
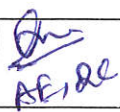
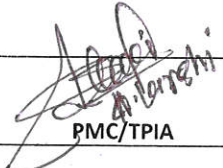

	NCC LTD.	
	STATE WATER AND SANITATION MISSION	
	CLIENT: JJM / SWSM / DWSM	
	CONSULTANT: Medhaj Techno Concepts Private Ltd.	
	SIEVE ANALYSIS OF PEA GRAVELS (1.6 mm to 4.8 mm) (As per IS : 460)	

Date of Testing :	06/10/2021
Test report no :	Ncc-akp-sl-017

SL NO.	DESCRIPTION	OBSERVATIONS
1	Source of material :	Nainital, Uttarakhand.
2	Location :	Block Name- BANSGAON
		G.P Name- Chak Baidpurva.
3	Date of sampling :	05/10/2021
4	Lab. Test no :	17
5	Sample no. :	17
6	Total wt. of sample (gm) :	1000 gm

SIEVE ANALYSIS					
IS Sieve Size	Wt. retained (gm)	Cumulative wt. Retained (gm)	Cumulative % wt. Retained	% passing	Specific limit
6.3 mm	54	54	5.4	94.6	OK
4.75 mm	230	284	28.4	71.6	OK
2.36 mm	698	982	98.2	1.8	OK
1.18 mm	16	998	99.8	0.2	OK
Pan	02	1000			

 NCC LTD.	 PMC/TPIA	 CLIENT (Bobbonyada)
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NCC LTD.

STATE WATER AND SANITATION MISSION

CLIENT: JJM / SWSM / DWSM



CONSULTANT: Medhaj Techno Concepts Private Ltd.

SPECIFIC GRAVITY OF PEA GRAVELS- 1.6 mm to 4.8 mm

As per IS : 2386 (Part-3)

Date of Testing-

06/10/2021

Test report no -

NCC/AR-5/02/017

SL NO.	DESCRIPTION	OBSERVATIONS
1	Source of material :	Mainital, uttrakhand.
2	Location :	NAME OF THE BLOCK - BANSGAON
		NAME OF THE GRAM PANCHAYAT - Chakbaidpurva.
3	Date of sampling :	05/10/2021
4	Lab. Test no :	17
5	Sample no :	17

## SPECIFIC GRAVITY TEST AT ROOM TEMPERATURE

6	Weight of the Jar, W1 (gm)=	355
7	Weight of Jar + Gravel, W2 (gm)=	565
8	Weight of Jar + Gravel + Water, W3 (gm)=	987
9	Weight of the Jar + Water, W4 (gm)=	850
10	Specific Gravity =	$\frac{W2 - W1}{(W2 - W1) - (W3 - W4)} = \frac{210}{73} = 2.876$

Note : The Specific Gravity should not be less than 2.5

A.R. R.  
NCC LTD.

BMC  
A. Verma

CLIENT (Babbar Yadav)



# 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: teplab@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/2020-21/117

Dated: 11.10.2021

## TEST REPORT

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

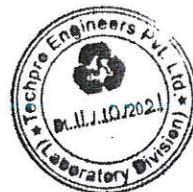
Sample Receipt Date	:	08-10-2021	Job No.	:	MT117/1
Condition of sample	:	Satisfactory	SRF No.	:	2021/55
Type of Sample	:	Pea-Gravel	ULR No.	:	NA
Source of sample	:	Lalkuan (Uttarakhand)	Period of Testing	:	08/10/2021 to 11/10/2021

### 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.

Checked By:

(Technical Manager)



Approved By:

Arvind Kumar Garg  
(Quality 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: tepllab@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

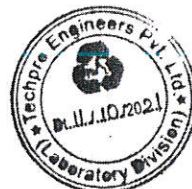
## I. PHYSICAL TEST RESULT

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	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	-	

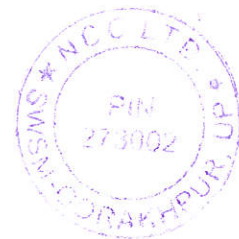
Checked By:

(Technical Manager)



Approved By:

Arvind Kumar Garg  
(Quality Manager)







# TECHPRO ENGINEERS PVT. LTD.

(Laboratory Division)

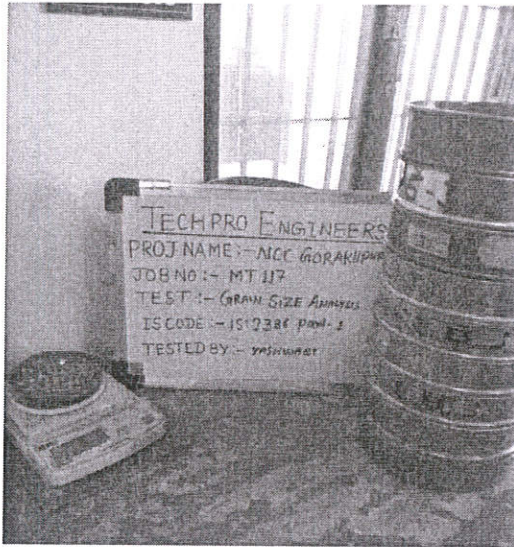
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Tel.: 0512-2525759, 09793209918, Web site: www.techproindia.com

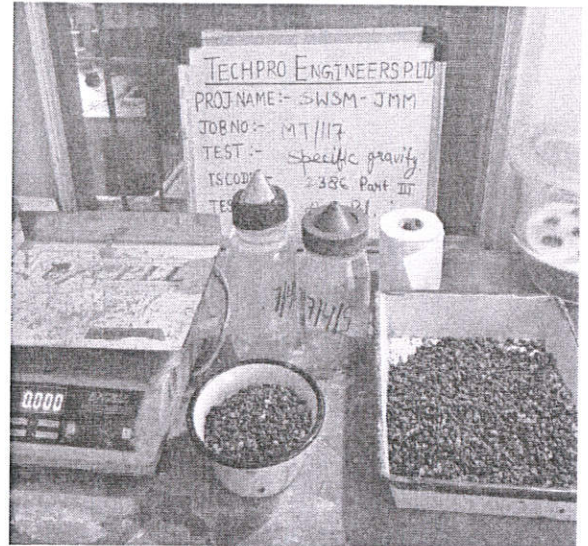
e-mail: tepplab@gmail.com, info@techproindia.com,

Doc No.: TEQR-36C, Issue No.: 02, Issue Date: 18/08/20, Rev. No. : 01, Rev. Date: 10/12/2020

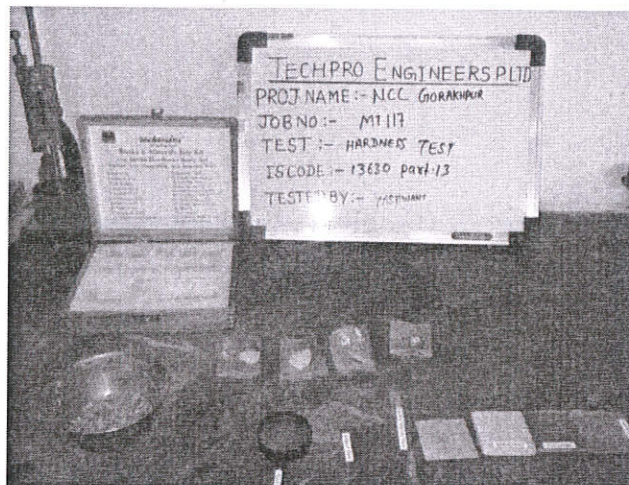
## PHOTOGRAPHS



SIEVE ANALYSIS



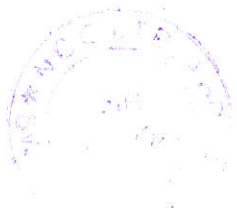
SPECIFIC GRAVITY



HARDNESS TEST

Checked By:

