कर्मचारा-यांची संख्या नमुद करणे आवश्यक आहे. तर निविदेतील पृष्ठ क्र.162 वर रसायनामधील Liquid Chlorine Tonner पुरवण्याकरीता येणारा सर्व खर्च कंत्राटदाराने करावयाचा असे नमुद केले आहे. या संदर्भात निविदेंतर्गत सविस्तर स्पेसीफिकेशन नमुद करणे आवश्यक असून ज्यावाबी कंत्राटदारामार्फत पुरवावयाच्या आहेत त्याकरीता आवश्यक ती तरतुद करणे आवश्यक आहे. तसेच सदरची योजना कशाप्रकारे चालवावी याबाबतचे सविस्तर विवरण नमुद करण्यात आले आहे. त्याची पडताळणी केली असता, योजना चालविण्याकरीता आवश्यक असणारा कमीत कमी कर्मचारीवर्ग, आवश्यक असणारी वाहने याचा विचार करता सदरची योजना चालविण्याकरीता ठेवण्यात आलेली तरतूद ही अत्यंत अल्प स्वरुपाची असल्याचे निदर्शनास येत असुन. सदरची करण्यात आलेली तरतूद ही प्रत्यक्षात आवश्यक असलेल्या कामाच्या विवरणानुसार सुधारित करण्यात यावी ही विनंती. तसेच या योजनेची चालू दरसुचीनुसार येणारी किंमत परिगणित करीत असतांना या सर्व बाबींचा विचार करुन चालु दरसुचीनुसारची किंमत परिगणित करण्यात येणार आहे किंवा कसे?	As per NIT
1.19		NIT pg no.167		निविदेतील पृ.क्र.167 वर या योजनेच्या कामाकरीता आवश्यक असलेल्या मृदु पोलादी प्रकारच्या पाईपाचे Laying बाह्य Wrapping सह केल्यानंतर पुरवठ्याच्या 10% इतकी रक्कम अदा करण्यात येईल असे नमुद केले आहे. वास्तविक पाहता सदर पाईप् पुरवठा हा आतून Food Grade Epoxy Paint आणि बाहेरुन 3 LPE कोटींग करुन त्रयस्थ तपासणी नंतर पुरवठा केल्यानंतर पुरवठ्याच्या 80% इतकी रक्कम अदा करण्यात येईल असेही नमूद केले आहे. सबब, या निविदेच्या उपांगामध्ये बाह्य कोटींगकरीता कोणत्याही प्रकारची	As per NIT

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				वेगळी तरतूद करण्यात आली नसून, पाईप पुरवठा करण्याच्या बाबीमध्ये बाह्य कोटींगची तरतूदीचा समावेश करण्यात आलेला नाही. त्याचप्रमाणे मृदू पोलादी प्रकारच्या पाईपांची जलदाब चाचणी व C-Value Test घेण्याबाबत नमुद केले आहे. वास्तविक पाहता C-Value Test करीता सदर उपांगामध्ये वेगळ्याने तरतुद करणे आवश्यक आहे. या निविदेअंतर्गत, अंतर्गत C-Value Test घेण्याकरीता कोणत्याही प्रकारची तरतुद करण्यात आलेली नाही. सबव. सदरच्या स्पेसीफिकेशनमध्ये आवश्यक त्या सुधारणा करण्याविषयी विनंती आहे.	
1.20		NIT Pg no,216		निविदेतील पृ.क्र. 216 वर Floor Slab of Jackwell should be design for dynamic loading and vibration load. तथापि, जॅकवेलची फ्लोअर स्लॅब डिझाईन करताना पंपाचा डायनॅमिक लोड आणि व्हायब्रेशन लोड किती गृहित धरावा हे नमूद करण्यात आलेले नाही, तरी सदर डायनॅमिक लोड आणि व्हायब्रेशन लोड नमूद करणे आवश्यक आहे.	As per NIT
1.21		NIT Pg no.241, DS-15		निविदेतील पृ.क्र.241 वरील DS-15 Pure Water Sump मध्ये In addition to sump, 30 minutes capacity chlorine contact tank (CCT) shall be provided असे नमुद केले आहे. तथापि, या निविदेच्या शेड्यूल-बी मधील Water Treatment Plant च्या बाबी अंतर्गत Chlorine Contact Tank बांधण्याबाबत कोणत्याही प्रकारचा उल्लेख दिसून येत नाही. याचा अर्थ Water Treatment Plant च्या दरांतर्गत Chlorine Contact Tank बांधण्याकरीता येणाऱ्या खर्चाची तरतूद गृहीत धरलेली दिसून येत नाही. सबब, सदरची बाब वगळणेविषयी विनंती आहे. जर Chlorine Contact Tank बांधणे आवश्यक असेल तर त्याकरीता येणाऱ्या खर्चाची तरतूद Water Treatment Plant च्या दरांतर्गत समाविष्ट करुन. सुधारीत दर शेड्यूल-वी मध्ये नमुद करणेविषयी विनंती आहे.	As per NIT
1.22		NIT pg no.241, DS-16		पृ.क्र. 241 वरील DS-16 शुध्द पाण्याचा पंप हाऊस मध्ये पंप फ्लोअरची लांबी रुंदी तसेच पॅनेल फ्लोअरची लांबी रुंदी नमूद करणे आवश्यक आहे.	As per NIT
1.23		NIT Pg no.405		पृ.क्र.405 वर असे नमूद केले आहे की. Agency has to submit BGs of equivalent O & M amounts at the end of the first year. Against BG Submission agency will be eligible for O & M Payment disbursement. सबब, पंपिंग स्टेशन आणि	As per NIT

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				स्काडा व ऑटोमेशनचे दैनंदिन देखभाल दुरुस्ती केल्याबाबतची अदायगी ही बँक हमीपत्र दिल्याशिवाय करण्यात येणार नाही, असे या अटीवरुन स्पष्ट होते. परंतु बँक हमीपत्राकरीता बँकेस अदा करावे लागणारे शुल्काचा समावेश या निविदेच्या मुल्यांकीत किंमतीत करुन कंत्राटदाराचा देकार सदर मुल्यांकीत किंमतीशी तुलना करण्यात येणार आहे किंवा कसे? हे स्पष्ट करणे आवश्यक असून जर सदर शुल्काचा समावेश मुल्यांकीत किंमतीत करण्यात येणार नसल्यास सदर अट वगळण्याची विनंती करण्यात येत आहे.	
1.24		NIT Pg no.161		पृ.क्र.485 वर Geo Tagging करीता Annexure 21 संलग्न केले आहे. तथापि, कंत्राटदाराने या योजनेच्या कार्यक्षेत्रास Geo Tagging करीता केव्हा भेट द्यावी याबाबतचा तपशील निविदेच्या सविस्तर निविदा सूचनेत करण्यात आलेला नाही. तरी Geo Tagging करीता कंत्राटदाराने कार्यक्षेत्रास केव्हा भेट द्यावी त्याबाबतचा दिनांक नमूद करणे आवश्यक आहे.	Kindly refer annexure 21 for details
1.25		NIT Pg no.168		जॅकवेलच्या उपांगातील जास्तीच्या माती हलविण्याबाबतचा वाहतूक खर्चाचा दर पाहता या दरामध्ये स्वामित्व शुल्काचा समावेश करण्यात आलेला दिसून येत आहे. सबब, सदर बाबीकरती स्वामित्व धन महसूल विभागास अदा करावी लागल्यास ती प्राधिकरणाकडून अदायगी बाबीच्या दरापेक्षा वेगळी देण्यात येणार किंवा कसे हे स्पष्ट होणे आवश्यक आहे.	As per NIT
1.26		Schedule B Subwork. 14		उपांग क्र.14 मध्ये Road Restoration ची तरतुद करण्यात आली आहे. सार्वजनिक बांधकाम विभागाने रस्ते बनविण्याचा पुर्ण बाबीच्या दरामध्ये Royalty ची रक्कम गृहीत धरलेली नाही. सबब, या उपांगामधील Royalty शी संबंधित बाबींकरीता अदा करावयास लागणाऱ्या Royalty ची वेगळी तरतुद करणे आवश्यक आहे.	For PWD Items where Royalty charges are not considered those will be paid to contractor separately after submission of Paid Royalty receipts.
1.27		Schedule B Subwork. 16		उपांग क्र. 16 मध्ये योजना चाचणी स्वरुपात 03 महिने चालविणेकरीता प्राधिकरणाच्या दरसूचीनूसार एका गावाच्या योजनेचा रु.35,160/- प्र.माह. असा दर गृहित धरण्यात आलेला आहे. तथापि, सदर योजना ही शहरी भागाची असून यामध्ये जॅकवेल, 60 द.ल.लि. क्षमतेचा जलशुध्दीकरण केंद्र जवळपास 07 ठिकाणी वेगवेगळ्या अश्वशक्तीचे एकूण 2485 अश्वशक्तीचे पंप एकाच वेळी चालविणे, वेगवेगळ्या प्रकारच्या जवळपास	As per NIT

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				1,03,325 मी. लांबीच्या जलवाहिन्या 02 मुख्य संतुलन टाक्या, 09 उंच जलकुंभ तसेच संप व पंप हाऊस इत्यादी उपांगांची देखभाल दुरुस्ती चाचणी स्वरुपात 03 महिने कालावधी करीता करणे आवश्यक असून त्याकरीता लागणारा कर्मचारी वर्ग हा मोठ्या प्रमाणात लागणार असून निविदेमध्ये गृहित धरलेली रु. 35, 160/- प्र. माह रक्कम ही कर्मचारी वर्गासाठी अत्यल्प असल्याचे आपणांस दिसून येईल. सबब, या योजनेची दैनंदिन देखभाल दुरुस्ती करण्याकरीता लागणारा कर्मचारी वर्ग गृहित धरुन त्यानूसार या उपांगांत तरतूद करणे आवश्यक आहे. सबब, सदर या योजनेची दैनंदिन देखभाल दुरुस्ती करण्याकरीता लागणाऱ्या कर्मचारी वर्गाकरीता येणा-या खर्चाची तरतूद मूल्यांकीत किंमतीस करुन ठेकेदाराच्या देकाराची तुलना सदर मुल्यांकीत किंमतीस प्राधिकरणामार्फत करण्यात येणार आहे किंवा कसे? हे स्पष्ट होणे आवश्यक आहे.	
1.28				ज्या-ज्या उपागांत काही बाबींचे दर सार्वजनिक बांधकाम विभागाच्या दर सुचीवर आधारीत आहेत व त्या बाबी गौण खनिजाशी संबंधित असल्यास सार्वजनिक विभागाच्या दर सुचीतील दर सुचीत गौण खनिजा संबंधित Completed बाबींच्या दरात Roylaty चा समावेश करण्यात आलेला नाही असे दरसुचीतील General Note मधील अटीवरून दिसून येते. सबब, या निविदेंतर्गत त्या-त्या बाबींकरीता Royalty ची वेगळी तरतुद संबंधित उपांगात करणे आवश्यक आहे..	As per NIT
1.29		NIT Pg no.242 DS-16		सार्वजनिक बांधकाम विभागाच्या दर सुचीतील दरांचा समावेश ज्या ज्या उपांगात करण्यात आला आहे. त्या-त्या उपांगात सार्वजनिक बांधकाम विभागाच्या दर सुचीतील अटीनुसार 1% विमा करीता वेगळी तरतुद करणे आवश्यक आहे.	As per NIT
1.30				या योजनेची अंदाजपत्रके व आराखडे ही प्राधिकरणाच्या प्रचलित दरसूचीचा वापर करून तयार करण्यात आली असल्याचे निदर्शनास येत आहे. सदर दरसुची अंतर्गत जे दर नमुद करण्यात आली आहेत, त्या दरांची पृथःकरणे तयार करत असताना बांधकाम साहित्य जसे की वाळू, वीटा, खडी, दगड इत्यादी साहित्य हे 5 कि.मी. च्या परिघा अंतर्गत उपलब्ध असल्याचे गृहीत धरुन करण्यात आली आहे. सर्व बांधकाम साहित्य हे 5 कि.मी.च्या परिघा अंतर्गत उपलब्ध आहेत किंवा कसे? नसल्यास, सदरची बांधकाम साहित्य प्रत्यक्ष कार्यक्षेत्रापासून किती कि.मी. अंतरावर उपलब्ध आहेत याचा स्थळदर्शक नकाशा उपलब्ध करुन देणे विषयी विनंती आहे. तसेच प्रत्येक बाबीच्या दरातंर्गत वाढीव वाहतुकी करीताची	Please refere Schedule B, Pg no. 102

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				तरतुद गृहीत धरली आहे किंवा कसे?	
1.31				सर्व उपांगाच्या जागा प्राधिकरणाच्या ताब्यात आहेत किंवा कसे?	The lands are in the possession of Department and KBMC and will be handed over to the contractor at the time of construction.
1.32				काम करत असताना स्थानिक रहिवाश्यांच्या काही अडचणी/अडथळे असतील तर त्या दूर करण्याची जबाबदारी प्राधिकरणाची राहील.	As per NIT
1.33				सदरचे काम हे महानगरपालिका / नगरपालिका / साखर कारखाना परिसर / जेल / मिलिटरी प्रतिबंधात्मक/आदिवासी/डोंगराळ क्षेत्रामध्ये येते किंवा कसे? येत असल्यास, प्राधिकरणाच्या प्रचलित दरसूचीनुसार प्रत्येक बाबीच्या दरात आवश्यक ती वाढ गृहीत धरण्यात आली आहे किंवा कसे?	As per NIT
1.34				या कामांतर्गत समाविष्ट असलेल्या जलवाहिनीची कामे राष्ट्रीय महामार्गाच्या बाजूने करावयाची आहेत किंवा कसे? येत असल्यास, प्राधिकरणाच्या प्रचलित दरसूचीनुसार प्रत्येक बाबीच्या दरात आवश्यक ती वाढ गृहीत धरण्यात आली आहे किंवा कसे?	As per NIT
1.35				या योजनेतील वितरण व्यवस्थेची कामे ही आदिवासी क्षेत्रात अथवा डोंगराळ क्षेत्रामध्ये येते किंवा कसे? येत असल्यास, प्राधिकरणाच्या प्रचलित दरसूचीनुसार प्रत्येक बाबीच्या दरात आवश्यक ती वाढ गृहीत धरण्यात आली आहे किंवा कसे?	As Per NIT
2	**Swastik Constructions**				
2.1	Possession of land for execution of work	Page No .190	Permissions from various Government department/local govt. bodies.	We presume that, all land required for Head-work, WTP, ESR and Pipe network are acquired by MJP and contractor will get hindrance free land for work execution. Please confirm. Also, We assume that the MJP is in charge of getting approvals from the relevant agency for railway and highway crossings works.	As per NIT
2.2	Mobilizatio n Advance	Page No .48	Mobilization Advance will not be granted.	We request you to provide Interest free 10% Mobilization Advance of contract value.	As per NIT
2.3	Hydraulic Testing of	Page No .203	Daily O & M of HDPE pipeline should be done &	This condition is never used in anywhere, any department, it should be upto O&M period only. We request you to please rectify and confirm this condition.	As per NIT

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	HDPE Pipe Line		maintained by contractor for two years free of cost. No extra payment will be done by MJP for this.		
2.4	Obstructions in work	Page No .29	All obstructions such as electric cables, telephone line, water and sewer mains, manholes, natural drainage, culverts, storm water drains etc. corning in the way shall be carefully looked after against any damages which otherwise will have to be made good by the contractor at his own cost. Any work of removing, repairing or remaking etc will be carried out by the contractor without any extra claims for the same in contractor with the respective departments.	We request you to either provide us the details of underground utilities coming across the alignment before the commencement of the work, if not possible, and if the same are damaged during the execution, the rectification cost should be paid extra or rectification of the same should not be the responsibility of the contractor.	As per NIT
2.5	Solar Panel with Battery	Page No .398	**Existing Payment Break up:** i) 65% Against Supply of Material as per given Specifications including TPI. ii) 25% Against Erection as per instruction of Site Engineer. iii) 10% Against Successful	We request you to revise Payment Break up as under :- i) 75% Against Supply of Material as per given Specifications including TPI. ii) 20% Against Erection as per instruction of Site Engineer. iii) 5% Against Successful commissioning and trial as per instructions of Engineer In Charge.	As per NIT

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			commissioning and trial as per instructions of Engineer In Charge.		
2.6	Water Lifting			Please clarify water lifting permissions from irrigation department	Water lifting permission is received from irrigation department.
2.7	Geo Tagging	Page No.485	The contractor intending to submit the tender must visit the site of the proposed work along with the concerned MJP officers and submit a self-declaration of geo-tagging in the prescribed format at the time of tender submission.	The tender document includes Annexure 21 pertaining to Geo-Tagging However, the exact locations where Geo-Tagging is required, as well as the details of the authorized contact person, have not been specified in the tender document. It is therefore requested to kindly provide the complete details of the Geo-Tagging location along with the name and contact details of the concerned official, to facilitate compliance with the tender conditions.	Kindly refer annexure 21 for details
3	**P Das Infrastructure Pvt Ltd.**				
3.1			Period of Completion: - 27 Calendar Months (including Monsoon) (Page No.11)	Considering scope & quantum of the work, we request you to revise work completion period by 36 Calendar Months (excluding Monsoon)	As per NIT
3.2			Special Pre-qualification conditions as per CVC guidelines. Particular Construction experience and key production rates The applicant should have 1.Three similar completed works costing not less than the amount equal to 40 (forty) percent of the	special Pre-Qualification conditions as per C.V.C. Guidelines. Particular Construction Experience and Key Production Rates The applicant should have experience: 1. Successfully completed similar works during last Seven years ending last day of month previous to the one in which applications are invited should be either of the following: - 1.1 Three similar completed works costing not less than the amount equal to 40 (forty) percent of the estimated cost. (Rs.183,17,03,110 x 40%)=Rs.73,26,81,244/-OR 1.2 Two similar completed works costing not less than the amount equal to 50	1. Successfully completed similar works during last Seven years ending last day of month previous to the one in which applications are invited will be considered.

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			estimated cost. (Rs. 183,17,03,110 X 40%) = Rs.73,26,81,244/-. or 2. Two similar completed works costing not less than the amount equal to SO (fifty) percent of the estimated cost. (Rs. 183,17,03,110 x 50%) = Rs. 91,58,51,555/-. or 3. One similar completed work costing not less than the amount equal to 80 (eighty) percent of the estimated cost. (Rs. 183,17,03,110 x 80%) = Rs. 146,53,62,488/-.	(fifty) percent of the estimated cost. (Rs. 183,17,03,110 x 50%)=Rs.91,58,51,555/-. OR 1.3 One similar completed work costing not less than the amount equal to 80 (eighty) percent of the estimated cost. (Rs. 183,17,03,110 x 80%)=Rs.146,53,62,488/-. As per CVC guideline similar work from last 7 year is Considered So please change accordingly.	
4	**Girish Enterprises ltd.**				
4.1	**Tender Documents Page No. – 126. PRE-QUALIFICATION CRITERIA**		**Particular Construction Experience and Key Production Rates**The applicant should have experience:1. Successfully completed similar works during last five years ending last day of month previous to the one in which applications are invited should be either of the following: - 1.1 Three similar	For better participation and to give all the Bidders fair chance –· Kindly change definition of Similar works as – "Similar work" shall mean successful commissioning of construction or augmentation of **Water Supply Scheme**"	"Similar work" shall mean successful commissioning and construction or augmentation of a water supply scheme project consisting of at least five (5) sub-works among Headworks, Water Treatment Plant, Pipeline work (Leading main/

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			completed works costing not less than the amount equal to 40 (forty) percent of the estimated cost.OR1.2 Two similar completed works costing not less than the amount equal to 50 (fifty) percent of the estimated cost.OR1.3 One similar completed work costing not less than the amount equal to 80 (eighty) percent of the estimated cost."Similar work" shall mean successful commissioning of construction or augmentation of a project consisting of Headworks, SCADA, Water Treatment Plant along with Pipeline work, Pumping Machinery, ESR and distribution system. Bidder is allowed to claim Similar Work experience for any new Construction or augmentation of existing project.		Gravity main/ Rising main), Pumping Machinery, ESR, distribution system, SCADA. Bidder is allowed to claim Similar Work experience for any new Construction or augmentation of existing project.
4.2	**Tender Documents Page No. – 136. PRE-**		**5. <u>Pumping Machinery</u>**1) The contractor shall have experience of successful	MJP has asked for the experience of Vertical Turbine pump, Submersible non clog pump and Transformer substation under single Agreement.· Kindly accept the experience of **Vertical Turbine pump along with Transformer substation** under single Agreement.**OR**· Kindly accept the experience of	As per NIT

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	QUALIFICATION CRITERIA		completion of work of Providing, Erecting, Installation, testing, commissioning & completion of VT Pumping Machinery of total installed capacity not less than 2088 HP & individual capacity of minimum 170 HP Vertical Turbine pump in a single agreement.2) The contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of Submersible Pumping Machinery of total installed capacity not less than 533 HP & individual capacity of minimum 170 HP Submersible non clog pump in a single agreement.3) The contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of	Vertical Turbine pump, Submersible non clog pump and Transformer substation **as three different components in three different Agreement**.	

