



STATE WATER AND SANITATION MISSION
CLIENT: JIM / SWSM / DWSM

NCC LTD.

NCC
NCC Limited

GORAKHPUR-UP

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

(As per IS : 460 and IS: 4097)

Date of Testing: 02/12/2021

Test report no : NCL/GRP/51/SC/031

SL NO.	DESCRIPTION	OBSERVATIONS
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1	Source of material :	Lakshya, Nainital, Uttarakhand
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2	Location :	Block Name- GOLA
		G.P Name- BATHPUR

3	Date of sampling :	01/12/2021
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4	Lab. Test no :	31
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5	Sample no. :	31
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6	Total wt. of sample (gm) :	2000gm
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SIEVE ANALYSIS

IS Sieve Size	retained	Cumulative wt. Retained (gm)	Cumulative % wt. Retained	% passing	Acceptable / Not Acceptable
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6.3 mm	0	0	0	100	OK
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4.75 mm	56	56	5.6	94.4	OK
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2.36 mm	828	884	88.4	11.6	OK
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1.18 mm	112	996	99.6	0.4	OK
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Pan	04	1000			
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Total(gm)= 1000

The Hardness of Material is = 08

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

NCC LTD. <i>(Signature)</i>	PMC/TPIA <i>(Signature)</i> 4-10-2021	CLIENT <i>(Signature)</i>
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NCC LTD.
STATE WATER AND SANITATION MISSION
CLIENT: JJM / SWSM / DWSM
GORAKHPUR-UP



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

As per IS : 2386 (Part-3)

Date of Testing-	02/12/2021
Test report no :	NCC/GKR-S/BCL/031

SL NO.	DESCRIPTION	OBSERVATIONS
--------	-------------	--------------

1	Source of material :	Lalkuan, Nainital, Uttarakhand
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2	Location :	NAME OF THE BLOCK - GOLA
		NAME OF THE GRAM PANCHAYAT - BAHARUK

3	Date of sampling :	01/12/2021
---	--------------------	------------

4	Lab. Test no :	31
---	----------------	----

5	Sample no :	31
---	-------------	----

SPECIFIC GRAVITY TEST AT ROOM TEMPERATURE

6	Weight of the Jar, W1 (gm)=	246 gm
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7	Weight of Jar + Gravel, W2 (gm)=	466 gm
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8	Weight of Jar + Gravel + Water, W3 (gm)=	856 gm
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9	Weight of the Jar + Water, W4 (gm)=	746 gm
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10	Specific Gravity =	W2 - W1	=	246 - 136	=	2.61
		(W2 - W1) - (W3 - W4)		246 - 136		

Note : The Specific Gravity should not be less than 2.5

NCC LTD. <i>(Signature)</i>	PMC/TPIA <i>(Signature)</i>	CLIENT <i>(Signature)</i>
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SWSM PROJECTS - UP - GORAKHPUR



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/N(S) 7/24/21	Date And Time	03/12/2021
Description:	Rectification (completion)		
Location:	Block - Gok, G.P. Bahpur.		
Preceding RFI No.	SWSM-UP-GKP/S) 7/24/21		
Commencement of work:	03/12/2021		
Submitted By:	Brijesh Solanki		
Signature:			
Designation:	JE (Civil)		
Concessionaire:	Proceed	Hold	
Name:			
Designation:			
Comments:	① V-groove was done properly on King 300mm 8 150mm pipe. ② welding profile is satisfied. ③ MS Prof clamp is prepared.		

Contractor Representative

Consultant Representative

Client Representative



Note: Block-Gola,GP-Bahpur

Time: 03-12-2021 17:25



Note: @ Block Gola, GP-Bahpur

Time: 3-12-2021 17:32



Note: @ Block Gola, GP-Bahpur

Time: 3-12-2021 17:35

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/N/S/029	Date And Time	02/12/2021 / 10:00 AM
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Description:	Lowering of pipe with Assembly & Filling of pre-cast.
Location:	Block - Caka, C.F. - Bahpur
Preceding RFI No.	N/A

Commencement of work:	03/12/2021
Submitted By:	Prady Saha
Signature:	<i>[Signature]</i>
Designation:	DE (Civil)

Concessionaire:	Proceed	Hold
Name:		
Designation:		

Comments:	<ol style="list-style-type: none"> 1. Pre-groove was not properly stacked. 2. M.S. flat clamp of 130mm width was used for housing, clamp need to be placed at premium. Enamel paint was used for tubewell Assembly. 3. V-groove were not done properly. On ring 300mm dia pipe. 4. Welding quality very poor. 5. Welding quality very poor.
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URGENT T.P.S.A.

 Signature
 Client Representative

 Signature
 Consultant Representative

 Signature
 Client Representative



VERTICALITY TEST

SOUND TEST

JE & AE
(Nandu Jaiswal)
(Rabbarajadon)

P.M.C.P.L.A
MCSM

E.B
Xm

DEPTH B.G.L. IN METER	BORING CHART	STRATA	EXECUTED ASSEMBLY
0 M			
17.0M			
37.0M		CONCRETE CLAY	
49.0M		CONCRETE CLAY	
52.0M		CONCRETE CLAY	
56.0M		CONCRETE CLAY	
60.0M		MEDIUM SAND	
66.0M		MEDIUM SAND	
76.0M		SANDY CLAY	
83.00M		MEDIUM SAND	
89.00M		MEDIUM SAND	
92.50M		MEDIUM SAND	
101.50M		MEDIUM SAND	
103.0		MEDIUM SAND	
120.0M		SANDY CLAY	
130.0M		CONCRETE CLAY	
133.0M		CONCRETE CLAY	
145.0M		MEDIUM SAND	
149.0M		MEDIUM SAND	
167.0M		CLAY	