(Technical Manager)



Approved By:

Arvind Kumar Garg  
(Quality Manager)

END OF REPORT



BORE WELL DEVELOPMENT CHART (E/M)

SWSM/DWSM

NCC LTD.- GORAKHPUR (UP)

NAME OF THE DISTRICT-	GORAKHPUR	TYPE OF RIG M/C-	RC
NAME OF THE BLOCK-	BANSGAON	SIZE OF BORE-	600 mm dia.
NAME OF THE GRAM PANCHAYAT-	CHAKBAIDPURWA	STATIC WATER LEVEL-	12 m.
NAME OF THE VILLAGE-		J.E Incharge	Nandulal A.E Incharge Babbar Yadav

DEPTH B.G.L. IN METER	BORING CHART	STRATA	EXECUTED ASSEMBLY	ASSEMBLY DETAILS
0M			0.50 mtr	300 mm Dia Housing Pipe A.G.L. = 0.50 m
			A.G.L.	300 mm Dia Housing Pipe m to 36.10 m
				300/150 mm Dia Reducer 35.60 m to 35.80 m
		SANDY CLAY		150 mm Dia BLIND pipe 35.80 m to 52.55 m
16.0				150 mm Dia SLOTTED pipe 52.55 m to 58.97 m
		MEDIUM SAND		150 mm Dia BLIND pipe 58.97 m to 113.86 m
				150 mm Dia SLOTTED pipe 113.86 m to 119.88 m
30.0		SANDY CLAY		150 mm Dia BLIND pipe 119.88 m to 122.93 m
33.0		MEDIUM SAND		150 mm Dia SLOTTED pipe 122.93 m to 128.95 m
36.0		CONCRETE CLAY		150 mm Dia BLIND pipe 128.95 m to 141.03 m
41.0			35.60 MTR	150 mm Dia SLOTTED pipe 141.03 m to 147.06 m
48.0		MEDIUM SAND	35.80 MTR	150 mm Dia BLIND pipe 147.06 m to 153.08 m
51.0		SANDY CLAY		mm Dia pipe m to m
60.0		MEDIUM SAND	52.55 MTR	mm Dia pipe m to m
65.0				mm Dia pipe m to m
75.0		CONCRETE CLAY	58.57 MTR	mm Dia pipe m to m
		V.FINE SAND		mm Dia pipe m to m
85.0		SANDY CLAY		mm Dia pipe m to m
90.0		MEDIUM SAND		mm Dia pipe m to m
95.0		CONCRETE CLAY		mm Dia pipe m to m
101.0		MEDIUM SAND		mm Dia pipe m to m
105.0		SANDY CLAY		mm Dia pipe m to m
113.0		MEDIUM SAND		mm Dia pipe m to m
120.0		CONCRETE CLAY		mm Dia pipe m to m
122.0		V.FINE SAND		mm Dia pipe m to m
130.0		CONCRETE CLAY		mm Dia pipe m to m
138.0		MEDIUM SAND		mm Dia pipe m to m
148.0		CLAY		mm Dia pipe m to m
160.0			153.08 MTR	mm Dia pipe m to m
170.0			Bail Plug	mm Dia pipe m to m

Total Assembly = 153.08 m + A.G.L. (m) = 0.5 m = 153.58 m

ABSTRACT

1. Drilling Started- 29/9/21
2. Drilling Completed/Lowering- 09/10/2021
3. Drilling Depth (m)- 170 MTR
4. Assembly Lowered (m)- 153.58 MTR
5. Housing Pipe (m)- 36.10 MTR
6. Plain Pipe (m)- 93.99 MTR
7. Slotted Pipe (m)- 24.09 MTR
8. Reducer (m)- 0.20 MTR

LOGGING REPORT

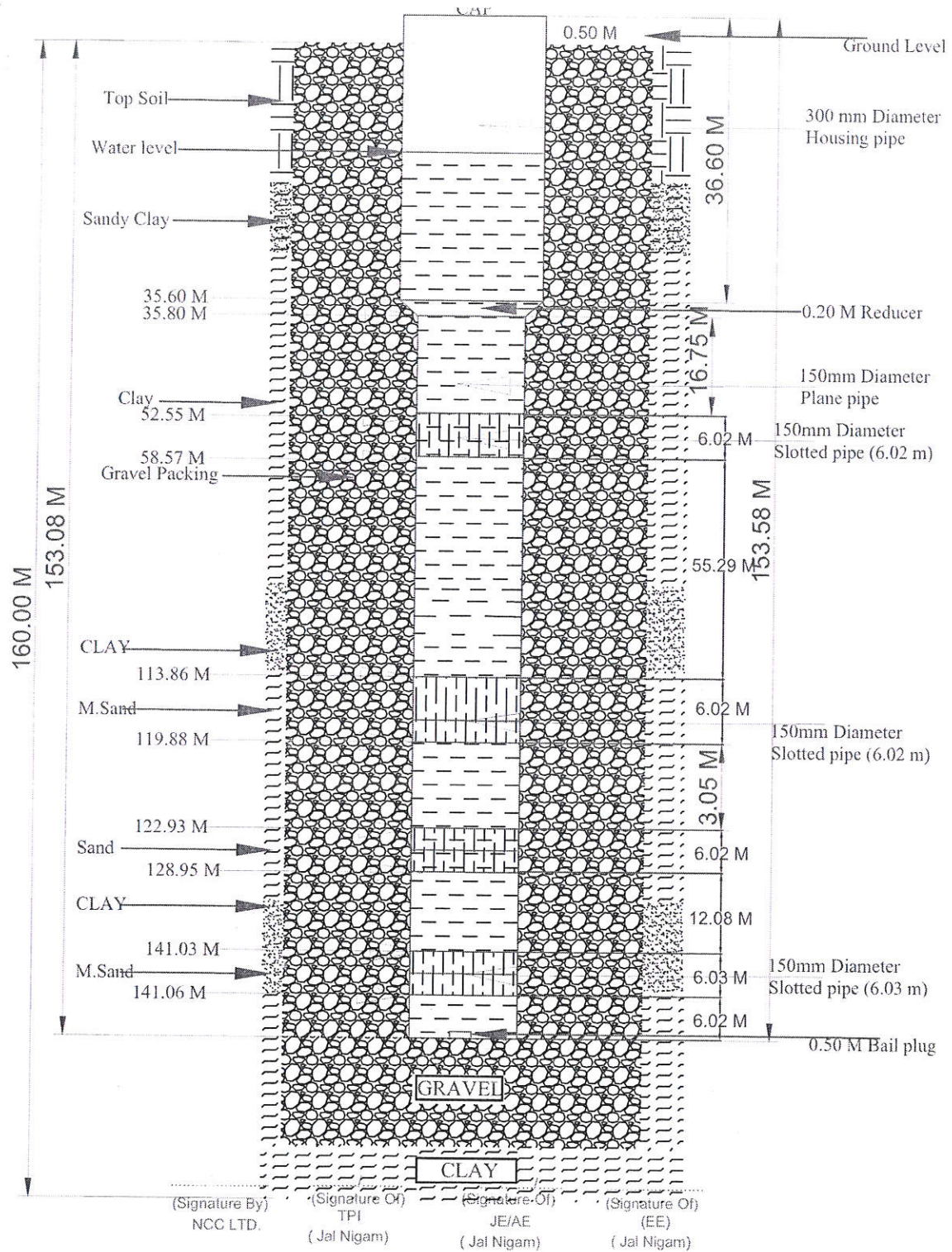
- 1- 17 - 30 = 13.0 MTR
- 2- 33 - 36 = 3.0 MTR
- 3- 41 - 48 = 7.0 MTR
- 4- 52 - 59 = 7.0 MTR
- 5- 60 - 65 = 5.0 MTR
- 6- 75 - 85 = 10.0 MTR
- 7- 90 - 95 = 5.0 MTR
- 8- 101 - 105 = 4.0 MTR
- 9- 113 - 120 = 7.0 MTR
- 10- 122 - 130 = 8.0 MTR
- 11- 138 - 148 = 10.0 MTR