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			Transformer substation of total installed capacity minimum 1600 kVAcapacity and individual minimum 400 kVA capacity in a single agreement.		
4.3	**Tender Documents Page No. – 14 6. PRE-QUALIFICATION CRITERIA**		**9. <u>Automation/SCADA</u>** c) 50 % of required annual maintenance period and d) If bidder is not a manufacturer or dealer of Sensor /PLC, he shall have Joint Venture with manufacturer/dealers.	c) Kindly accept experience of **1 year of annual maintenance period**. d) **Kindly delete such conditions**. There are different types of Sensor/ PLC in the Tender which are manufactured by different OEM. Successful Bidder can submit Technical Data Sheets during execution of the work.	In case of Automation/ SCADA, experience of 1year annual maintenance period will be accepted.
4.4	**Tender Documents Page No. – 113 CONDITIONS OF CONTRACT**		**<u>Clause 61 :</u>** 5. The minimum insurance cover for loss damages to physical property, injury and death shall be 10% of the contract cost per occurrence with number of occurrences as 3 (Three). After each occurrence the contractor shall pay additional premium necessary so as to keep the insurance policy valid always till the defect liability period is over.	Kindly consider the insurance policy validity **till the end of Completion of Work and Trial – Run period of 3 months and not** defect liability period.	As per NIT

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4.5	**Tender Documents Page No. – 203TECHNICAL SPECIFICATIONS**		**HDPE Pipes** Daily O & M of HDPE pipeline should be done & maintain by contractor for two years free of cost. No extra payment will be done by MJP for this.	Kindly Delete such conditions.	As per NIT
4.6	**Tender Documents Page No. – 399** DETAILED TECHNICAL SPECIFICATIONS (MECHANIICAL)		**IDS No 52: - COMPREHENSIVE OPERATION and MAINTANACE** The entire Pumping Station and SCADA & AUTOMATION system to be installed under this work is to be compulsory operated & maintained by the contractor for the period of 2 years after one-year initial guarantee period.	· The rates for operated & maintenance **are not given** in Schedule B.	Please refer departmental clarification.
4.7	**Tender Documents Page No. – 404** Detailed Technical Specifications (MECHANIICAL)		**Method of Payment** The contractor will be paid per year for the period upto 3 years. The first year will be the warranty period during which O & M services will be free. During 2nd and 3rd year the contractor will be paid appropriate amount as mentioned in schedule B to carry out	· The rates for operated & maintenance are not given in Schedule B.	Please refer departmental clarification.

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			entire O & M for items mentioned in Schedule B.		
4.8	**Schedule – B Page No. – 102 RECAPITULATION SHEET**		Total Cost Raw & Pure Pumping Machinery & SCADA – Rs. 22,43,75,243.00	**Details of Sub Works not given in Schedule B.**	Please refer departmental clarification.
5	**Laxmi Constructions**				
5.1			1) "Similar work" shall mean successful commissioning ofconstruction or augmentation of a project consisting of Headworks, SCADA, Water Treatment Plant along with Pipeline work, Pumping Machinery, ESR and distribution system. Bidder is allowed to claim Similar Work experience for any new Construction or augmentation of existing project.For arriving at cost of similar work, the value of work executed shall be brought to current costing level by enhancing the actual value of work at simple rate of seven percent per	"Similar work" shall mean constrùction andsuccessful commissioning of or augmentation of **Water Supply Seheme"**The value of work executed shall be brought to current costing level by enhancing the actual value of work at simple rate of expected regular percent per annum, calculated from the date of completion to the date of Bid opening.	Please refer clarification given in 4.1

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			annum, calculated from the date of completion to the date of Bid opening.		
5.2			Page No. — 13 **5. <u>Pumping Machinery</u>** 1) The contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of VT Pumping Machinery of total installed capacity not less than 2088 HP & individual capacity of minimum 170 HP Vertical Turbine pump in a single agreement. 2) The contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of Submersible Pumping Machinery of total installed capacity not less than 533 HP & individual capacity of minimum 170 HP Submersible non clog pump in a single	Collaboration as per standard tender Procedure should allow and requested to accept.	Kindly refer page no. 18 of NIT

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			agreement. 3) The contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of Transformer substation of total installed capacity minimum 1600 kVA capacity and individual minimum 400 kVA capacity in a single agreement.		
5.3			Page No. — 14**9. Automation/ SCADA**d) If bidder is not a manufacturer or dealer of Sensor/PLC, he shall have Joint Venture with manufacturer/dealers.	Please delete this condition.	As per NIT
5.4			Page No. — 102: **Schedule** — B Total Cost Raw & Pure Pumping Machinery & SCADA (A) — Rs. 22,43,75,243.00	Please share details of Sub Works.	Please refer departmental clarification.
6	**Vijyoti Construction Pvt Ltd.**				
		कलम	निविदा अट	स्पष्टीकरणे/बदल आवश्यक आहेत	
6.1		पान क्र.- 12	विशिष्ट बांधकाम अनुभव आणि प्रमुख उत्पादन	कृपया 'समान काम' याची व्याख्या खालीलप्रमाणे बदलावी "जलपुरवठा योजनेच्या बांधकामाचे किंवा विस्ताराचे यशस्वी कार्यान्वयन"	Please refer clarification given in 4.1

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		6. पूर्व पात्रता निकष	अर्जदारास अनुभव असावा 1) अर्ज मागविण्यात येत असलेल्या आधीच्या महिन्याच्या शेवटच्या दिवसापर्यंत, मागील पाच वर्षांच्या कालावधीत यशस्वीरीत्या पूर्ण केलेली तत्सम कामे खालीलपैकी एक असावीत:- 1.1 अंदाजित खर्चाच्या 40 (चाळीस) टक्क्यापेक्षा कमी नसलेल्या खर्चाची तीन समान पूर्ण झालेली कामे. किंवा 1.2 अंदाजित खर्चाच्या 50 (पन्नास) टक्क्यापेक्षा कमी नसलेल्या खर्चाची दोन समान पूर्ण झालेली कामे. किंवा 1.3 अंदाजित खर्चाच्या 80 (ऐंशी) टक्क्यापेक्षा कमी नसलेल्या खर्चाची दोन समान पूर्ण झालेली कामे. तत्सम कामे म्हणजे हेडवर्क्स, स्कॅडा, जलशुद्धीकरण प्रकल्प, तसेच पाइपलाइनचे काम, पंपिंग मशिनरी,		

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			ईएसआर आणि वितरण प्रणाली यांचा समावेश असलेल्या प्रकल्पाचे बांधकाम किंवा विस्ताराचे यशस्वी कार्यान्वयन होय. निविदाकाराला कोणत्याही नवीन बांधकामासाठी किंवा विद्यमान प्रकल्पाच्या विस्तारासाठी 'तत्सम कामाचा अनुभव' असल्याचा दावा करण्याची परवानगी आहे.		
6.2		पान क्रमांक - 13पूर्व-पात्रता निकष	पंपिंग यंत्रसामग्री1) कंत्राटदाराकडे एकाच करारामध्ये किमान 2088 एचपी एकूण स्थापित क्षमतेच्या व्हीटी पंपिंग मशिनरीची तरतूद, उभारणी, स्थापना, चाचणी, कार्यान्वयन आणि पूर्तता करण्याचे काम, तसेच किमान 170 एचपी वैयक्तिक क्षमतेच्या व्हर्टिकल टर्बाइन पंपाचे काम यशस्वीरित्या पूर्ण केल्याचा अनुभव असावा.2) कंत्राटदाराकडे एकाच करारामध्ये किमान 533 एचपी एकूण स्थापित	कृपया ट्रान्सफॉर्मर सबस्टेशनसह व्हर्टिकल टर्बाइन पंपाचा अनुभव एकाच कराराअंतर्गत असलेला स्वीकारावा.किंवाकृपया तीन वेगवेगळ्या करारांमध्ये व्हर्टिकल टर्बाइन पंप, सबमर्सिबल नॉन-क्लॉग पंप आणि ट्रान्सफॉर्मर सबस्टेशन यांचा अनुभव स्वीकारावा	As per NIT

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			क्षमतेच्या सबमर्सिबल पंपिंग मशिनरीची तरतूद, उभारणी, स्थापना, चाचणी, कार्यान्वयन आणि पूर्तता करण्याचे काम, तसेच किमान 170 एचपी वैयक्तिक क्षमतेच्या सबमर्सिबल नॉन-क्लॉग पंपाचे काम यशस्वीरित्या पूर्ण केल्याचा अनुभव असावा.3) कंत्राटदाराकडे एकाच करारामध्ये किमान किमान 1600 केव्हीए एकूण स्थापित क्षमतेच्या आणि किमान 400 केव्हीए वैयक्तिक क्षमतेच्या ट्रान्सफॉर्मर सबस्टेशनची तरतूद, उभारणी, स्थापना, चाचणी, कार्यान्वयन आणि पूर्तता करण्याचे काम यशस्वीरित्या पूर्ण केल्याचा अनुभव असावा.		
6.3		पृष्ठ क्रमांक-१४ 6. पूर्व-पात्रता निकष	9. ऑटोमेशन/स्काडा ड) जर बोली लावणारा सेन्सर/पीएलसीचा उत्पादक किंवा विक्रेता नसेल, तर त्याने उत्पादक/विक्रेत्यांसोबत संयुक्त उपक्रम स्थापन करावा.	कृपया अशी अट कमी करावी.	As per NIT

No	Vol. / Section	Clause no.	As per tender documents	Bidder's Question / Query / Clarification / Comment	Reply
6.4		पान क्र. ११३ कराराच्या अटी	कलम ६१- ५ : किमान विमा संरक्षणभौतिक मालमत्तेचे नुकसान, इजा व मृत्यू यांसाठी किमान विमा संरक्षण हे प्रत्येक घटनेमागे करार किमतीच्या १०% इतके असावे आणि अशा घटनांची संख्या ३ (तीन) असावी. प्रत्येक घटनेनंतर कंत्राटदाराने आवश्यक असलेला अतिरिक्त प्रीमियम भरून विमा पॉलिसी दोष दायित्व कालावधी संपेपर्यंत नेहमी वैध राहील याची काळजी घ्यावी.	काम पूर्ण होईपर्यंत आणि ३ महिन्यांच्या चाचणी कालावधी (Trial- Run) संपेपर्यंतच विमा पॉलिसी वैध राहावी, याचा कृपया विचार करावा.	As per NIT
6.5		पान क्रमांक- 203तांत्रिक तपशील	एचडीपीई पाईप्स५. एचडीपीई पाईपलाईनची दैनंदिन देखभाल व दुरुस्ती कंत्राटदाराकडून दोन वर्षांसाठी विनामूल्य केली जावी. यासाठी एमजेपीकडून कोणतेही अतिरिक्त शुल्क आकारले जाणार नाही.	कृपया अशी अट कमी करावी.	As per NIT
6.6		पान क्र. १०२ शेड्यूल B	कच्च्या आणि शुद्ध पंपिंग मशिनरी आणि SCADA चा एकूण खर्च	शेड्यूल ८ मध्ये उपकामाचे तपशील रककमे सहित दिसत नाही. तरी साहेबाना विनंती की बरील बद्दल करून मला निविदा भरण्यासाठी सहकार्य करण्यात यावे अशी विनंती. धन्यवाद	Please refer departmental clarification.

No	Vol. / Section	Clause no.	As per tender documents	Bidder's Question / Query / Clarification / Comment	Reply
7	**M/S P.L.Adake**				
7.1	Particular Construction Experience and Key Production Rates	Page No. - 12	"Similar work" shall mean successful commissioning of construction or augmentation of a project consisting of Headworks, SCADA, Water Treatment Plant along with Pipeline work, Pumping Machinery, ESR and distribution system. Bidder is allowed to claim Similar Work experience for any new Construction or augmentation of existing project.	Similar works as - "Similar work" shall mean successful commissioning of construction or augmentation of Water Supply Scheme"	Please refer clarification given in 4.1
7.2	5. Pumping Machinery	Page No.- 13	1) The contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of VT Pumping Machinery of total installed capacity not less than 2088 HP & individual capacity of minimum 170 HP Vertical Turbine pump in a single agreement.2) The contractor shall have experience of successful	5A) Pumping MachineryThe contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of VT Pumping Machinery of total installed capacity not less than 2088 HP & individual capacity of minimum 170 HP Vertical Turbine pump in a single agreement.5B) Pumping MachineryThe contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of Submersible Pumping Machinery of total installed capacity not less than 533 HP & individual capacity of minimum 170 HP Submersible non clog pump in a single agreement.5C) Pumping MachineryThe contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of Transformer substation of total installed capacity minimum 1600 KVA capacity and individual minimum 400 kVA capacity in a single agreement.	As per NIT

No	Vol. / Section	Clause no.	As per tender documents	Bidder's Question / Query / Clarification / Comment	Reply
			completion of work of Providing, Erecting, Installation, testing, commissioning & completion of Submersible Pumping Machinery of total installed capacity not less than 533 HP & individual capacity of minimum 170 HP Submersible non clog pump in a single agreement.3) The contractor shall have experience of successful completion of work of Providing, Erecting, Installation, testing, commissioning & completion of Transformer substation of total installed capacity minimum 1600 kVA capacity and individual minimum 400 kVA capacity in a single agreement.		
7.3	Automation /SCADA	Page No.-14	d) If bidder is not a manufacturer or dealer of Sensor /PLC, he shall have Joint Venture with manufacturer/dealers.	Please delete this condition.	As per NIT
7.4	HDPE Pipes	Page No.-203	Daily O & M of HDPE pipeline should be done &	Kindly Delete such conditions.	As per NIT

No	Vol. / Section	Clause no.	As per tender documents	Bidder's Question / Query / Clarification / Comment	Reply
			maintain by contractor for two years free of cost. No extra payment will be done by MJP for this.		
7.5	IDS No 52:- COMPREHENSIVE OPERATION and MAINTANACE	Page No.-399	The entire Pumping Station and SCADA & AUTOMATION system to be installed under this work is to be compulsory operated & maintained by the contractor for the period of 2 years after one-year initial guarantee period.	Rates not given in Schedule B.	Please refer departmental clarification.
7.6		Page No.-102	Total Cost Raw & Pure Pumping Machinery & SCADA.	Rates not given in Schedule B.	Please refer departmental clarification.

B) Departmental Points and clarification given by Department is as follows

S.No	Vol. / Section	Clause no/Pg no	Points	Clarified as
1	Schedule B	Mechanical	Schedule B Mechanical was not attached	Schedule B for Pumping machinery, SCADA & Automation now attached herewith.

Abstract Sheet- Schedule B
(Pumping Machinery, SCADA & Automation)

No.	Sub-Work No.	Sub-Work Name	Sub-Work Cost
1	Sub Work No. 7.1	Sub work No 1:- Providing Erecting Testing and Commissioning of Raw Water Pumping Machinery with allied equipment's	12,35,31,996.00
2	Sub Work No. 7.2	Sub work No 2:- Providing Erecting Testing and Commissioning of Pure Water	2,93,20,278.00

No.	Sub-Work No.	Sub-Work Name	Sub-Work Cost
		Pumping Machinery with allied equipments at 60 MLD WTP	
3	Sub Work No. 7.3	Sub work No 3:- Pure Water Pump V.T. Pump sets & allied electromechanical works For Joveli ESR at 7.2 &5 MLD WTP	17,74,439.00
4	Sub Work No. 7.4	Sub work No 4:- Pure Water Pumping Machinery for shirgaon ESR at 18 MLD WTP	1,69,59,504.00
5	Sub Work No. 7.5	Sub work No 5:-Pure Water Pump V.T. Pump sets & allied electromechanical works for Gandhinagar ESR at 15 MLD WTP	79,97,273.00
6	Sub Work No. 7.6	Sub work No 6:- Pure Water Pumping Machinery at 24 MLD WTP for Mhada ESR	2,48,38,593.00
7	Sub Work No. 7.7	Sub work No 7:- Pure Water Pumping Machinery at Vadavali Proposed Sump	7,19,295.00
		Net Cost of Mechanical and Electrical Part Rs.	**20,51,41,378.00**