TYPE OF RIG M/C.	SIZE OF BORE.	NAME OF THE BLOCK.	NAME OF THE GRAM PANCHAYAT.	NAME OF THE VILLAGE.
R.C	600/1500 mm φ	GORAKHPUR GOLA BAHAPUR	BAHAPUR	
Pipe Thickness: 30mm - 7mm, 150mm dia - 7mm				
ASSEMBLY DETAILS				
300 mm Dia Housing Pipe A.G.L. = 0.50 m				
300 mm Dia Housing Pipe A.G.L. = 0.50 m				
300 mm Dia Reducer 35.50 m to 35.70 m				
150 mm Dia BLIND pipe 35.70 m to 83.00m				
150 mm Dia Slotted pipe 83.00 m to 89.00m				
150 mm Dia BLIND pipe 89.00 m to 92.50m				
150 mm Dia Slotted pipe 92.50 m to 101.50m				
150 mm Dia BLIND pipe 101.50 m to 103.0m				
150 mm Dia Slotted pipe 103.0 m to 120.0m				
150 mm Dia BLIND pipe 120.0 m to 130.0m				
150 mm Dia Slotted pipe 130.0 m to 137.08				
150 mm Dia BLIND pipe 137.08 m to 150				
35.50				
35.70				
83.00M				
89.00M				
92.50M				
101.50M				
120.0M				
130.0M				
133.0M				
145.0M				
149.0M				
167.0M				
LOGGING REPORT				
1. Drilling Started - 25/11/2021				
2. Drilling Completed/Lowering - 04/12/2021				
3. Drilling Depth (m) - 167.0M				
4. Assembly Lowered (m) - 137.58M				
5. Housing Pipe (m) - 36.00 M				
6. Plain Pipe (m) - 27.34 M				
7. Slotted Pipe (m) - 24.04 M				
8. Reducer (m) - 0.20 M				
Total Assembly = 137.08 m + A.G.L. (m) = 137.58 m				
ABSTRACT				
1. Drilling Started - 25/11/2021				
2. Drilling Completed/Lowering - 04/12/2021				
3. Drilling Depth (m) - 167.0M				
4. Assembly Lowered (m) - 137.58M				
5. Housing Pipe (m) - 36.00 M				
6. Plain Pipe (m) - 27.34 M				
7. Slotted Pipe (m) - 24.04 M				
8. Reducer (m) - 0.20 M				
LOGGING REPORT				



Aqua Xplore

(Groundwater Assessment & Allied Services)

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

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

Ref 1201 - B / AX - 2021 Date 01.12.2021

Geophysical Borehole Logging Report

Name of the site : Bahpur, Block- Gola

District : Gorakhpur

Date : 01.12.2021

Depth logged : 152.0 mbgl

Depth drilled : 167.0 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;

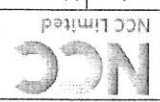
Sl.No.	Depth range(mbg)	Thickness(m)	Remarks
1	16.0---36.0	20.0	Good all
2	44.0---48.0	4.0	
3	52.0---56.0	4.0	
4	60.0---65.0	5.0	
5	76.0---90.0	14.0	
6	92.0---102.0	10.0	
7	112.0---116.0	4.0	
8	120.0---132.0	12.0	
9	144.0---148.0	4.0	

Note. All zones are intermixed with kankar.

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



1	Name of the Block-	GOLA
2	Name of the Gram Panchayat-	BAHPUR
3	Name of the Borewell Village-	UDAYPUR
4	Name of the Revenue Village-	
5	Drilling For Housing Pipe (Dia- 200 mm/300 mm)-	300mm
	Bore Hole For Plain/Slotted 150 mm dia-	150mm
6	Drilling For Housing Pipe-	36.00M
	Depth) For Plain/Slotted Pipe-	77.54M/24.04M
7	Total Drilling Depth (m)-	167M
8	Electrical Logging Test Depth	152M

Sl no.	Date of Sample Collection	Type of Soil Sample	Depth of Sample Collection (m)	Remarks
1	25/11/2021	CLAY	0-3	
2	25/11/2021	CLAY	3-6	
3	25/11/2021	CLAY	6-9	
4	25/11/2021	CLAY	09-12	
5	25/11/2021	CLAY	12-15	
6	25/11/2021	CLAY	15-18	
7	25/11/2021	CLAY	18-21	
8	25/11/2021	FINE SAND	21-24	
9	25/11/2021	FINE SAND	24-27	
10	25/11/2021	FINE SAND	27-30	
11	25/11/2021	FINE SAND	30-33	
12	25/11/2021	FINE SAND	33-36	
13	25/11/2021	SAND WITH CLAY	36-40	
14	25/11/2021	SAND WITH CLAY	40-42	
15	25/11/2021	SAND WITH CLAY	42-45	
16	26/11/2021	SAND WITH CLAY	45-49	
17	26/11/2021	SAND WITH CLAY	49-52	
18	26/11/2021	GRAVEL WITH SAND	52-56	
19	26/11/2021	GRAVEL	56-58	
20	26/11/2021	GRAVEL	58-60	
21	26/11/2021	GRAVEL WITH SAND	60-63	
22	26/11/2021	GRAVEL WITH SAND	63-66	
23	26/11/2021	GRAVEL	66-69	
24	26/11/2021	GRAVEL	69-72	
25	26/11/2021	FINE SAND	72-75	
26	26/11/2021	FINE SAND	75-78	
27	27/11/2021	FINE SAND	78-81	
28	27/11/2021	FINE SAND	81-84	
29	27/11/2021	FINE SAND	84-87	
30	27/11/2021	FINE SAND	87-90	
31	27/11/2021	GRAVEL	90-93	
32	27/11/2021	FINE SAND	93-95	
33	27/11/2021	FINE SAND	95-99	
34	28/11/2021	FINE SAND	099-103	