NCC LTD (Nandulal) JE & A.E (Babbar Yadav)

P.M.C/T.P.I.A

X/E



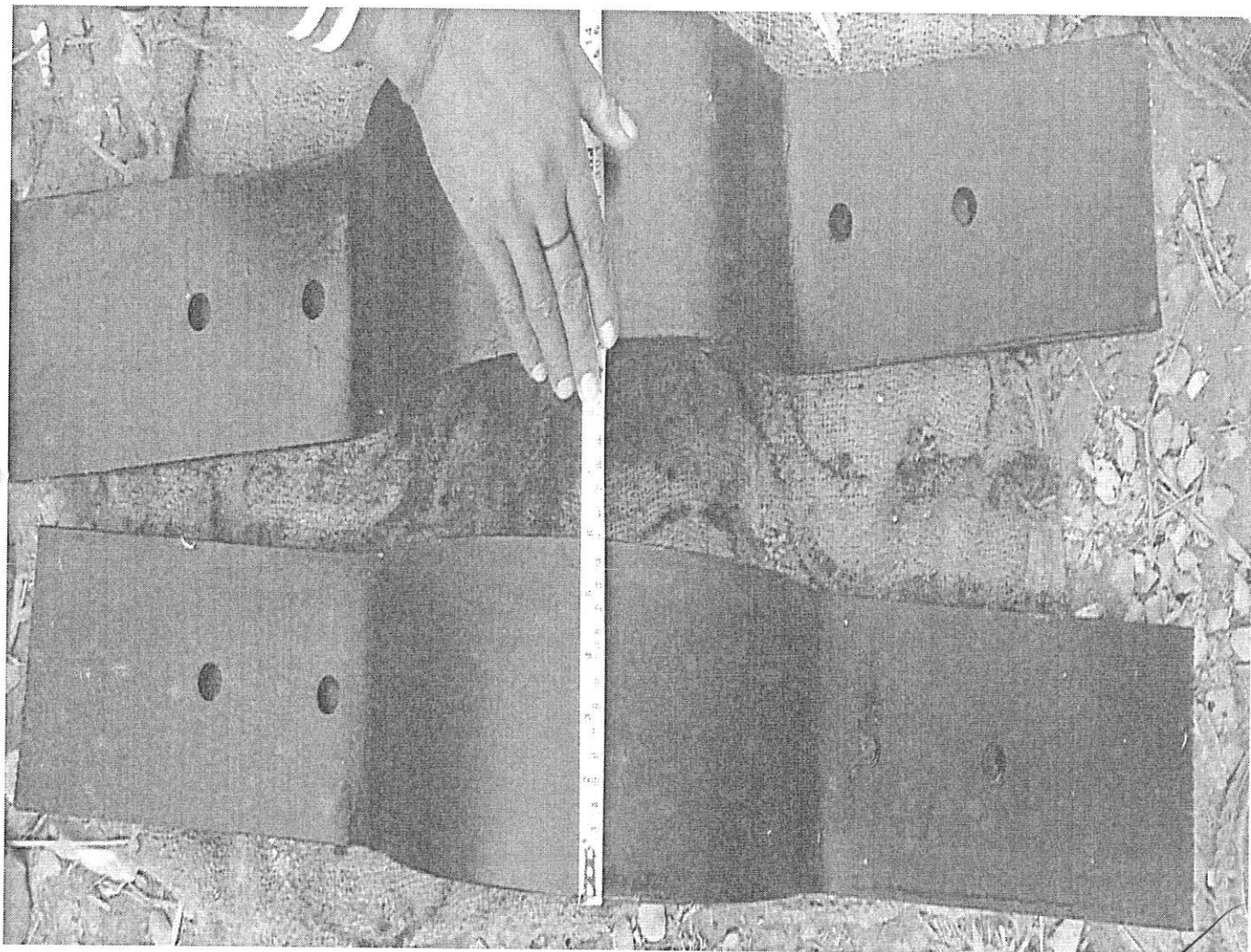


Depth of Tube well :- 1  
 Lowering of Tube well assembly :- 153.58 M  
 Plane/Housig pipe :- 36.10 M  
 Plane pipe :- 93.39 M  
 Stotted pipe :- 24.09 M  
 Required Dicharge :- LPM

Project Name  
 Implementation of Rural Water Supply Projects in the Gorakhpur District  
 of Gorakhpur Division Uttar pradesh under jeevan mission  
 Name of Block :- BANSGAON  
 Name of Viliage :- **CHAKBAIDPURWA**  
 Name of Client  
 Executive Director , SWSM Lucknow  
 State Water & sanitation Mission , 6 Rana Pratap Marg  
 Lucknow - 2260001 . Uttar Pradesh .  
 Name of Contractor  
 NCC Limited  
 Ansal API Sector - C2/183, Sushant Gold City, Near S.I



# Chakbaidpurwa





# Chakbaidpurwa



Not properly stacked ✓







# NCC 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/S/Tw/13/R1	Date And Time - 11/10/2021	
Description:	Rectification of Compliance		
Location:	Block - Banagan, Cir- chakbaidpurwa		
Preceding RFI No.	SWSM-UP - Cir 1s/Tw/ R13		
Commencement of work:	11/10/2021		
Submitted By:	om shankar		
Signature:			
Designation:	AE (Civil)		
Concessionaire:	Proceed	Hold	
Name:			
Designation:			
Comments:	<p>① Pea gravel stacked in proper way X</p> <p>② Pipe clamp found 150mm flat MS. ✓</p> <p>③ <del>Pea gravel</del> Pipe Assembly painted with 2-coat. ✓</p>		

  
 Signature  
 Contractor Representative

  
 Signature  
 Consultant Representative


\_\_\_\_\_  
 Signature  
 Client Representative



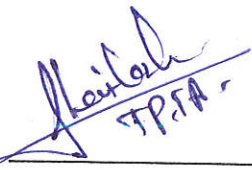
# NCC SWSM PROJECTS – UP – GORAKHPUR

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/S/TW/13	Date And Time - 9/18/21 / 13:00th	
Description:	Lowering of pipe with Assembly & filling of P-gravel.		
Location:	Block - Bangaon, C.t - Chakradipura		
Preceding RFI No.	NA		
Commencement of work:	11/10/2021		
Submitted By:	om shankar		
Signature:			
Designation:	AE(Civil)		
Concessionaire:	Proceed	Hold	
Name:			
Designation:			
Comments:	<p>① Pea gravel are not stacking in proper way.</p> <p>② 2 coated anti corrosive paint not used.</p> <p>③ Pipe clamp not as per standard. It should be 150 mm flat- m.s.</p>		

  
 Signature  
 Contractor Representative

  
 Signature  
 Consultant Representative

\_\_\_\_\_  
 Signature  
 Client Representative



# Aqua Xplore

(Groundwater Assessment & Allied Services)

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

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

Ref 1009 - C / AX - 2021 Date 09.10.2021

## Geophysical Borehole Logging Report

Name of the site : Chakbaidpurwa, Block- Bansaon  
District : Gorakhpur  
Date : 09.10.2021  
Depth logged : 155.0 mbgl  
Depth drilled : 170.0 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(mbgl)	Thickness(m)	Remarks
1	17.0---30.0	13.0	Good all
2	33.0---36.0	3.0	
3	41.0---48.0	7.0	
4	52.0---59.0	7.0	
5	60.0---65.0	5.0	
6	75.0---85.0	10.0	
7	90.0---95.0	5.0	
8	101.0---105.0	4.0	
9	113.0---120.0	7.0	
10	122.0---130.0	8.0	
11	138.0---148.0	10.0	

Note. All zones are intermixed with fine bands of kankar and Sl.Nos. 6 & 10 are very fine sand.

for Aqua Xplore

CC;

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



NCC LTD.

