

CLIENT: *(Signature)*
 PMC/TPIA: *(Signature)*
 NCC LTD.: *(Signature)*

Note:- The Hardness value should not be less than 5 in Moh's scale.

The Hardness of Material is = 08

IS Sieve Size	retained	Cumulative wt. Retained (gm)	Cumulative % wt. Retained	% passing	Acceptable / Not Acceptable
6.3 mm	0	0	0	100	OK
4.75 mm	48	48	4.8	95.2	OK
2.36 mm	902	950	95	5.0	OK
1.18 mm	48	998	99.8	0.2	OK
Pan	01				
Total(gm)=					

SIEVE ANALYSIS

SL NO.	DESCRIPTION	OBSERVATIONS
1	Source of material :	Lalkuan, Uttar Pradesh
2	Location :	Block Name- Banskagan G.P Name- Rajhudeh Buzurg
3	Date of sampling :	28/10/2021
4	Lab. Test no :	23
5	Sample no. :	23
6	Total wt. of sample (gm) :	1000gm

Date of Testing : 29/10/2021
 Test report no : NCC/GR-S/BC/023

(As per IS : 460 and IS: 4097)

SIEVE ANALYSIS OF PEA GRAVELS (SIZE-1.6 mm to 4.8 mm)

GORAKHPUR-UP

NCC LTD.
 STATE WATER AND SANITATION MISSION
 CLIENT: JIM / SWSM / DWSM


NCC LTD. <i>(Signature)</i>	PMC/TPIA <i>(Signature)</i>	CLIENT <i>(Signature)</i>
--------------------------------	--------------------------------	------------------------------

Note : The Specific Gravity should not be less than 2.5

10	Specific Gravity =	$(W2 - W1) - (W3 - W4)$	=	$\frac{193}{193-122}$	=	2.7
9	Weight of the Jar + Water, W4 (gm) =	724 gm				
8	Weight of Jar + Gravel + Water, W3 (gm) =	846 gm				
7	Weight of Jar + Gravel, W2 (gm) =	445 gm				
6	Weight of the Jar, W1 (gm) =	252 gm				


SPECIFIC GRAVITY TEST AT ROOM TEMPERATURE

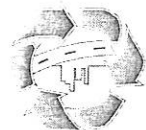
5	Sample no :	23
4	Lab. Test no :	23
3	Date of sampling :	28/10/2021
2	Location :	NAME OF THE BLOCK - <i>Bansgaon</i> NAME OF THE GRAM PANCHAYAT - <i>Peghwa dekh Buzurg</i>
1	Source of material :	<i>Lalkuan, Uttarakhnad</i>
SL NO.	DESCRIPTION	OBSERVATIONS

Date of Testing-	29/10/2021
Test report no :	NCC/LAR-S/84023

As per IS : 2386 (Part-3)

SPECIFIC GRAVITY OF PEA GRAVELS (SIZE- 1.6 mm to 4.8 mm)

NCC LTD.	STATE WATER AND SANITATION MISSION	
CLIENT: JIM / SWSM / DWSM	GORAKHPUR-UP	
NCC Limited		



TEST REPORT

Name of Customer	: Jai Nigam, Gorakhpur
Project	: SWSM-JJM Project (Har Ghar Jal Mission) at Gorakhpur.
Reference No.	: SWSM-UP/GKP/QC/TP/E/001
Sample supplied to Lab by	: Customer representative
Name of Contractor/ Agency	: NCC Ltd.
Sample Particulars	: Pea-Gravel

Sample Receipt Date	: 08-10-2021	Job No.	: MT117/1
Condition of sample	: Satisfactory	SRF No.	: 2021/55
Type of Sample	: Pea-Gravel	ULR No.	: NA
Source of sample	: Lalkuan (Uttarakhand)	Period of Testing	: 08/10/2021 to 11/10/2021

Terms & Conditions:

1.	Results relate only to the test sample provided by customer.
2.	This report is under copyright of Techpro Engineers Pvt. Ltd. (Laboratory Division) and is not to be reproduced, copied, handed over third party or used for any purpose other than for which it has been loaned.
3.	The tested samples are retained for three months after issue of test report (if not collected by customer).
4.	The unique identification of sample is as Job No. / Chainage No. /BH. No./SI. No. But only SI. No is mentioned in results.



Approved By:

[Signature]

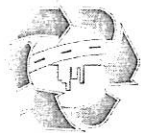
Arvind Kumar Garg
 (Quality Manager)



[Signature]

Checked By:

(Technical Manager)



I. PHYSICAL TEST RESULT

Sample Unique ID: MT117/1

Sl. No.	Particular of Test	Test-1 Passing %	Test-2 Passing %	Avg. Passing %	Test Method	Remark	
1.0	Sieve Analysis (% by weight)	6.3 mm	100	100	IS 2386 (Part-1)-1963, RA- 2016	-	
		4.75 mm	49.928	52.412			51.17
		3.35 mm	18.992	23.930			21.461
		2.00 mm	13.116	17.926			15.521
		1.18 mm	6.412	8.016			7.214
		0.600 mm	2.562	3.410			2.986
		0.300 mm	0.164	0.818			0.491
		0.150 mm	0.134	0.354			0.244
		0.075 mm	0.092	0.254			0.173
2.0	Elongation Index (% by weight)	0.0	0.0	0.0	IS 2386 (Part-1)-1963, RA- 2016	Partical Size >6.3	
3.0	Hardness Test (Number)	7.40	8.66	8.00	IS 13630 (Part-13)-2006	-	
4.0	Specific Gravity	2.66	2.66	2.66	IS 2386 (Part-3)-1963, RA- 2016	-	



Approved By:

[Signature]

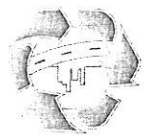
Arvind Kumar Garg
(Quality Manager)



Checked By:

[Signature]

(Technical Manager)



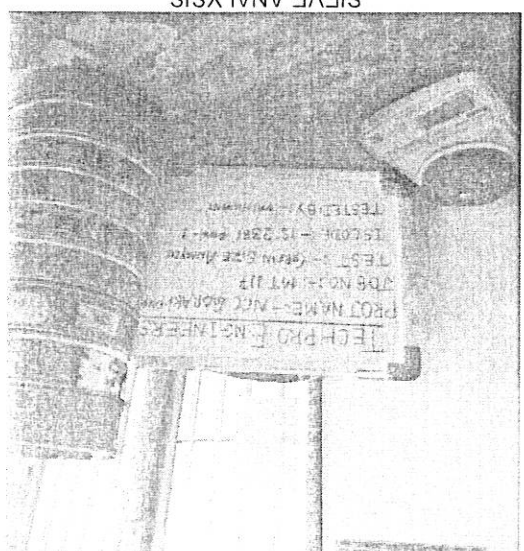
TECHPRO ENGINEERS PVT. LTD.

(Laboratory Division)
 Lab Add. 131, Ram Ganga Housing Society, Naramau, Kanpur-209217,
 Tel.: 0512-2525759, 09793209918, Web site: www.techproindia.com,
 e-mail: techlab@gmail.com, info@techproindia.com,
 Doc No.: TEQR-36C, Issue No.: 02, Issue Date: 18/08/20, Rev. No.: 01, Rev. Date: 10/12/2020