CLIENT		TPM M. K. K. K.	INCC LTD (K. K. K.)
	103 - 105	FINE SAND WITH GRAVEL	28/11/2021
	105 - 108	FINE SAND WITH GRAVEL	28/11/2021
	108 - 111	FINE SAND	28/11/2021
	111 - 114	FINE SAND	28/11/2021
	114 - 117	FINE SAND	28/11/2021
	117 - 120	FINE SAND WITH GRAVEL	28/11/2021
	120 - 123	FINE SAND	28/11/2021
	123 - 126	FINE SAND	28/11/2021
	126 - 129	FINE SAND	29/11/2021
	129 - 132	FINE SAND	29/11/2021
	132 - 135	GRAVEL	29/11/2021
	135 - 139	GRAVEL WITH CLAY	29/11/2021
	139 - 142	GRAVEL WITH CLAY	29/11/2021
	142 - 145	FINE SAND	30/11/2021
	145 - 149	FINE SAND	30/11/2021
	149 - 154	FINE SAND	30/11/2021
	154 - 158	FINE SAND	30/11/2021
	158 - 162	FINE SAND	30/11/2021
	162 - 167	FINE SAND	30/11/2021

TECHPRO ENGINEERS PVT. LTD.



Lab Add. 131, Ram Ganga Housing Society, Naramau, Kanpur-209217,
Tel.: 0512-2525759, 09793209918, Web site: www.techproindia.com
e-mail: techproindia@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
TEPL/MT/2022/136/R1

Dated: 05-03-2022

TEST REPORT

Name of Customer	Jal Nigam, Gorakhpur
Project	SWSM-JM Project (Har Char Jal Mission) at Gorakhpur U.P.
Reference No.	SWSM-UP/GKP/QC/77
Sample supplied to Lab by	Customer representative
Name of Contractor/ Agency	NCC Ltd.
Sample Particulars	Pea-Gravel

Sample Receipt Date	03/03/2022	Job No.	MT136
Condition of sample	Satisfactory	SRF No.	2022/29
Type of Sample	Pea-Gravel	ULR No.	NA
Source of sample	Lalkuan (Uttarakhand)	Period of Testing	03/03/2022 to 05/03/2022

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.



Checked By: *Alok Chauhan*

Alok Kumar Chauhan
(Technical Manager)

Approved By:

Arvind Kumar Garg

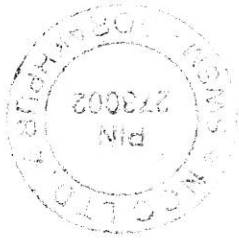
Arvind Kumar Garg
(Quality Manager)