SOIL SAMPLE COLLECTION REPORT


SWSM PROJECT - GORAKHPUR, UP



1	Name of the Block-	BANSGAON
2	Name of the Gram Panchayat-	CHAKBAIDPURWA
3	Name of the Borewell Village-	GAJARI
4	Name of the Revenue Village-	
5	Drilling Dia of Bore Hole(m	For Housing Pipe (Dia- 200 mm/300 mm)- 300MM
	mm dia-	For Plain/Slotted 150 mm dia- 150MM
6	Drilling Depth(	For Housing Pipe- 36.04M
		For Plain/Slotted Pipe- 93.39M/24.09M
7	Total Drilling Depth (m)-	170M
8	Electrical Logging Test Depth	155M

Sl no.	Date of Sample Collection	Type of Soil Sample	Depth of Sample Collection (m)	Remarks
1	29/09/2021	CLAY	0 - 3	
2	29/09/2021	CLAY	3 - 6	
3	29/09/2021	CLAY	6 - 9	
4	29/09/2021	CLAY WITH GRAVEL	09 - 12	
5	29/09/2021	CLAY WITH GRAVEL	12 - 15	
6	29/09/2021	SANDY CLAY	15 - 18	
7	29/09/2021	SAND	18 - 21	
8	29/09/2021	MEDIUM SAND	21 - 24	
9	29/09/2021	MEDIUM SAND	24 - 27	
10	29/09/2021	MEDIUM SAND	27 - 30	
11	29/09/2021	MEDIUM SAND	30 - 33	
12	30/09/2021	MEDIUM SAND	33 - 36	
13	30/09/2021	MEDIUM SAND	36 - 39	
14	30/09/2021	MEDIUM SAND	39 - 42	
15	30/09/2021	MEDIUM SAND	42 - 45	
16	30/09/2021	FINE SAND	45 - 48	
17	30/09/2021	FINE SAND	48 - 51	
18	30/09/2021	FINE SAND	51 - 54	
19	30/09/2021	FINE SAND	54 - 57	
20	01/10/2021	MEDIUM SAND	57 - 60	
21	01/10/2021	SANDY CLAY WITH GRAVEL	60 - 63	
22	01/10/2021	SANDY CLAY WITH GRAVEL	63 - 66	
23	01/10/2021	SANDY CLAY WITH GRAVEL	66 - 69	
24	01/10/2021	SANDY CLAY WITH GRAVEL	69 - 72	
25	01/10/2021	SANDY CLAY WITH GRAVEL	72 - 75	
26	01/10/2021	SANDY CLAY WITH GRAVEL	75 - 78	
27	02/10/2021	SANDY CLAY WITH GRAVEL	78 - 81	
28	02/10/2021	SANDY CLAY WITH GRAVEL	81 - 84	
29	02/10/2021	CLAY	84 - 87	
30	02/10/2021	FINE SAND WITH GRAVEL	87 - 90	
31	02/10/2021	CLAY	90 - 93	
32	02/10/2021	SANDY CLAY WITH GRAVEL	93 - 96	
33	03/10/2021	CLAY WITH GRAVEL	96 - 99	
34	03/10/2021	CLAY WITH GRAVEL	099 - 102	
35	03/10/2021	CLAY WITH GRAVEL	102 - 105	



36	03/10/2021	GRAVEL	105 - 108	
37	03/10/2021	SAND WITH GRAVEL	108 - 111	
38	03/10/2021	SAND	111 - 114	
39	03/10/2021	SAND WITH GRAVEL	114 - 117	
40	04/10/2021	SAND	117 - 120	
41	04/10/2021	MEDIUM SAND	120 - 123	
42	04/10/2021	MEDIUM SAND	123 - 126	
43	04/10/2021	SAND WITH GRAVEL	126 - 129	
44	04/10/2021	MEDIUM SAND	129 - 132	
45	05/10/2021	MEDIUM SAND	132 - 135	
46	05/10/2021	MEDIUM SAND	135 - 138	
47	05/10/2021	MEDIUM SAND	138 - 141	
48	05/10/2021	MEDIUM SAND	141 - 144	
49	05/10/2021	MEDIUM SAND	144 - 147	
50	06/10/2021	SAND WITH GRAVEL	147 - 150	
51	06/10/2021	FINE SAND	150 - 153	
52	06/10/2021	SAND	153 - 156	
53	08/10/2021	SAND	156 - 159	
54	08/10/2021	SAND	159 - 162	
55	08/10/2021	SAND	162 - 165	
56	08/10/2021	SAND	165 - 167	
 NCC LTD				
		TPIA	CLIENT	

CIN :U28111DL2006PTC148810

ISO 9001:2015

**DADU PIPES (P) LIMITED**

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



Corporate Office : C-101, Dadu Dayal House, RDC, Raj Nagar, Ghaziabad-201002 (U.P.) India.

Email : info@dadupipes.com, Website : www.dadupipes.com

Regd. Office : B-231, Okhla Industrial Area, Phase-1, New Delhi-110020

Contractor Name: NCC Limited

Client Name: State Water and Sanitation Mission

Project Name: Gorakhpur South Project

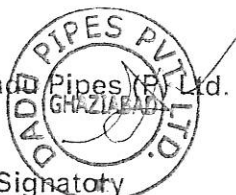
PO No.: NCC/ROK/SWSMUP-G(S)/PO/23 Dt.: 19.08.2021

**TECHNICAL DATASHEET OF STEEL TUBES USED FOR WATER WELLS**

S.No.	Parameter	Unit	Requirement	Vender data
1.	Name of Manufacturer			M/S Dadu Pipes Ltd.
2.	Ref IS No.		IS:4270-2001	IS:4270-2001
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 CM/L 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 CM/L 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.

For Dadu Pipes (P) Ltd.

Auth. Signatory



Recommended for approval with condition that  
negative tolerance individuals is not allowed

A.E. E.H.3  
C.D. (E/M) UPJN  
Gorakhpur



अधीक्षण अभिनन्दन  
23वां मण्डल (वि०  
उ० प्र० जल नि.  
अयोध्या

# 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/QP/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 CIOL SKELP	1 CHEMICAL COMPOSITION	4 MAJOR	5 CHEMICAL ANALYSES	6 VERIFICATION OF SUPPLIER T.C	7 IS:10748 & IS:4270	8 AS PER IS:4270	9 SUPPLIER T.C & DPPL TEST REPORT	10 SUPPLIER/ DPPL QC	11 R	12	
		2 PHYSICAL PROPERTIES	MAJOR	MECHANICAL	DPPL QC REPORT	DO	DO	DO	DPPL QC	R		
		3 DIMENSIONS THICK & WIDTH.	MAJOR	DIMENSIONAL	100%	DO	DO	DO	DPPL TEST REPORT	DO	R	
		4 VISUAL	MINOR	VISUAL	100%	DO	DO	DO	DO	DO	R	
2	IN PROCESS INSPECTION	1 DIMENSIONS	CRITICAL	DIMENSIONAL	ONE HOUR PRODUCTION	AS PER IS:4270	DO	DPPL TEST REPORT	DPPL QC	R		
		THICKNESS	--DO-- MINOR	--DO--	--DO--	DO	DO	DO	DO	R		
		LENGTH	--DO--	--DO--	--DO--	DO	DO	DO	DO	R		
		WEIGHT	--DO--	--DO--	--DO--	DO	DO	DO	DO	R		
		STRAIGHTNESS	--DO--	--DO--	--DO--	DO	DO	DO	DO	R		
		SURFACE & END FINISH	--DO--	VISUAL	--DO--	DO	DO	DO	DO	R		
		PLAIN, BEVEL/ SCREWE AND SOCKET	--DO--	VISUAL	--DO--	DO	DO	DO	DO	R		
		PHYSICAL PROPERTIES	--DO--	VISUAL	--DO--	DO	DO	DO	DO	R		
		FLATTENING /BEND	CRITICAL	MECH. TEST	TWO SAMPLE PER SHIFT	DO	DO	DO	DO	R		
		TENSILE STRENGTH	--DO--	--DO--	--DO--	DO	DO	DO	DO	R		
		PRESSURE /LEAK TEST	MAJOR	HYDRAULIC TEST	100%	DO	DO	DO	DO	R		
		WORKMANSHIP & PROTECTIVE COATING	MAJOR	VISUAL	RANDOM	AS PER IS:4270	AS PER IS:4270	DO	DO	R		

A.E. E.E.