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Sub work No 7.1: - Providing Erecting Testing and Commissioning of Raw Water Pumping Machinery with allied equipment's					
	Item No.: 1-A - Submersible Non-Clog Pump (IDS No 1)					
1	a) Providing erecting and giving test of Submersible Non clog Pump set suitable to discharge **800 Cum/hr** against total head of **71 Meter** and with Power and Control Cable of 25 Mtr of Control Panel and 1500 RPM Motor and auto coupling arrangement with TPI as per detailed specification - **335 HP**	3	No	6891015.00	Rupees Sixty-Eight Lakh Ninety-One Thousand Fifteen Only	20673045.00
	Item No.: 1-B - Vertical Turbine Pump set (IDS No 2)					
	a) Providing erecting and giving test of VT	4	No	3814422.00	Rupees Thirty-Eight Lakh Fourteen	15257688.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Pump set suitable to discharge **950 Cum/hr** against total head of **36 Meter** and 21 m Suspension Length with base frame sole plate and TPI as per detailed specification - **180 HP (Kharvai Raw Water Pumps)**				Thousand Four Hundred Twenty-Two Only	
	b) Providing erecting and giving test of VT Pump set suitable to discharge **1320 Cum/hr** against total head of **20 Meter** and 21 m Suspension Length with base frame sole plate and TPI as per detailed specification - **150 HP (24 MLD Raw Water Pumps)**	2	No	4411214.00	Rupees Forty-Four Lakh Eleven Thousand Two Hundred Fourteen Only	8822428.00
	c) Providing erecting and giving test of VT Pump set suitable to discharge **850 Cum/hr** against total head of **74 Meter** and 21 m Suspension Length with base frame sole plate and TPI as per detailed specification - **335 HP (60 MLD Raw Water Pumps)**	3	No	4059604.00	Rupees Forty Lakh Fifty-Nine Thousand Six Hundred Four Only	12178812.00
	d) Providing erecting and giving test of VT Pumpset suitable to discharge **700 Cum/hr** against total head of **38 Meter** and 21 m Suspension Length with base frame sole plate and TPI as per detailed specification - **150 HP (Pressure Filter Raw Water Pump)**	1	No	2911464.00	Rupees Twenty-Nine Lakh Eleven Thousand Four Hundred Sixty-Four Only	2911464.00
2	**Item No.: 2 - VSS Motor (IDS No 4)**					
	a) Providing, erecting and giving test and trial of vertical Solid shaft motor 1500 RPM, squirrel cage induction motor, conforming to IS 12615, class IE4 IP55 premium, having continuous rating suitable for operation at 415 Volts +/-10%, 3 Phase, 50 Hz +/-5%					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	with "F" class insulation temperature rise limited to class "B" insulation. with TPI.					
	i) 150 HP	1	No	797560.00	Rupees Seven Lakh Ninety-Seven Thousand Five Hundred Sixty Only	797560.00
	ii) 335 HP	3	No	1630083.00	Rupees Sixteen Lakh Thirty Thousand Eighty-Three Only	4890249.00
	b) Providing, erecting and giving test and trial of vertical Solid shaft motor 1000 RPM, squirrel cage induction motor, conforming to IS 12615, class IE4 IP55 premium, having continuous rating suitable for operation at 415 Volts +/-10%, 3 Phase, 50 Hz +/-5% with "F" class insulation temperature rise limited to class "B" insulation. with TPI.					
	i) 150 HP	2	No	765757.00	Rupees Seven Lakh Sixty-Five Thousand Seven Hundred Fifty-Seven Only	1531514.00
	ii) 180 HP	4	No	911724.00	Rupees Nine Lakh Eleven Thousand Seven Hundred Twenty-Four Only	3646896.00
3	**Item No.: 3 - Pressure gauges (IDS No 5)**					
	Providing, erecting Glycerine filled Pressure gauge of required range complete with syphon tube.150 mm dia.	15	No	2010.00	Rupees Two Thousand Ten Only	30150.00
4	**Item No.: 4 - RMU (IDS No 6)**					
	a) Supplying, installing, testing and commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 4-way outdoor, extensible motorised SCADA compatible RMU, internal arc tested as per electric supply company specification consisting of 2 nos. feeder with 2 LBS and 2 nos. feeder with 2 VCB compliant to IEC 62271 - 100, 200 and	1	No	1036790.00	Rupees Ten Lakh Thirty-Six Thousand Seven Hundred Ninety Only	1036790.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	102, as per specification no. SW-HTS/RMU SCADA					
	b) Supplying, erecting foundation structure for RMU for cable entry etc..	1	No	35294.50	Rupees Thirty-Five Thousand Two Hundred Ninety-Four Paise Fifty Only	35294.00
	c) Providing and erecting Silicon Coated Touchproof Indoor Termination Joint Kit 22 kV (E) XLPE HT cable 3x95 sq. mm. with necessary material	4	No	22120.38	Rupees Twenty-Two Thousand One Hundred Twenty Paise Thirty-Eight Only	88482.00
5	**Item No.: 5 - Electronic Soft Starters (IDS No 7)**					
	Providing, erecting and giving test and trial of Electronic Soft Starters with Built-In by pass contactor and all Motor Protections and external Semi-conductor fuses, Display and keypad, bus bars etc complete assembled in an SWG 14 IP23 and above Enclosure Application: - General Purpose Water Pumping Operational Voltage 380-600VAC Control Voltage 110-250VAC.					
	a) **335 HP**	6	No	409501.00	Rupees Four Lakh Nine Thousand Five Hundred One Only	2457006.00
	b) **150 HP**	3	No	239442.00	Rupees Two Lakh Thirty-Nine Thousand Four Hundred Forty-Two Only	718326.00
	c) **180 HP**	4	No	262350.00	Rupees Two Lakh Sixty-Two Thousand Three Hundred Fifty Only	1049400.00
6	**Item No.: 6 - Sluice Valves (IDS No 8)**					
	Providing and erecting of DIDF Glandless Sluice valves PN 1.6 rating with TPI etc. complete					
	a) 400 mm Pump Delivery	2	No	183743.00	Rupees One Lakh Eighty-Three Thousand Seven Hundred Forty-Three Only	367486.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	b) 350 mm W/W Inlet + 18 MLD Raw Water Pumps	11	No	152272.00	Rupees One Lakh Fifty-Two Thousand Two Hundred Seventy-Two Only	1674992.00
7	**Item No.: 7 - Reflux Valves (IDS No 9)**					
	Providing and erecting of **400 mm** CIDF Sluice valves PN 1.6 rating with TPI. **(At 24 MLD)**	2	No	123561.00	Rupees One Lakh Twenty-Three Thousand Five Hundred Sixty-One Only	247122.00
	Providing and erecting of **350 mm** CIDF Sluice valves PN 1.6 rating with TPI. **(At Kharvai and 55 MLD)**	11	No	103778.00	Rupees One Lakh Three Thousand Seven Hundred Seventy-Eight Only	1141558.00
8	**Item No.: 8 - MS/CI Pipes and Specials (IDS No 10)**					
	a) Providing and erecting DF MS Specials	14175	kg	92.00	Rupees Ninety-Two Only	1304100.00
	b) Providing and erecting CIDF DF Specials	10420	kg	88.00	Rupees Eighty-Eight Only	916960.00
	c) Providing and erecting 400 mm CIDF Pipes	80	Rmt	14951.00	Rupees Fourteen Thousand Nine Hundred Fifty-One Only	1196080.00
	d) Providing and erecting 350 mm CIDF Pipes	80	Rmt	12262.00	Rupees Twelve Thousand Two Hundred Sixty-Two Only	980960.00
9	**Item No.: 9 - Cable (IDS No 11)**					
	a) Supplying, erecting & terminating XLPE insulated, galvanised steel formed wire armoured (Round) cable 22 kV(E), 3 x 300 sq. mm. aluminium conductor laid in provided trench / pipe as per specification no. CB-HT	165	Rmt	3316.00	Rupees Three Thousand Three Hundred Sixteen Only	547140.00
	b) Providing and erecting Heat shrinkable outdoor termination kit for 11 kV (UE)/ 22 kV (E) XLPE HT cable 3x240 to 400 sq. mm. with necessary material as per specification no. CB-JT/HT	10	Rmt	24342.00	Rupees Twenty-Four Thousand Three Hundred Forty-Two Only	243420.00
	c) Supplying and erecting, XLPE/PVC insulated, armoured cable 1100V grade with					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	ISI mark, stranded aluminium conductor with 6mm thick 25 mm width M.S. spacer with G.I. Earth wire 6sqmm, complete erected on wall/on pole with 25X3 mm M.S. clamps or in provided trench in an approved manner					
	c) 1 Core x 400 mm^2 (Incomer Cable)	293	Rmt	775.00	Rupees Seven Hundred Seventy-Five Only	227075.00
	d) 1 Core x 630 mm^2 (Incomer Cable)	1000	Rmt	1207.00	Rupees One Thousand Two Hundred Seven Only	1207000.00
	e) 3.5 Core x 300 mm^2 (Pump Cable)	215	Rmt	1636.00	Rupees One Thousand Six Hundred Thirty-six Only	351740.00
10	**Item No.: 10 - RCC Duct and Hume Pipe (IDS No 12)**					
	Providing and laying RCC (M- 150) cable duct of size given below for laying electric cable including form work for cantering M.S. bar reinforcement, necessary excavation bolder filling, PCC (M100), compacting, curing, plastering, including providing and fixing 35 X 35 X 5 mm M.S. angles, RCC pre cast cover of Adequate length with 100 mm overlap on either walls etc complete and providing RCC pre cast covers. - Cable Duct 2 tier - 750 W x 1000 D	250	Rmt	1696.00	Rupees One Thousand Six Hundred Ninety-six Only	424000.00
	b) Supplying & laying (including excavation) half round reinforced cement concrete pipe of IS 458:2003 NP-2 class of 150 mm internal diameter in proper line, level and slope including providing and fixing collars in cement mortar 1:2 and curing etc. complete.	200	Rmt	508.00	Rupees Five Hundred Eight Only	101600.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
11	**Item No.: 11 - RCC M-200 (IDS No 13)**					
	Designing, Providing, RCC/CC Supports, thrust blocks for manifold pipe, valves in M-200 concrete with necessary reinforcement including excavation in allotypes of strata, frame work, curing, plastering etc.comp.as per detailed specifications.	5	Cum	7318.00	Rupees Seven Thousand Three Hundred Eighteen Only	36590.00
12	**Item No.: 12 - Dismantling Joint (IDS No 14)**					
	Providing, erecting and commissioning M.S. Dismantling joint as per requirement and Department's approved drawing and specifications, including machining and rubber rings and suitable for 16 kg/cm^2 working pressure with required flanges of suitable size with nut bolt set complete. - **400 mm**	2	No	37737.00	Rupees Thirty-seven Thousand Seven Hundred Thirty-seven Only	75474.00
	Providing, erecting and commissioning M.S. Dismantling joint as per requirement and Department's approved drawing and specifications, including machining and rubber rings and suitable for 16 kg/cm^2 working pressure with required flanges of suitable size with nut bolt set complete. - **350 mm**	11	No	28334.00	Rupees Twenty-eight Thousand Three Hundred Thirty-four Only	311674.00
13	**Item No.: 13 - Iron Work (IDS No 15)**					
	Providing structural steel work i.e., base frame channel for pump set & grill work etc also support for EOT	9	MT	114390.00	Rupees One Lakh Fourteen Thousand Three Hundred Ninety Only	1029510.00
14	**Item No.: 14 - Kinetic air valve (IDS No 16)**					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Providing and erecting 80 mm Tamperproof air valve	6	No	18028.00	Rupees Eighteen Thousand Twenty-eight Only	108168.00
15	**Item No.: 15 - Earthing (IDS No 17)**					
	a) Supplying, installation and testing of maintenance free earthing comprising of Electrode of 17.2 mm diameter Low Carbon Steel with 250-micron molecular copper bonded earthing rod of Length 3m along with 25 kg Carbon based environment friendly back fill ground enhancing compound required to fill up the excavated earth with required quantity complete, and recording the results Specification no. EA-MOBI	14	No	13805.00	Rupees Thirteen Thousand Eight Hundred Five Only	193270.00
	b) Supplying and erecting GI strip of high purity required size used for earthing on wall and/or any other purpose with necessary GI clamps fixed on wall painted with bituminous paint with joints required. As per specification no EA-EP.	141.25	kg	222.00	Rupees Two Hundred Twenty-two Only	31,358.00
16	**Item No.: 16 - APFC Panel (IDS No 18)**					
	Supplying and erecting 250 KVA, 3 phase, 50 Hz., Power contactors Derated for microprocessor APFC controller with MPP / APP type capacitor with Static VAR Compensator of 25 AMP 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP / APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main incomer	2	No	708344.00	Rupees Seven Lakh Eight Thousand Three Hundred Forty-four Only	1,416,688.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	and MCCB for each branch protection, as per specification no CP-ED/APFC					
17	**Item No.: 17 - Ultrasonic Insertion Type Flow Meter (IDS No 19)**					
	a) Providing, Installing, commissioning & Testing of battery operated Ultra-sonic Insertion type bulk type water meters as per ISO:4064 for ESR Inlets with all mandatory accessories with TPI	20	No	278895.00	Rupees Two Lakh Seventy-eight Thousand Eight Hundred Ninety-five Only	5,577,900.00
	b) Providing and fitting Panel Cabinet for fixing flowmeter transmitter with proper locking arrangement with glass window on front door for seeing the readings of flow transmitter and data logger without opening of the panel cabinet. It should house complete ancillaries and including the provision for connection of electrical power supply from nearby apparatus. The panel Cabinet Shall be pre wired & with suitable gland entire M.S. Canopy fabricated from M.S. plate for housing Electromagnetic Flow meter including cutting, welding, fabricating etc. complete.	20	No	6603.00	Rupees Six Thousand Six Hundred Three Only	132,060.00
18	**Item No.: 18 - Gas Chlorination System (IDS No 21)**					
	Providing. Erecting, commissioning and g giving test and trial of gas chlorination system confirmation to all applicable compressed Gas Association recommendations and comprising of following : Vacuum operated chlorinator unit	4	No	502793.00	Rupees Five Lakh Two Thousand Seven Hundred Ninety-three Only	2,011,172.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	of capacity as mentioned below One set of Rota meter assembly and control valve assembly, one set of Remote injector assembly(1W+1S),10 RMT of vacuum tubing ,10 meters of uPVC piping for chlorine solution & suitable booster pumps (1W +1S) with 10 meters water inlet piping ,valves, fittings etc. Automatic switchover type vacuum regulators (2 nos) or with vacuum operated switchover system. Control panel of suitable capacity wall mounted industrial type with voltmeter, ammeter, starter, MCB indicating lamps. Preventive maintenance kit for injector, Rotameter & vacuum regulator including erection. - **10 kg/hr**					
19	**Item No.: 19 - Repairs to CLF (IDS No 22)**					
	Repairs to CLF Flocculator and End Carriage Assembly of 24, 18 MLD WTP including replacement of bridge	2	Job	2200000.00	Rupees Twenty-two Lakh Only	4,400,000.00
20	**Item No.: 20 - Vibration Monitoring System (IDS No 23)**					
	Supplying Installing Testing Commissioning Vibration Monitoring System on VT Pump	10	Nos	157500.00	Rupees One Lakh Fifty-seven Thousand Five Hundred Only	1,575,000.00
21	**Item No.: 21 - Motor Protection Relays (IDS No 24)**					
	Providing, installing numerical motor protection relay for motors controlled through circuit breaker / with vacuum contactor, providing instantons 3 ph overcurrent, unbalance and single phasing,	9	Nos	67304.00	Rupees Sixty-seven Thousand Three Hundred Four Only	605,736.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	earth fault and separate built in stalling portion similar to ABB make type REM 601 or similar					
22	**Item No.: 22 - EOT Crane (IDS No 25)**					
	a) Providing, erecting and commissioning single girder Electrically Operated Rectangular Overhead Travelling Crane with 16 m lift complete with wire rope hoist, class II duty, all three motions electrically operated by suitable rating motor IP 54, control panel and down pendant control block. with TPI - **10 T and 8-10 m**	1	No	1540832.00	Rupees Fifteen Lakh Forty Thousand Eight Hundred Thirty-two Only	1,540,832.00
	b) Providing, erecting and fixing square bar of EN 8 as rail for overhead crane on provided track, girder / continuous corbel beam, including supporting plate and "J" bolts. - **50 x 50 mm**	30	Rmt	2453.00	Rupees Two Thousand Four Hundred Fifty-three Only	73,590.00
23	**Item No.: 23 - Surveillance System (IDS No 26)**					
	Designing, supplying, installing, commissioning & testing of CCTV IR water proof camera suitable for up to 100ft. with control key board, DVR, Hard Disk, cables, UPT trans receivers etc. complete with not less than following specifications. 1. Four numbers of IP Camera with night vision functionality with range up to 30 meters. Camera construction shall be suitable for weather proof outdoor installation. 2. Eight Channel DVR with metal body construction, having software features of motion detect	11	Set	56336.00	Rupees Fifty-six Thousand Three Hundred Thirty-six Only	619,696.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	recording. 3. 3.5inch 2 GB HDD 4. 8 port POE Switch 5. 32inch LED Screen, Keyboard & mouse.					
24	**Item No.: 24 - Level Transmitter (IDS No 27)**					
	a) Designing, Supplying, Installing, commissioning & testing of Ultrasonic Radar type Ultrasonic level transmitter CE marked with following technical parameters at Raw Water Pump House and Interfacing with PLC panel including mounting arrangement. Display - 4" LED Range- 0 to …30... mtrs Accuracy - +/- 0.25% of Full Scale or better Enclosure- IP 68 Mounting - On PLC panel	1	No	75207.00	Rupees Seventy-five Thousand Two Hundred Seven Only	75,207.00
	b) Designing, Supplying, Installing, commissioning & testing of GPRS / GSM Based Operating system for Data communication	1	No	50300.00	Rupees Fifty Thousand Three Hundred Only	50,300.00
25	**Item No.: 25 - Emergency Shut Off Drive (IDS No 28)**					
	SITC of Electronic Shut off Drive & ESD Panel for Twin tonner Gas Chlorination System including sensor cables etc..	3	No	3000000.00	Rupees Thirty Lakh Only	9,000,000.00
28	**Item No.: 26 - Electrification (IDS No 33)**	1	Job	2901521.00	Rupees twenty-nine Lakh One Thousand Five Hundred Twenty-one Only	2,901,521.00
	Providing and erecting outdoor electrification (Area Lighting)					-
29	**Item No.: 27 - LT Cubical Panel (IDS No 34)**					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	a) Providing and erecting L.T. Cubical type Panel Board including all standard switchgears and suitable for above pump arrangement. With TPI	1	No	3277251.00	Rupees Thirty-two Lakh Seventy-seven Thousand Two Hundred Fifty-one Only	3,277,251.00
30	**Item No.: 28 - Valve Actuators (IDS No 8)**					
	Providing, erecting Electric Valve Actuator for non-rising spindle type sluice valve of PN 1 & PN 1.6 rating, totally enclosed, weather-proof and dust proof construction with IP-67, protection class etc. complete including distribution panel					
	a) 400 mm Pump Delivery	2	No	121796.00	Rupees One Lakh Twenty-one Thousand Seven Hundred Ninety-six Only	243592.00
	b) 350 mm W/W Inlet + 18 MLD Raw Water Pumps	10	No	118907.00	Rupees One Lakh Eighteen Thousand Nine Hundred Seven Only	1189070.00
					Total Rs.	**123,531,996.00**
	Sub work No 7.2: - Providing Erecting Testing and Commissioning of Pure Water Pumping Machinery with allied equipment's at 60 MLD WTP					
1	**Item No.: 1- Vertical Turbine Pump set (IDS No 2)**					
	Designing, Providing, installing, commissioning with test & trial of water Lubricated type V.T. Pump set with 5 mtr column assembly capable of discharging water of **335 LPS** against a total head of **30 mtr** operating @ 980rpm, approx. synchronous speed from all causes including bowl assembly, column pipe assembly, discharge head, motor stool, Sole plate, frame, Pressure gauge, channel iron & as per detailed specifications etc complete. (2 Nos working + 1 No standby)	3	No	3611214.00	Rupees Thirty-six Lakh Eleven Thousand Two Hundred Fourteen Only	10,833,642.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
2	**Item No.: 2 - Dismantling Joint (IDS No 14)**					
	Providing, erecting and commissioning M.S. Dismantling joint as per requirement and Department's approved drawing and specifications, including machining and rubber rings and suitable for 16 kg/cm2 working pressure with required flanges of suitable size with nut bolts etc complete. The joint should have through long bolts so that during normal working pressure there should be no sliding movement of sliding flanges. L.O.F. (length over flange) should not be less than 75% of dia. - **400 mm**	3	No	37737.00	Rupees Thirty-seven Thousand Seven Hundred Thirty-seven Only	113,211.00
3	**Item No.: 3 - Reflux Valve (IDS No 9)**					
	Providing erecting Cast Steel /Spheroidal Graphite (S.G.) Iron D/F Reflux Valves of class 150 Single Door with jointing to pipe work (including all hardware and packing) water works quality with jointing to pipe without bypass arrangement, with gunmetal seats including inspection charges, transportation up to departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. completed but excluding C. Foundation / structural steel support. 400 mm	3	No	152362.00	Rupees One Lakh Fifty-two Thousand Three Hundred Sixty-two Only	457,086.00
4	**Item No.: 4 - Sluice Valve (IDS No 8)**					
	Providing erecting 400 mm Cast Steel/ Spheroidal Graphite (S.G) Iron D/F Sluice Valves /Butterfly Valves of class 150 with jointing to pipe work (including all hardware and packing) water works quality, having non-rising spindle with hand wheel and without bypass	3	No	183743.00	Rupees One Lakh Eighty-three Thousand Seven Hundred Forty-three Only	551,229.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	arrangement, spindle of stainless steel as per requirement, inspection charges, transportation up to departmental store, unloading, stacking, excluding GST levied by GOI & GOM in all respect etc. excluding C. C. foundation / structural steel support.					
5	**Item No.: 5 - MS Pipes and Specials (IDS No 10)**					
	Providing erecting 400mm dia M.S.D/F Pipes & Specials	11684	Kg	95.00	Rupees Ninety-five Only	1,109,980.00
6	**Item No.: 6 - Structural Steel Work (IDS No 15)**					
	Providing structural steel work in rolled sections like joists, channels, angles, tees, etc. as per detailed designs and drawings including fixing in position without coats of oil painting of approved quality etc. complete.	0.5	MT	84020.00	Rupees Eighty-four Thousand Twenty Only	42,010.00
7	**Item No.: 7 - R.C.C. work (IDS No 13)**					
	Designing, Providing/CC Supports, thrust blocks for manifold pipes, valves in M-200 concrete with necessary reinforcement including excavation in all types of strata, frame work, curing, plastering etc.comp.as per detailed specifications.	3	Cum	7318.00	Rupees Seven Thousand Three Hundred Eighteen Only	21,954.00
8	**Item No.: 8 - Electric Valve Actuator (IDS No 8)**					
	Providing, erecting electric Valve actuators for non-rising spindle valve of size **400 mm** dia.PN 1.6 rating totally enclosed, weather-proof and dust proof construction with IP-67, protection class suitable for installation in any position without lubrication, leakage or other operational	3	No	115796.00	Rupees One Lakh Fifteen Thousand Seven Hundred Ninety-six Only	347,388.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	difficulty with special grease filled gear box and hand wheel for emergency manual operation which will automatically dis-engage on restoration of power to motor and with 10 watt single phase space heater and continuous local mechanical position indicator and individually replaceable counter gear assembly and with two torque and four limit switches with S.S. flap and operated with gear driven cams and of rating 250 Volt, 5 Amp, AC/DC, torque switch dial and with TEFC squirrel cage induction motor working on 440 Volts +/- 10%, 3 phase, 50 Hz AC of intermittent duty rating S-2, insulation class "F" and temp rise restricted to class "B" with IP - 67 protection class suitable for DOL starting and with three thermostat and 30% over load margin. The torque rating of reduction gear box shall be at least 1.5 times max. torque required for opening and closing of valve with integral starter for ON & OFF operation					
9	**Item No.: 9 - Kinetic Double orifice 150 mm Air Valve (IDS No 16)**					
	Providing and supplying Kinetic Double Orifice type 200 mm PN 1.6 rating Air Valves confirming to IS 14845 as per MJP's standard specifications having small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, with built-in Kinetic features, isolating sluice valve mounted in horizontal position and operated by wheel gearing, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation up to departmental stores, excluding GST levied by GOI & GOM in	1	No	27485.00	Rupees Twenty-seven Thousand Four Hundred Eighty-five Only	27,485.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	all respect etc. complete.					
10	**Item No.: 10 - EOT Crane (10 MT) (10Mtr Span) (12mtr lift) (IDS No 25)**					
	Providing, installing, comm. With test & trial of double Girder Electrical operating Travelling crane (EOT) suitable for 10 Ton capacity for 30x20m pumphouse including C.P. Block Travelling trolley, Square bar, gantry girder, all associated electrical equipment's, DSL system, wire rope etc & as per detailed specifications etc comp.	1	No	1534832.00	Rupees Fifteen Lakh Thirty-four Thousand Eight Hundred Thirty-two Only	1,534,832.00
11	**Item No.: 11 - Full bore Electromagnetic Flowmeter (IDS No 20)**					
	Supply, install and commission of 800 mm dia. Electromagnetic Flow Meter (EMF) As Per ISO 4064, for Raw/Pure water with accuracy +/-0.5% of measured value & protection as per given specifications for size 100 mm-1000mm including sensor, transmitter surge arrestor, cable GI duct if suitable size for 25 mtrs built in GSM (with Sim card and its charges, valid for 36 months) including the pipe cutting, levelling and installation of flow meter in the pipelines with necessary tool tackles, cranes including 36 months guarantee etc complete, as may be required at site & based on technical specifications.	1	No	634881.00	Rupees Six Lakh Thirty-four Thousand Eight Hundred Eighty-one Only	634,881.00
12	**Item No.: 12 - VSS Motor (IDS No 4)**					
	Providing, erecting and giving test and trial of vertical Solid shaft motor 1000 RPM, squirrel cage induction motor, conforming to IS 12615, class IE4 IP55 premium, having continuous rating suitable for operation at 415 Volts +/-10%,	3	No	1317928.00	Rupees Thirteen Lakh Seventeen Thousand Nine Hundred Twenty-eight Only	3,953,784.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	3 Phase, 50 Hz +/-5% with "F" class insulation temperature rise limited to class "B" insulation. with TPI. - **250 HP**					
13	**Item No.: 13 - Hermetically Sealed Transformer (IDS No 35)**					