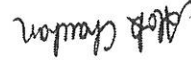
1. PHYSICAL TEST RESULT OF PEA GRAVEL

Sample Unique ID: MT136/TEPL/02

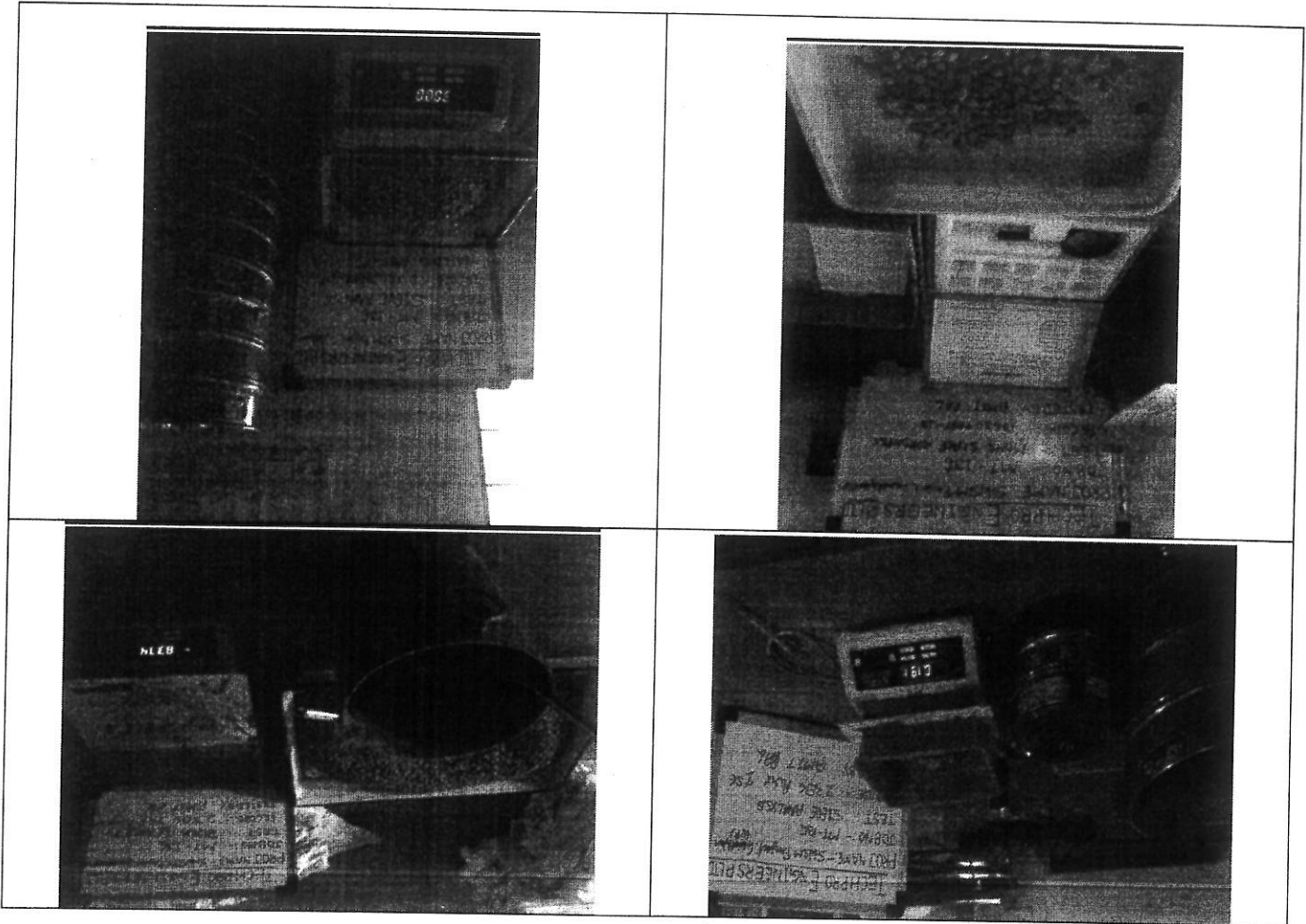
Sl. No.	Particular of Test	Test Passing %	Specification As Per IS (383 & 4097)	Test Method	Remarks	
1.0	Sieve Analysis (% by weight)	12.5 mm	100	IS 2386 (Part-1) 1963, RA-2016		
		8.0 mm	100			
		6.30mm	100			
		4.75 mm	80.90			
		3.35 mm	14.40			
		2.00 mm	8.60			
		2.0	Combined Flakiness & Elongation Index (% by weight)			0.0
3.0	Water Absorption (% by weight)	0.90	5 Max	IS 2386 (Part-3)-1963 RA-2016	-	
4.0	Specific Gravity	2.66	2.1 - 3.2	IS 2386 (Part-3)-1963 RA-2016	-	
5.0	Hardness Test (Number)	7.3	5 Min	IS 13630 (Part-13)-2006	-	
6.0	Bulk Density, Kg/litre	a) Compacted	1.59	NA	IS 2386 (Part-3)-1963 RA-2016	-
		b) Loose	1.49	NA		



Approved By: 
 Arvind Kumar Garg
 (Quality Manager)

Checked By: 
 Alok Kumar Chauhan
 (Technical Manager)

PHOTOGRAPHS



END OF REPORT

TUV INDIA PRIVATE LIMITED

INSPECTION RELEASE NOTE / CERTIFICATE

PN-2110445855-NCC/ROK/SWS/MUP-G(S)/PO/21 - S.No. 1 - Rev. 00



TUV India Control No: E116448388
SAP Number: 17-08-2021

Project Name: Gornahpur South Project
Location: State water and sanitation Mission

TUV India Client: M/E, DADU PIPES PVT LTD
End User Name: NCC Limited

Name: DCC / P/MC / EPC
Name: Not Applicable
DEC / P/MC / EPC: Not Applicable
Asgmt. Number: (if applicable)
P.O. Number: NCC/ROK/SWS/MUP-G(S)/PO/21
DL: 10.08.2021

Vendor Name & Location: M/E DADU PIPES PVT LTD, A-72, Industrial Area Sikandrabad, Bulandshahr (U.P.)

Sub Vendor Name & Location: Not Applicable
P.O. Number: (if applicable - Vendor PO or Sub Vendor)
Not Applicable

Item Description:

PO	Item No.	Item Code	Item Description	UOM	P.O. Quantity	Offered Quantity	Accepted Quantity	Cumulative accepted Quantity
	1		MS ERW Plain Pipe (Mtrs), IS 4270 300 MM Dia x 7.10 MM Thick - 6 Mtr length (Plain End)	Mtrs	36	48	36	36
	2		MS ERW Plain Pipe (Mtrs), IS 4270 200 MM Dia x 7.10 MM Thick - 6 Mtr length (Plain End)	Mtrs	144	156	144	144
	3		MS ERW Plain Pipe (Mtrs), IS 4270 150 MM Dia x 7.10 MM Thick - 6 Mtr length (Plain End)	Mtrs	576	588	576	576
	4		MS ERW Slotted Pipe (Mtrs), IS:4270, slotting as per IS 8110 Zig Zag slots, 150 MM Dia x 7.10 MM Thick - 6 Mtr length (Plain End)	Mtrs	66	66	66	66

Reference Documents:

Sr. No.	Document Name	Client Document Number	Vendor Document Number	Approval Status
1)	PR / MR / ARM	Not Applicable	Not Applicable	Not Applicable
2)	GAP / ITP / QCP	DPPL/QP/02 Rev 0	Not Applicable	Approved by client
3)	Drawing(s)	Not Applicable	Not Applicable	Not Applicable
4)	Datasheet(s)	Not Applicable	Not Applicable	Not Applicable
5)	Procedure(s)	Not Applicable	Not Applicable	Not Applicable
6)	Others (specify)	IS 4270, IS 8110, IS 4711	Not Applicable	Approved

Stages Witnessed: (For PO sr.no 4 - Scope as per GAP sr. no 3.1, 3.4,3.5 only & All for rest)

- 1) Total offered quantity verified.
- 2) GAP Sr.No 3.5 Visual inspection done for surface defects, workmanship and protective coating for all items - found satisfactory.