S. NO.	COMPONENT/ OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	EXTENT OF CHECK	REFERING DOCUMENT	PAGE NO.		FORMAT OF RECORDS	Status of Inspection		REMARKS
							ACCT. ANCL. NORMS			DFFL	ITP (H&G)	
1	2	3	4	5	6	7	8	9	10	11	12	
3	FINAL INSPECTION	1 DIMENSIONAL	MAJOR	MEASUREMENT & VISUAL	IS:4711-2008	— DO —	— DO —	— DO —	— DO —	— DO —	W	
		2 TENSILE & BEND / FLATTENING	CRITICAL	MECHANICAL TEST	As Per IS:4279	— DO —	— DO —	— DO —	— DO —	— DO —	W	
		3 LEAK TEST	MAJOR	HYDRAULIC TEST	IS:4711-2008	AS PER IS:4279	AS PER IS:4279	— DO —	— DO —	— DO —	W	
		4 IDENTIFICATION & MARKING	MAJOR	VISUAL	— DO —	— DO —	— DO —	— DO —	— DO —	— DO —	R	
		5 WORKMANSHIP	MAJOR	VISUAL	— DO —	— DO —	— DO —	— DO —	— DO —	— DO —	W	

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

APPROVED BY—



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

*20/2*  
 अधीक्षण अभियंता  
 23वाँ मण्डल (पि०/०/०)  
 उ० प्र० जल निगम  
 अयोध्या

# TUV INDIA PRIVATE LIMITED

## INSPECTION RELEASE NOTE / CERTIFICATE

IRN -8116448356-NCC/ROK/SWSMUP-G(S)/PO/23- Sr. No 1.- Rev. 00



<b>TUV India Control Or SAP Number:</b>	8116448356	<b>Date:</b>	01-09-2021
<b>Project Name &amp; Location</b>	SWSM-Gorakhpur-South Project Gorakhpur (U.P)	<b>TUV India Branch Name:</b>	Noida
<b>TUV India Client Name:</b>	M/S. DADU PIPES PVT LTD	<b>End User Name:</b>	NCC LIMITED
<b>Contractor Name &amp; Location</b>	NCC LIMITED		
<b>Vendor Name &amp; Location:</b>	M/s. Dadu Pipes (P) Ltd. A-72, Ind. Area, Sikandrabad Bulandshahar (U.P)	<b>P.O. Number: (Client PO on Vendor)</b>	NCC/ROK/SWSMUP-G(S)/PO/23 DT:-19.08.2021
<b>Sub Vendor Name &amp; Location: (If applicable)</b>	Not Applicable	<b>P.O. Number: (If applicable - Vendor PO on Sub Vendor)</b>	Not Applicable

**Item Description:**

PO Item No.	Item Code Item Description	UOM	P.O. Quantity	Offered Quantity	Accepted Quantity	Cumulative accepted Quantity
1	300 MM Dia MS ERW Plain pipe 6 Mtr Length, WT:7.1 MM Thick as per IS:4270 Plain end	Mtrs	462	474	462	462
2	200 MM Dia MS ERW Plain pipe 6 Mtr Length, WT:7.1 MM Thick as per IS:4270 Plain end	Mtrs	36	48	36	36
3	150 MM Dia MS ERW Plain pipe 6 Mtr Length, WT:7.1 MM Thick as per IS:4270 Plain end	Mtrs	180	192	180	180
4	MS ERW PLAIN END SLOTTED PIPE 150 MM Dia, Wt:7.10 mm conforming to IS:4270(Slotting as per IS:8110 & Zig Zag slots of length 75 mm x width 1.20 mm. & 780 Slot (+/- 10%) per Mtr	Mtrs	162	162	162	162

**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)	QAP / ITP / QCP	DPPL/443/QP/01 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 QAP sr. no 3.1, 3.4,3.5 only & All for rest)

- 1) Total offered quantity verified.
- 2) QAP Sr.No 3.5 Visual inspection done for surface defects, workmanship and protective coating for all items- found satisfactory.
- 3) QAP Sr.No 3.1 Final dimension inspection done Thickness, Outer Diameter, Length & weight for randomly selected

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 / Stakeholder from their responsibility towards the Client / End User to supply the genuine material / Item(s) and document(s) in full compliance with applicable Order, Specification, Technical, Quality, Quantity, Warranty, Guarantee, Requirements, Supplier / Manufacturer / Stakeholder is wholly legally responsible for genuineness of the material / Item(s) supplied and document(s) submitted. TUV India's responsibility is only limited to correctness of inspection. All the material / Item(s) / document(s) within its agreed scope against within 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 / Item(s) / document(s) 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 material / Item(s) / document(s) in the calibration certificate.

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Tel: + 91 22 65477000, Email: inspection@tuv-nord.com Website: www.tuv-nord.com/in

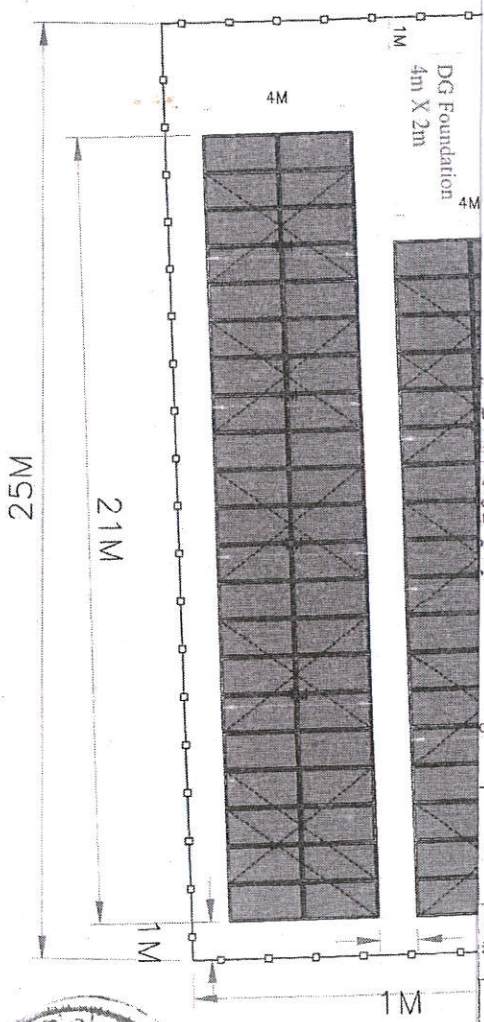




Dimensions are in meters



# WATER WORKS TYPICAL



UNIT SIZING		
Description	Nos.	SIZE (M)
Water Bore well	01	-
House	01	3.00m (L) x 3.60m (W) x 3.00m (Ht)
Je Room	01	2.50m (L) x 1.80m x 3.00m (Ht)
Head Tank Staging	01	250 KL @ 18m (Staging Height)
Quarters	01	11.06m (L) x 6.60m (W) x 3.00m (Ht)
panels(26 KW)		4m (L) x 3.0m (W)

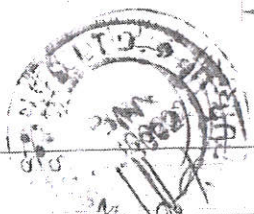
Layout may vary on actual ground condition.