	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 800 kVA, Natural Ester Oil immersed and naturally cooled outdoor type, Copper wound ,without gas cushioning ,hermetically Sealed transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 45°C by thermometer in oil and 50°C by the resistance method in winding at full load rating, using type B winding insulation (kraft paper) with HV tapping (with on load tap changer) on load +5 to -15 in steps of 2.5%, with standard accessories complete with test certificate with losses below 2401 Watts at 50% load, 6723 Watts at 100% load as per IS:1180 (part 1) : 2014 with necessary permissions of Electrical Inspector, as per specification no SS- TRS.	2	No	1953551.41	Rupees Nineteen Lakh Fifty-three Thousand Five Hundred Fifty-one Paise Forty-one Only	3,907,103.00
14	**Item No.: 14 - RMU (IDS No 6)**					
	a) Supplying, installing, testing and commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 3way outdoor, extensible motorised SCADA compatible RMU, internal arc tested as per electric supply company specification consisting of 1 no. feeder with 1 LBS and 2 nos. feeder with 2 VCB. compliant to IEC 62271 - 100, 200 and 102, as per specification no. SW-HTS/RMU SCADA	1	No	1036790.00	Rupees Ten Lakh Thirty-six Thousand Seven Hundred Ninety Only	1,036,790.00
	b) Supplying, erecting foundation structure for	1	No	35294.50	Rupees Thirty-five Thousand Two	35,294.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	RMU for cable entry etc.				Hundred Ninety-four Paise Fifty Only	
	c) Providing and erecting Silicon Coated Touchproof Indoor Termination Joint Kit 22 kV (E) XLPE HT cable 3x95 sq. mm. with necessary material	1	No	22120.38	Rupees Twenty-two Thousand One Hundred Twenty Paise Thirty-eight Only	22,120.00
15	**Item No.: 15 - Metering Kiosk (IDS No 36)**					
	Supplying, erecting, testing and commissioning 22KV HT metering cubical (compact type) approved by MSEDCL / licensee fabricated with 2 mm (14 SWG) M.S. sheets with supporting angle, painted with powder coating / epoxy paint of required shade, copper bus bar size 25 x 6 mm, heavy duty mechanical lock, with counter meter for measuring no. of times the opening of meter door, top side cover (CT, PT cover) interlock with meter door, epoxy casted 3 nos. CT having required ratio between 5/5A to 25/5A, VA 10 or 15, Class 0.5S, epoxy casted 3 nos. PT having ratio 22000/V3/110/V3 VA 50, Class 0.5 suitable for provided trisector meter, and provision for incoming and outgoing cables complete duly tested by licensee with necessary test certificates and erected on provided plinth/ cc foundation.	1	No	190452.00	Rupees One Lakh Ninety Thousand Four Hundred Fifty-two Only	190,452.00
16	**Item No.: 16 - Cables (IDS No 11)**					
	Designing, providing, erecting, commissioning & testing of cables as per detailed specifications etc comp.					
	a) XLPE 22 kV 3 core cable 95 Sq mm from point of supply to Kiosk to HT indoor Panel to 2 Transformers.	75	Mtr	1770.00	Rupees One Thousand Seven Hundred Seventy Only	132,750.00
	b) XLPE 1.1 kV 3 run X 3.5 core X 400 Sq mm from LT Transformer to 0.415 V LT indoor panel board	200	Mtr	2041.00	Rupees Two Thousand Forty-one Only	408,200.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	c) XLPE 1.1 kV single run X3 core X 400 Sq mm from Panel board to Motor & Capacitors	200	Mtr	1649.00	Rupees One Thousand Six Hundred Forty-nine Only	329,800.00
	d) XLPE ,4 core X 16 sq mm copper cable (for crane)	50	Mtr	863.00	Rupees Eight Hundred Sixty-three Only	43,150.00
	e) XLPE ,4 core X 6 sq mm copper cable for actuators, lighting etc	50	Mtr	396.00	Rupees Three Hundred Ninety-six Only	19,800.00
	(f) Providing, fixing aluminium & copper lugs and glands suitable for all types of cables etc comp.	1	Job	10000.00	Rupees Ten Thousand Only	10,000.00
17	**Item No.: 17 - Cable Trays (IDS No 11)**					
	Providing & erecting Hot dipped galvanized cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 200 mm width & 20 mm height complete with necessary hardware in approved manner.	80	No	455.00	Rupees Four Hundred Fifty-five Only	36,400.00
18	**Item No.: 18 - LT Panel (IDS No 34)**					
	Providing and fixing LT panel board comprises of incomer, Bus bar and 5 outgoing feeders for LT motors including Fixed type capacitors for each feeder etc complete	1	No	616367.00	Rupees Six Lakh Sixteen Thousand Three Hundred Sixty-seven Only	616,367.00
19	**Item No.: 19 - APFC Panel (IDS No 18)**					
	Supplying and erecting 250 KVA r, 3 phase, 50 Hz., Power contactors Derated for microprocessor APFC controller with MPP / APP type capacitor with Static VAR Compensator of 25 AMP 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP / APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main incomer and MCCB for each branch protection, as per specification no CP-ED/APFC	1	No	708344.00	Rupees Seven Lakh Eight Thousand Three Hundred Forty-four Only	708,344.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
20	**Item No.: 20 - Soft Starter (IDS No 7)**					
	Providing, erecting and giving test and trial of Electronic Soft Starters with Built-In by pass contactor and all Motor Protections and external Semi-conductor fuses, Display and keypad, bus bars etc complete assembled in an SWG 14 IP23 and above Enclosure Application: - General Purpose Water Pumping Operational Voltage 380-600VAC Control Voltage 110-250VAC... **-270 HP**	3	No	346324.00	Rupees Three Lakh Forty-six Thousand Three Hundred Twenty-four Only	1,038,972.00
21	**Item No.21: -Earthing system (IDS No 17)**					
	Designing, providing, erecting, commissioning & testing of earth electrode, earth pit, chamber, earth bus, earthing etc. For11KV ,6.6KV,415Volts system complete as per detailed specifications etc comp.					
	(a) Pipe type or plate type earthing for structure, LA , fencing, CT, PT, Transformer, motor etc comp.	30	No.	4714.00	Rupees Four Thousand Seven Hundred Fourteen Only	141,420.00
	(b) G.I. Strip of 50X6mm for above earthing etc comp.	200	Kg.	452.00	Rupees Four Hundred Fifty-two Only	90,400.00
	(c) Copper strip of required size for above earthing etc.	300	Kg.	1164.00	Rupees One Thousand One Hundred Sixty-four Only	349,200.00
22	**Item No. 22: - Internal & External Electrification of pump house and Area lighting (IDS No 33)**					
	Designing, providing, erecting, commissioning & testing of electrification to pump house & area lighting as per detailed specifications etc comp.	1	set	297000.00	Rupees Two Lakh Ninety-seven Thousand Only	297,000.00
23	**Item No.23: - Firefighting Equipment (IDS No 40)**					
	Designing, providing, erecting , commissioning					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	& testing of & safety equipment and tools as per detailed specifications etc comp.					
	(a) Instruction chart- 2 Nos.	2	No.	64.00	Rupees Sixty-four Only	128.00
	(b) Rubber hand gloves - 2 Pairs.	2	Pair.	393.00	Rupees Three Hundred Ninety-three Only	786.00
	(c) Fire buckets - 4 Nos.	4	No.	363.00	Rupees Three Hundred Sixty-three Only	1,452.00
	(d) Mounting stand for 4 buckets	1	No.	1672.00	Rupees One Thousand Six Hundred Seventy-two Only	1,672.00
	(e) First Aid Box	1	No.	292.00	Rupees Two Hundred Ninety-two Only	292.00
	(f) Rubber matting 12mm	30	Sqmt	1732.00	Rupees One Thousand Seven Hundred Thirty-two Only	51,960.00
	(g) Fire Extinguisher 5 Kg DCP	4	No.	2186.00	Rupees Two Thousand One Hundred Eighty-six Only	8,744.00
24	**Item No.24: - Tools (IDS No 39)**					
	Providing the St. Tools required as per the list enclosed.		Job	95840.00	Rupees Ninety-five Thousand Eight Hundred Forty Only	
25	**Item No.25:- Test & Trial (IDS No 37)**					
	Testing, operating & trial of pumping machinery & all allied equipment as per direction of Engineer in charge etc comp. For 3 months after commissioning etc.	3	Month	71400.00	Rupees Seventy-one Thousand Four Hundred Only	214,200.00
					Total Rs.	**29,320,278.00**
	Sub work No 7.3: - Pure Water Pump V.T. Pump sets & allied electromechanical works For Joveli ESR at 7.2 &5 MLD WTP					
1	**Item No.: 1 - Electric Valve Actuator (IDS No 8)**					
	Providing, erecting electric Valve actuators for non-rising spindle valve of size **250 mm** dia.PN 1.6 rating totally enclosed, weather-proof and dust proof construction with IP-67, protection class suitable for installation in any position	2	No	103177.00	Rupees One Lakh Three Thousand One Hundred Seventy-seven Only	206354.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	without lubrication, leakage or other operational difficulty with special grease filled gear box and hand wheel for emergency manual operation which will automatically dis-engage on restoration of power to motor and with 10 watt single phase space heater and continuous local mechanical position indicator and individually replaceable counter gear assembly and with two torque and four limit switches with S.S. flap and operated with gear driven cams and of rating 250 Volt, 5 Amp, AC/DC, torque switch dial and with TEFC squirrel cage induction motor working on 440 Volts +/- 10%, 3 phase, 50 Hz AC of intermittent duty rating S-2, insulation class "F" and temp rise restricted to class "B" with IP - 67 protection class suitable for DOL starting and with three thermostat and 30% over load margin. The torque rating of reduction gear box shall be at least 1.5 times max. torque required for opening and closing of valve with integral starter for ON & OFF operation					
2	**Item No.: 2 - Kinetic Double orifice Air Valve**					
	Kinetic Double orifice cast steel 150 mm Air Valve Providing and supplying Kinetic Double Orifice type 200 mm PN 1.6 rating Air Valves confirming to IS 14845 as per MJP's standard specifications having small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, with built-in Kinetic features, isolating sluice valve mounted in horizontal position and operated by wheel gearing, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation up to departmental	1	No	27485.00	Rupees Twenty-seven Thousand Four Hundred Eighty-five Only	27485.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	stores, excluding GST levied by GOI & GOM in all respect etc. complete. (MJP SSR 23-24 I.no.9 page 151)					
3	**Item No.: 3 - Cables (IDS No 11)**					
	Designing, providing, erecting, commissioning & testing of cables as per detailed specifications etc comp.					
	a) XLPE 1.1 kV 1 run X 3.5 core X 240 Sqmm from Transformer to LT indoor panel board (item no7-2-28 pg.130 PWD Elec.)	100	Mtr	11514.00	Rupees Eleven Thousand Five Hundred Fourteen Only	1151400.00
4	**Item No.: 4 - Internal & External Electrification of pump house and Area lighting**					
	Designing, providing, erecting, commissioning & testing of electrification to pump house & area lighting as per detailed specifications etc comp. (As per RA)	1	Mtr	175000.00	Rupees One Lakh Seventy-five Thousand Only	175000.00
7	**Item No.5: - Test & Trial (IDS No 34)**					
	Testing, operating & trial of pumping machinery & all allied equipment as per direction of Engineer in charge etc comp. For 3 months after commissioning etc.	3	Month	71400.00	Rupees Seventy-one Thousand Four Hundred Only	214200.00
					Total Rs.	**1,774,439.00**
	Sub work No 7.4: - Pure Water Pumping Machinery for shirgaon ESR at 18 MLD WTP					
1	**Item No.: 1- Vertical Turbine Pump set (IDS No 2)**					
	Designing, Providing, installing, commissioning with test & trial of water Lubricated type V.T. Pump set with 5 mtr column assembly capable of discharging water of **105 LPS** against a total head of **50 mtr** operating @ 1450rpm, approx. synchronous speed from all causes including bowl assembly, column pipe assembly, discharge	3	No	2589787.66	Rupees Twenty-five Lakh Eighty-nine Thousand Seven Hundred Eighty-seven Paise Sixty-six Only	7769363.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	head, motor stool, Sole plate, frame, Pressure gauge, channel iron & as per detailed specifications etc complete. (1W+1S)					
2	**Item No.: 2 - Dismantling Joint (IDS No 14)**					
	Providing, erecting and commissioning M.S. Dismantling joint as per requirement and Department's approved drawing and specifications, including machining and rubber rings and suitable for 16 kg/cm2 working pressure with required flanges of suitable size with nut bolts etc complete. The joint should have through long bolts so that during normal working pressure there should be no sliding movement of sliding flanges. L.O.F. should not be less than 75% of dia. **-250 mm**	3		17333.00	Rupees Seventeen Thousand Three Hundred Thirty-three Only	51999.00
3	**Item No.: 3 - Reflux Valve (IDS No 9)**					
	Providing erecting **250 mm** Cast Steel /Spheroidal Graphite (S.G.) Iron D/F Reflux Valves of class 150 Single Door with jointing to pipe work water works quality with jointing to pipe without bypass arrangement, with gunmetal seats including inspection charges, transportation up to departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. completed but excluding C. Foundation / structural steel support.	3		101569.00	Rupees One Lakh One Thousand Five Hundred Sixty-nine Only	304707.00
4	**Item No.: 4 - Sluice Valve (IDS No 8)**					
	Providing erecting **250 mm** Cast Steel/ Spheroidal Graphite (S.G) Iron D/F Sluice Valves /Butterfly Valves of class 150 with jointing to pipe work (including all hardware and packing) water works quality, having non-rising	3		81401.00	Rupees Eighty-one Thousand Four Hundred One Only	244203.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	spindle with hand wheel and without bypass arrangement, spindle of stainless steel as per requirement, inspection charges, transportation up to departmental store, unloading, stacking, excluding GST levied by GOI & GOM in all respect etc. excluding C. C. foundation / structural steel support.					
5	**Iten No.5: - Providing & fixing M.S. pipes & Specials (IDS No 10)**	7765	Kg	95.00	Rupees Ninety-five Only	737675.00
6	**Item No.: 6 - Structural Steel Work (IDS No 15)**					
	Providing structural steel work in rolled sections like joists, channels, angles, tees, etc. as per detailed designs and drawings including fixing in position without coats of oil painting of approved quality etc. complete.	5	MT	84020.00	Rupees Eighty-four Thousand Twenty Only	420100.00
7	**Item No.: 7 - R.C.C. work (IDS No 13)**					
	Designing, Providing, RCC/CC Supports, thrust blocks for manifold pipes, valves in M-200 concrete with necessary reinforcement including excavation in all types of strata, frame work, curing, plastering etc.comp.as per detailed specifications.	2	Cum	7318.00	Rupees Seven Thousand Three Hundred Eighteen Only	14636.00
8	**Item No.: 8 - Electric Valve Actuator (IDS No 8)**					
	Providing, erecting electric Valve actuators for non-rising spindle valve of size **250 mm** dia.PN 1.6 rating totally enclosed, weather-proof and dust proof construction with IP-67, protection class suitable for installation in any position without lubrication, leakage or other operational difficulty with special grease filled gear box and hand wheel for emergency manual operation	3	No	103177.00	Rupees One Lakh Three Thousand One Hundred Seventy-seven Only	309531.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	which will automatically dis-engage on restoration of power to motor and with 10 watt single phase space heater and continuous local mechanical position indicator and individually replaceable counter gear assembly and with two torque and four limit switches with S.S. flap and operated with gear driven cams and of rating 250 Volt, 5 Amp, AC/DC, torque switch dial and with TEFC squirrel cage induction motor working on 440 Volts +/- 10%, 3 phase, 50 Hz AC of intermittent duty rating S-2, insulation class "F" and temp rise restricted to class "B" with IP - 67 protection class suitable for DOL starting and with three thermostat and 30% over load margin. The torque rating of reduction gear box shall be at least 1.5 times max. torque required for opening and closing of valve with integral starter for ON & OFF operation					
9	**Item No.: 9 - Kinetic Double orifice 150 mm Air Valve (IDS No 16)**					
	Providing and supplying Kinetic Double Orifice type 200 mm PN 1.6 rating Air Valves confirming to IS 14845 as per MJP's standard specifications having small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, with built-in Kinetic features, isolating sluice valve mounted in horizontal position and operated by wheel gearing, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation up to departmental stores, excluding GST levied by GOI & GOM in all respect etc. complete.	1	No	27485.00	Rupees Twenty-seven Thousand Four Hundred Eighty-five Only	27485.00
10	**Item No.: 10 - HOT Crane (5 MT) (8Mtr**					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Span) (6mtr lift) (IDS No 38)					
	Providing, installing, comm. With test & trial of double Girder Hand operating Travelling crane (HOT) suitable for 5 Ton capacity for pumphouse including C.P. Block, Travelling trolley, Square bar, gantry girder, all associated electrical equipment's, DSL system, wire rope etc & as per detailed specifications etc comp.	1	No	390901.00	Rupees Three Lakh Ninety Thousand Nine Hundred One Only	390901.00
11	**Item No.: 11 - Ultrasonic Insertion Fixed Type Flow Meter (IDS No 19)**					
	Providing, installing and giving satisfactory test & trial of ultrasonic Insertion Fixed type flow meter working on conditions & specifications, calibration, inspection, testing, training, guarantee and manufacturers test certificate/ declaration copy along with accessories as mentioned in a (1) to (16) below & with inbuilt assembly to fix the insertion type transducer on the pipeline	1	No	272895.00	Rupees Two Lakh Seventy-two Thousand Eight Hundred Ninety-five Only	272895.00
12	**Item No. : 12 - VSS Motor (IDS No 4)**					
	Providing, erecting and giving test and trial of vertical Solid shaft motor 1500 RPM, squirrel cage induction motor, conforming to IS 12615, class IE4 IP55 premium, having continuous rating suitable for operation at 415 Volts +/-10%, 3 Phase, 50 Hz +/-5% with "F" class insulation temperature rise limited to class "B" insulation. with TPI. - **100 HP**	3	No	531359.00	Rupees Five Lakh Thirty-one Thousand Three Hundred Fifty-nine Only	1594077.00
15	**Item No.: 15 - Cables (IDS No 11)**					
	Designing, providing, erecting, commissioning & testing of cables as per detailed specifications etc comp.					
	a) XLPE 1.1 kV 1 run X 3.5 core X 240 Sq mm	150	Mtr	11514.00	Rupees Eleven Thousand Five Hundred	1727100.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	from Transformer to LT indoor panel board				Fourteen Only	
	b) XLPE 1.1 kV 3 core X 95 Sqmm from Panel board to starter to Motor & Capacitors	150	Mtr	629.00	Rupees Six Hundred Twenty-nine Only	94350.00
	c) XLPE ,4 core X 16 sq mm copper cable (for crane)	50.0	Mtr	863.00	Rupees Eight Hundred Sixty-three Only	43171.00
	d) XLPE ,4 core X 6 sq mm copper cable for actuators, lighting etc	50	m	396.00	Rupees Three Hundred Ninety-six Only	19800.00
	e) Providing, fixing aluminium & copper lugs and glands suitable for all types of cables etc comp.	1	LS	10000.00	Rupees Ten Thousand Only	10000.00
16	**Item No.16: Cable Trays (IDS No 11)**					
	Providing & erecting Hot dipped galvanized cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 200 mm width & 20 mm height complete with necessary hardware in approved manner.	50.09	Mtr	455.00	Rupees Four Hundred Fifty-five Only	22791.00
17	**Item No.17: L.T. Panel board (IDS No 34)**					
	Providing and fixing LT panel board comprises of 1 incomer bar and 3 outgoing feeders for **100 HP** motors including Fixed type capacitors of 100 KVAR for each feeder etc complete.	1	No	574174.00	Rupees Five Lakh Seventy-four Thousand One Hundred Seventy-four Only	574174.00
18	**Item No.18: Soft Starter (IDS No 7)**					
	Providing, erecting and giving test and trial of Electronic Soft Starters with Built-In by pass contactor and all Motor Protections and external Semi-conductor fuses, Display and keypad, bus bars etc complete assembled in an SWG 14 IP23 and above Enclosure Application: - General Purpose Water Pumping Operational Voltage 380-600VAC Control Voltage 110-250VAC... **-120 HP**	3	No	203417.00	Rupees Two Lakh Three Thousand Four Hundred Seventeen Only	610251.00
19	**Item No.19: Earthing System (IDS No 17)**					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Designing, providing, erecting, commissioning & testing of earth electrode, earth pit, chamber, earth bus, earthing etc. For 11KV ,6.6KV,415Volts system complete as per detailed specifications etc comp.					
	(a) Pipe type or plate type earthing for structure, LA, fencing, CT, PT, Transformer, motor etc comp.	10.00	No	1500.00	Rupees One Thousand Five Hundred Only	15001.00
	(b) G.I. Strip of 50X6mm for above earthing etc comp.	300	Kg	222.00	Rupees Two Hundred Twenty-two Only	66600.00
	(c) Copper strip of required size for above earthing etc.	200	Kg	883.00	Rupees Eight Hundred Eighty-three Only	176600.00
20	**Item No.20: - Internal & External Electrification of pump house and Area lighting (IDS No 33)**					
	Designing, providing, erecting, commissioning & testing of electrification to pump house & area lighting as per detailed specifications etc comp.	1	set	297000.00	Rupees Two Lakh Ninety-seven Thousand Only	297000.00
21	**Item No.21: - Firefighting Equipment (IDS No 40)**					
	Designing, providing, erecting, commissioning & testing of & safety equipment and tools as per detailed specifications etc comp.					
	(a) Instruction chart- 2 Nos.	2	No.	151.00	Rupees One Hundred Fifty-one Only	302.00
	(b) Rubber hand gloves - 2 Pairs.	2	Pair.	681.00	Rupees Six Hundred Eighty-one Only	1362.00
	(c) Fire buckets - 4 Nos.	4	No.	363.00	Rupees Three Hundred Sixty-three Only	1452.00
	(d) Mounting stand for 4 buckets	1	No.	1672.00	Rupees One Thousand Six Hundred Seventy-two Only	1672.00
	(e) First Aid Box	1	No.	888.00	Rupees Eight Hundred Eighty-eight Only	888.00
	(f) Rubber matting 12mm	30	Sqmt	5131.00	Rupees Five Thousand One Hundred Thirty-one Only	153930.00
	(g) Fire Extinguisher 4.5 Kg	4	No.	10397.00	Rupees Ten Thousand Three Hundred	41588.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
					Ninety-seven Only	
22	**Item No.22: - Test & Trial (IDS No 37)**					
	Testing, operating & trial of pumping machinery & all allied equipment as per direction of Engineer in charge etc comp. For 3 months after commissioning etc: -	3	Month	321300.00	Rupees Three Lakh Twenty-one Thousand Three Hundred Only	963900.00
					Total Rs.	**16,959,504.00**
	Sub work No 7.5: -Pure Water Pump V.T. Pump sets & allied electromechanical works for Gandhinagar ESR at 15 MLD WTP					
1	**Item No.: 1- Vertical Turbine Pump set (IDS No 2)**					
	Designing, Providing, installing, commissioning with test & trial of water Lubricated type V.T. Pump set with 5 mtr column assembly capable of discharging water of **85 LPS** against a total head of **58 mtr** operating @ 1450rpm, approx. synchronous speed from all causes including bowl assembly, column pipe assembly, discharge head, motor stool, Sole plate, frame, Pressure gauge, channel iron & as per detailed specifications etc complete. (1W+1S)	2	No	1500000	Rupees Fifteen Lakh Only	3000000.00
2	**Item No.: 2 - Dismantling Joint (IDS No 14)**					
	Providing, erecting and commissioning M.S. Dismantling joint as per requirement and Department's approved drawing and specifications, including machining and rubber rings and suitable for 16 kg/cm2 working pressure with required flanges of suitable size with nut bolts etc complete. The joint should have through long bolts so that during normal working pressure there should be no sliding	2	No	17333	Rupees Seventeen Thousand Three Hundred Thirty-three Only	34666.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	movement of sliding flanges. L.O.F. (length over flange) should not be less than 75% of dia. **-250 mm**					
3	**Item No.: 3 - Reflux Valve (IDS No 9)**					
	Providing erecting 250 mm Cast Steel /Spheroidal Graphite (S.G.) Iron D/F Reflux Valves of class 150 Single Door with jointing to pipe work (including all hardware and packing) water works quality with jointing to pipe without bypass arrangement, with gunmetal seats including inspection charges, transportation upto departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. completed but excluding C. Foundation / structural	2	No	101569	Rupees One Lakh One Thousand Five Hundred Sixty-nine Only	203138.00
4	**Item No.: 4 - Sluice Valve (IDS No 8)**					
	Providing erecting **250 mm** Cast Steel/ Spheroidal Graphite (S.G) Iron D/F Sluice Valves /Butterfly Valves of class 150 with jointing to pipe work (including all hardware and packing) water works quality, having non-rising spindle with hand wheel and without bypass arrangement, spindle of stainless steel as per requirement, inspection charges, transportation up to departmental store, unloading, stacking, excluding GST levied by GOI & GOM in all	2	No	81401	Rupees Eighty-one Thousand Four Hundred One Only	162802.00
5	**Iten No.5: - Providing & fixing M.S. pipes & Specials (IDS No 10)**	5177	Kg	95.00	Rupees Ninety-five Only	491815.00
6	**Item No.: 6 - Structural Steel Work (IDS No 15)**					
	Providing structural steel work in rolled sections like joists, channels, anglesites, etc. as per detailed designs and drawings including fixing in	0.5	MT	86542.00	Rupees Eighty-six Thousand Five Hundred Forty-two Only	43271.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	position without coats of oil painting of approved					
7	**Item No.: 7 - R.C.C. work (IDS No 13)**					
	Designing, Providing/CC Supports, thrust blocks for manifold pipes, valves in M-200 concrete with necessary reinforcement including excavation in all types of strata, frame work, curing, plastering etc.comp.as per detailed specifications.	2	Cum	7318.00	Rupees Seven Thousand Three Hundred Eighteen Only	14636.00
8	**Item No.: 8 - Electric Valve Actuator (IDS No 8)**					