Disclaimer: The inspection by TUV India Pvt. Ltd. review of Test Certificates / Reports and issue of Inspection Release Note / Certificate does not relieve Client / Supplier / Manufacturer / Stocker from their responsibility towards the Client / End User to supply the genuine material / Items and documents in full compliance with applicable Order, Specification, Technical, Quantity, Quality, Warranty, Guarantee requirements. Supplier / Manufacturer / Stocker is wholly responsible for genuineness of the material / Items and documents. TUV India Pvt. Ltd. is not responsible for genuineness of the material / Items and documents. If within the agreed scope against written requirements and neither TUV India nor any of its group companies, associates or employees are in any way legally responsible for genuineness of the material / Items and documents. If the calibration certificate(s) for the measuring instrument(s) / equipment(s) used during inspection do not have traceability to NABL / Other certifying bodies, then the scope of review is limited only to technical content in the CopyRight: This document is the property of TUV India Private Limited and should not be reproduced, except in full without the consent of TUV India Pvt. Ltd.

EXECUTIVE SUMMARY

Salient Features
 Name of the state
 Name of the District
 Name of the Tehsil
 Name of the Block
 Name of the Programme
 Name of the GP
 No. of Village/Habitations
 UTTAR PRADESH
 GORAKHPUR
 GOLA
 GOLA
 Under Jal Jeevan Mission Programme
 BAHPUR
 4/4

Table 1: List of Village and Habitations

S. No	District Name	Sub District Name	Block Name	Gram Panchayat Name	2011 Census Code	Revenue Village Name	Habitations Name
1	GORAKHPUR	GOLA	GOLA	BAHPUR	187812	BAHPUR	BAHPUR
2					187811	NUAW	NUAW
3					187813	TURKHALIA	TURKHALIA
4					187810	UDAIPUR	UDAIPUR

Village Population Summary

Table 2: Population, SC/ST and House hold Data

GP/MLLAGE-POPULATION DETAILS

S. NO	DESCRIPTION	GROWTH FACTOR WRT Y-2011	POPULATION	SC/ST	HOUSE HOLDS
1.	As per Census 2011	1	2295	459	347
2.	Initial Stage 2022	1.23	2830	566	428
3.	Middle Stage 2037	1.68	3850	770	582
4.	Ultimate Stage 2052	2.28	5240	1048	792

64.7 LPCD (added 15% losses over 55 LPCD)

Ground water

Tube-Well

183 KLD

249 KLD

339 KLD

1 No.

Chlorinator through HDPE Tank (100 L) and Dosing

0.5 PPM

metring pump (0-6LPH)

1 Number of Submersible Pump

650 LPM

45 M

15 HP

1 No.

200 KL

16 M

Pumping plant for Tube Well
 a) No. and Type of Plant
 b) Anticipated Discharge
 c) Total Working Head
 d) Motor (HP)
 Service Storage
 a) Quantity
 b) Capacity
 c) Staging

Average Dosing Capacity

Number of Tube wells

Design year 2052

Intermediate year 2037

Base year 2022

Daily Water Demand Summary

Source of Development

Nature of Sources

Rate of water supply

Pipeline Type	Material	Class	Diameter(mm)	Length (m)
Distribution Mains	HDPE	PN-6 PE100	63	9,838
Distribution Mains	HDPE	PN-6 PE100	75	949
Distribution Mains	HDPE	PN-6 PE100	90	316
Distribution Mains	HDPE	PN-6 PE100	110	235
Distribution Mains	HDPE	PN-6 PE100	125	496
Distribution Mains	HDPE	PN-6 PE100	140	671
Distribution Mains	HDPE	PN-6 PE100	160	36
Distribution Mains	HDPE	PN-6 PE100	180	0
Distribution Mains	HDPE	PN-6 PE100	200	0
Total Length (m)				12,542

Table 4: Distribution Summary

Pipeline Type	Details of tube well	Tube well Location	Material	Class	Diameter (mm)-OD	Length (m)
Rising Mains	New Tube Well	In Water Works	DI	K-9	150	35
Total Length (m)						35

Table 3: Rising Main Summary

Pipeline Summary

Estimate for Bahpur Gram Panchayat
Water Supply Scheme
Under - SWSM
Blok- Gola, District- Gorakhpur

BoQ Item No.	Description	Unit	Qty	Rate	Amount
1.01	Survey, Design & Preparation of DPR All the works including Hydrological survey, topographical survey, Design charges including preparation and approval of DPR	LS	1.00	286132.00	286132
2.00	Drilling of Borehole for Tubewell construction by DC/R/C/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/R/C 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/R/C 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/R/C 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/R/C 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 Tubewell Assembly (Supply + Fittings & Specials)	Hr.		2900.00	
3.01	MSERW plain pipe,As per IS 4270				
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 Tubewell Assembly Lowering Works	RM	163.00	471.68	76884
	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 Plain/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

Estimate for Bahpur Gram Panchayat
Water Supply Scheme
Under - SWSM
Block-Gola, District-Gorakhpur