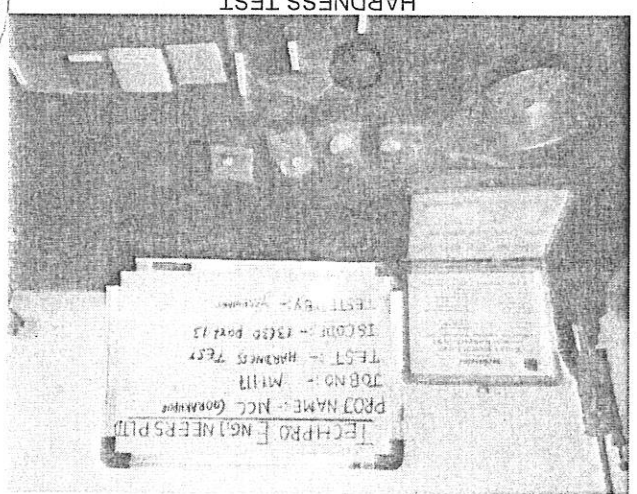
PHOTOGRAPHS



SPECIFIC GRAVITY




SIEVE ANALYSIS




HARDNESS TEST

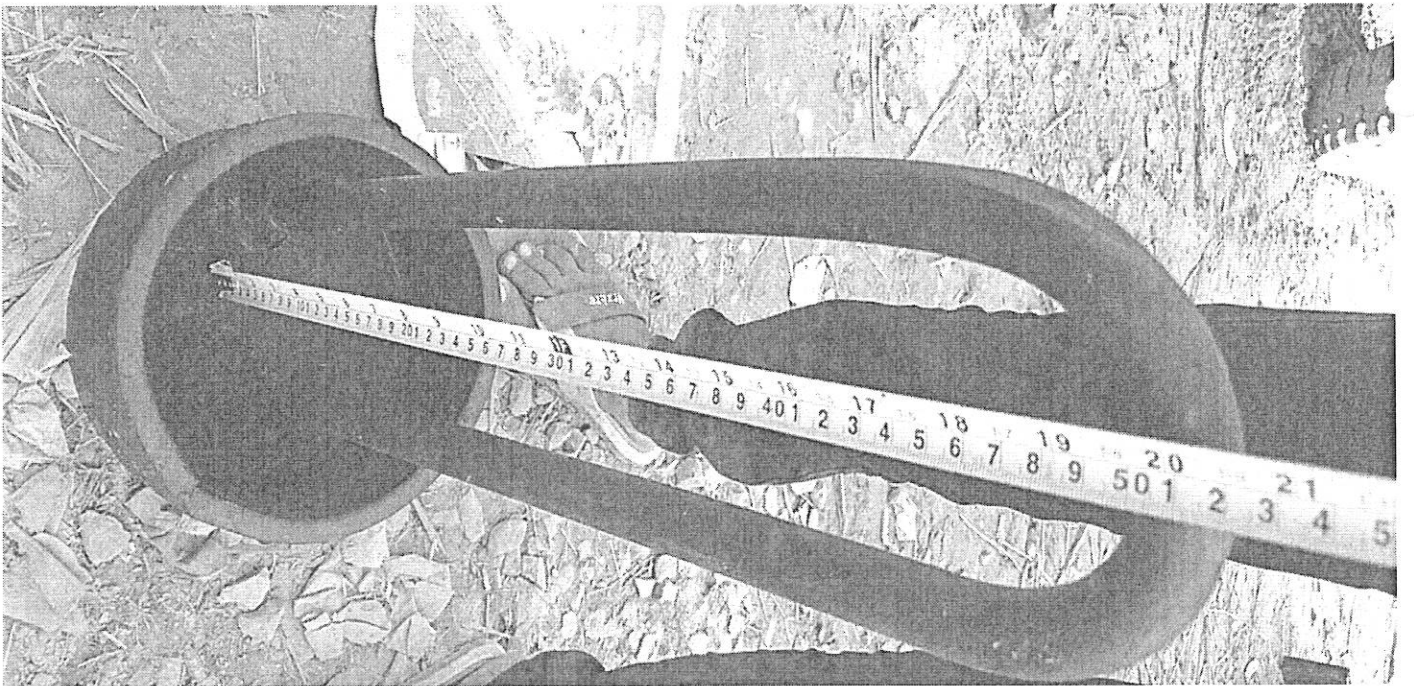
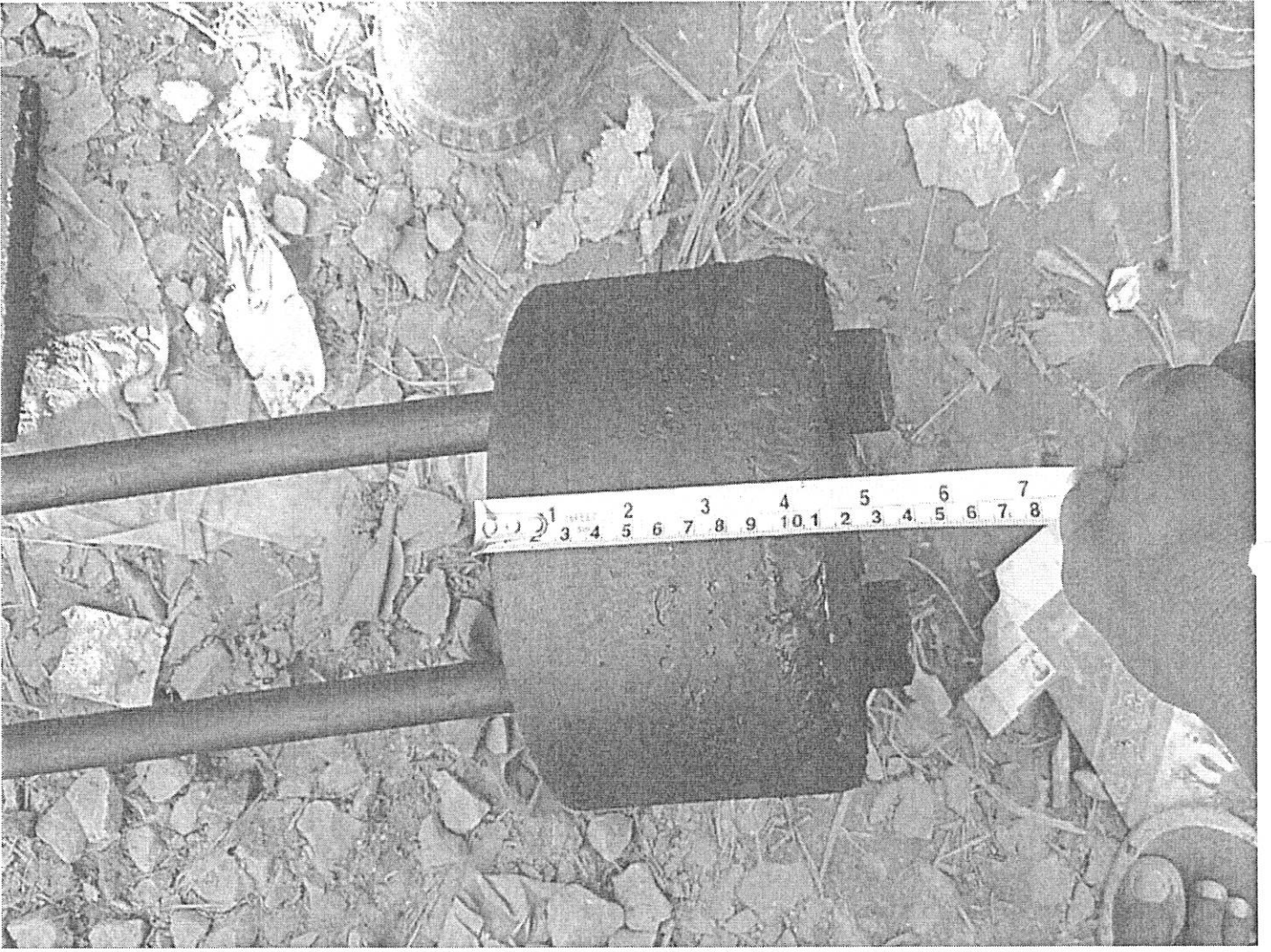


Approved By: 
 Arvind Kumar Garg
 (Quality Manager)



Checked By: 
 (Technical Manager)

END OF REPORT



Raghu'dih Buzurg

Project Name : Survey, Design, Preparation of DPR, Construction, Commissioning and O&M for 10 years of Various Rural Water Supply Project in the State of Uttar Pradesh - Gorakhpur District
 Client : SWSM/DWSM-UP-GKP
 Consultant : Medhaj Techno Concept Pvt. Ltd.
 Contractor : NCC Limited

Request For Inspection

RFI No:	SWSM-UP-GKP/S/TW/22/RA	Date And Time	02/11/2021
Description:	Rectification		
Location:	Block-Bansgaon, G.P.-Rajwadih Buzurg		
Preceding RFI No.	SWSM-UP-GKP/S/TW/22		
Commencement of work:	02/11/2021		
Submitted By:	Utkarsh		
Signature:	Utkarsh		
Designation:	JB Civil		
Concessionaire:	Proceed	Hold	
Name:	Mr. A. Kumar		
Designation:			
Comments:	<p>① Bail Plug is replaced.</p> <p>② Isomorph pipe is cleaned & get painted with 2 coat epoxy with enamel paint. used But anti corrosive paint not used.</p>		

Contractor Representative

Signature
(Utkarsh)

Consultant Representative

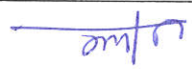
Signature
A. Kumar

Client Representative

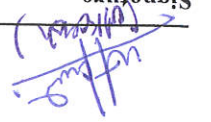
Signature

Project Name : Survey, Design, Preparation of DPR, Construction, Commissioning and O&M for 10 years of Various Rural Water Supply Project in the State of Uttar Pradesh - Gorakhpur District
Client : SWSM/DWSM-UP-GKP
Consultant : Medhaj Techno Concept Pvt. Ltd.
Contractor : NCC Limited

Request For Inspection

RFI No:	SWSM-UP-GKP/S/TW/22	Date And Time	2-11-21 / 11:00 am.
Description:	lowering of Pipe with assembly and filling of P-gravel.		
Location:	Block - Bangaon - GP Rajwadih Bangung.		
Preceding RFI No.			
Commencement of work:	2-11-2021.		
Submitted By:	utkashi.		
Signature:			
Designation:	JE level		
Concessionaire:	Proceed	Hold	
Name:	M.V. A. Kulkarni		
Designation:	-		
Comments:	<p>① Ball plug Not as per specification - need to replace</p> <p>② ISO manhole pipe found cracked need to clean and paint with anti corrosion paint 2 coat.</p>		

Contractor Representative



Consultant Representative



Client Representative

 (Mandu Khand)

BORE WELL DEVELOPMENT CHART (E/M)

SWSM/DWSM

NCC LTD.-GORAKHPUR (UP)

NAME OF THE DISTRICT-

GORAKHPUR

NAME OF THE BLOCK-

BHUSGADAN

NAME OF THE GRAM PANCHAYAT-

RAGHUNATH BAZAR

NAME OF THE VILLAGE-

DISCHARGA - 700 LPM

DEPTH B.G.L. IN METER

0 MTR

BORING CHART

STRATA

EXECUTED ASSEMBLY

ASSEMBLY DETAILS

mm Dia Housing Pipe A.G.L. = 0.50 mtr

300 mm Dia Housing Pipe mtr to 35.95 mtr

300/150 mm Dia Reducer mtr to 35.45 mtr

150 mm Dia BLIND 35.45 mtr to 68.30 mtr

150 mm Dia SLATED 68.30 mtr to 68.32 mtr

150 mm Dia BLIND 68.32 mtr to 88.48 mtr

150 mm Dia SLATED 88.48 mtr to 94.49 mtr

150 mm Dia BLIND 94.49 mtr to 120.50 mtr

150 mm Dia SLATED 120.50 mtr to 126.52 mtr

150 mm Dia BLIND 126.52 mtr to 133.57 mtr

150 mm Dia SLATED 133.57 mtr to 139.58 mtr

150 mm Dia BLIND 139.58 mtr to 145.59 mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

mm Dia pipe mtr to mtr

180 MTR

148 MTR

130 MTR

133 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

148 MTR

Aqua Xplore

(Groundwater Assessment & Allied Services)