	Providing, erecting electric Valve actuators for non-rising spindle valve of size **250 mm** dia.PN 1.6 rating totally enclosed, weather-proof and dust proof construction with IP-67, protection class suitable for installation in any position without lubrication, leakage or other operational difficulty with special grease filled gear box and hand wheel for emergency manual operation which will automatically dis-engage on restoration of power to motor and with 10 watt single phase space heater and continuous local mechanical position indicator and individually replaceable counter gear assembly and with two torque and four limit switches with S.S. flap and operated with gear driven cams and of rating 250 Volt, 5 Amp, AC/DC, torque switch dial and with TEFC squirrel cage induction motor working on 440 Volts +/- 10%, 3 phase, 50 Hz AC of intermittent duty rating S-2, insulation class "F" and temp rise restricted to class "B" with IP - 67 protection class suitable for DOL starting and with three thermostat and 30% over load margin. The torque rating of reduction gear box shall be at least 1.5 times max. torque required for	2	No	103177.00	Rupees One Lakh Three Thousand One Hundred Seventy-seven Only	206354.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	opening and closing of valve with integral starter for ON & OFF operation					
9	**Item No.: 9 - Kinetic Double orifice 150 mm Air Valve (IDS No 16)**					
	Providing and supplying Kinetic Double Orifice type 200 mm PN 1.6 rating Air Valves confirming to IS 14845 as per MJP's standard specifications having small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, with built-in Kinetic features, isolating sluice valve mounted in horizontal position and operated by wheel gearing, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation up to departmental stores, excluding GST levied by GOI & GOM in all respect etc. complete.	1	No	27485.00	Rupees Twenty-seven Thousand Four Hundred Eighty-five Only	27485.00
10	**Item No.: 10 - Ultrasonic Insertion Fixed type Flow Meter (IDS No 19)**					
	Providing, installing and giving satisfactory test & trial of ultrasonic Insertion Fixed type flow meter working on conditions & specifications, calibration, inspection, testing, training, guarantee and manufacturers test certificate/ declaration copy along with accessories as mentioned in a (1) to (16) below & with inbuilt assembly to fix the insertion type transducer on the pipeline	1	No	272895.00	Rupees Two Lakh Seventy-two Thousand Eight Hundred Ninety-five Only	272895.00
11	**Item No.: 11 - VSS Motor (IDS No 4)**					
	Providing, erecting and giving test and trial of vertical Solid shaft motor 1500 RPM, squirrel cage induction motor, conforming to IS 12615, class IE4 IP55 premium, having continuous	3	No	531359.00	Rupees Five Lakh Thirty-one Thousand Three Hundred Fifty-nine Only	1594077.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	rating suitable for operation at 415 Volts +/-10%, 3 Phase, 50 Hz +/-5% with "F" class insulation temperature rise limited to class "B" insulation. with TPI. - **100 HP**					
12	**Item No.: 12 - Cables (IDS No 11)**					
	Designing, providing, erecting, commissioning & testing of cables as per detailed specifications etc comp.					
	a) XLPE 1.1 kV 1 run X 3.5 core X 240 Sqmm from Transformer to LT indoor panel board	100	Mtr	11514.00	Rupees Eleven Thousand Five Hundred Fourteen Only	1151400.00
	b) XLPE 1.1 kV 3 core X 120 Sqmm from Panel board to starter to Motor & Capacitors	100	Mtr	780.00	Rupees Seven Hundred Eighty Only	78000.00
	c) XLPE ,4 core X 16 sqmm copper cable (for crane)	50	Mtr	863.00	Rupees Eight Hundred Sixty-three Only	43150.00
	d) XLPE ,4 core X 6 sqmm copper cable for actuators, lighting etc	50	m	396.00	Rupees Three Hundred Ninety-six Only	19800.00
	e) Providing, fixing aluminium & copper lugs and glands suitable for all types of cables etc comp.	Job	LS	10000.00	Rupees Ten Thousand Only	10000.00
	Providing & erecting Hot dipped galvanized cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 200 mm width & 20 mm height complete with necessary hardware in approved manner.	50	Mtr	455.00	Rupees Four Hundred Fifty-five Only	22750.00
13	**Item No.13: Electronic Soft Starter (IDS No 7)**					
	Providing, erecting and giving test and trial of Electronic Soft Starters with Built-In by pass contactor and all Motor Protections and external Semi-conductor fuses, Display and keypad, bus bars etc complete assembled in an SWG 14 IP23 and above Enclosure Application: - General Purpose Water Pumping	2	No	203417.00	Rupees Two Lakh Three Thousand Four Hundred Seventeen Only	406834.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Operational Voltage 380-600VAC Control Voltage 110-250VAC... **-120 HP**					
14	**Item No.14: - Test & Trial (IDS No 37)**					
	Testing, operating & trial of pumping machinery & all allied equipment as per direction of Engineer in charge etc comp. For 3 months after commissioning etc.	3	Month	71400.00	Rupees Seventy-one Thousand Four Hundred Only	214200.00
					Total Rs.	**7,997,273.00**
	Sub work No 7.6: - Pure Water Pumping Machinery at 24 MLD WTP for Mhada ESR					
1	**Item No.: 1- Vertical Turbine Pump set (IDS No 2)**					
	Designing, Providing, installing, commissioning with test & trial of water Lubricated type V.T. Pump set with 5 mtr column assembly capable of discharging water of **156 LPS** against a total head of **72 mtr** operating @ 1450rpm, appox. synchronous speed from all causes including bowl assembly, column pipe assembly, discharge head, motor stool, Sole plate, frame, Pressure gauge, channel iorn & as per detailed specifications etc complete. (2 W+1S)	3	No	2589787.50	Rupees Twenty-five Lakh Eighty-nine Thousand Seven Hundred Eighty-seven Paise Fifty Only	7,769,363.00
2	**Item No.: 2 - Dismantling Joint (IDS No 14)**					
	Providing, erecting and commissioning M.S. Dismantling joint as per requirement and Department's approved drawing and specifications, including machining and rubber rings and suitable for 16 kg/cm2 working pressure with required flanges of suitable size with nut bolts etc complete. The joint should have through long bolts so that during normal working pressure there should be no sliding movement of sliding flanges. L.O.F. (length over	3	No	37737.00	Rupees Thirty-seven Thousand Seven Hundred Thirty-seven Only	113,211.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	flange) should not be less than 75% of dia. **400 mm**					
3	**Item No.: 3 - Reflux Valve (IDS No 9)**					
	Providing erecting Cast Steel /Spheroidal Graphite (S.G.) Iron D/F Reflux Valves of class 150 Single Door with jointing to pipe work (including all hardware and packing) water works quality with jointing to pipe without bypass arrangement, with gunmetal seats including inspection charges, transportation up to departmental store, unloading, stacking excluding GST levied by GOI & GOM in all respect etc. completed but excluding C. Foundation / structural steel support. - **400 mm**	3	No	152362.00	Rupees One Lakh Fifty-two Thousand Three Hundred Sixty-two Only	457,086.00
4	**Item No.: 4 - Sluice Valve (IDS No 8)**					
	Providing erecting 400 mm Cast Steel/ Spheroidal Graphite (S.G) Iron D/F Sluice Valves /Butterfly Valves of class 150 with jointing to pipe work (including all hardware and packing) water works quality, having non-rising spindle with hand wheel and without bypass arrangement, spindle of stainless steel as per requirement ,inspection charges, transportation up to departmental store, unloading, stacking, excluding GST levied by GOI & GOM in all respect etc. excluding C. C. foundation / structural steel support.	3	No	183743.00	Rupees One Lakh Eighty-three Thousand Seven Hundred Forty-three Only	551,229.00
5	**Iten No.5: - Providing & fixing M.S. pipes & Specials (IDS No 10)**	11684	Kg	95.00	Rupees Ninety-five Only	1,109,980.00
6	**Item No.: 6 - Structural Steel Work**					
	Providing structural steel work in rolled sections like joists, channels, angles, tees, etc. as per detailed designs and drawings including fixing in	0.5	MT	84020.00	Rupees Eighty-four Thousand Twenty Only	42,010.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	position without coats of oil painting of approved quality etc. complete.					
7	**Item No.: 7 - R.C.C. work (IDS No 13)**					
	Designing, Providing/CC Supports, thrust blocks for manifold pipes, valves in M-200 concrete with necessary reinforcement including excavation in all types of strata, frame work, curing, plastering etc.comp.as per detailed specifications.	3	Cum	7318.00	Rupees Seven Thousand Three Hundred Eighteen Only	21,954.00
8	**Item No.: 8 - Electric Valve Actuator (IDS No 8)**					
	Providing, erecting electric Valve actuators for non-rising spindle valve of size **400 mm** dia.PN 1.6 rating totally enclosed, weather-proof and dust proof construction with IP-67, protection class suitable for installation in any position without lubrication, leakage or other operational difficulty with special grease filled gear box and hand wheel for emergency manual operation which will automatically dis-engage on restoration of power to motor and with 10 watt single phase space heater and continuous local mechanical position indicator and individually replaceable counter gear assembly and with two torque and four limit switches with S.S. flap and operated with gear driven cams and of rating 250 Volt, 5 Amp, AC/DC, torque switch dial and with TEFC squirrel cage induction motor working on 440 Volts +/- 10%, 3 phase, 50 Hz AC of intermittent duty rating S-2, insulation class "F" and temp rise restricted to class "B" with IP - 67 protection class suitable for DOL starting and with three thermostat and 30% over load margin. The torque rating of reduction gear box shall be	3	No	115796.00	Rupees One Lakh Fifteen Thousand Seven Hundred Ninety-six Only	347,388.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	at least 1.5 times max. torque required for opening and closing of valve with integral starter for ON & OFF operation					
9	**Item No.: 9 - Kinetic Double orifice 150 mm Air Valve**					
	Providing and supplying Kinetic Double Orifice type 200 mm PN 1.6 rating Air Valves confirming to IS 14845 as per MJP's standard specifications having small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, with built-in Kinetic features, isolating sluice valve mounted in horizontal position and operated by wheel gearing, inlet face and drilled, including insurance, third party inspection charges, loading, unloading, transportation upto departmental stores, excluding GST levied by GOI & GOM in all respect etc. complete.	1	No	27485.00	Rupees Twenty-seven Thousand Four Hundred Eighty-five Only	27,485.00
10	**Item No.10: - (EOT Crane) (10 Ton) (10Mtr Span) (6mtr lift) (IDS No 25)**					
	Providing, installing, comm. With test & trial of double Girder Electrical operating Travelling crane (EOT) suitable for 10 Ton capacity for 30x20m pumphouse including C.P. Block, Travelling trolley, Square bar, gantry girder, all associated electrical equipment's, DSL system, wire rope etc & as per detailed specifications etc comp.	1	No	1534832.00	Rupees Fifteen Lakh Thirty-four Thousand Eight Hundred Thirty-two Only	1,534,832.00
11	**Item No.11: - Full bore Electromagnetic Flowmeter (IDS No 20)**					
	Supply, install and commission of 800 mm dia. Electromagnetic Flow Meter (EMF) As Per ISO 4064, for Raw/Pure water with accuracy +/-0.5%	1	No	634881.00	Rupees Six Lakh Thirty-four Thousand Eight Hundred Eighty-one Only	634,881.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	of measured value & protection as per given specifications for size 100 mm-1000mm including sensor, transmitter surge arrestor, cable GI duct if suitable size for 25 mtrs built in GSM (with Sim card and its charges, valid for 36 months) including the pipe cutting, levelling and installation of flow meter in the pipelines with necessary tool tackles, cranes including 36 months guarantee etc complete, as may be required at site & based on technical specifications.					
12	**Item No. 12: - VSS Motor (IDS No 4)**					
	Providing, erecting and giving test and trial of vertical Solid shaft motor 1500 RPM, squirrel cage induction motor, conforming to IS 12615, class IE4 IP55 premium, having continuous rating suitable for operation at 415 Volts +/-10%, 3 Phase, 50 Hz +/-5% with "F" class insulation temperature rise limited to class "B" insulation. with TPI. **250 HP**	3	No	1317928.00	Rupees Thirteen Lakh Seventeen Thousand Nine Hundred Twenty-eight Only	3,953,784.00
13	**Item No. 13: - Hermetically Sealed Transformer (IDS No 35)**					
	Supplying, installing, testing & commissioning 3 phase, 22/0.433 kV, 50 Hz., 800 kVA, Natural Ester Oil immersed and naturally cooled outdoor type, Copper wound ,without gas cushioning ,hermetically Sealed transformer, delta/star connected with additional neutral brought out on load side, temperature rise should not exceed 45°C by thermometer in oil and 50°C by the resistance method in winding at full load rating, using type B winding insulation (kraft paper) with HV tapping (with on load tap changer) on load +5 to -15 in steps of 2.5%, with standard	2	No	1953551.41	Rupees Nineteen Lakh Fifty-three Thousand Five Hundred Fifty-one Paise Forty-one Only	3907103.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	accessories complete with test certificate with losses below 2401 Watts at 50% load, 6723 Watts at 100% load as per IS:1180 (part 1) : 2014 with necessary permissions of Electrical Inspector, as per specification no SS- TRSL.					
14	**Item No. 14: - RMU (IDS No 6)**					
	Supplying, installing, testing and commissioning SF 6 Insulated 22kV, 630A, 16kA/3sec, 3-way outdoor, extensible motorised SCADA compatible RMU, internal arc tested as per electric supply company specification consisting of 1 no. feeder with 1 LBS and 2 nos. feeder with 2 VCB. compliant to IEC 62271 -100, 200 and 102, as per specification no. SW-HTS/RMU SCADA	0	No	766967.00	Rupees Seven Lakh Sixty-six Thousand Nine Hundred Sixty-seven Only	-
15	**Item No. 15: - Cables (IDS No 11)**					
	Designing, providing, erecting, commissioning & testing of cables as per detailed specifications etc comp.					
	a) XLPE 1.1 kV 3 run X 3.5 core X 400 Sqmm from LT Transformer to 0.415 V LT indoor panel board	200	Mtr	2041.00	Rupees Two Thousand Forty-one Only	408200.00
	b) XLPE 1.1 kV single run X3 core X 300 Sqmm from Panel board to Motor & Capacitors	200	Mtr	1649.00	Rupees One Thousand Six Hundred Forty-nine Only	329,800.00
	d) XLPE ,4 core X 16 sqmm copper cable (for crane)	50	Mtr	863.00	Rupees Eight Hundred Sixty-three Only	43150.00
	e) XLPE ,4 core X 6 sqmm copper cable for actuators, lighting etc	50	Mtr	396.00	Rupees Three Hundred Ninety-six Only	19,800.00
	(f) Providing, fixing aluminium & copper lugs and glands suitable for all types of cables etc comp.	LS	Job	10000.00	Rupees Ten Thousand Only	10,000.00
16	**Item No. 16: - Cable Trays (IDS No 11)**					
	Providing & erecting Hot dipped galvanized	80	No	455.00	Rupees Four Hundred Fifty-five Only	36,400.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	cover suitable for perforated type cable tray manufactured from 18 swg (1.2 mm thick) GI sheet of 200 mm width & 20 mm height complete with necessary hardware in approved manner.					
17	**Item No. 17: - 415 V LT Panel board**					
	Providing and fixing LT panel board comprises of incomer, Bus bar and 5 outgoing feeders for LT motors including Fixed type capacitors for each feeder etc complete.	1	No	616367.00	Rupees Six Lakh Sixteen Thousand Three Hundred Sixty-seven Only	616,367.00
18	**Item No. 18: - APFC Panel**					
	Supplying and erecting 250 KVAr, 3 phase, 50 Hz., Power contactors Derated for microprocessor APFC controller with MPP / APP type capacitor with Static VAR Compensator of 25 AMP 525 V and having minimum overcurrent capacity of 1.8 In, peak inrush current capacity 300 In and minimum life 150000 hours with , consisting of suitable steps of MPP / APP type capacitor units with detuned aluminium filter 7% reactors with circuit breaker as main incomer and MCCB for each branch protection, as per specification no CP-ED/APFC	1	No.	708344.00	Rupees Seven Lakh Eight Thousand Three Hundred Forty-four Only	708,344.00
19	**Item No. 19: - Electric Soft Starter**					
	Providing, erecting and giving test and trial of Electronic Soft Starters with Built-In by pass contactor and all Motor Protections and external Semi-conductor fuses, Display and keypad, bus bars etc complete assembled in an SWG 14 IP23 and above Enclosure Application: - General Purpose Water Pumping Operational Voltage 380-600VAC Control Voltage 110-250VAC.	3	No.	346324.00	Rupees Three Lakh Forty-six Thousand Three Hundred Twenty-four Only	1,038,972.00
20	**Item No. 20: - Earthing system**					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Designing, providing, erecting, commissioning & testing of earth electrode, earth pit, chamber, earth bus, earthing etc.For 11KV ,6.6KV,415Volts system complete as per detailed specifications etc comp.					
	(a) Pipe type or plate type earthing for structure,LA , fencing, CT, PT, Transformer, motor etc comp	30	No.	4714.00	Rupees Four Thousand Seven Hundred Fourteen Only	141,420.00
	(b) G.I.Strip of 50X6mm for above earthing etc comp.	200	Kg	452.00	Rupees Four Hundred Fifty-two Only	90,400.00
	(c) Copper strip of required size for above earthing	300	No.	1164.00	Rupees One Thousand One Hundred Sixty-four Only	349,200.00
21	**Item No. 21: - Internal & External Electrification of pump house and Area lighting (IDS No 33)**					
	Designing, providing, erecting, commissioning & testing of electrification to pump house & area lighting as per detailed specifications etc comp. (As per RA)	1	set	297000.00	Rupees Two Lakh Ninety-seven Thousand Only	297,000.00
22	**Item No. 22: - Firefighting Equipment (IDS No 40)**					
	Designing, providing, erecting, commissioning & testing of & safety equipment and tools as per detailed specifications etc comp.					-
	(a) Instruction chart- 2 Nos.	2	No.	64.00	Rupees Sixty-four Only	128.00
	(b) Rubber hand gloves - 2 Pairs.	2	Pair.	393.00	Rupees Three Hundred Ninety-three Only	786.00
	(c) Fire buckets - 4 Nos.	4	No.	363.00	Rupees Three Hundred Sixty-three Only	1,452.00
	(d) Mounting stand for 4 buckets	1	No.	1672.00	Rupees One Thousand Six Hundred Seventy-two Only	1,672.00
	(e) First Aid Box	1	No.	292.00	Rupees Two Hundred Ninety-two Only	292.00
	(f) Rubber matting 12mm	30	Sqmt	1732.00	Rupees One Thousand Seven Hundred Thirty-two Only	51,960.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	(g) Fire Extinguisher 5 Kg DCP	4	No.	2186.00	Rupees Two Thousand One Hundred Eighty-six Only	8,744.00
23	**Item No. 23: - Test & Trial (IDS No 37)**					
	Testing, operating & trial of pumping machinery & all allied equipment as per direction of Engineer in charge etc comp. For 3 months after commissioning etc:	3	Month	71400.00	Rupees Seventy-one Thousand Four Hundred Only	214,200.00
					Total Rs.	**24,838,593.00**
	Sub work No 7.7: - Pure Water Pumping Machinery at Vadavali Proposed Sump					
1	**Item No. 1: -SUBMERSIBLE MONOBLOCK PUMP SET (IDS No 3)**					
	Providing, Commissioning & giving test & trial of @ site of work Submersible Monoblock Pump set (with Bronze /Stainless steel (CF8M) Impeller) Horizontal /Vertical - up to 3 stages. Motor with water lubricated bearing to accept entire hydraulic thrust. Pump set Pump shall be suitable for working on 3 ph, 415 Volts + / / 10 %, 3 Ph, 50 Hz A.C. Supply as per specifications. **Head = 27Mtr, discharge - 44 LPS,30 HP**	2	No	100000	Rupees One Lakh Only	200,000.00
2	**Item No. 2: -Glandless Sluice Valve (IDS No 8)**					
	Providing and supplying at site of ductile iron / spheroidal graphite (S.G.) iron D/F non-rising spindle resil-ient seated glandless sluice valves with handwheel &without bypass arrangement. Valves in accordance with BS 5163 of PN-10/ 16 rated, with body and bonnet of ductile iron confirming to IS 1865 Gr. 500/7 or Gr.400/15. Wedge fully encapsulated WRAS approved EPDM rubber (approved for drinking water), Wedge nut of brass,shaft of stainless steel 1.4021/1.4104, stem seals min. 3 nos. of NBR,	2	No	16299	Rupees Sixteen Thousand Two Hundred Ninety-nine Only	32,598.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	internal fasteners of stainless steel A2. Body& Bonnet coated inside & outside with electrostatically applied epoxy powder coated blue colour (suitable for drinking water) as per DIN 30677-2 & GSK guidelines with a coating thickness of min. 250 microns. Valves should be full bore & tight shut-off. Flange drilling as per IS 1538 raised face & pressure testing at manufactures works shall be done as per IS 14846. including transportation charges excluding GST levied by GOI & GOM in all respect etc. complete. (For PN 10 & 16) **-150 mm**					
3	**Item No. 3: -REFLUX VALVE (IDS No 9)**					
	Providing and supplying ISI mark CI D/F reflux valves (non-return valves) of following dia including railway freight, inspection charges, unloading from railway wagon, loading into truck, transportation up to departmental stores, onloading, stacking excluding GST levied by GOI & GOM in all respect etc. complete. Reflux valves as per I.S.5312 Part I (1984)					
	150 mm dia rating for Pump set	2	No	15849	Rupees Fifteen Thousand Eight Hundred Forty-nine Only	31,698.00
4	**Item No. 4: -KINETIC AIR VALVE**					
	Designing Providing erecting commissioning with test and trial of 80 mm dia Kinetic Double Orifice type Air Valves of following dia and Rating as per MJP's standard specifications having small orifice elastic ball resting on a gun metal orifice, nipple, large orifice, vulcanite ball **80 mm dia Pn 1.0 rating**	1	No	14767	Rupees Fourteen Thousand Seven Hundred Sixty-seven Only	14,767.00
5	**Item No. 5:-G.I. Pipe - 150 MM DIA**					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Providing erecting 150 MM dia "B" class G.I. Pipe for suction & delivery	20	Mtr	1732	Rupees One Thousand Seven Hundred Thirty-two Only	34,640.00
6	**Item No. 6 :-M.S. PIPES & SPECIALS (IDS No 10)**					
	Providing & erecting ISI standard MS Pipes & Specials of required thickness with 3 coats of approved make epoxy paint with all jointing material , nut bolts, rubber packing etc complete	500	Kg	95	Rupees Ninety-five Only	47,500.00
7	**Item No. 7 :-Flanged Joints**					
	Providing & erecting M.S. flanged joints to flanged M.S. pipes of all classes/ specials with all jointing material rubber packing, nut bolts etc. -150 mm	20	No	1092	Rupees One Thousand Ninety-two Only	21,840.00
8	**Item No. 8 :-M.S. Flanges**					
	Providing & erecting 150 mm M.S. flanged joints to flanged M.S. pipes of all classes / specials with all jointing material rubber packing, nut bolts etc.	50	Kg	171	Rupees One Hundred Seventy-one Only	8,550.00
9	**Item No. 9 :-Automatic control L.T. Panel - 30 HP (IDS No 34)**					
	Supplying & erecting automatic control panel for 3 Ph, 415 volt, A.C. Submersible/ centrifugal pump set up to 30 HP consisting of Star Delta starter having relay range 30-50 Amp, S.P.P., Combined ammeter/ voltmeter, phase indicating lamp enclosed in CRCA powder coated Vibration proof enclosure with IP 54 protection. Control Panel should offer single phasing, phase reversal, phase imbalance etc.	2	No	28795	Rupees Twenty-eight Thousand Seven Hundred Ninety-five Only	57,590.00
10	**Item No. 10 :-EARTHING (IDS No 17)**					
	a) Supplying & erecting Galvanised cast iron plate 60 X 60 X 0.6 cm buried in specially prepared earth pit refilling with 40 kG charcoal &	4	No	1500	Rupees One Thousand Five Hundred Only	6,000.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	salt in alternate layers 19 mm dia. Vertical G.I. Pipe 1.5 mtr lon with funnel & mesg @ top for watering a break masonry block, C.I. cover complete with necessary length of double G.I. earth strip bolted with plate & covered in 12 mm dia. G.I. pipe 2.5 mtr long complete connected to nearest switchgear with end socket as per direction & duly tested with earth tester & recording the results etc complete as per detailed specifications 4 Nos.					
	b) Supplying & erecting G.I. strips 25 X 5 mm as per detailed specifications	50		222	Rupees Two Hundred Twenty-two Only	11,100.00
11	**Item No. 11 :-CABLE (IDS No 11)**					
a	Providing, laying & testing 1100 V , grade cable in trays, in ducts or in walls, floor heavy duty Al armoured Cable including crimping Lugs & Glands etc. 3.5 X 35 MM2 Aluminium armoured cable	50	Mtr	242	Rupees Two Hundred Forty-two Only	12,100.00
b	3 core X 10 sqmm Flat flexible submersible cable with Copper Conductor, PVC insulated, & PVC sheathed from Panel to Motor	100	Mtr	162	Rupees One Hundred Sixty-two Only	16,200.00
c	4c X 4 sqmm Al arm Cable For Lighting	100	Mtr	135	Rupees One Hundred Thirty-five Only	13,500.00
d	Cable glands & lugs	LS	Job	5000	Rupees Five Thousand Only	5,000.00
e	Cable Trench	50	Mtr	169	Rupees One Hundred Sixty-nine Only	8,450.00
12	**Item No. 12 :-Pressure Gauge - (IDS No 5)**					
	Supplying and erecting 100 mm dia. pressure gauge , 0-300 PSI or 0-14 kg per cm square fitted with 12/15 mm dia. pad cock valve, erected with provided G.I.pipe, elbow etc. complete as per specification no. FF-FFA/PG	3	No	772	Rupees Seven Hundred SeventyTwo Only	2,316.00
13	**Item No. 13 :-FULL BORE ELECTROMAGNETIC FLOW METER (IDS No 20)**					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Manufacturing, supplying & commissioning Electromagnetic Flow Meter (EMF) with accuracy + / - 0.5 % of measured value & protection as per given specifications including senser , transmitter surge arrester, cable duct separate PVC of 25 mm dia for 25 mtrs senser transmitter surge arrester, flow meter in the pipelines with tool tackles, crane etc. with flowmeter transmitter panel cubical as per detailed specifications -**150 mm**	1	No	145399	Rupees One Lakh Forty-five Thousand Three Hundred Ninety-nine Only	145,399.00
14	**Item No. 14 :-BM Chambers for Flow Meter 1.5x1.5x1.5**					
	Flow meter chamber work with suitable manhole for entering the chamber and removal of flow meter for maintenance in future, providing and constructing B.B. masonry flow meter chamber with 15 cm thick 1:3:6 proportion PCC bedding, including excavation, B.B. masonry in CM 1:5 proportion, 12 mm thick cement plaster in CM 1:4 proportion on both sides with providing and fixing suitable manhole arrangement & cover in RCC 1:2:4 coping or RCC 1:2:4 proportion x 15 cm thick slab, etc. complete as directed by Engineer-in-charge.	1	No	27729	Rupees Twenty-seven Thousand Seven Hundred Twenty-nine Only	27,729.00
15	**Item No. 15 :-RCC (IDS No 13)**					
	Providing and casting CC Foundation for Pump, Panel, Starters etc as per specifications. M-200	1	Cum	7318	Rupees Seven Thousand Three Hundred Eighteen Only	7,318.00
16	**Item No. 16 :-Test and Trial (IDS No 34)**					