BOQ Item No.	Description	Unit	Qty	Rate	Amount
1.01	Survey, Design & Preparation of DPR All the works including Hydrological survey, topographical survey, Design charges including preparation and approval of DPR	LS	1.00	288434.00	288434
2.00	Drilling of Borehole for Tubewell construction by DC/R/C/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/R/C Drilling up to 100Mtr.	Mtr.			
2.04	400 MMØ	Mtr.			
2.05	450 MMØ	Mtr.			
2.06	500 MMØ	Mtr.			
2.07	600 MMØ	Mtr.			
2.08	DC/R/C Drilling from 101 Mtr. To 200 Mtr.Deep	Mtr.			
2.09	450 MMØ	Mtr.			
2.10	500 MMØ	Mtr.			
2.11	600 MMØ	Mtr.			
2.12	DC/R/C Drilling from 201 Mtr. To 300 Mtr.Deep	Mtr.			
2.13	450 MMØ	Mtr.			
2.14	500 MMØ	Mtr.			
2.15	600 MMØ	Mtr.			
2.16	DC/R/C Drilling from 301 Mtr. To 400 Mtr.Deep & above	Mtr.			
2.17	450 MMØ	Mtr.			
2.18	500 MMØ	Mtr.			
2.19	600 MMØ	Mtr.			
2.20	DTH Drilling upto 200.0 Mtr.Deep	Mtr.			
2.21	200/165 MMØ (in over burden/Hard Rock)	Mtr.			
2.22	Development / Flushing of tubewell Tubewell Assembly (Supply + Fittings & Specials)	Hr.			
3.01	MSERW plain pipe,As per IS 4270	Mtr.			
3.02	100 MMØ	Mtr.			
3.03	150 MMØ	Mtr.			
3.04	200 MMØ	Mtr.			
3.05	300 MMØ	Mtr.			
3.06	MSERW Pipe slotted pipe as per IS 8110	Mtr.			
3.07	100 MMØ	Mtr.			
3.08	150 MMØ	Mtr.			
3.09	200 MMØ	Mtr.			
3.10	300 MMØ	Mtr.			
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 Tubewell Assembly Lowering Works Lowering of above assembly with welding of parts complete in all respect with all required material, T&P, labour, etc.	RM	14.00	471.68	6604
4.01	Lowering up to 100 Mtr. Deep	Mtr.			
4.02	100 MMØ MSERW Plane/Slotted Pipe	Mtr.			
4.03	150 MMØ MSERW Plane/Slotted Pipe	Mtr.			
4.04	200 MMØ MSERW Plane/Slotted Pipe	Mtr.			
4.05	300 MMØ MSERW Plane/Slotted Pipe	Mtr.			
4.06	Lowering from 101 Mtr. To 200 Mtr. Deep	Mtr.			
4.07	150 MMØ MSERW Plane/Slotted Pipe	Mtr.			

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.		3154.10	
6.06	Charges for Development by 600 PSI Compressor per hour	Hr.	60.00	3154.10	189246
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.		959.00	
6.11	Charges for Development of TW by 3 cusec OP Unit	Hr.	100.00	959.00	95900
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	
7.00	Pumping Plant:- SITC of Pumping plant including pumps with motors starter, panel, cable, complete in all respect with all required material T&P labour etc.				
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	252100
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		27519.8	
9.04	Check Valve PN 1.0 DPCV dia 150 mm	Nos	1.00	51145.45	27520
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	1.00	5605.6	5606

BoQ Item No.	Description	Unit	Qty	Rate	Amount
9.08	Dismantling Joint PN 1.0 dia 200 mm	Nos	1.00	7367.36	7367
9.09	SITC of Chain Pulley Blocks				
9.10	1 Tonne	Nos	1.00	46305	46305
9.11	2 Tonne	Nos	1.00	58432.5	273000
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	12777.78	
12.02	5 KVA	Nos	25555.56	25555.56	
12.03	7.5 KVA	Nos	44722.22	44722.22	
12.04	10 KVA	Nos	12777.78	12777.78	
12.05	15 KVA	Nos	166111.11	166111.11	
12.06	20 KVA	Nos	191666.67	191666.67	
12.07	25 KVA	Nos	204444.44	204444.44	
12.08	30 KVA	Nos	230000	230000	
12.09	40 KVA	Nos	281111.11	281111.11	
12.10	50 KVA	Nos	319444.44	319444.44	
12.11	60 KVA	Nos	345000	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	500	
13.02	40 mm dia size - MS pipe	Mtr.	666.67	666.67	
13.03	50 mm dia size - MS pipe	Mtr.	921	921	
13.04	65 mm Dia size - MS pipe	Mtr.	1066.67	1066.67	
13.05	80 mm Dia size - MS pipe	Mtr.	1400	1400	
13.06	100 mm Dia size - MS pipe	Mtr.	1567	1567	47010
13.07	150 mm Dia size - MS pipe	Mtr.	2167	2167	
14.00	Chlorinating System:- Supply, Installation of chlorinating system with dosing pump 0-6 LPH capacity with 100 Litres(1wt%) 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
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	Mtr.		385.19	
4.11	150 MMØ MSERW Plane/Slotted Pipe	Mtr.		459.00	
4.12	200 MMØ MSERW Plane/Slotted Pipe	Mtr.		606.62	
4.13	300 MMØ MSERW Plane/Slotted Pipe	Mtr.		426.53	
4.14	Lowering from 301 Mtr. To 400 Mtr. Deep & above	Mtr.		499.00	
4.15	150 MMØ MSERW Plane/Slotted Pipe	Mtr.		643.94	
4.16	200 MMØ MSERW Plane/Slotted Pipe	Mtr.			
4.17	300 MMØ MSERW Plane/Slotted Pipe	Mtr.			
5.00	Supply and Packing of Gravel Works 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	
7.00	Pumping Plant:- SITC of Pumping plant including pumps with motors starter, panel, cable, complete in all respect with all required material T&P labour etc.				
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	1.00	252100	252100
7.09	17.5 HP	Nos		276504.56	
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:- 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	2.00	125000	250000
9.02	Electrically operated Sluice Valve PN 1.0 dia 200 mm	Nos	1.00	150000	150000
9.03	Check Valve:- 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	1.00	3923.92	3924
9.07	Dismantling Joint PN 1.0 dia 150 mm	Nos	4.00	5605.6	22422