243/5, New Colony Jiyaman, Hazratganj, Lucknow - 226001
Mob. 9918202546 / 9889323322, Email-aquaxplorelko@gmail.com

Advisor- Dr. R. A. Yadav, ex-Manager(Groundwater), U. P. Jal Nigam

Ref 1031 - R / AX - 2021 Date 31.10.2021

Geophysical Borehole Logging Report

Name of the site : Raghuadeeh Bujurg, Block- Bansaon

District : Gorakhpur

Date : 31.10.2021

Depth logged : 170.0 mbgl

Depth drilled : 180.0 mbgl

Logged by : Aqua Xplore

Presence : Representative of M/S NCC Limited, Gorakhpur - South

Based on the interpretation of geophysical logs, following information may be

deciphered, particularly with respect to salinity of the formation water;



SI.No.	Depth range(mbgl)	Thickness(m)	Remarks
1	23.0---27.0	4.0	Good all
2	41.0---58.0	17.0	
3	60.0---70.0	10.0	
4	88.0---95.0	7.0	
5	120.0---127.0	7.0	
6	133.0---140.0	7.0	
7	150.0---170.0	20.0	

Note.

for Aqua Xplore

CC;

1. Executive Engineer, C.D. (E/M), U.P. Jal Nigam, Gorakhpur.
2. M/S NCC Limited, Gorakhpur - South, SWSM.

NCC LTD.		SOIL SAMPLE COLLECTION REPORT		SWSM PROJECT - GORAKHPUR, UP	
				Name of the Block-	
				BANSGAON	
1		Name of the Gram Panchayat-		RAGHUADIH BUZURG	
3		Name of the Borewell Village-		MANJHRIYA KHURD	
4		Name of the Revenue Village-			
5		Drilling For Housing Pipe (Dia-		300	
		Bore For Plain/Slotted 150		150	
6		Drilling For Housing Pipe-		35.95	
		Depth) For Plain/Slotted Pipe-		86.08/24.06	
7		Total Drilling Depth (m)-		180M	
8		Electrical Logging Test Depth		170M	
Sl no.	Date of Sample Collection	Type of Soil Sample	Depth of Sample Collection (m)	Remarks	
1	26/10/2021	CLAY	0-3		
2	26/10/2021	CLAY	03-06		
3	26/10/2021	SAND	6-9		
4	26/10/2021	FINE SAND	9-11		
5	26/10/2021	FINE SAND	11-13		
6	26/10/2021	FINE SAND	13-16		
7	27/10/2021	FINE SAND	16-19		
8	27/10/2021	FINE SAND	19-22		
9	27/10/2021	SILTY FINE SAND	22-25		
10	27/10/2021	FINE SAND	25-28		
11	27/10/2021	MEDIUM SAND	28-31		
12	27/10/2021	MEDIUM SAND	31-34		
13	27/10/2021	SANDY CLAY	34-37		
14	28/10/2021	SANDY CLAY	37-40		
15	28/10/2021	SANDY CLAY	40-43		
16	28/10/2021	FINE SAND	43-46		
17	28/10/2021	FINE SAND	46-49		
18	28/10/2021	FINE SAND	49-52		
19	28/10/2021	MEDIUM SAND	52-55		
20	28/10/2021	MEDIUM SAND	55-58		
21	28/10/2021	MEDIUM SAND WITH GRAVEL	58-61		
22	28/10/2021	FINE SAND	61-64		
23	28/10/2021	SAND	64-67		
24	28/10/2021	FINE SAND	67-70		
25	29/10/2021	CLAY	70-73		
26	29/10/2021	CLAY WITH GRAVEL	73-76		
27	29/10/2021	CLAY WITH GRAVEL	76-79		
28	29/10/2021	CLAY WITH GRAVEL	79-82		
29	29/10/2021	CLAY	82-85		
30	29/10/2021	SAND	85-88		
31	29/10/2021	CLAY WITH GRAVEL	88-91		
32	29/10/2021	SAND	91-94		
33	29/10/2021	SAND	94-97		
34	29/10/2021	CLAY WITH GRAVEL	097-100		

1

CLIENT		PIA	RCC LTD
	175 - 180	CLAY	31/10/2021 60
	170 - 175	CLAY	31/10/2021 59
	169 - 170	CLAY	31/10/2021 58
	166 - 169	SAND	31/10/2021 57
	163 - 166	SAND	31/10/2021 56
	160 - 163	SAND	31/10/2021 55
	157 - 160	SAND	31/10/2021 54
	154 - 157	SAND	31/10/2021 53
	151 - 154	SAND	31/10/2021 52
	148 - 151	SAND	31/10/2021 51
	145 - 148	CLAY	31/10/2021 50
	142 - 145	CLAY	30/10/2021 49
	139 - 142	SAND WITH GRAVEL	30/10/2021 48
	136 - 139	SAND	30/10/2021 47
	133 - 136	SAND	30/10/2021 46
	130 - 133	FINE SAND	30/10/2021 45
	127 - 130	MEDIUM SAND	30/10/2021 44
	012 - 427	MEDIUM SAND	30/10/2021 43
	121 - 124	FINE SAND	30/10/2021 42
	118 - 121	FINE SAND	30/10/2021 41
	115 - 118	MEDIUM SAND	30/10/2021 40
	112 - 115	CLAY WITH GRAVEL	30/10/2021 39
	109 - 112	CLAY WITH GRAVEL	30/10/2021 38
	106 - 109	SANDY CLAY	30/10/2021 37
	103 - 106	SANDY CLAY	29/10/2021 36
	100 - 103	GRAVEL	29/10/2021 35



ISO 9001:2015

Manufacturers & Exporters of MS ERW Black Pipes, Steel Tubular Poles & Hollow Sections

DADU PIPES (P) LIMITED

CIN : U2811DL2006PTC148810

Corporate Office : C-101, Dadu Dayal House, PDC, Raj Nagar, Ghaziabad-201002 (U.P.) India.
 Email : info@dadupipes.com, Website : www.dadupipes.com
 Regd. Office : B-251, Okhla Industrial Area, Phase-1, New Delhi-110020

Contractor Name: NCC Limited

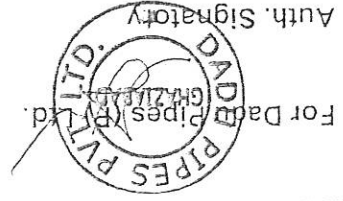
Client Name: State Water and Sanitation Mission

Project Name: Gorakhpur South Project

PO No.: NCC/ROK/SWSMUP-G(S)/PO/23 Dt.: 19.08.2021

TECHNICAL DATASHEET OF STEEL TUBES USED FOR WATER WELLS

S.No.	Parameter	Unit	Requirement	Vendor data
1	Name of Manufacturer		M/S Dadu Pipes Ltd	IS:4270-2001
2	Ref IS No.		IS:4270-2001	ERW/HFIW
3	Type		ERW/HFIW	ERW/HFIW
4	Ends (Plain/Bevel/Screwed)		Plain	Plain
5	Size	mm	300mm, 200mm, 150mm	300mm, 200mm, 150mm
6	Specified Thickness	mm	7.1mm	7.1mm
7	Tolerance on thickness	%	As per BIS	As per BIS
8	Tolerance on OD	mm	± 1% of OD	± 1% of OD
9	Length of Pipe	Mtr	As per order	As per order
10	Tolerance on Mass	%	± 10%	± 10%
11	Tensile strength	MPa	410 MPa (Min.)	410 MPa (Min.)
12	Yield Strength	MPa	235 MPa (Min.)	235 MPa (Min.)
13	Elongation percent	%	15% (Min.)	15% (Min.)
14	Flattening Test	%	On weld = 66% remaining On material = 33% remaining	On weld = 66% remaining On material = 33% remaining
15	Embossing details	--	Embossing on every metre of Manufacturer Name/logo, IS:4270, Grade & ISI Logo with CML No. and Size, Thickness, Grade & Batch No. stenciling on each pipe	Embossing on every metre of Manufacturer Name/logo, IS:4270, Grade & ISI Logo with CML No. and Size, Thickness, Grade & Batch No. stenciling on each pipe
16	Bituminous Coating	°C	At 0°C & 65°C	At 0°C & 65°C
17	Bead Height	%	60% Max. of specified thickness	60% Max of specified thickness
18	Straightness	mm	Max. 1 in 600 of any length	Max. 1 in 600 of any length
19	Make of Steel		Tata/SAIL/Reputed make	SAIL TC to be submitted
20	Chemical composition certificate	%	As per IS:10748, Grade-3	Raw material certificate & manufacturer test certificate to be provided
21	Leak Proof Test	MPa	7 MPa for at least 5 sec.	7 MPa for at least 5 sec.



Recommended for approval with conditions
 ncc & sww mission is not allowed



अधिकारी का हस्ताक्षर
 23 अगस्त 2021
 30 अगस्त 2021

AE
 C.D. (E/M) UPJN
 Gorakhpur

DADU PIPES PVT. LTD.

A-72, Industrial Area, Sikandrabad, Bulandshahar (U.P.)

QUALITY PLAN FOR ERW M.S. ERW PIPES (DADU MAKE)

SIZE :- 100 MM NB TO 300 MM NB CONFORMING AS PER IS:4270-2001.