	Testing operating & trials of Pumping Machinery & allies Electrical & Mechanical equipment's as per detailed specifications	3	month	5000	Rupees Five Thousand Only	15,000.00
					Total Rs.	**719,295.00**
	Sub work No 19:-Providing Fully SCADA Based Automation for 60 MLD capacity WTP and 4 Pumping stations for					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Badlapur Water Supply Scheme					
	Raw Water Pump house					
1	**Item No. 1 :-Ultrasonic level transmitter (IDS No 27)**	1	No	65384	Rupees Sixty-five Thousand Three Hundred Eighty-four Only	65,384.00
	Designing, Supplying, Installing, commissioning & testing of Ultrasonic level transmitter CE marked with following technical parameters Interfacing with PLC panel including mounting arrangement. Output-4-20 mA / HART Power supply - 24V DC ext. Display - 4" LED Range- 0-10 mtr - 20 mtr. Accuracy - +/- 0.25% of Full Scale or better Enclosure- IP 68 Mounting - On PLC panel					
2	**Item No. 2 :-Pressure Transmitter (IDS No 32)**	1	No	36774	Rupees Thirty-six Thousand Seven Hundred Seventy-four Only	36,774.00
	Designing, Supplying, Installing, commissioning & testing of pressure transmitter CE marks with following technical parameters at Raw Water Pump House and Interfacing with PLC panel including mounting arrangement. Output 4-20 mA / HART Power supply - 24V DC ext. Display - 4" LED Accuracy - +/- 0.1 % of full scale or better Enclosure- IP 68					
3	**Item No. 3 :-Power Analyser (IDS No 41)**	1	No	33265	Rupees Thirty-three Thousand Two Hundred Sixty-five Only	33,265.00
	Designing, Supplying, Installing, commissioning & testing of Power Analyser interfacing to PLC Panel with Modbus communication port , as per					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	IEC 62053 and in the prescribed format including mounting arrangement.					
4	**Item No. 4 :-PLC panel for Raw water pump House with Six Pumps (IDS No 42)**	1	No	273330	Rupees Two Lakh Seventy-three Thousand Three Hundred Thirty Only	273,330.00
	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1000 mm X 700 mm X 1500 mm (LBH), fabricated out of min. 2 mm thick CRCA sheet powder coated to Siemens Gray colour. The Panel shall be provided with reputed make PLC with following accessories as well as input output configuration. The PLC shall be programmed with IEC 61131 standards for control, monitoring and communication of equipment's & instruments at Raw water Pumphouse PLC shall have Ethernet port & protocol for Modbus TCP communication with following IO. DI –32 num DO – 32 num AI –24 num AO – 8 num. 7 inch color TFT HMI complete with programming shall be provided to interact with PLC The panel shall include all the accessories (not limited to following) to achieve purpose of smooth & trouble free operation of pump house. MCB 10A DP – 1 num MCB 4A DP – 4 num 24 VDC Power Supply 10A – 1 num Push Buttons – 7 num Selector Switch - 2 num Control Contactor – 6 num Annunciator with 6 Windows NO to NC Type Electronic Hooter – 1 num Control Transformer – 1 num Emergency PB – 1 num Panel Cooling Fan – 1 num Panel Light with Door Switch – 1 num Control Indication Lamp – 5 num Wiring + TB etc – 1 lot					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Hardware – 1 lot					
5	**Item No. 5 :-Scada system for Raw water pump House (IDS No 43)**	1	No	244638	Rupees Two Lakh Forty-four Thousand Six Hundred Thirty-eight Only	244,638.00
	Design, manufacture, supply, installation, testing and commissioning of SCADA System for pump house. Windows based PC with latest configuration & OS complete with necessary office & antivirus software's. PC configuration shall not be less than Intel i5 10th Gen CPU, 16 GB Ram, 128 GB SDD, 500 GB HDD, DVD RW, Rs232 & Rs485 port, 2 RJ45 ports, Keyboard, Optical Mouse, 32 inch colour TFT Monitor, Latest Windows Pro OS, Microsoft Office & Antivirus & Internet SCADA Software of reputed company with developer & runtime license with minimum 256 number of Tags with following features & functions 1. Supervise real-time data in the form of graphical presentation 2. Control pumping processes locally or through Remote locations 3. Dynamic process Graphic, It should resemble the process mimic. SCADA should have good library of symbols so that develop the mimic as per required. When operator sees the screen he should know what's going in plant. 4. Alarm summery & Alarm history, SCADA system must be able to detect, display, and log alarms and events. When there are problems the SCADA system must notify the operators to take corrective action. 5. Acquire real-time data as well as logs data with Real time trend					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	& Historical time trend. 6. Web Connectivity, Real-time displays can be accessed on remotely attached PCs and notebooks using internet.					
6	**Item No. 6 :-Power Cable Cable (IDS No 11)**	100	Mtr	110	Rupees One Hundred Ten Only	11,000.00
	Designing, Supplying, Installing, commissioning & testing with Terminating & Interfacing of 2 C x 1.5 sq.mm as per IS 694 twisted shielded copper armoured conductor on wall in GI tray or in ground suitable for supplied D. C. Voltage					
7	**Item No. 7 :-Communication Cable (IDS No 11)**	200	Mtr	77	Rupees Seventy-seven Only	15,400.00
	Designing, Supplying, Installing, commissioning & testing with Terminating & Interfacing of CAT As per PWD CSR Terminating & Interfacing of CAT 6 as per ISO/IEC-11801 std.cable for networking on wall in GI tray or on ground etc.					
8	**Item No. 8 :-Signal Cable (IDS No 11)**	100	Mtr	200	Rupees Two Hundred Only	20,000.00
	a) Designing, Supplying, Installing, commissioning & testing with Terminating & Interfacing of 2 Pair x 1 sq.mm as per IS 694 copper Shielded twisted, multistranded armoured cable on wall in GI tray					
	c) Designing, Supplying, Installing, commissioning & testing with Terminating & Interfacing of 3 Pair x 1 sq.mm as per IS 694 copper Shielded twisted, multistranded armoured cable on wall in GI tray	100	Mtr	254	Rupees Two Hundred Fifty-four Only	25,400.00
	c) Designing, Supplying, Installing, commissioning & testing with Terminating & Interfacing of 4.5 Pair x 1 sq.mm as per IS 694	50	Mtr	373	Rupees Three Hundred Seventy-three Only	18,650.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	copper Shielded twisted, multistranded armoured cable on wall in GI tray					
	d) Designing, Supplying, Installing, commissioning & testing with Terminating & Interfacing of 8 Pair x 1 sq.mm as per IS 694 copper Shielded twisted, multistranded armoured cable on wall in GI tray	50	Mtr	668	Rupees Six Hundred Sixty-eight Only	33,400.00
9	**Item No. 9 :-Control Cable (IDS No 11)**	150	Mtr	110	Rupees One Hundred Ten Only	16,500.00
	Designing, Supplying, Installing, commissioning & testing with Terminating & Interfacing of 2 C x 1.5 sq.mm as per IS 694 twisted shielded copper armoured conductor on wall in GI tray or in ground suitable for supplied D. C. Voltage					
10	**Item No. 10 :-Surveillance System (Head works , WTP & 3 P.S.)(IDS No 26)**	5	No	56336	Rupees Fifty-six Thousand Three Hundred Thirty-six Only	281,680.00
	Designing, supplying, installing, commissioning & testing of CCTV IR water proof camera suitable for up to 100ft. with control key board, DVR, Hard Disk, cables, UPT trans receivers etc. complete with not less than following specifications 1. Four numbers of IP Camera with night vision functionality with range up to 30 meters. Camera construction shall be suitable for weather proof outdoor installation. 2. Eight Channe DVR with metal body construction, having software features of motion detect recording. 3. 3.5 inch 2 GB HDD 4. 8 port POE Switch 5. 32 inch LED Screen, Keyboard & mouse.					
	Water Treatment Plant (60 MLD)					
11	**Item No. 11 :-Open channel type ultrasonic**	1	No	54863	Rupees Fifty-four Thousand Eight	54,863.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	flowmeter with FIT (IDS No 27)				Hundred Sixty-three Only	
	Design, Supply, Installation, Testing & calibration of open channel type ultrasonic flow Transmitter CE marked with following technical parameters at Raw Water channel and Interfacing with PLC panel including mounting arrangement. Output-4-20 mA / HART Power supply - 24V DC ext. Display - 4" LED Range- 0-5 mtr. Accuracy - +/- 0.25% of Full Scale or better Enclosure- IP 68 Mounting - On PLC panel					
12	**Item No. 12 :-PH analyser (IDS No 31)**	1	No	105060	Rupees One Lakh Five Thousand Sixty Only	105,060.00
	Design, Supply, Installation, Testing of pH analyser as per IUPAC(International Union for Pure & Applied Chemistry)at A.F. and Interfacing with PLC panel including mounting arrangement. Range : 0 -14 , pH Accuracy : Better than 0.1% of full scale , Supply Voltage : 24V dc, Output : 4-20 mA /HART As per IEC 61000-6-2 & IEC 61000-6-3					
13	**Item No. 13 :-Turbidity Analyser (IDS No 29)**	1	No	256085	Rupees Two Lakh Fifty-six Thousand Eighty-five Only	256,085.00
	Design, Supply, Installation, Commissioning & Testing of Turbidity Analyser as per ISO 7027 scattering light method at A.F. and Interfacing with PLC panel. Turbidity Analyser shall comprises of 3 components					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	i.e. sensors,signal distributor and transmitter with indicator with 2 outputs, 1 to PLC & another to local display including Mounting arrangement. Overall Range : 0 - 2000 NTU Accuracy : +/- 0.02 NTU Supply Voltage : 230 VAC Output : 4-20 mA					
14	**Item No. 14 :-Level transmitter (IDS No 27)**	8	No	52530	Rupees Fifty-two Thousand Five Hundred Thirty Only	420,240.00
	Designing, Supplying, Installing, commissioning & testing of Ultrasonic level transmitter CE marked with following technical parameters Interfacing with PLC panel including mounting Output-4-20 mA / HART Power supply - 24V DC ext. Display - 4" LED Range- 0-5 mtr. Accuracy - +/- 0.25% of Full Scale or better Enclosure- IP 68 Mounting - On PLC panel					
15	**Item No. 15 :-Power Analyser (IDS No 41)**					
	Designing, Supplying, Installing, commissioning & testing of Power Analyser interfacing to PLC Panel with Modbus communication port , as per IEC 62053 and in the prescribed format including mounting arrangement.	1	No	33265	Rupees Thirty-three Thousand Two Hundred Sixty-five Only	33,265.00
16	**Item No. 16 :-PLC with HMI for sand filter (with 4 Filter beds) considering 8 Filter beds with 2 sections (IDS No 44)**	2	No	279366	Rupees Two Lakh Seventy-nine Thousand Three Hundred Sixty-six Only	558,732.00
	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1200 mm X 700 mm X 1500mm (LBH), fabricated out of min. 2 mm thick CRCA sheet powder coated to Siemens Gray colour. The Panel shall be provided with reputed make PLC					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	with following accessories as well as input output configuration. The PLC shall be programmed withIEC 61131 standards for control, monitoring and communication of equipment's & instruments at WTP Plant (sand filter bed washing & operation). PLC shall have Ethernet port & protocol for Modbus TCP communication with following IO DI –72 num DO – 40 num AI –24 num AO – 16 num 10 inch color TFT HMI complete with programming shall be provided to interact with PLC The panel shall include all the accessories (not limited tofollowing) to achieve purpose of smooth & trouble free operationof sand filters filters (sand filter bed wasing & operation) MCB 10A DP – 1 num MCB 4A DP – 4 num 24 VDC Power Supply 10A – 1 num Push Buttons – 30 num Selector Switch -15 num Control Contactor – 15 num Annunciator with 12 WindowsNO to NC Type Electronic Hooter – 1 num Control Transformer – 1 num Emergency PB – 1 num Panel Cooling Fan – 1 num Panel Light with Door Switch – 1 num Control Indication Lamp – 15 num 2 HP VFDs - 3 num					
17	**Item No. 17 :-Pressure Transmitter for Blower (IDS No 32)**	2	No	36774	Rupees Thirty-six Thousand Seven Hundred Seventy-four Only	73,548.00
	Designing, Supplying, Installing, commissioning & testing of pressure transmitter CE markd with following technical parameters at Raw Water Pump House and Interfacing with PLC panel including mounting arrangement. Output 4-20 mA / HART Power supply - 24V DC ext. Display - 4" LED Accuracy - +/- 0.1 % of full scale or better					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Enclosure- IP 68					
18	**Item No. 18 :-Level transmitter for W/W Tank (IDS No 27)**	1	No	52530	Rupees Fifty-two Thousand Five Hundred Thirty Only	52,530.00
	Designing, Supplying, Installing, commissioning & testing of Ultrasonic level transmitter CE marked with following technical parameters Interfacing with PLC panel including mounting arrangement. Output-4-20 mA / HART Power supply - 24V DC ext. Display - 4" LED Range- 0-5 mtr. Accuracy - +/- 0.25% of Full Scale or better Enclosure- IP 68 Mounting - On PLC panel					
19	**Item No. 19 :-Priming arrangement**	1	No	97221	Rupees Ninety-seven Thousand Two Hundred Twenty-one Only	97,221.00
	Designing, supplying, installing, commissioning & testing with complete priming arrangements for centrifugal pumps as applicable & as required shall be done with interface with PLC panels & further to SCADA system.					
20	**Item No. : 20 - Electric Valve Actuator (IDS No 8)**					
	Providing, erecting electric Valve actuators for non rising spindle valve of size **various** dia.PN 1.6 rating totally enclosed, weather-proof and dust proof construction with IP-67, protection class suitable for installation in any position without lubrication, leakage or other operational difficulty with special grease filled gear box and					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	hand wheel for emergency manual operation which will automatically dis-engage on restoration of power to motor and with 10 watt single phase space heater and continuous local mechanical position indicator and individually replaceable counter gear assembly and with two torque and four limit switches with S.S. flap and operated with gear driven cams and of rating 250 Volt, 5 Amp, AC/DC, torque switch dial and with TEFC squirrel cage induction motor working on 440 Volts +/- 10%, 3 phase, 50 Hz AC of intermittent duty rating S-2, insulation class "F" and temp rise restricted to class "B" with IP - 67 protection class suitable for DOL starting and with three thermostat and 30% over load margin. The torque rating of reduction gear box shall be atleast 1.5 times max. torque required for opening and closing of valve with integral starter for ON & OFF operation **(Including Distribution Panel)**					
	a) 500 mm diameter	10	No	131273	Rupees One Lakh Thirty-one Thousand Two Hundred Seventy-Three Only	1,312,730.00
	b) 300 mm diameter	25	No	110019	Rupees One Lakh Ten Thousand Nineteen Only	2,750,475.00
	c) 200 mm diameter	15	No	97060	Rupees Ninety-seven Thousand Sixty Only	1,455,900.00
	d) 100 mm diameter	10	No	87831	Rupees Eighty-seven Thousand Eight Hundred Thirty-one Only	878,310.00
	Pure Water Pump houses @ 70,24,18 & 15 MLD WTP					
21	**Item No. 21 :-Level transmitter for W/W Tank (IDS No 27)**	4	No	52530	Rupees Fifty-two Thousand Five Hundred Thirty Only	210,120.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Designing, Supplying, Installing, commissioning & testing of Ultrasonic level transmitter CE marked with following technical parameters Interfacing with PLC panel including mounting arrangement. Output-4-20 mA / HART Power supply - 24V DC ext. Display - 4" LED Range- 0-5 mtr. Accuracy - +/- 0.25% of Full Scale or better Enclosure- IP 68 Mounting - On PLC panel					
22	**Item No. 22 :-Pressure Transmitter (IDS No 32)**	4	No	36774	Rupees Thirty-six Thousand Seven Hundred Seventy-four Only	147,096.00
	Designing, Supplying, Installing, commissioning & testing of pressure transmitter CE marks with following technical parameters at Raw Water Pump House and Interfacing with PLC panel including mounting arrangement. Output 4-20 mA / HART Power supply - 24V DC ext. Display - 4" LED Accuracy - +/- 0.1 % of full scale or better Enclosure- IP 68					
23	**Item No. 23 :-PH analyser (IDS No 31)**	4	No	105060	Rupees One Lakh Five Thousand Sixty Only	420,240.00
	Design, Supply, Installation, Testing of pH analyser as per IUPAC (International Union for Pure & Applied Chemistry)at A.F. and Interfacing with PLC panel including mounting arrangement. Range : 0 -14 , pH Accuracy : Better than 0.1% of full scale , Supply Voltage : 24V dc, Output : 4-20 mA /HART As per IEC 61000-6-2 & IEC 61000-6-3					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
24	**Item No. 24 :-Turbidity Analyser (IDS No 29)**	4	No	204541	Rupees Two Lakh Four Thousand Five Hundred Forty-one Only	818,164.00
	Design, Supply, Installation, Commissioning & Testing of Turbidity Analyser as per ISO 7027 scattering light method at A.F. and Interfacing with PLC panel. Turbidity Analyser shall comprises of 3 components i.e. sensors, signal distributor and transmitter with indicator with 2 outputs, 1 to PLC & another to local display including Mounting arrangement. Overall Range : 0 - 100 NTU Accuracy : +/- 0.02 NTU Supply Voltage : 230 VAC Output : 4-20 mA					
25	**Item No. : 25 - Residual chlorine analyser (IDS No 30)**	4	No	274320	Rupees Two Lakh Seventy-four Thousand Three Hundred Twenty Only	1,097,280.00
	Design, Supply, Installation, Testing of Residual chlorine analyser / meter must have automatic sensor cleaning facility at pure water sump and Interfacing with PLC panel. Residual Chlorine meter shall comprises of 3 components i.e. sensors ,flow through assembly and transmitter with indicator and gives 2 outputs one to Local display & other to PLC including Mounting arrangement. Overall Range : 0 - 8 mg/l (ppm) Accuracy : 2% of full scale Supply Voltage : 230 V ac Output : 4-20 mA Membrane free sensor of 2 gold					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	plated electrodes for long term stability and reference electrode (ag/Agcl) must be provided to avoid maintenance. IP 65 Nema 4 housing protection class required.					
26	**Item No. 26 :-Power Analyser (IDS No 41)**	4	No	33265	Rupees Thirty-three Thousand Two Hundred Sixty-five Only	133,060.00
	Designing, Supplying, Installing, commissioning & testing of Power Analyser interfacing to PLC Panel with Modbus communication port , as per IEC 62053 and in the prescribed format including mounting arrangement.					
27	**Item No. : 27 -PLC panel for Pure water pump House with four Pumps @ four P.S. (IDS No 42)**	4	No	345460	Rupees Three Lakh Forty-five Thousand Four Hundred Sixty Only	1,381,840.00
	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1000mm X 700 mm X 1500mm (LBH), fabricated out of min. 2 mm thick CRCA sheet powder coated to Siemens Gray colour. The Panel shall be provided with reputed make PLC with following accessories as well as input output configuration. The PLC shall be programmed withIEC 61131 standards for control, monitoring and communication of equipment's & instruments at Raw water Pumphouse PLC shall have Ethernet port & protocal for Modbus TCP communication with following IO.DI –32 num DO – 32 num AI –24 num AO – 8 num.7 inch color TFT HMI complete with programming shall be provided to interact with PLC The panel shall include all the accessories (not limited to following) to achieve purpose of smooth &					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	trouble free operation of pump house.MCB 10A DP – 1 num MCB 4A DP – 4 num24 VDC Power Supply 10A – 1 num Push Buttons – 7 num Selector Switch - 2 num Control Contactor – 6 numAnnunciator with 6 WindowsNO to NC Type Electronic Hooter – 1 num Control Transformer – 1 num Emergency PB – 1 num Panel Cooling Fan – 1 numPanel Light with Door Switch –1 num Control Indication Lamp – 5 num Wiring + TB etc – 1 lot Hardware – 1 lot					
28	**Item No. : 28 -LED UHD 49" Monitor (IDS No 47)**	1	No	84421	Rupees Eighty-four Thousand Four Hundred Twenty-one Only	84,421.00
	Supply, Installation, Testing, Integration & Commissioning of 49" UHD LED monitor at Conf. Room for display of total water system (Online)					
29	**Item No. : 29 -PLC Panel for WTP Automation (IDS No 45)**	1	No	345460	Rupees Three Lakh Forty-five Thousand Four Hundred Sixty Only	345,460.00
	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1200 mm X 700 mm X 1500mm (LBH), fabricated out of min. 2 mm thick CRCA sheet powdercoated to Siemens gray color. The Panel shall be provided with reputed make PLC with following accessories as well as input output configuration. The PLC shall be programmed with IEC 61131 standards for control, monitoring and communication of equipments & instruments at WTP Plant (raw water monitoring, alum dosing control, clarificatory operation & control, recirculation & mud pump operation) PLC shall have Ethernet port & protocol for Modbus TCP					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	communication with following IO DI –72 num DO – 40 num AI –12 num AO – 4 num 10 inch color TFT HMI complete with programming shall be provided to interact with PLC The panel shall include all the accessories (not limited to following) to achieve purpose of smooth & trouble free operation of WTP plant. MCB 16A DP – 3 num MCB 10A DP – 1 num MCB 4A DP – 4 num 24 VDC Power Supply 10A – 1 num Push Buttons – 30 num Selector Switch -16 num Control Contactor – 16 num Annunciator with 12 Windows NO to NC Type Electronic Hooter – 1 num Control Transformer – 1 num Emergency PB – 1 num Panel Cooling Fan – 1 num Panel Light with Door Switch – 1 num Control Indication Lamp – 16 num Wiring + TB etc – 1 lot Hardware – 1 lot					
30	**Item No. : 30 -SCADA system for WTP (IDS No 46)**	1	No	380268	Rupees Three Lakh Eighty Thousand Two Hundred Sixty-eight Only	380,268.00
	Design, manufacture, supply, installation, testing and commissioning of SCADA System for WTP Plant, Sand Filter beds & pump house. Windows based PC with latest configuration & OS complete with necessory office & antivirus softwares. PC configuration shall not be less than					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Intel i5 10th Gen CPU, 16 GB Ram, 128 GB SDD, 500 GB HDD, DVD RW, Rs232 & Rs485 port, 2 RJ45 ports, Keyboard, Optical Mouse, 32 inch color TFT Monitor, Latest Windows Pro OS, Microsoft Office & Antivirus & Internet Sequrity software for 3 years license. SCADA Software of reputed company with developer & runtime license with minimum 512 number of Tags with following features & functions. 1. Supervise real-time data in the form of graphical presentation. 2. Control WTP processes locally or through Remote locations. 3. Dynamic process Graphic, It should resemble the process mimic. SCADA should have good library of symbols so that develop the mimic as per required. When operator sees the screen he should know what's going in plant. 4. Alarm summery & Alarm history, SCADA system must be able to detect, display, and log alarms and events. When there are problems the SCADA system must notify the operators to take corrective action. 5. Acquire real-time data as well as logs data with Real time trend & Historical time trend. 6. Web Connectivity, Real-time displays can be accessed on remotely attached PCs and notebooks using internet.					
31	**Item No. : 31 -Secondary work station PC (IDS No 48)**	1	No	75450	Rupees Seventy-five Thousand Four Hundred Fifty Only	75,450.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	Windows based PC with latest configuration & OS complete with necessary office & antivirus software's. PC configuration shall not be less than Intel i5 10th Gen CPU, 16 GB Ram, 128 GB SDD, 500 GB HDD, DVD RW, Rs232 & Rs485 port, 2 RJ45 ports, Keyboard, Optical Mouse, 32 inch colour TFT Monitor, Latest Windows Pro OS, Microsoft Office & Antivirus & Internet Security software for 3 years license.					
32	**Item No 32 - RTU (Remote terminal control & communication unit at each GSE/ESR) considering 5 ESR/GSR**	20	No	84202	Rupees Eighty-four Thousand Two Hundred Two Only	1,684,040.00
	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 800 mm X 700 mm X 800mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet powder coated to Siemens gray color. The Panel shall be provided with reputed make PLC with following accessories as well as input output configuration. The PLC shall be programmed with IEC 61131 standards for control, monitoring and communication of equipments & instruments at GSR/ESR Tank. PLC shall have Ethernet port & protocal for Modbus TCP communication with following IO DI –16 num DO – 16 num AI –2 num AO – 1 num. The panel shall include all the accessories (not limited to following) to achieve purpose of smooth & trouble free operation at GSR/ESR functionality. Digital Flow Indicator-1 num Digital TDS Indicator – 1 num Led Level Indicator – 5 levels MCB 4A DP – 4 num 24 VDC Power Supply 10A – 1 num Push Buttons – 4 num Selector Switch - 1 num Control Relay –2 num Control Transformer – 1 num Emergency					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	PB – 1 num Panel Cooling Fan – 1 num Panel Light with Door Switch – 1 num Wiring + TB etc – 1 lot Hardware – 1 lot					
33	**Item No 33 - SCADA System for MBR/GSR/ESR with PLC based control valves Management system (IDS No 50)**	1	No	466784	Rupees Four Lakh Sixty-six Thousand Seven Hundred Eighty-four Only	466,784.00
	b) Design, manufacture, supply, installation, testing and commissioning of SCADA System for MBR/GSR/ESR Management system Windows based PC with latest configuration & OS complete with necessory office & antivirus softwares. PC configuration shall not be less than Intel i5 10th Gen CPU, 16 GB Ram, 128 GB SDD, 500 GB HDD, DVD RW, Rs232 & Rs485 port, 2 RJ45 ports, Keyboard, Optical Mouse, 32 inch color TFT Monitor, Latest Windows Pro OS, Microsoft Office & Antivirus & Internet Security software for 3 years license. one LTE Cellular Gateway with minimum following specifications shall be provided with Dual Sim Support, Support for all LTE bands used by Indian Cellular Operators, with atleast one, Ethernet, one USB & one serial port for connectivity with host device, ruegged construction for hazardous location. One remote dice mangement software shall be provided to manage IP addresses of RTUs SCADA Software of reputed compny with developer & runtime license with unlimited number of Tags with following features & functions 1. Supervise real-time data in the form of graphical presentation 2. Control MBR/GSR/ESR processes locally or					