BoQ Item No.	Description	Unit	Qty	Rate	Amount
9.08	Dismantling Joint PN 1.0 dia 200 mm	Nos	1.00	7367.36	7367
9.09	SITC of Chain Pulley Blocks	Nos			
9.10	1 Tonne	Nos		46305	
9.11	2 Tonne	Nos		58432.5	58433
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	16611.11		
12.06	20 KVA	Nos	19166.67		
12.07	25 KVA	Nos	20444.44		
12.08	30 KVA	Nos	23000		
12.09	40 KVA	Nos	28111.11		
12.10	50 KVA	Nos	31944.44		
12.11	60 KVA	Nos	34500		
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.	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(1+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 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	26.00	86800	2256800
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/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 boundary wall pillars of size 1.35mx0.23mx0.23m with ornamental brick work 115mm 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 cartage 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	Bye-pass Chamber:- Provide all materials, labour, T&P etc. complete and constructed Bye-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	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 LS.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, Lightening conductor as per I.S.S.2309 or its latest amendments of latest electricity rules, consisting of proper elevation	Job		1712500.00	1712500.00
32.02	50 KL 10 M Staging	Job		1788750.00	1788750.00
32.03	75 KL 10 M Staging	Job		2150000.00	2150000.00
32.04	75 KL 12 M Staging	Job		2242500.00	2242500.00
32.05	100 KL 12 M Staging	Job		2886250.00	2886250.00
32.06	100 KL 16 M Staging	Job		3073750.00	3073750.00
32.07	150 KL 12 M Staging	Job		3241250.00	3241250.00
32.08	150 KL 16 M Staging	Job		3457500.00	3457500.00
32.09	175 KL 12 M Staging	Job		3441250.00	3441250.00
32.10	175 KL 16 M Staging	Job		3732500.00	3732500.00
32.11	200 KL 12 M Staging	Job		3843750.00	3843750.00
32.12	200 KL 16 M Staging	Job	1.00	4040000.00	4040000.00
32.13	200 KL 18 M Staging	Job		4105000.00	4105000.00
32.14	225 KL 12 M Staging	Job		4170000.00	4170000.00
32.15	250 KL 12 M Staging	Job		4537500.00	4537500.00
32.16	300 KL 12 M Staging	Job		4877500.00	4877500.00
32.17	300 KL 16 M Staging	Job		5508750.00	5508750.00

BOQ 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		202000.00	
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	4539.79	214.61	974285
35.00	Mixed Soil with Kankar	Cum	4539.79	249.27	1131634
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 /bajri 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- /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) 300 mm dia Ductile Iron K-9 250 mm dia Ductile Iron K-9	m		3103.5	

BOQ Item No.	Description	Unit	Qty	Rate	Amount
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	17626.00		17626
42.05	Sluice valve - 125 mm dia	Nos	14505.00		14505
42.06	Sluice valve - 100 mm dia	Nos	14455.00		28910
42.07	Sluice valve - 80 mm dia	Nos	12401.00		12401
42.07.1	Sluice valve - 65 mm dia	Nos	10650.00		10650
42.07.2	Sluice valve - 50 mm dia	Nos	9700.00		67900
42.08	Scour valve - 80 mm dia	Nos	10160.84	6.00	60965
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	Nos			
42.14	PRV 80 mm dia	Nos			
42.15	PRV 100 mm dia	Nos			
42.16	PRV 150 mm dia	Nos			
42.17	PRV 200 mm dia	Nos			
42.18	PRV 250 mm dia	Nos			
42.19	PRV 300 mm dia	Nos			
42.20	Isolating Sluice Valve				
41	Supply of following sizes pipes for distribution system conforming to latest/relevant I.S. 4984/1995 Specifications with all joining 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 joining 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.				
41.01	90 mm dia HDPE Pipe PN6, PE 100	m	316.00	229.5	72522
41.02	75 mm dia HDPE Pipe PN6, PE 100	m	949.00	169.2	160571
41.03	63 mm dia HDPE Pipe PN6, PE 100	m	9839.00	125.8	1237746
40.03	200 mm dia Ductile Iron K-9	m	2332.32		
40.04	150 mm dia Ductile Iron K-9	m	1728.48	35.00	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	Ductile Iron Pipe (K-7)				
40.09	300 mm dia Ductile Iron K-7	m	3151.6		
40.10	250 mm dia Ductile Iron K-7	m	2564.5		
40.11	200 mm dia Ductile Iron K-7	m	1848.32		
40.12	150 mm dia Ductile Iron K-7	m	1497.48		
40.13	125 mm dia Ductile Iron K-7	m	1301.41		
40.14	100 mm dia Ductile Iron K-7	m	1007.11		
40.14	80 mm dia Ductile Iron K-7	m	909.49		
42.00	Supply and carting up to site of work of the following dia DI butterfly /sluice valves, class I, working pressure 10 Kg/cm ² 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 joining them with pipelines and testing etc. complete and also including supply of joining materials etc. complete including all taxes and insurance, as per instructions of Engineer - in - charge.				