SURVEY, DESIGN, PREPARATION OF DPR, CONSTRUCTION AND COMMISSIONING AND O & M FOR 10 YEARS OF VARIOUS RURAL WATER SUPPLY PROJECT IN THE STATE OF UTTAR PRADESH AS PER REQUEST FOR PROPOSAL FOR DIVISION- GORKHPUR

GOVERNMENT OF UTTAR PRADESH  
STATE WATER & SANITATION MISSION

**NCC LIMITED**

LAYOUT PLAN FOR GP CHAK BAIDPURVA  
BLOCK: BANSGAON  
DISTRICT: GORAKHPUR



Signature by  
NCC LTD.

Signature by  
JE (Civil and E&M)  
(Jal Nigam)

250 SHEET-A3 REVISION: 0

PRELIMINARY 
  TENDER 
  INFORMATION 
  APPROVAL 
  CONSTRUCTION

**EXECUTIVE SUMMARY**

**Salient Features**

- Name of the state : UTTAR PRADESH
- Name of the District : GORAKHPUR
- Name of the Tehsil : BANSGAON
- Name of the Block : BANSGAON
- Name of the Programme : Under Jal Jeevan Mission Programme
- Name of the GP : CHAKBAID PURWA
- No. of Village/Habitations : 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	BANSGAON	BANSGAON	CHAK BAIDPURWA	187004	CHAKBAID PURWA	CHAKBAID PURWA
2					186997	DADAUR	DADAUR
3					187002	GAJARI	GAJARI
4					187003	KARAILAWARI	KARAILAWARI

Village Population Summary

**Table 2: Population, SC/ST and House hold Data  
GP/VILLAGE-POPULATION DETAILS**

S. NO	DESCRIPTION	GROWTH FACTOR WRT Y-2011	POPULATION	SC/ST	HOUSE HOLDS
1.	As per Census 2011	1	2782	820	403
2.	Initial Stage 2022	1.2	3350	987	485
3.	Middle Stage 2037	1.57	4360	1285	631
4.	Ultimate Stage 2052	2.03	5650	1665	818

- Rate of water supply : 64.7 LPCD (added 15% losses over 55 LPCD)
- Nature of Sources : Ground water
- Source of Development : Tube-Well
- Daily Water Demand Summary :
  - a) Base year 2022 : 217 KLD
  - b) Intermediate year 2037 : 282 KLD
  - c) Design year 2052 : 366 KLD
- Number of Tube wells : 1 No.
- Nature of Treatments : Chlorinator through HDPE Tank (100 L) and Dosing metering pump (0-6LPH)
- Average Dosing Capacity : 0.5 PPM
- Pumping plant for Tube Well :
  - a) No. and Type of Plant : 1 Number of Submersible Pump
  - b) Anticipated Discharge : 750 LPM
  - c) Total working Head : 45 M
  - d) Motor (HP) : 15.0 HP
- Service Storage :
  - a) Quantity : 1 No.
  - b) Capacity : 200 KL
  - c) Staging : 16 M



Pipeline Summary

Table 3: Rising Main 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
<b>Total Length (m)</b>						<b>35</b>

Table 4: Distribution Summary

Pipeline Type	Material	Class	Diameter(mm)	Length (m)
Distribution Mains	HDPE	PN-6 PE100	63	7,690
Distribution Mains	HDPE	PN-6 PE100	75	768
Distribution Mains	HDPE	PN-6 PE100	90	395
Distribution Mains	HDPE	PN-6 PE100	110	812
Distribution Mains	HDPE	PN-6 PE100	125	240
Distribution Mains	HDPE	PN-6 PE100	140	127
Distribution Mains	HDPE	PN-6 PE100	160	271
Distribution Mains	HDPE	PN-6 PE100	180	0
Distribution Mains	HDPE	PN-6 PE100	200	0
<b>Total Length (m)</b>				<b>10,303</b>



**Estimate for Chak Baidpurva Gram Panchayat**  
**Water Supply Scheme**  
**Under - SWSM**  
**Block- BANSGAON, District- Gorakhpur**

BOQ Item No.	Description	Unit	Qty	Rate	Amount
	<b>Survey, Design &amp; Preparation of DPR</b>				
1.01	All the works including Hydrological survey, topographical survey, Design charges including preparation and approval of DPR	LS	1.00	260037.00	260037
2.00	Drilling of Borehole for Tubewell construction by DC/RC/DTH Rig Machine including transportaion, erection, dismantling of Rig and assoiated T&P complete in all respect including required all material labour etc.				
	<b>RIG Transportation for Tube Well Construction</b>				
2.01	Transportation, Installation Dismantling of Rig machine and logging of bore hole	Job	1.00	159478.88	159479
	<b>Tube Well Construction- Drilling of Borehole</b>				
2.03	<b>DC/RC Drilling up to 100Mtr.</b>				
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	<b>DC/RC Drilling from 101 Mtr. To 200 Mtr.Deep</b>				
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	<b>DC/RC Drilling from 201 Mtr. To 300 Mtr.Deep</b>				
2.13	450 MMØ	Mtr.		2831.63	
2.14	500 MMØ	Mtr.		3014.75	
2.15	600 MMØ	Mtr.		3381.00	
2.16	<b>DC/RC Drilling from 301 Mtr. To 400 Mtr.Deep &amp; above</b>				
2.17	450 MMØ	Mtr.		3319.35	
2.18	500 MMØ	Mtr.		3502.48	
2.19	600 MMØ	Mtr.		3868.72	
2.20	<b>DTH Drilling upto 200.0 Mtr.Deep</b>				
2.21	200/165 MMØ (in over burden/Hard Rock)	Mtr.		1250.00	
2.22	Development / Flushing of tubewell	Hr.		2900.00	
	<b>Tubwell Assembly (Supply + Fittings &amp; Specials)</b>				
3.01	<b>MSERW plain pipe,As per IS 4270</b>				
3.02	100 MMØ	Mtr.		927.50	
3.03	150 MMØ	Mtr.	97.00	1900.00	184300
3.04	200 MMØ	Mtr.		2550.00	
3.05	300 MMØ	Mtr.	36.00	3800.00	136800
3.06	<b>MSERW Pipe slotted pipe as per IS 8110</b>				
3.07	100 MMØ	Mtr.		1366.85	
3.08	150 MMØ	Mtr.	30.00	2800.00	84000
3.09	200 MMØ	Mtr.		3833.80	
3.10	300 MMØ	Mtr.		5188.59	
3.11	MS fittings such as clamp, bail 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
	<b>Tubwell Assembly Lowering Works</b>				
	Lowering of above assembly with welding of parts complete in all respect with all required material, T&P, labour, etc.				
4.01	<b>Lowering up to 100 Mtr. Deep</b>				
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	<b>Lowering from 101 Mtr. To 200 Mtr. Deep</b>				
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	<b>Lowering from 201 Mtr. To 300 Mtr. Deep</b>				
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	<b>Lowering from 301 Mtr. To 400 Mtr. Deep &amp; above</b>				
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	
	<b>Supply and Packing of Gravel Works</b>				
5.00	Supply and unconsolidated packing of gravel with suitable size	Cum	45.00	7500.00	337500
	<b>Development of Tube well</b>				
6.01	Tranportation, 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	Tranportation, 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	Tranportation, 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	Tranportation, 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	Tranportation, 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	<b>Pumping Plant:-</b> SITC of Pumping plant including pumps with motors starter, pannel, 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
	<b>Electrically operated Sluice Valve:-</b>				
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
	<b>Check Valve:-</b>				
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	
	<b>Dismantling Joint :-</b>				
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		58432.5	
10.00	Turbidity & Chlorine analyzer	Nos	1.00	273000	273000
11.00	<b>Hydrostatic Level Sensor:-</b> 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	<b>Stabalizer</b>				
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		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	<b>Column Pipe:-</b> 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	<b>Chlorinating System:-</b> 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	<b>Fluoride Removal Plant:-</b> 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	<b>Iron Removal Plant:-</b> 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	<b>Arsenic Removal Plant:-</b> 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	<b>TDS and Hardness Removal Plant:-</b> 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	<b>Tube Well Electrification:-</b> Internal electrificaton of tube well	LS	1.00	20000	20000