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
	through Remote locations 3. Dynamic process Graphic, It should resemble the process mimic. SCADA should have good library of symbols so that develop the mimic as per required. When operator sees the screen he should know what's going in plant. 4. Alarm summery & Alarm history, SCADA system must be able to detect, display, and log alarms and events. When there are problems the SCADA system must notify the operators to take corrective action.					
34	**Item No 34 -Solar Panel with Battery (IDS No 51)**	20	No	20463	Rupees Twenty Thousand Four Hundred Sixty-three Only	409,260.00
	Designing, Supplying, installing commissioning & testing of photovoltaic solar panel with its charger,MS Stand for mounting solar panel so as to have maximum exposure of sunlight for desired location and maintenance free battery with 3 days battery backup.					
					Total cost of SCADA & Automation	**16,777,863.00**
35	**Item No 35 -Comprehensive O & M (IDS No 52)**					
	Operation and Maintenance Charges of the whole water supply scheme on SCADA and generation of daily report of water quality parameters and electrical parameters with specific consumption in kWh/ml .The report shall be mailed daily to the head quarters for monitoring purpose.					
i	During First year	free				
ii	During Second year	3	%		Rupees Two Lakh Fifty-four Thousand Sixty-nine Only	254,069.00
iii	During Third year	5	%		Rupees Four Lakh Twenty-three Thousand Four Hundred Forty-nine Only	423,449.00