Contractor Name:- NCC Limited,
 Client Name:- UP Jal Nigam
 Project Name:- State Water & Sanitation Mission Gorakhpur

DOCUMENT NO. DPPL/01/01 REV. 0
 NO. OF PAGES 2
 PAGE NO. 1/2

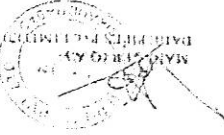
Sr. NO.	COMPONENT/ OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	Scope of Inspection		REMARKS	
									DPPL	TPI (If Any)		
1	RAW MATERIALS H.R CIRCULAR SHEET	1	CHEMICAL COMPOSITION	5	6	7	8	9	10	11	12	
		2	PHYSICAL PROPERTIES	MAJOR	CHEMICAL ANALYSES	100%	AS PER IS:4270	AS PER IS:4270	SUPPLIER TC & DPPL TEST REPORT	SUPPLIER/ DPPL QC	R	
		3	DIMENSIONS THICK & WIDTH.	MAJOR	MECHANICAL	100%	DO	DO	DPPL TEST REPORT	DPPL QC	R	
		4	VISUAL	MINOR	VISUAL	100%	DO	DO	DO	DO	R	
2	IN PROCESS INSPECTION	1	DIMENSIONS	CRITICAL	ONE HOUR PRODUCTION	AS PER IS:4270	DO	DPPL TEST REPORT	DPPL QC	R		
		2	THICKNESS	--DO--	DO	DO	DO	DO	DO	R		
		3	LENGTH	--DO--	DO	DO	DO	DO	DO	R		
		4	WEIGHT	--DO--	DO	DO	DO	DO	DO	R		
3	TENSILE STRENGTH	1	STRAIGHTNESS	--DO--	DO	DO	DO	DO	DO	R		
		2	SURFACE & END FINISH	--DO--	DO	DO	DO	DO	DO	R		
		3	PLAIN, BEVEL, SCREW AND SOCKET	--DO--	DO	DO	DO	DO	DO	R		
		4	PHYSICAL PROPERTIES	CRITICAL	MECH. TEST	TWO SAMPLE PER SHIFT	DO	DO	DO	DO	R	
4	WORKMANSHIP & PROTECTIVE COATING	1	FLATTENING/BEND	DO	DO	DO	DO	DO	DO	R		
		2	PRESSURE/LEAK TEST	MAJOR	HYDRAULIC TEST	100%	DO	DO	DO	R		
		3	TENSILE STRENGTH	DO	DO	DO	DO	DO	DO	R		
		4	WORKMANSHIP & PROTECTIVE COATING	MAJOR	VISUAL	RANDOM	AS PER IS:4270	AS PER IS:4270	DPPL TEST REPORT	DO	R	

AE

EE

2341 मकब (100/1)
 20 नो वर 1994
 34/12/94

Recommended
 C.D. (E/M) UPJN
 E.E.
 Gorakhpur



APPROVED BY

NOTE: WE GIVE OUR MANUFACTURE TEST CERTIFICATE.
 R = REVIEW OF DOCUMENT
 W = WITNESS
 V = VERIFICATION
 PREPARED BY: Deep Narayan Singh
 QUALITY CONTROL ENGINEER
 DABU PIPES (P) LIMITED

NO.	OPERATION	CHARACTERISTICS	CLASS	TYPE OR CHECK	EXTENT OF CHECK	ACCEPTANCE CRITERIA	FORMS	RECORDS	DATE	INITIALS
1	DIMENSIONAL	MAJOR	MEASUREMENT & INSPECTION	VISUAL	100%	1	2	3	4	5
2	TENSILE & BEND / FLATTENING	CRITICAL	MECHANICAL TEST	ASTM	100%	1	2	3	4	5
3	LEAK TEST	MAJOR	HYDRAULIC TEST	ASTM	100%	1	2	3	4	5
4	IDENTIFICATION & MARKING	MAJOR	VISUAL	100%	100%	1	2	3	4	5
5	WORKMANSHIP	MAJOR	VISUAL	100%	100%	1	2	3	4	5

EXECUTIVESUMMARY

SalientFeatures
 Nameofthestate
 Nameofthedistrict
 Nameofthetehsil
 NameoftheBlock
 NameoftheProgramme
 NameoftheGP
 No.ofVillage/Habitations

UTTARPRADESH
 GORAKHPUR
 BANSGAON
 BANSGAON
 UnderJaiJeevanMission
 ProgrammeRAGHUADIBBUJURG
 5/5

Table1:ListofVillageandHabitations

S.No	District Name	SubDis trictName	Block Name	GramPanc hayatName	2011 Census Code	Revenue Villagen ame	Habitaton sName
1	GORAKHPUR	BANSGAON	BANSGAON	RAGHUADIBBUJURG	187018	RAGHUADIB BUJURG	RAGHUADIBBUJURG
2					187017	MANJHRIYA KHURD	MANJHRIYAKKHURD
3					187028	BARAIPAR	BARAIPAR
4					187016	RAGHUADIB KHURD	RAGHUADIBKHURD
5					187019	SINGRA	SINGRA

VillagePopulationSummary

Table2:Population,SC/STandHouseholdDataP/ VILLAGE-POPULATIONDETAILS

S.NO	DESCRIPTION	GROWTH FACTORWRTY. 2011	POPULATION	SC/ST	HOUSEHOLDS
1.	AsperCensus 2011	1	2739	619	414
2.	InitialStage2022	1.18	3240	732	490
3.	MiddleStage2037	1.47	4040	913	611
4.	UltimateStage2052	1.82	4990	1128	755

Rateofwatersupply
 NatureofSources
 SourceofDevelopment
 DailyWaterDemandSummary
 Baseyear2022
 Intermediateyear2037
 Designyear2052
 a)
 b)
 c)
 NumberofTubewells
 NatureofTreatments
 AverageDosingCapacity
 Pumping plantofTubewell
 a) No.andTypeofPlant
 b) AnticpatedDischarge
 c) TotalworkingHead
 d) Motor(HP)
 ServiceStorage
 a) Quantity
 b) Capacity
 c) Staging

64.7LP/CD(added15%lossesover5LP/CD)
 Groundwater
 Tube-Well
 210KLD
 261KLD
 323KLD
 1 No.
 ChlorinatorthroughHDPETank (100L)and
 meteringpump(0-6LPH)
 0.5 PPM
 NumberofsubmersiblePump
 700 LPM
 47 M
 17.5 HP
 200KL
 18M

Dosing

PipelineType	Material	Class	Diameter(mm)	Length(m)
DistributionMains	HDPE	PN-6PE100	63	11,550
DistributionMains	HDPE	PN-6PE100	76	76
DistributionMains	HDPE	PN-6PE100	90	347
DistributionMains	HDPE	PN-6PE100	110	1,291
DistributionMains	HDPE	PN-6PE100	125	0
DistributionMains	HDPE	PN-6PE100	140	590
DistributionMains	HDPE	PN-6PE100	160	0
DistributionMains	HDPE	PN-6PE100	180	1,146
DistributionMains	HDPE	PN-6PE100	200	0
TotalLength(m)				15,000

Table4:DistributionSummary

PipelineType	Details of Tube Well	In Water Works	DI	K-9	Diameter(m)-OD	Length(m)
RisingMains	New Well				150	35
TotalLength(m)						35

Table3:RisingMainsSummary

PipelineSummary

Estimate for Raghudh Gram Panchayat
Water Supply Scheme
Under - SWSM
Block - BANSGAON, District- Gorakhpur

BoQ Item No.	Description	Unit	Qty	Rate	Amount
1.01	All the works including Hydrological survey, topographical survey, Design charges including preparation and approval of DPR	LS	1.00	352606.00	352606
2.00	Drilling of Borehole for Tubewell construction by DC/RC/DTH Rig Machine including transportation, erection, dismantling of Rig and associated T&P complete in all respect including required all material labour etc.				
2.01	RIG Transportation for Tube Well Construction Transportation, Installation Dismantling of Rig machine and logging of bore hole	Job	1.00	159478.88	159479
2.03	DC/RC Drilling up to 100Mtr.				
2.04	400 MMØ	Mtr.		1638.27	
2.05	450 MMØ	Mtr.		1834.20	
2.06	500 MMØ	Mtr.	100.00	2013.00	201300
2.07	600 MMØ	Mtr.		2422.00	
2.08	DC/RC Drilling from 101 Mtr. To 200 Mtr.Deep				
2.09	450 MMØ	Mtr.		1960.88	
2.10	500 MMØ	Mtr.	80.00	2144.00	171520
2.11	600 MMØ	Mtr.		2510.25	
2.12	DC/RC Drilling from 201 Mtr. To 300 Mtr.Deep				
2.13	450 MMØ	Mtr.		2831.63	
2.14	500 MMØ	Mtr.		3014.75	
2.15	600 MMØ	Mtr.		3381.00	
2.16	DC/RC Drilling from 301 Mtr. To 400 Mtr.Deep & above				
2.17	450 MMØ	Mtr.		3319.35	
2.18	500 MMØ	Mtr.		3502.48	
2.19	600 MMØ	Mtr.		3868.72	
2.20	DTH Drilling upto 200.0 Mtr.Deep				
2.21	200/165 MMØ (in over burden/Hard Rock)	Mtr.		1250.00	
2.22	Development / Flushing of tubewell	Hr.		2900.00	
3.01	Tubewell Assembly (Supply + Fittings & Specials)				
3.02	100 MMØ	Mtr.		927.50	
3.03	150 MMØ	Mtr.	103.00	1900.00	195700
3.04	200 MMØ	Mtr.		2550.00	
3.05	300 MMØ	Mtr.	36.00	3800.00	136800
3.06	MSERW Pipe slotted pipe as per IS 8110				
3.07	100 MMØ	Mtr.		1366.85	
3.08	150 MMØ	Mtr.	24.00	2800.00	67200
3.09	200 MMØ	Mtr.		3833.80	
3.10	300 MMØ	Mtr.		5188.59	
3.11	MS fittings such as clamp, ball plug, reducer, well cap, girder & support structure	LS	1.00	32295.00	32295
3.12	MS fittings such as ring & centre guide	RM	163.00	471.68	76884
	Tubewell Assembly Lowering Works				
	Lowering of above assembly with welding of parts complete in all respect with all required material, T&P, labour, etc.				
4.01	Lowering up to 100 Mtr. Deep				
4.02	100 MMØ MSERW Plane/Slotted Pipe	Mtr.		129.45	
4.03	150 MMØ MSERW Plane/Slotted Pipe	Mtr.	64.00	281.00	17984
4.04	200 MMØ MSERW Plane/Slotted Pipe	Mtr.		376.50	
4.05	300 MMØ MSERW Plane/Slotted Pipe	Mtr.	36.00	472.00	16992
4.06	Lowering from 101 Mtr. To 200 Mtr. Deep				
4.07	150 MMØ MSERW Plane/Slotted Pipe	Mtr.	63.00	376.00	23688