BOQ Item No.	Description	Unit	Qty	Rate	Amount
20.00	<b>Solar Power Plant:-</b> SITC of Solar power plant (for complete plant ) including solar pannel, Structure, invertor etc. complete in all respect with required material, T&P labour	KW	26.00	86800	2256800
21.00	<b>Boundary Wall:-</b> Construction of 1.3 m high and 115mm 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	<b>MS Gate:-</b> Supply and fixing of 3.6 m x 1.20 m MS gate including fabrication and supply of steel and construction of bounary 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	<b>MS Wicket Gate :-</b> 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	<b>Interlocking Pavement:-</b> 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	<b>Granular Sub Base:-</b> 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	<b>Construction of WBM:-</b> Construction of WBM by providing grade materials, spreading in uniform layers including watering and compaction complete.	Cum	65.55	3029	198551
27.00	<b>Earth Filling:-</b> 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	<b>Semicircular Drain:-</b> 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	<b>Pump House (3.6x3.0x3.0):-</b> 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	<b>Pump House (2.5x3.0x3.0):-</b> 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	<b>Bye-pass Chamber:-</b> 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	<b>OHT:-</b> 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 aluminum 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 rod with 5 or more fork points as prescribed in ISS 2309-1969 and ISS 3013-1966, C.I. manhole of min 60x60cm size with locking arrangement, Supply, fixing, jointing of D.I.D/F Pipes of appropriate size with D.I.D/F specials conforming to IS 8329/2000 as vertical pipes for inlet, outlet, overflow and washout as per latest / relevant I.S. specifications with all jointing materials for proper completion of work, Construction of bed blocks in 1:2:4 PCC with cement, coarse sand and approved stone grit , Construction of washout / overflow chamber and chambers for sluice / butter fly valves as per departmental type design and drawing, Supply of 200 mm dia PVC pipe as per I.S.- 4985/2000 for disposal of water from overflow and washout chamber to suitable point outside the water works compound, Painting of all concrete surface and steel pipe works with three coats of				
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	



BOQ Item No.	Description	Unit	Qty	Rate	Amount
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		3843750.00	
32.12	200 KL 16 M Staging	Job	1.00	4040000.00	4040000
32.13	200 KL 18 M Staging	Job		4105000.00	
32.14	225 KL 12 M Staging	Job		4170000.00	
32.15	250 KL 12 M Staging	Job		4537500.00	
32.16	300 KL 12 M Staging	Job		4877500.00	
32.17	300 KL 16 M Staging	Job		5508750.00	
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	<b>Excavation:-</b> Excavation of earth in ordinary soil (loam, clay or sand) for pipe line 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	3743.65	214.61	803425
35.00	Mixed Soil with Kankar	Cum	3743.65	249.27	933180
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	<b>Sand Bedding:-</b> 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	<b>Retaining Wall:-</b> 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 relevent 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/ Kanker /morrum /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	



BOQ Item No.	Description	Unit	Qty	Rate	Amount
40.00	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.				
	<b>Ductile Iron Pipe (K-9)</b>				
40.01	300 mm dia Ductile Iron K-9	m		3877.6	
40.02	250 mm dia Ductile Iron K-9	m		3103.5	
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	
	<b>Ductile Iron Pipe (K-7)</b>				
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	<b>HDPE Pipes PN6, PE 100:-</b> Supply of following sizes pipes 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.				
41.01	90 mm dia HDPE Pipe PN6, PE 100	m	395.00	229.5	90653
41.02	75 mm dia HDPE Pipe PN6, PE 100	m	768.00	169.2	129946
41.03	63 mm dia HDPE Pipe PN6, PE 100	m	7690.00	125.8	967402
42.00	<b>Valves:-</b> Supply and carting up to site of work of the following dia DI butterfly /sluice valves, class I, working pressure 10 Kg/cm2 confirming 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.				
	<b>Isolating Sluice Valve</b>				
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	1.00	17626.00	17626
42.05	Sluice valve - 125 mm dia	Nos	1.00	14505.00	14505
42.06	Sluice valve - 100 mm dia	Nos	2.00	14455.00	28910



BOQ Item No.	Description	Unit	Qty	Rate	Amount
42.07	Sluice valve - 80 mm dia	Nos	1.00	12401.00	12401
42.07.1	Sluice valve - 65 mm dia	Nos.	1.00	10650.00	10650
42.07.2	Sluice valve - 50 mm dia	Nos.	6.00	9700.00	58200
	<b>Scour Valve</b>				
42.08	Scour valve - 80 mm dia	Nos	6.00	10160.84	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	<b>Pressure Relief Valve</b>				
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	
42.17	<b>Single / Double ball type Air Valve:-</b> 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 jointing them with pipelines and testing etc. complete (including supply of jointing materials and Valve fittings etc complete) as per instructions of Engineer.				
42.18	20 mm	Nos	6.00	10229.21	61375
42.19	50 mm	Nos		23170.33	
42.20	80 mm	Nos		23170.33	
42.21	150 mm	Nos		41024.88	
42.22	<b>Fire Hydrant:-</b> Supply of under ground sluice valve type 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 jointing them with pipelines and testing etc. complete (including supply of jointing materials and Valve fittings etc. complete as per instructions of Engineer -in - charge.	Nos	5.00	24500.00	122500
43.00	<b>Valve Chambers:-</b> 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	No.	10.00	25800.00	258000
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.	5.00	18500.00	92500
43.05	Air Valve Chamber				
43.06	350 (L) x 350 (W) x 500 (H) mm	No.	6.00	9000.00	54000
43.07	Scour Valve Chamber				
43.08	dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.	6.00	29670.00	178020
43.09	PRV Valve Chamber - 1000 (L) x 1200 (W) x 1300 (H) mm	No.		28380.00	
44.00	<b>Design and construct Thrust Block:-</b> 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.				