Sr No	ITEM	QTY.	PER	RATE Rs.		AMOUNT Rs.
				In Fig	In Words	
iv	During Fourth year	7	%		Rupees Five Lakh Ninety-two Thousand Eight Hundred Twenty-eight Only	592,828.00
v	During Fifth year	7	%		Rupees Five Lakh Ninety-two Thousand Eight Hundred Twenty-eight Only	592,828.00
vi	During Sixth year	7	%		Rupees Five Lakh Ninety-two Thousand Eight Hundred Twenty-eight Only	592,828.00
					Total cost Rs.	**19,233,865.00**

Divisional Accountant
M.J.P. WM Dn. Ambernath

Executive Engineer
M.J.P. WM Dn. Ambernath

Executive Engineer (Mech)
M.J.P. Circle, Thane

Astt. Chief Engineer
MJP Thane

Superintending Engineer
MJP Circle Thane

Chief Engineer
MJP Thane

महाराष्ट्र जीवन प्राधिकरण

मध्यवर्ती नियोजन संकल्पचित्र व संनियंत्रण कक्ष,
नविन प्रशासकीय इमारत, तळ मजला, कन्हैय्या नगर,
कोपरी, ठाणे (पूर्व) - 400 603.
दूरध्वनी क्र. 022 - 25320203 फॅक्स क्र.022 - 25320207.
Email-secpdmr@gmail.com

तांत्रिक परिपत्रक क्र. 2-10

विषय:- मजीप्रा अंतर्गत करण्यात येणा-या विविध स्थापत्य कामा करीता नैसर्गिक वाळू ऐवजी नैसर्गिक स्त्रोतापासून तयार केलेल्या कृत्रिम वाळूचा वापर करण्याबाबत.

राज्यात विविध कार्यक्रमांतर्गत जसे जलस्वराज्य-२, मुख्यमंत्री ग्रामीण पेयजल कार्यक्रम, अमृत, नगरोत्थान व इतर पाणी पुरवठा व भुयारी गटार योजनेची कामे सुरु आहेत. या सर्व कामांमध्ये कॉंक्रिट व सिमेंट मॉरटर (Concrete and Mortar) हा अत्यंत महत्वाचा घटक आहे. या कॉक्रीट व मॉरटर करिता मुख्यत्वे नैसर्गिक वाळूचा वापर करण्यात येतो.

राज्यात ब-याच ठिकाणी वाळू उपशाला (dredging) बंदी लावल्याने, नैसर्गिक वाळूची उपलब्धता कमी झाली आहे. त्याचा स्थापत्य कामांच्या वर व परिणामी एकूणच योजनेच्या कामांच्या प्रगतीवर विपरित परिणाम झाला असल्याचे आढळते.

IS 383-1970 तसेच त्यांचे 2016 च्या आवृत्तीमध्ये अनुक्रमे Clause 2.1.2,2.1.3 आणि 3.1.2.1,3.1.2.2, व 3.1.3 मध्ये fine aggregate म्हणून Natural sand सह crushed stone sand , crushed gravel sand व Mixed sand बाबतची तरतूद आहे. या अनुषंगाने नैसर्गिक वाळू करीता पर्याय म्हणून कृत्रिम वाळू (Artificial Sand) वापर करण्याची बाब विचाराधीन होती. उपरोक्त सर्व बाबीचा विचार करुन मजीप्राच्या अखत्यारितील कामा करिता कृत्रिम वाळूचा वापर करण्याबाबत प्रस्ताव मान्य करण्यात येत असून त्या बाबत खालील प्रमाणे सुचना निर्गमित करण्यात येत आहेत.

१) IS 383-2016 च्या Clause-1 कॉंक्रिटमध्ये वापरावयाच्या वाळू व खडीच्या अपेक्षित गुणवत्तेबाबत विविध तरतूदी नमूद केल्या आहेत. त्यातील कलम-१ मध्ये "requirement for aggregates, crushed or uncrushed, derived from natural sources, such as river terraces, river bed, glacial deposits, rocks, boulders and gravels and manufactured aggregates produced from other than natural sources "इ. चा कॉंक्रीट मध्ये वापरण्याचे प्रमाण काय असावे याबाबत स्पेसिफिकेशन्स नमुद केले आहेत.

२) सदर परिपत्रकान्वये म्हणजे कृत्रिम वाळू (Artificial sand) IS 383 -2016 मधील कलम 3.1.2 व 3.1.3 मध्ये नमुद केलेले क्रशड् स्टोन सँड (crushed stone sand), क्रशड् ग्रॅव्हल सँड (crushed gravel sand) व मिक्सड् सँड (Mixed sand) असुन फक्त त्या वापरण्यास परवानगी देण्यात येत आहे याची नोंद घ्यावी.

3) IS 383 -2016 मधील कलम 3.1.4 मध्ये नमुद उत्पादित वाळू (Manufactured Sand) बाबतच्या तरतुदींचे पालन करणे व विशेषत: त्याबाबत नियंत्रण करणे क्षेत्रिय पातळीवर अडचणीचे होवू शकते याचा विचार करुन कृत्रिम वाळू (Artificial Sand) मध्ये उत्पादित वाळू (Manufactured Sand) चा समावेश नाही. याची नोंद घेण्यात यावी. त्यामुळे उत्पादित वाळूचा (Manufactured Sand) वापर करु नये.

४) कृत्रिम वाळू (Artificial Sand) वापराबाबतची परवानगी मुख्य अभियंता यांचे कडून प्राप्त करणे बंधनकारक राहील. मुख्य अभियंता यांनी परवानगी देताना खालील गोष्टींची तपासणी व पूर्तता करुन घेणे आवश्यक राहील.

i) नैसर्गिक नदीतील वाळूचा तुटवडा आहे, याची खात्री करणे.

ii) कृत्रिम वाळूचा उत्पादक स्त्रोत म्हणजेच उत्पादन करणारी जागा याची या ठिकाणी योग्य गुणवत्तेची कृत्रिम वाळू बनविण्यात येत असल्याबाबत खातरजमा करुन त्या स्त्रोतास पूर्वमान्यता देणे.

iii) कृत्रिम वाळू उत्पादन हे Vertical Shaft Impactor (VSI) वापरुन केलेले असणे बंधनकारक असेल.

iv) कृत्रिम वाळूच्या स्त्रोतास मान्यता देताना त्याठिकाणी वाळु बनविण्यासाठी वापरण्यात येणारे दगड , तसेच तयार झालेली वाळू यांच्या IS 383 -2016 मधील कलम ५ मधील Quality of aggregate बाबत सर्व निकषांची पूर्तता करीत असल्यांची खातरजमा करणे आवश्यक राहील.त्याबाबतच्या शासनमान्य प्रयोगशाळेत केलेल्या सर्व चाचण्यांचे अहवाल, स्त्रोत मान्यतेच्या धारिकेत ठेवणे आवश्यक राहील. सदर कृत्रिम वाळूच्या चाचण्या हया IS 383 -2016 मधील कलम 5.2, 5.3, 5.4, 5.5, 5.6, 6.3 मध्ये नमुद केल्या प्रमाणे Specific gravity, Bulk density, Moisture content, Absorption Value, Aggregate crushing Value, Abrasive Value, Flakiness Index, Elongation Index ,

Presences of deleterious materials, soundness of aggregate व Physical and Mechanical properties करिता करणे आवश्यक राहील.

v) कृत्रिम वाळूचा दर हा नैसर्गिक नदीतील वाळूपेक्षा अधिक असणार नाही,याची दक्षता घेणे. जर दर जास्त असेल तर परवानगी देण्यात येऊ नये.

vi) IS 383 -2016 मधील Annexure-B मधील कृत्रिम वाळू संबंधाची (Manufactured Sand बाबत मुद्दे वगळून) माहिती वाळू उत्पादनास सादर करणे आवश्यक राहील.

vii) जर एखादया उत्पादकाकडे BIS. Certification असेल तर त्यास नॉदणी मध्ये प्राधान्य दयावे.

viii) सार्वजनिक बांधकाम विभाग किंवा जलसंधारण विभागांनी प्रमाणित केलेल्या कृत्रिम वाळू उत्पादकाचा गुणवत्ता (Performance) पाहुन त्याचा ही विचार करण्यात यावा. तथापि, सदर उत्पादक उपरोक्त नमूद निकष पूर्ण करीत असल्याची खातरजमा करावी.

५) **Sand dust, quarry dust, crusher sand dust इत्यादि चा वापर काँक्रीटमध्ये अथवा सिमेंट मॉरटर मध्ये वापरल्यामुळे त्यांचा गुणवत्ते वर विपरित परिणाम होतो. म्हणून कोणत्याही परिस्थितीमध्ये कृत्रिम वाळू म्हणून त्याचा वापर करु नये. याची नोंद घेण्यात यावी.**

६) काँक्रीटमध्ये कृत्रिम वाळूचा वापर करताना,काँक्रीटचे Mix Design करणे व ते योग्य क्षमतेचे (Strength) असल्याची खातरजमा करुन,मंजूर Mix Design प्रमाणे कृत्रिम वाळूचा वापर करणे बंधनकारक राहील.

७) कृत्रिम वाळूच्या स्त्रोतास /उत्पादकास मुख्य अभियंता यांनी मान्यता दिली असली तरी IS Code मध्ये नमुद केलेनुसार कामे चालु असताना या वाळूची, काँक्रीटची तसेच मॉरटर ची नियमाप्रमाणे शासनमान्य प्रयोग शाळेतून चाचण्या घेऊन, वाळू, काँक्रीट व मार्टर योग्य गुणवत्ता असलेबाबत वेळोवेळी खातरजमा करणे आवश्यक राहील. जर गुणवत्ता समाधानकारक नसल्यास सदर बाब कार्यकारी अभियंता यांनी मुख्य अभियंता यांचे तात्काळ निर्देशनास आणण्याची आहे.यास अनुसरुन मुख्य अभियंतायांनी योग्य ती शहानिशा करुन

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संबंधीत उत्पादनाची मान्यता रदद करणे/स्थगित करणे या स्वरुपाची कार्यवाही विना विलंब करावयाची आहे..

८) उत्पादनांची / स्त्रोताची मान्यता एक वर्षासाठी राहील.त्यानंतर त्यांचे नुतनीकरण गुणवत्ता पाहुन करण्याबाबत कार्यवाही करणे आवश्यक राहील.

९) ज्या दगडापासून वाळू बनविली जाते , त्याचा स्त्रोत (खाण) बदलली तर उत्पादकास पुन्हा नव्याने मान्यता घेणे आवश्यक राहील. त्याबाबत क्षेत्रिय अधिकारी यांनाही वेळोवेळी खातरजमा करणे गरजेचे राहील.

१०) मुख्य अभियंता यांनी मान्यता दिलेल्या उत्पादकांकडून कृत्रिम वाळूचा पुरवठा करण्यात आला तरी IS Code प्रमाणे योग्य गुणवत्तेच्या कृत्रिम वाळूचा पुरवठा करण्याची संपुर्ण जबाबदारी ही कंत्राटदाराची असणार आहे. जर योग्य गुणवत्तेच्या कृत्रिम वाळूचा पुरवठा झाला नाही तसेच त्यामुळे कामामध्ये कोणत्याही प्रकारे विलंब अथवा त्रुटी उदभवली तर कंत्राटदार हा निविदा शर्तीप्रमाणे दंडास तसेच इतर कार्यवाहीस पात्र राहील. सदर अटीचा/कलमाचा निविदेत किंवा कृत्रिम वाळूचा वापर करण्याच्या प्रस्तावास मान्यता देताना मान्यतेच्या पत्रात समावेश करणे गरजेचे राहील. निविदे मध्ये मुख्य अभियंता यांनी प्रमाणित केलेल्या कृत्रिम वाळू उत्पादकांची यादी समाविष्ट करणे आवश्यक राहील.

सदर परिपत्रकाचे पालन कटाक्षाने व तंतोतंत करण्याची संपुर्ण जवाबदारी संबंधित मुख्य अभियंता यांची राहील. सुलभ संदर्भासाठी IS 383 -2016 ची प्रत सोबत जोडण्यात येत आहे.

(संतोष कुमार)
सदस्य सचिव

सहपत्र : वरिल प्रमाणे.

जाक्र.मजीप्रा/मनिसंसकक्ष/नागरी/तां.प./ 209 /२०१८ दिनांक :- ९।४।२०१८

प्रत:- मा.अवर सचिव, पाणी पुरवठा व स्वच्छता विभाग, मुंबई.यांना माहितीसाठी सविनय सादर.
प्रत:- मुख्य अभियंता, महाराष्ट्र जीवन प्राधिकरण,ठाणे/ पुणे/ नाशिक /औरंगाबाद/ अमरावती /नागपूर यांना माहिती व कार्यवाहीकरिता.
प्रत:- अधीक्षक अभियंता, मजीप्रा मंडळ, यांना माहिती व कार्यवाहीकरिता.
प्रत:- कार्यकारी अभियंता, मजीप्रा विभाग , माहिती व कार्यवाहीकरिता.
प्रत:- तांत्रिक शाखा, मध्यवर्ती कार्यालय,मुंबई .यांना माहितीसाठी.

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