BOQ Item No.	Description	Unit	Qty	Rate	Amount
4.08	200 MMØ MSERW Plane/Slotted Pipe	Mtr.		499.19	
4.09	300 MMØ MSERW Plane/Slotted Pipe	Mtr.		745.58	
4.10	Lowering from 201 Mtr. To 300 Mtr. Deep				
4.11	150 MMØ MSERW Plane/Slotted Pipe	Mtr.		385.19	
4.12	200 MMØ MSERW Plane/Slotted Pipe	Mtr.		459.00	
4.13	300 MMØ MSERW Plane/Slotted Pipe	Mtr.		606.62	
4.14	Lowering from 301 Mtr. To 400 Mtr. Deep & above				
4.15	150 MMØ MSERW Plane/Slotted Pipe	Mtr.		426.53	
4.16	200 MMØ MSERW Plane/Slotted Pipe	Mtr.		499.00	
4.17	300 MMØ MSERW Plane/Slotted Pipe	Mtr.		643.94	
5.00	Supply and unconsolidated packing of gravel with suitable size Development of Tube well	Cum	45.00	7500.00	337500
6.01	Transportation, Installation Dismantling of 150 PSI Compressor	Job		42120.00	
6.02	Charges for Development by 150 PSI Compressor per hour	Hr.		2544.52	
6.03	Transportation, Installation Dismantling of 250/400/600 PSI Compressor	Job	1.00	42120.00	42120
6.04	Charges for Development by 250 PSI Compressor per hour	Hr.		3027.00	
6.05	Charges for Development by 400 PSI Compressor per hour	Hr.	60.00	3154.10	189246
6.06	Charges for Development by 600 PSI Compressor per hour	Hr.		4062.20	
6.07	Transportation, Installation Dismantling of 0.5 Cusec OP Unit and Yield test, water test	Job		22321.28	
6.08	Charges for Development of TW by 0.5 Cusec OP Unit	Hr.		785.42	
6.09	Transportation, Installation Dismantling of 1 Cusec to 3 Cusec OP Unit and Yield test, water test	Job	1.00	67225.00	67225
6.10	Charges for Development of TW by 1 cusec OP Unit	Hr.	100.00	959.00	95900
6.11	Charges for Development of TW by 3 cusec OP Unit	Hr.		1196.00	
6.12	Transportation, Installation Dismantling of 2 Cusec OP Unit and Yield test, water test	Job		89317.00	
6.13	Charges for Development of TW by 2 cusec OP Unit	Hr.		1119.00	
7.01	1 HP	Nos		32518.98	
7.02	2 HP	Nos		35843.14	
7.03	3 HP	Nos		46249.21	
7.04	5 HP	Nos		65037.95	
7.05	7.5HP	Nos		228500	
7.06	10 HP	Nos		230200	
7.07	12.5 HP	Nos		238800	
7.08	15 HP	Nos		252100	
7.09	17.5 HP	Nos	1.00	276504.56	276505
7.10	20 HP	Nos		295500	
7.11	25 HP	Nos		334043.48	
7.12	30 HP	Nos		366163.04	
7.13	35 HP	Nos		393723.7	
7.14	40 HP	Nos		426547.83	
7.15	Variation in HP due to change of site locations increased/decreased in per HP of the proposed pumping plants.	Rate/HP		30467	
8.00	Pressure Transmitter	Nos	1.00	43120	43120
9.00	Electrically operated Sluice Valve PN 1.0 dia 100 mm	Nos	2.00	125000	250000
9.01	Electrically operated Sluice Valve PN 1.0 dia 150 mm	Nos		125000	
9.02	Electrically operated Sluice Valve PN 1.0 dia 200 mm	Nos	1.00	150000	150000
9.03	Check Valve PN 1.0 DPCV dia 100 mm	Nos	1.00	27519.8	27520
9.04	Check Valve PN 1.0 DPCV dia 150 mm	Nos		51145.45	
9.05	Check Valve PN 1.0 DPCV dia 200 mm	Nos		73485.9	
9.06	Dismantling Joint PN 1.0 dia 100 mm	Nos		3923.92	
9.07	Dismantling Joint PN 1.0 dia 150 mm	Nos		5605.6	

BOQ Item No.	Description	Unit	Qty	Rate	Amount
9.08	Dismantling Joint PN 1.0 dia 200 mm	Nos	1.00	7367.36	7367
9.10	SITC of Chain Pulley Blocks	Nos	1.00	46305	46305
9.11	1 Tonne	Nos	1.00	58432.5	58432.5
10.00	Turbidity & Chlorine analyzer	Nos	1.00	273000	273000
11.00	Hydrostatic Level Sensor:- Providing and installation hydrostatic level sensor at all tubewell pumping system including all accessories etc. complete in all respect as per instructions of Engineer - in-charge.	Nos	1.00	126000	126000
12.00	Stabilizer				
12.01	2 KVA	Nos		12777.78	
12.02	5 KVA	Nos		25555.56	
12.03	7.5 KVA	Nos		44722.22	
12.04	10 KVA	Nos		12777.78	
12.05	15 KVA	Nos		166111.11	
12.06	20 KVA	Nos		191666.67	
12.07	25 KVA	Nos		204444.44	
12.08	30 KVA	Nos		230000	
12.09	40 KVA	Nos		281111.11	
12.10	50 KVA	Nos		319444.44	
12.11	60 KVA	Nos		345000	
13.00	Column Pipe:- SITC of Column pipe of MS pipe for connecting submersible pumps				
13.01	32 mm Dia size - MS pipe	Mtr.		500	
13.02	40 mm dia size - MS pipe	Mtr.		666.67	
13.03	50 mm dia size - MS pipe	Mtr.		921	
13.04	65 mm Dia size - MS pipe	Mtr.		1066.67	
13.05	80 mm Dia size - MS pipe	Mtr.		1400	
13.06	100 mm Dia size - MS pipe	Mtr.	30.00	1567	47010
13.07	150 mm Dia size - MS pipe	Mtr.		2167	
14.00	Chlorinating System:- Supply, installation of chlorinating system with dosing pump 0-6 LPH capacity with 100 Litres(1w+1s) tanks, valves, pipes with required accessories (Automatic dosing system for chemical injection)	JOB	1.00	112000	112000
15.00	Fluoride Removal Plant:- Supplying, installation, testing, commissioning of Fluoride removal plant for required capacity including transportation and labour charges as complete. (vendor have to select the technology based on capacity (Electrolytic-de fluoridation plant or media based system). Rates for 400 KLD/ 500 LPM	LS		8062500	
16.00	Iron Removal Plant:- Supplying, installation, testing, commissioning of Iron removal plant which includes vessel, media, piping valves etc. for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		6062500	
17.00	Arsenic Removal Plant:- Supplying, installation, testing, commissioning of Arsenic removal plant which include vessel, media, piping valves etc. for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		9000000	
18.00	TDS and Hardness Removal Plant:- Supplying, installation, testing, commissioning of reverse osmosis plant which includes pump, micron cartridge filter, high pressure pump, reverse osmosis membrane, cleaning system and required piping and valves etc. complete for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		13125000	
19.00	Tube Well Electrification:- Internal electrification of tube well	LS	1.00	20000	20000

BoQ Item No.	Description	Unit	Qty	Rate	Amount
20.00	Solar Power Plant:- SITC of Solar power plant (for complete plant) including solar panel, Structure, inverter etc. complete in all respect with required material, T&P labour	KW	30.00	86800	2604000
21.00	Boundary Wall:- Construction of 1.3 m high and 15mm thick boundary wall with 230 mmx230 mm thick pillar made in Brick masonry in 1 cement and 4 sand mortar, the spacing between two pillar should not be more than 3.0 m/c and the depth of foundation should not be less than 0.60m, at the site of water works as per departmental type design and drawing, and, as per specifications given in the bid document including supply of all materials, labour T&P etc. for proper completion of work as per instructions of Engineer-in-charge. (Drawing No.D-1)	Rmt	145.20	6400	929280
22.00	MS Gate:- Supply and fixing of 3.6 m x 1.20 m MS gate including fabrication and supply of steel and construction of bonary wall pillars of size 1.35mx0.23mx0.23m with ornamental brick work 15mm th. around RCC, as per departmental type design and drawing (Drawing No. D-1) and as per specifications laid down in the bid document, including supply of all material, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.	No.	1.00	52000	52000
23.00	MS Wicket Gate :- Supply and fixing of 1.2m wide MS wicket gate including fabrication and supply of steel and construction of boundary wall pillars etc. as per specifications laid down in the bid document, including supply of all material, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.	No.	1.00	19000	19000
24.00	Interlocking Pavement:- Construction of Interlocking pavement for approach to water works, as per departmental type design and drawing and as per specifications laid down in the bid document, including supply of all materials, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.	Sqm.	262.20	1070.5	280685
25.00	Granular Sub Base:- Construction of granular sub base by providing coarse grade materials, spreading in uniform layers including watering and compaction complete.	Cum	52.44	2800	146832
26.00	Construction of WBM:- Construction of WBM by providing grade materials, spreading in uniform layers including watering and compaction complete.	Cum	65.55	3029	198551
27.00	Earth Filling:- Earth filling work for proper leveling of water work site, in accordance with the contour map and Grid map of existing site enclosed (Drawing no.D-1), including leveling, dressing, excavation and filling of earth where necessary and also including all labour, materials, T&P etc. required for proper completion of works and also including carriage of earth from within a distance of about 8 km. from the site of works as per instructions of Engineer-in-charge.	Cum	890		
28.00	Semicircular Drain:- Provision for inside semicircular drain 200mm dia including supply of all materials, labour and T & P etc. complete.	Rmt	156.50	1607.14	251517