BOQ Item No.	Description	Unit	Qty	Rate	Amount
44.01	<b>Reinforced Cement Concrete:-</b> 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	1.84	13656.33	25128
44.02	<b>Shuttering:-</b> 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	10.60	420.00	4452
44.03	<b>Reinforcement of Thrust Block:-</b> 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	0.09	109838.98	10102
45.00	<b>Staff Quarter / Office Room:-</b> 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	<b>Recharge Mechanism:-</b> Water recharge Mechanism within the water works campus	Sqm	16.00	52500.00	840000
47.00	<b>Backfilling of Earth:-</b> Backfilling of abandoned tube well with available Earth	Cum		107.00	
48.00	<b>Assest replacement items</b>				
48.01	<b>Pumping Plant:-</b> 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	<b>Hydrostatic Level Sensor:-</b> 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	<b>3Mtr. Long Column Pipe</b>				
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	



BOQ Item No.	Description	Unit	Qty	Rate	Amount
49.00	<b>Tubewell Automation System:-</b> 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 iwith RTU panel , 7" HMI screen , surge device including enrgy 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
50.00	<b>Dismantling of Roads:-</b> Dismantling of Following type of surfaces including sorting out and stacking of serviceable materials and disposal of unserviceable materials upto a distance of 50m as per instructions of Engineer -in -charge.				
50.01	<b>B.O.E. Surface</b>	Sqm	2110.00	100.00	211000
50.02	<b>Bituminous Surface</b>	Sqm	440.00	200.00	88000
50.03	<b>Interlocking Road</b>	Sqm	766.00	155.00	118730
50.04	<b>C.C. Road</b>	Sqm	899.00	329.96	296634
51.00	<b>Restoration of Roads:-</b> 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	2110.00	350	738500
51.02	Bituminous surface	Sqm	440.00	1534.82	675321
51.03	Interlocking Road	Sqm	766.00	1070.5	820003
51.04	C.C. Road	Sqm	899.00	1560.71	1403078
52.00	<b>Nala/Culvert Crossing:-</b> 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	2.00	19000	38000
52.02-52.03	<b>Trenchless Crossings:-</b> 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	



BOQ Item No.	Description	Unit	Qty	Rate	Amount
52.07	<b>Road Crossing:-</b> Excavation in foundation of trench of proper size in soil mixed with moorum, Shingle, Kankar, 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 encasing 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	
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	<b>Functional House Tap Connection:-</b> 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.	485.00	3500	1697500
54.00	<b>Stand Post:-</b> Construction of single tap pillar type stand post as per type design	Nos.	15.00	10000	150000
55.00	<b>Operation and Maintenance:-</b> Operation and Maintenance for 10 years of water supply schemes after completion including staff required for operation and maintenance, chemicals, all materails, specials T & P for operation and maintenance excluding electricity charges. <b>(2% of Capex cost for first year of O&amp;M)</b> <b>Note:- 6% Inflation Factor considered for arriving the O&amp;M Cost from Second Year onwards.</b>	Rs			
55.01	Cost of DPR Preperation @ 1% of CAPEX Cost of DPR	%			
56.00	<b>Electromagnetic flow meters</b>				
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	
57.00	<b>Soft Starter :-</b>				
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	



BOQ Item No.	Description	Unit	Qty	Rate	Amount
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	<b>Auto Phase Reversal Unit:-</b>				
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	
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	<b>Control Panel:-</b> control panel for all power equipments with IP 54 protection	Nos	1.00	120000	120000
61.00	<b>Cabling for Tube Well:-</b> complete cabling for tubewell including all power and control cables of all equipments at pumphouse and OHT	Nos	1.00	60000	60000
62.00	<b>Master Control PLC:-</b> Master control plc with CPU, SCADA software including GSM / GPRS modem, nessaray firewall, ethernet switch, CCTV system	Nos		2665000	
63.00	Installation testing and commissioning	Nos	1.00	60000	60000
<b>Additional Items</b>					
A.I - 1	110 mm dia HDPE Pipe PN6, PE 100	m	812.00	321	260652
A.I - 2	125 mm dia HDPE Pipe PN6, PE 100	m	240.00	378	90720
A.I - 3	140 mm dia HDPE Pipe PN6, PE 100	m	127.00	498	63246
A.I - 4	160 mm dia HDPE Pipe PN6, PE 100	m	271.00	630	170730
A.I - 5	180 mm dia HDPE Pipe PN6, PE 100	m		779	
A.I - 6	200 mm dia HDPE Pipe PN6, PE 100	m		951	
A.I - 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.I - 8	Provision for arboriculture for development of water works	LS	1.00	50000	50000
A.I - 9	Battery Backup with Accessories for 2 Kw Load	Nos	2.00	92800	185600
A.I - 10	40 Watts Solar Street Lights inbuilt with all accessories	Nos	4.00	30000	120000
A.I - 11	<b>SITC of DG for Electricity support</b>				
A.I - 11 -1	7.5 KVA	Nos		240000	
A.I - 11 -2	10 KVA	Nos		260000	
A.I - 11 -3	15 KVA	Nos		306000	
A.I - 11 -3	20 KVA	Nos		370000	
A.I - 11 -3	25 KVA	Nos	1.00	389000	389000
A.I - 11 -3	30 KVA	Nos		405000	
A.I - 11 -3	40 KVA	Nos		483000	
A.I - 11 -3	45 KVA	Nos		495000	
A.I - 11 -3	50 KVA	Nos		555000	
A.I - 11 -3	62.5 KVA	Nos		569000	
A.I - 12	<b>Electromagnetic flow meters</b>				
A.I - 12 - 1	100mm Electromagnetic flow meters	Nos.	1.00	100000	100000
A.I - 12 - 2	80mm Electromagnetic flow meters	Nos.		80000	

Estimate for Chak Baidpurva 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)
<b>(A) Civil Works</b>		
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	43.98
E-4	Pipelines - Distribution Network	106.68 <del>87.87</del> 106.66
E-5	Construction of Boundary Wall	10.00
E-6	Construction of Approach Road & Ancilliary Civil Works	9.20 <del>8.95</del> 18.10
E-7	Construction of Staff Quarters	9.71
E-8	Suvey, Investigation & Preparation of Detailed Project Report	2.52 <del>2.60</del>
Net Cost of the Civil Works of the Scheme		188.94 <del>197.92</del>
<b>(B) Electrical &amp; Mechanical Works</b>		
E-9	Drilling Construction & Development of Tube Well - 1 Nos	18.37
E-10	Pumping Plant & Chlorination Plant	11.77
E-11	Solar Power Plant	22.57
E-12	Electrical & Instrumentation	13.30
Net Cost of the Electrical & Mechanical Works of the Scheme		66.01
Total Net Cost of the Scheme (A + B)		254.95 <del>263.93</del>

254.95



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30.10.97

**Estimate for Chak Baidpurva Gram Panchayat**  
**Water Supply Scheme**  
**Under - SWSM**  
**Block- BANSGAON, District- Gorakhpur**  
**Form "J" - Comprehensive Scheme**

Sr. No.	Description of Work	Amount (Rs. in Lacs)	%	Amount (Rs. in Lacs)	Govt. of U.P. Share	Govt. of India Share
1	2	3	4	5	6	7
1	Cost of Work	263.93		<del>237.83</del> 263.93		254.95
2	0.14% Discount as per Contract on Cost of work	263.93	-0.14%	<del>0.37</del> 0.33		0.36
	Net Cost of Work			<del>237.60</del> 263.56		254.59
3	Add Contingency 2%	263.56	2.00%	<del>4.75</del> 5.27		5.09
	Sub Total (A)			<del>262.35</del> 268.83	134.41	134.41
4	Add GST 12 %-B	268.83	12.00%	<del>29.08</del> 32.26	16.13	16.13
5	Add 12.5% Centage-C	268.83	12.50%	<del>30.29</del> 33.60	33.60	32.46
Grand Total (A+B+C)				<del>301.71</del> 334.69	184.15	150.54
10 year (O & M)				<del>68.28</del> 75.85	75.85	73.17
Total Cost of Scheme (Ex O & M)				410.54		odm

TOTAL POPULATION A (ULTIMATE YEAR 2052)	5650
PER CAPITA COST (NET COST+CONTIGENCY+GST)	5329

Dt & Hiring charges shall be paid separately.

PREPARED BY

CHECKED BY



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 J.E(T) Assistant Engineer

*Alu*  
 Member Secretary, WSSM  
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*A*  
 A.E

*Sup*

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

*73*  
 EXECUTIVE ENGINEER  
 CONSTRUCTION DIVISION  
 (E/M) U.P. JAL NIGAM  
 GORAKHPUR