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					
42.19					
42.20					
42.21					
42.22	Fire Hydrant:- Supply of under ground sluice valve type fire hydrant consisting of 80 mm dia sluice valve, 80mm dia tall 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	5.00	24500.00	122500
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&P 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 Sluice Valve Chamber (Surface Box Type):- Dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.	11.00	25800.00	283800
43.03		No.		5000.00	
43.04	Fire Hydrant chamber (800 (L) X 1250 (W) X 1000 (H) mm)	No.	5.00	18500.00	92500
43.05	Air Valve Chamber	No.			
43.06	350 (L) x 350 (W) x 500 (H) mm	No.	9.00	9000.00	81000
43.07	Scour Valve Chamber	No.			
43.08	dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.	7.00	29670.00	207690
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 equired 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	0.32	13656.33	4370
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 fitting fixing and striking out after completion of works.	Sqm	3.20	420.00	1344

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	0.02	109838.98	1757
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	Assesst 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 T.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 serviceable materials and disposal of unserviceable materials upto a distance of 50m as per instructions of Engineer -in-charge.				
50.01	B.O.E. Surface	Sqm	2082.00	100.00	208200
50.02	Bituminous Surface	Sqm	2246.00	200.00	449200
50.03	Interlocking Road	Sqm	937.00	155.00	145235
50.04	C.C. Road	Sqm	228.00	329.96	75231
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	2082.00	350	728700
51.02	Bituminous surface	Sqm	2246.00	1534.82	3447206
51.03	Interlocking Road	Sqm	937.00	1070.5	1003059
51.04	C.C. Road	Sqm	228.00	1560.71	355842
52.00	Nata/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	Nata/Culvert Crossing (width -3.5 m) upto Dia 300 mm	Nos	7.00	19000	133000
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 (IS:3589 & made from confining to IS:2062) with 750 Micron PU coating internally and 250 micron anti corrosive bituminous paint externally by trenchless technology method at an average depth 3.60 mtr 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 joining of casing pipe 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		

Break up of Cost

Sl. No.	Sub Head	Total Cost of work	Building	R.C.C. Reservoir	Pipe Line	Machinery	Misc.
1	2	3.0	4.0	5.0	6.0	7.0	8.0
A. Civil works :							
1	Pump house & Chlorinating room	5,97,000	5,97,000				
2	Rising Main	89,882			89,882		
3	R.C.C. Over head tank (<u> </u> KL/ <u> </u> m staging)	43,98,054		43,98,054			
4	Distribution System	1,33,40,636		1,33,40,636			
5	Approach Road	11,29,954	18,09,954				
6	Boundary Wall and approach road	10,00,280	10,00,280				
7	Staff Quarter	9,70,600	9,70,600				
8	Surveying and designing	2,78,722					2,86,132
	(Total A)	2,24,92,537	43,77,834	1,77,38,690	89,882	-	2,86,132
B. E&M works:							
1	Cost of Tubewell construction	18,31,833				18,31,833	
2	Cost of pumping plant and Chlorinating Plant	12,77,055				12,77,055	
3	Solar plant	22,56,800				22,56,800	
4	Electrification of pump house, SCADA	11,44,000				11,44,000	
	Total (B)	65,09,688	-	-	-	65,09,688	-
	G. Total (A+B)	2,90,02,225	43,77,834	1,77,38,690	89,882	65,09,688	2,86,132

25,31,4815

ए.ए. (सो. ०१०१०) (सो. ०१०१०) (सो. ०१०१०) (सो. ०१०१०)

ए.ए. (सो. ०१०१०) (सो. ०१०१०) (सो. ०१०१०) (सो. ०१०१०)

Forwarded As Recommended by DWSSM For SLSSC

EXECUTIVE ENGINEER
CONSTRUCTION DIVISION
(E/M) U.P. JAL NIGAM
GORAKHPUR

ए.ए. (सो. ०१०१०) (सो. ०१०१०) (सो. ०१०१०) (सो. ०१०१०)

Executive Engineer
Member Secretariat
U.P. Jal Nigam
Gorakhpur



CHECKED BY

10% O & M = 81.26
72.55

Estimate for Bahpur Gram Panchayat		Tond - SWSNI		Block - Gola Dist. Gorakhpur		Form "P" - Comprehensive Scheme	
No.	Description of Work	Amount (Rs. Lacs)	%	Amount (Rs. Lacs)	%	Amount (Rs. Lacs)	%
1	Cost of Work	282.75	0.14%	282.75	0.14%	282.75	0.14%
2	Sub-Total	282.75	0.14%	282.75	0.14%	282.75	0.14%
3	Commission @ 2% on Net Cost	5.66	2.00%	5.66	2.00%	5.66	2.00%
4	Net Cost of Scheme	288.41	12.00%	288.41	12.00%	288.41	12.00%
5	Cost of Scheme (Including O & M)	314.70	12.50%	314.70	12.50%	314.70	12.50%
6	Gross Cost of Scheme	359.06	12.50%	359.06	12.50%	359.06	12.50%
7	Total Population (1st year 2022)	5240		5240		5240	
8	Cost Per capita Rs. (Normal + Contingencies + GST)	6385		6385		6385	