BOQ Item No.	Description	Unit	Qty	Rate	Amount
29.00	Pump House (3.6x3.0x3.0):- Provide all materials, labour, T&P etc. complete and construct Pump house size (3.6x3.0x3.0)m Chlorinating room size (2.5x1.8x3.0)m as per departmental type design and drawing (drawing no-D-2) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer - in - charge.	Job	1.00	597000.	597000
30.00	Pump House (2.5x3.0x3.0):- Provide all materials, labour, T&P etc. complete and construct Pump house size (2.5x3.0x3.0)m Chlorinating room size (1.5x1.3x3.0)m as per departmental type design and drawing (drawing no-D-2) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer - in - charge.	Job		404000	
31.00	By-pass Chamber:- Provide all materials, labour, T&P etc. complete and constructed By-pass chamber for pump house (1000 (L) x 1000 (W) x 1150 (H) mm) drawing (drawing no.D-3) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer - in - charge.	No.	1.00	14600	14600
32.00	OHT:- Supply of all materials labour T&P etc. for complete construction of R.C.C. Over Head Tank of following capacity and staging above ground level with main components, including cost of soil testing and assuming bearing capacity of soil as 8 MT, with supply of design and drawings. All the water retaining components of OHT shall be casted in M-30 concrete and minimum grade of concrete of foundation and staging should be M-25 with approved cement, coarse sand and stone grit as per I.S. 11682 and I.S.456 Seismic effects and wind load should be taken into consideration as per I.S. 1893 for earthquake resistance and I.S. 875 part-III for wind load on structure and including 1M wide RCC staircase, 1 m wide R.C.C. M30 balcony, M.S. ladder made of 50x50x6 mm angle section and 20mm plain M.S. bars with hand rails of 20mm medium class G.I. pipes, One aluminium ladder inside the tank from top dome to bottom dome, R.C.C. railing with 20mm dia medium class G.I. pipe (in 3 rows) on both sides of stair case, supported on 50x50x6mm M.S. angle section, spaced at intervals not more than 1.5m, Proper ventilator at top dome in circular shape of 1.2 m dia, Water level indicator fabricated with sensor connecting to automation, Lightning conductor as per I.S.S.2309 or its latest amendments of latest electricity rules, consisting of proper elevation	Job		1712500.00	
32.01	50 KL 10 M Staging	Job		1712500.00	
32.02	50 KL 12 M Staging	Job		1788750.00	
32.03	75 KL 10 M Staging	Job		2150000.00	
32.04	75 KL 12 M Staging	Job		2242500.00	
32.05	100 KL 12 M Staging	Job		2886250.00	
32.06	100 KL 16 M Staging	Job		3073750.00	
32.07	150 KL 12 M Staging	Job		3241250.00	
32.08	150 KL 16 M Staging	Job		3457500.00	
32.09	175 KL 12 M Staging	Job		3441250.00	
32.10	175 KL 16 M Staging	Job		3732500.00	
32.11	200 KL 12 M Staging	Job		3732500.00	
32.12	200 KL 16 M Staging	Job		3843750.00	
32.13	200 KL 18 M Staging	Job		4040000.00	
32.14	225 KL 12 M Staging	Job	1.00	4105000.00	4105000
32.15	250 KL 12 M Staging	Job		4170000.00	
32.16	300 KL 12 M Staging	Job		4537500.00	
32.17	300 KL 16 M Staging	Job		4877500.00	
		Job		5508750.00	

B09 Item No.	Description	Unit	Qty	Rate	Amount
32.18	350 KL 14 M Staging	Job		6093750.00	
32.19	400 KL 14 M Staging	Job		6830000.00	
32.20	400 KL 16 M Staging	Job		7021250.00	
32.21	500 KL 14 M Staging	Job		7457500.00	
32.22	25 KI 10 M Staging	Job		1296250.00	
32.23	25 KI 12 M Staging	Job		1363750.00	
32.24	For 2 m Staging (5% additional per Meter)	Rm		205250.00	
33.00	Excavation:- and rising main trenches including lift upto 1.50 m and lead upto 50 m and refilling watering, ramming of the excavated earth into the trench and also disposal of surplus earth upto 50m from the center of the trenches including supply of all material labour, T&P etc complete as per instructions of Engineer -in-charge.				
34.00	Ordinary Soil	Cum	5528.84	214.61	1186544
35.00	Mixed Soil with Kankar	Cum	5528.84	249.27	1378174
36.00	Soft Rock	Cum		943.82	
37.00	Hard Rock	Cum		1319.18	
Additional	Disposal of Surplus Earth top 300 mm ht.	Cum			
38.00	Sand Bedding:- Sand Bedding in trenches in layers not exceeding 10 cm. in depth, consolidating each deposited layer by ramming and watering complete as per instructions of Engineer.	Cum	10.49	1656.00	17368
39.00	Retaining Wall:- Construction of Retaining Wall for Protection Survey, Investigation, Soil Testing, Planning, construction, commissioning etc. as per design and drawing provided by the contractor all in accordance with the relevant latest I.S. Codes and approved by the Engineer as per conditions of the bid documents. The design and drawings provided by the contractor should be betted by any IIT Institute or Government Engineering College approved by the Engineer, on contractor's cost. For construction of R.C.C. retaining wall including excavation of earth in hard rock/soft rock/ Kankar /mortum /bajrit etc. for foundation, Plain Cement Concrete 1:4:8 (one cement four fine aggregates and eight coarse aggregates) and supply of steel as per drawing including bending, binding with all type of binding materials including wastage of steel Reinforced Cement Concrete (M20) 1:1½:3(one cement one and half fine aggregates and three coarse aggregates) including cost of all arrangement of shuttering, scaffolding and water with supply of all materials, labors T&P etc. required for proper completion of works as per the directions of the Engineer (Provisional)	Cum		16400.00	
40.01	Ductile Iron Pipes:- Supply of following sizes (D.I) pipes for rising main/distribution system conforming to latest/relevant I.S. 8329/2000 Specifications with all jointing materials such as specials conforming to latest/relevant I.S. specifications, suitable for D.I pipes, as per IS-1239/2000 and IS 8329/2000 or their latest amendment including F.O.R, destination and all taxes and insurance etc. with loading, unloading and Carting up to site of work, also including specials for these pipes and lowering them into the trenches and laying true to alignment and gradient and jointing etc. complete (including testing of pipe lines and cutting of pipes for making up the length but excluding the cost of trenches), all complete as per instructions of Engineer -in-charge.	m		3877.6	
40.02	Ductile Iron Pipe (K-9)	m		3103.5	

BoQ Item No.	Description	Unit	Qty	Rate	Amount
40.03	200 mm dia Ductile Iron K-9	m		2332.32	
40.04	150 mm dia Ductile Iron K-9	m	35.00	1728.48	60497
40.05	125 mm dia Ductile Iron K-9	m		1411.41	
40.06	100 mm dia Ductile Iron K-9	m		1191.41	
40.07	80 mm dia Ductile Iron K-9	m		905.41	
40.08	300 mm dia Ductile Iron K-7	m		3151.6	
40.09	250 mm dia Ductile Iron K-7	m		2564.5	
40.10	200 mm dia Ductile Iron K-7	m		1848.32	
40.11	150 mm dia Ductile Iron K-7	m		1497.48	
40.12	125 mm dia Ductile Iron K-7	m		1301.41	
40.13	100 mm dia Ductile Iron K-7	m		1007.11	
40.14	80 mm dia Ductile Iron K-7	m		909.49	
41	<p>HDPE Pipes PN6, PE 100:-</p> <p>Supply of following sizes for distribution system conforming to latest/relevant I.S. 4984/1995 Specifications with all jointing materials and specials conforming to latest/relevant I.S. specifications including F.O.R. destination and all taxes and insurance etc. with loading, unloading and Carting up to site of work, also including specials for these pipes and lowering them into the trenches and laying true to alignment and gradient and jointing etc. complete (including testing of pipe lines and cutting of pipes for making up the length but excluding the cost of trenches) all complete as per instructions of Engineer -in - charge.</p>				
41.01	90 mm dia HDPE Pipe PN6, PE 100	m	347.00	229.5	79637
41.02	75 mm dia HDPE Pipe PN6, PE 100	m	76.00	169.2	12859
41.03	63 mm dia HDPE Pipe PN6, PE 100	m	11550.00	125.8	1452990
42.00	<p>Valves:-</p> <p>Supply and carting up to site of work of the following dia DI butterfly /sluice valves, class I, working pressure 10 Kg/cm2 conforming to IS: 780/1969 or its latest amendments, including valve fittings & dismantling joints as per requirement F.O.R. destination, and lowering them into the already prepared trenches, fixing in position and jointing them with pipelines and testing etc. complete and also including supply of jointing materials etc. complete including all taxes and insurance, as per instructions of Engineer -in -charge.</p>				
42.01	Sluice valve - 300 mm dia	Nos		64042.00	
42.02	Sluice valve - 250 mm dia	Nos		48109.00	
42.03	Sluice valve - 200 mm dia	Nos		27304.00	
42.04	Sluice valve - 150 mm dia	Nos	2.00	17626.00	35252
42.05	Sluice valve - 125 mm dia	Nos	1.00	14505.00	14505
42.06	Sluice valve - 100 mm dia	Nos		14455.00	
42.07	Sluice valve - 80 mm dia	Nos	3.00	12401.00	37203
42.07.1	Sluice valve - 65 mm dia	Nos	1.00	10650.00	10650
42.07.2	Sluice valve - 50 mm dia	Nos	8.00	9700.00	77600
42.08	Scour valve - 80 mm dia	Nos	8.00	10160.84	81287
42.09	Scour valve - 100 mm dia	Nos		12535.28	
42.10	Scour valve - 150 mm dia	Nos		17625.57	
42.11	Scour valve - 200 mm dia	Nos		27304.03	
42.12	Scour valve - 250 mm dia	Nos		48109.48	
42.13	Pressure Relief Valve				
42.14	PRV 80 mm dia	Nos		54219.00	
42.15	PRV 100 mm dia	Nos		80025.00	
42.16	PRV 150 mm dia	Nos		124575.00	

BoQ Item No.	Description	Unit	Qty	Rate	Amount
42.17	Single / Double ball type Air Valve:- Supply and installation, testing etc. of single/double ball type air valve conforming to latest/relevant I.S. specifications including all taxes and insurance, carting up to site of work and lowering them into the trenches, fixing in position and joining them with pipelines and testing etc. complete (including supply of joining materials and Valve fittings etc complete) as per instructions of Engineer.				
42.18	20 mm	Nos	5.00	10229.21	51146
42.19	50 mm	Nos		23170.33	
42.20	80 mm	Nos		23170.33	
42.21	150 mm	Nos		41024.88	
42.22	Supply of under ground sluice valve fire hydrant consisting of 80 mm dia sluice valve, 80mm dia tail pieces, 80mm dia duck foot bend and 80 mm dia standard makes iron coupling with cap and etc. complete conforming to latest/relevant I.S. specifications including all taxes and insurance up to site of work and lowering them into the trenches, fixing in position and joining them with pipelines and testing etc. complete (including supply of joining materials and Valve fittings etc. complete as per instructions of Engineer-in-charge.	Nos	6.00	24500.00	147000
43.00	Valve Chambers:- Construction of following type chambers as per department type design and drawing including Heavy duty M.S. Manhole Cover and all materials, labour, T&F etc complete for proper completion of work as per instructions of Engineer-in-charge.				
43.01-43.02	Sluice Valve Chamber (Masonry Type):- Dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.	13.00	25800.00	335400
43.03	Sluice Valve Chamber (Surface Box Type):- Dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.		5000.00	
43.04	Fire Hydrant chamber (800 (L) X 1250 (W) X 1000 (H) mm)	No.	6.00	18500.00	111000
43.05	Air Valve Chamber				
43.06	350 (L) x 350 (W) x 500 (H) mm	No.	5.00	9000.00	45000
43.07	Scour Valve Chamber				
43.08	dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.	8.00	29670.00	237360
43.09	PRV Valve Chamber - 1000 (L) x 1200 (W) x 1300 (H) mm	No.		28380.00	
44.00	Design and construct Thrust Block made in R.C.C. with cement, coarse sand & 20 mm gauge stone ballast in proportion of 1:1.5:3, for pipe line, including supply of MS reinforcement wrought to equited shape as necessary, its bending, fixing & binding the same with 0.50 mm thick binding wire in position & necessary centering & shuttering including curing and supply of all materials, labour, T & P etc. required for proper completion of the work and as per specifications for RCC work as per instructions of Engineer-in-charge.				
44.01	Reinforced Cement Concrete:- Design and construct Thrust Block made in Reinforced Cement concrete (1:1.5:3), with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, as per technical requirements.	Cum	1.60	13656.33	21850
44.02	Shuttering:- Providing shuttering for Thrust block using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete works curved or straight including fixing and striking for out after completion of works.	Sqm	16.00	420.00	6720

BoQ Item No.	Description	Unit	Qty	Rate	Amount
44.03	Reinforcement of Thrust Block:- Providing reinforcement of Thrust block for reinforced concrete work including distribution bars, stirrups, binders etc. initial straightening and removal of loose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with wire at every inter-section, complete as per drawing and direction.	MT	0.08	109838.98	8787
45.00	Staff Quarter / Office Room:- Provide all materials labour, T&P etc. and construct single room staff quarter / office room at water works site identified by the Engineer-in-charge as per department type design and drawing and specifications of civil works laid down in the bid document, including all material labour, T&P etc complete for proper completion of work as per instructions of Engineer -in -charge. (Drawing No.D-7)	No	1.00	970600	970600
46.00	Recharge Mechanism:- Water recharge Mechanism within the water works campus	Sqm	16.00	52500.00	840000
47.00	Backfilling of Earth:- Backfilling of abandoned tube well with available Earth	Cum		107.00	
48.00	Assess replacement items				
48.01	Pumping Plant:- SITC of Pumping plant including pumps with motors, starter, pannel, cable, complete in all respect with all required material T&P labour etc.				
48.02	1 HP	Nos		32518.98	
48.03	2 HP	Nos		35843.14	
48.04	3 HP	Nos		46249.21	
48.05	5 HP	Nos		65037.95	
48.06	7.5HP	Nos		228500.00	
48.07	10 HP	Nos		230200.00	
48.08	12.5 HP	Nos		238800.00	
48.09	15 HP	Nos		252100.00	
48.10	17.5 HP	Nos		276504.56	
48.11	20 HP	Nos		295500.00	
48.12	25 HP	Nos		334043.48	
48.13	30 HP (discharge 1000 LPM Head 62 m)	Nos		366163.04	
48.14	35 HP	Nos		393723.70	
48.15	40 HP	Nos		426547.83	
48.16	Turbidity & Chlorine analyzer	Nos		273000.00	
48.17	Hydrostatic Level Sensor:- Providing and installation hydrostatic level sensor at all tubewell pumping system including all accessories etc. complete in all respect as per instructions of Engineer -in -charge.	Nos		126000.00	
48.18	3Mtr. Long Column Pipe				
48.19	32 mm Dia size - MS pipe	Nos		1500.00	
48.20	40 mm dia size - MS pipe	Nos		2000.01	
48.21	50 mm dia size - MS pipe	Nos		2763.00	
48.22	65 mm Dia size - MS pipe	Nos		3200.01	
48.23	80 mm Dia size - MS pipe	Nos		4200.00	
48.24	100 mm Dia size - MS pipe	Nos		4701.00	
48.25	150 mm Dia size - MS pipe	Nos		6501.00	
49.00	Tubewell Automation System:- Installation of suitable capacity simple I.W. automation system to control operation of the pumping plant with respect to high/low water level in OHT with RTU panel, 7" HMI screen, surge device including energy meter inside the pump house with arrangement for communication of data with GSM and GPRS system to show required parameters including all accessories etc. complete in all respect as per instructions of Engineer -in -charge.	Job	1.00	375000	375000

BOQ Item No.	Description	Unit	Qty	Rate	Amount
50.00	Dismantling of Roads:- stacking of servicable materials and disposal of unservicable materials upto a distance of 50m as per instructions of Engineer -in-charge.				
50.01	B.O.E. Surface	Sqm	1675.07	100.00	167507
50.02	Bituminous Surface	Sqm	4376.99	200.00	875398
50.03	Interlocking Road	Sqm	627.63	155.00	97282
50.04	C.C. Road	Sqm	787.70	329.96	259910
51.00	Restoration of Roads:- Reinstatement of the following type of road surface with old and new materials including supply of all materials, labour, T&P etc. required for proper completion of the work as per instructions of Engineer -in-charge.				
51.01	B.O.E. Surface (50% of existing bricks to be reused)	Sqm	1675.07	350	586275
51.02	Bituminous surface	Sqm	4376.99	1534.82	6717893
51.03	Interlocking Road	Sqm	627.63	1070.5	671875
51.04	C.C. Road	Sqm	787.70	1560.71	1229373
52.00	Nala/Culvert Crossing:- Provision for following types of Culvert crossing -along the alignment of pipe line complete as per instructions of Engineer -in-charge. (casing of pipe is done by concreting)				
52.01	Nala/Culvert Crossing (width -3.5 m) upto Dia 300 mm	Nos	12.00	19000	228000
52.02-52.03	Trenchless Crossings:- Survey site Investigation Planning, design Drawings as per State Road manual and vetting / checked from State Road Divisional Office and taking NOC for trenchless crossing of National highway road and Railway track(crossing length 15m to 25m), Road for of required dia Rising main pipe with casing pipe as required for proper completion of work required size of MS casing pipe as per drawing and as per coating internally and 250 micron anti corrosive bituminous paint (IS:3589 & made from confining to IS:2062) with 750 Micron PU mt from normal ground level up to top of casing pipe including excavation & filling of Pit, Dewatering arrangement, Supporting system for soil, also including supply and fixing of 2 no Sluice valve ISI Mark, construction of sluice valve chamber etc. all complete work including supply & fixing specials in carrier pipe over main pipe, as per specification given in the bid documents including supply of all materials, labour T&P etc. for proper completion of work as per instruction of Engineer.				
52.04	Railway Line crossing (Upto Dia 350 mm)	Nos	60000		
52.05	National Highway road crossing (Upto Dia 350 mm)	Nos	40000		
52.06	State Highway road crossing (Upto Dia 350 mm)	Nos	27000		
52.07	Road Crossing:- Excavation in foundation of trench of proper size in soil mixed with moorum, Shingle, Kanakar, soft rock, hard rock, including refilling, dressing and ramming earth or sand or bajri, ballast, including providing, supply, carting, lowering, laying and jointing of casing pipe of RCC NP-3 with appropriate size, with rubber ring joint, sand filling in gap inside RCC pipe, insertion of distribution pipe into the casing pipe including supply of T&P, including concrete of 150 mm thick in with 40mm gauge brick ballast local sand and cement in proportion of 8:4:1, provision for barricading, labour for traffic diversion etc. Complete for proper completion of work as per instruction of Engineer.				
52.08	50 mm dia. Pipe	Nos	1400		
52.09	100 mm dia. Pipe	Nos	1700		
52.10	150 mm dia. Pipe	Nos	2000		

BoQ Item No.	Description	Unit	Qty	Rate	Amount
52.11	200 mm dia. Pipe	Nos		2400	
52.12	250 mm dia. Pipe	Nos		3600	
52.13	300 mm dia. Pipe	Nos		3900	
52.14	350 mm dia. Pipe	Nos		4386	
52.15	400 mm dia. Pipe	Nos		4700	
52.16	450 mm dia. Pipe	Nos		5200	
52.17	500 mm dia. Pipe	Nos		6200	
52.18	600 mm dia. Pipe	Nos		7600	
53.00	Functional House Tap Connection:- Making house connection should be done atleast 2 m inside the boundary wall with provision of tap from distribution line to outer wall of house, with supply of 1 m G.I. pipe (15 mm) (above ground) & average 5 mtr. MDPE Pipe (20 mm) (below ground) including specials, saddle, Tap, etc. of suitable size, T&P etc. including excavation, laying and jointing for proper completion of work as per instructions of Engineer as per Dwg 12 (excluding road restoration)	Nos.	490.00	3500	1715000
54.00	Stand Post:- Construction of single tap pillar type stand post as per type design	Nos.	10.00	10000	100000
55.00	Operation and Maintenance:- Operation and Maintenance for 10 years of water supply schemes after completion including staff required for operation and maintenance, chemicals, all materials, specials T & P for operation and maintenance, excluding electricity charges. (% of Capex cost for first year of O&M) Note:- 6% Inflation Factor considered for arriving the O&M Cost	Rs			
55.01	Cost of DPR Preparation @ 1% of CAPEX Cost of DPR	%			
56.00	Electromagnetic flow meters				
56.01	150mm	Nos.		150000	
56.02	200mm	Nos.		190000	
56.03	250mm	Nos.		225000	
56.04	300mm	Nos.		260000	
56.05	350mm	Nos.		330000	
56.06	400mm	Nos.		420000	
56.07	450mm	Nos.		500000	
56.08	500mm	Nos.		550000	
Additional Items	100 mm	Nos.	1.00	100000	100000
57.00	Soft Starter :-				
57.01	soft starter with RS485 port -400V,7.5KW Rating	Nos		60000	
57.02	soft starter with RS485 port -400V,15KW Rating	Nos		70000	
57.03	soft starter with RS485 port -400V,22KW Rating	Nos		85000	
57.04	soft starter with RS485 port -400V,30KW Rating	Nos		100000	
57.05	soft starter with RS485 port -400V,45KW Rating	Nos		125000	
57.06	soft starter with RS485 port -400V,55KW Rating	Nos		140000	
57.07	soft starter with RS485 port -400V,75KW Rating	Nos		150000	
57.08	soft starter with RS485 port -400V,90KW Rating	Nos		175000	
57.09	soft starter with RS485 port -400V,110KW Rating	Nos		225000	
57.10	soft starter with RS485 port -400V,132KW Rating	Nos		250000	
57.11	soft starter with RS485 port -400V,220KW Rating	Nos		275000	
57.12	soft starter with RS485 port -400V,250KW Rating	Nos		325000	
57.13	soft starter with RS485 port -400V,312KW Rating	Nos		375000	
57.14	soft starter with RS485 port -400V,450KW Rating	Nos		550000	
58.00	Auto Phase Reversal Unit:-				
58.01	100 Amp rating	Nos		45000	
58.02	125 Amp rating	Nos		50000	
58.03	160 Amp rating	Nos		70000	
58.04	200 Amp rating	Nos		120000	
58.05	250 Amp rating	Nos		135000	
58.06	315 Amp rating	Nos		140000	

BOQ Item No.	Description	Unit	Qty	Rate	Amount
58.07	400 Amp rating	Nos		150000	
58.08	500 Amp rating	Nos		190000	
58.09	630 Amp rating	Nos		225000	
59.00	Radar type Level transmitter	Nos	1.00	120000	120000
60.00	Control Panel:- control panel for all power equipments with IP 54 protection	Nos	1.00	120000	120000
61.00	Cabling for Tube Well:- complete cabling for tubewell including all power and control cables of all equipments at pump house and OHT	Nos	1.00	60000	60000
62.00	Master Control PLC:- Master control plc with CPU, SCADA software including GSM / GPRS modem, necessary firewall, ethernet switch, CCTV system	Nos		2665000	
63.00	Installation testing and commissioning	Nos	1.00	60000	60000
Additional Items					
A.1 - 1	110 mm dia HDPE Pipe PN6, PE 100	m	1291.00	321	414411
A.1 - 2	125 mm dia HDPE Pipe PN6, PE 100	m		378	
A.1 - 3	140 mm dia HDPE Pipe PN6, PE 100	m	590.00	498	293820
A.1 - 4	160 mm dia HDPE Pipe PN6, PE 100	m		630	
A.1 - 5	180 mm dia HDPE Pipe PN6, PE 100	m	1146.00	779	892734
A.1 - 6	200 mm dia HDPE Pipe PN6, PE 100	m		951	
A.1 - 7	Supply Installation of Display board of Size 2M X 1 M for Providing details of proposal of water supply scheme	LS	1.00	25000	25000
A.1 - 8	Provision for arboriculture for development of water works	LS	1.00	50000	50000
A.1 - 9	Battery Backup with Accessories for 2 Kw Load	Nos		92800	
A.1 - 10	40 Watts Solar Street Lights inbuilt with all accessories	Nos	4.00	30000	120000
A.1 - 11	SITC of DG for Electricity support				
A.1 - 11 - 1	7.5 KVA	Nos		240000	
A.1 - 11 - 2	10 KVA	Nos		260000	
A.1 - 11 - 3	15 KVA	Nos		306000	
A.1 - 11 - 3	20 KVA	Nos		370000	
A.1 - 11 - 3	25 KVA	Nos	1.00	389000	389000
A.1 - 11 - 3	30 KVA	Nos		405000	
A.1 - 11 - 3	40 KVA	Nos		483000	
A.1 - 11 - 3	45 KVA	Nos		495000	
A.1 - 11 - 3	50 KVA	Nos		555000	
A.1 - 11 - 3	62.5 KVA	Nos		569000	

EXECUTIVE ENGINEER
CONSTRUCTION DIVISION
(E/M) U.P. J.A. GAM
GORAKH

Checked And Found Ok
Recommended For Approval
Technical Cell (SWSM), Lucknow

U.P. Jai Nigam, 10 TH Div. Gorakhpur
Executive Engineer,
Mentha Secretariat, Jai Nigam

J.E.T. Assistant Engineer

M/S NCC LTD.

CHECKED BY

PREPARED BY

8150	PER CAPITA COST (NET COST+CONTINGENCY+GST)
4990	TOTAL POPULATION A (ULTIMATE YEAR 2052)

* Dn & Hiring charges shall be paid separately.

Sr. No.	Description of Work	Amount (Rs. in Lacs)	%	Amount (Rs. in Lacs)	Govt. of U.P. Share	Govt. of India Share
1	Cost of Work	356.50		356.50	331.09	0.46
2	0.14% Discount as per Contract on Cost of work	356.50	-0.14%	0.50		0.46
	Net Cost of Work	356.00		356.00	330.63	6.61
3	Add Contingency 2%	356.00	2.00%	7.12		6.61
	Sub Total (A)			363.12	181.56	337.24
4	Add GST 12 % - B	363.12	12.00%	43.57	21.79	40.47
5	Add 12.5% Contingency - C	363.12	12.50%	45.39	45.39	42.15
	Grand Total (A+B+C)			452.08	248.73	419.86
6	Est & M Cost (after DLP) Total Cost of Scheme (Ex O&M)	356.00	2%	7.12	162.31	95.02
				554.39	356	356

406.61
②

Estimate for Raghudih Gram Panchayat		
Water Supply Scheme		
Under - SWSM		
Block- BANSGAON, District- Gorakhpur		
General Abstract of Cost (Comprehensive)		
Estimate Number	Description of Sub-Estimate	
Amount (Rs. Lacs)		
E-1	Construction of Pump House	5.97
E-2	Pipelines - Raw Water Rising Main	0.90
E-3	Construction of Over Head Tank - 1 Nos	44.55
E-4	Pipelines - Distribution Network	194.93
E-5	Construction of Boundary Wall	10.00
E-6	Construction of Approach Road & Ancillary Civil Works	18.10
E-7	Construction of Staff Quarters	9.71
E-8	Survey, Investigation & Preparation of Detailed Project Report	3.53
Net Cost of the Civil Works of the Scheme		287.68
(B) Electrical & Mechanical Works		
E-9	Drilling Construction & Development of Tube Well - 1 Nos	18.32
E-10	Pumping Plant & Chlorination Plant	13.01
E-11	Solar Power Plant	26.04
E-12	Electrical & Instrumentation	11.44
Net Cost of the Electrical & Mechanical Works of the Scheme		68.81
Total Net Cost of the Scheme (A + B)		356.50