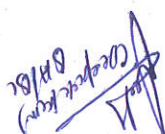



NCC LTD. 	PMC/TPIA 	CLIENT 
---	---	---

Note : The Specific Gravity should not be less than 2.5

10	=	Specific Gravity	=	(W2 - W1) - (W3 - W4)	=	198-124	=	2.71
9				W2 - W1		198		
9				Weight of the Jar + Water, W4 (gm)=		724		
8				Weight of Jar + Gravel + Water, W3 (gm)=		849		
7				Weight of Jar + Gravel, W2 (gm)=		450		
6				Weight of the Jar, W1 (gm)=		252		



SPECIFIC GRAVITY TEST AT ROOM TEMPERATURE

5	Sample no :	28
4	Lab. Test no :	28
3	Date of sampling :	27/11/2021
2	Location :	NAME OF THE BLOCK - GOLA NAME OF THE GRAM PANCHAYAT - CHANDPURI
1	Source of material :	Lalkum, Nainital, Uttarakhand
SL NO.	DESCRIPTION	OBSERVATIONS

Test report no :	NCC Lark-s/0cl028
Date of Testing-	28/11/2021

As per IS : 2386 (Part-3)

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

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



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 : 28/11/2021
Test report no : NCC GKF-51 SC / 028

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

1	Source of material :	Lalkuan, Nainital, Uttarakhand
2	Block Name-	GOLA
	Location :	G.P Name- CHANDAVLI
3	Date of sampling :	27/11/2021
4	Lab. Test no :	28
5	Sample no. :	28
6	Total wt. of sample (gm) :	2500gm

SIEVE ANALYSIS

IS Sieve Size	retained	Cumulative wt. Retained (gm)	Cumulative % wt. Retained	% passing	Acceptable / Not Acceptable
6.3 mm	0	0	0	100	OK
4.75 mm	50	50	5.0	95.0	OK
2.36 mm	902	952	95.2	4.8	OK
1.18 mm	46	998	99.8	0.2	OK
Pan	02	1000			
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. Bafar Corept/kansu	PMC/TPIA A. Masrui	CLIENT
-----------------------------------	-----------------------	--------

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 07/29/K	Date And Time	28/11/2021
Description:	Kachhrony Bompone.		
Location:	Block. Gola, G.P. Choudhary.		
Preceding RFI No.	SWSM-UP-GKP/S/7/29/27		
Commencement of work:	29/11/2021		
Submitted By:	Bankt Saha		
Signature:			
Designation:	JE (Civil)		
Concessionaire:	Proceed	Hold	
Name:			
Designation:			
Comments:	① Housing pipe clamp replaced & found as per specification.		

Contractor Representative

Signature
 Consultant Representative

Signature
 Client Representative



Time: 29-12-2021 17:28

Note: Block-Gola,Gp-Chandauli

Powered by NoteCam

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/M/S	Date And Time -	28/11/2021 / 9:20 AM
Description:	Lowering of pipe with Assembly & Fixing of Tee-Connect Block - Enka, G.P - Ghorekh		
Location:	NA		
Preceding RFI No.	NA		
Commencement of work:	29/11/2021		
Submitted By:	Ajay Sakurhe		
Signature:			
Designation:	JE (Civil)		
Concessionaire:	Proceed	Hold	
Name:			
Designation:			
Comments:	<p>① - Housing pipe clamp. (thickness & width) was not found as per specification.</p> <p>② - Painting of housing clamp was not done by anti-corrosion paint.</p>		

Signature
 Contractor Representative

Signature
 Consultant Representative

29/11/2021
 NCC

Signature
 Client Representative



ASSEMBLY DETAILS

300	mm Dia Housing Pipe A.G.L. =	0.50 m
300	mm Dia Housing Pipe	m to 36.11 m
300/150	mm Dia Reducer	35.61m to 35.81 m
150	mm Dia Blind pipe	35.81m to 101.0m
150	mm Dia Slotted pipe	101.0m to 107.0m
150	mm Dia Blind pipe	107.0m to 115.50
150	mm Dia Slotted pipe	115.50m to 129.53
150	mm Dia Blind pipe	129.53 to 135.53
150	mm Dia Slotted pipe	135.53 to 139.53
150	mm Dia Blind pipe	139.53 to 145.53

mm Dia pipe m to m

EXECUTED ASSEMBLY

300	mm Dia Housing Pipe A.G.L.	0.50 m	GL
300	mm Dia Housing Pipe	m to 36.11 m	GL
300/150	mm Dia Reducer	35.61m to 35.81 m	GL
150	mm Dia Blind pipe	35.81m to 101.0m	SANDY CLAY
150	mm Dia Slotted pipe	101.0m to 107.0m	SANDY CLAY
150	mm Dia Blind pipe	107.0m to 115.50	SANDY CLAY
150	mm Dia Slotted pipe	115.50m to 129.53	CONCRETE CLAY
150	mm Dia Blind pipe	129.53 to 135.53	CONCRETE CLAY
150	mm Dia Slotted pipe	135.53 to 139.53	CONCRETE CLAY
150	mm Dia Blind pipe	139.53 to 145.53	CONCRETE CLAY
150	mm Dia Slotted pipe	145.53 to 159.0M	SANDY CLAY
150	mm Dia Blind pipe	159.0M to 167.0M	SANDY CLAY
150	mm Dia Slotted pipe	167.0M to 174.0M	CLAY

DEPTH B.G.L. IN METER

ASSEMBLY DETAILS

300	mm Dia Housing Pipe A.G.L. =	0.50 m
300	mm Dia Housing Pipe	m to 36.11 m
300/150	mm Dia Reducer	35.61m to 35.81 m
150	mm Dia Blind pipe	35.81m to 101.0m
150	mm Dia Slotted pipe	101.0m to 107.0m
150	mm Dia Blind pipe	107.0m to 115.50
150	mm Dia Slotted pipe	115.50m to 129.53
150	mm Dia Blind pipe	129.53 to 135.53
150	mm Dia Slotted pipe	135.53 to 139.53
150	mm Dia Blind pipe	139.53 to 145.53

mm Dia pipe m to m

TYPE OF RIG MC- RC

SIZE OF BORE- 600/500 mm φ

STATIC WATER LEVEL- 12 M

A.F. Incharge- CHANDAULI

NAME OF THE DISTRICT- GORAKHPUR

NAME OF THE BLOCK- GOLH

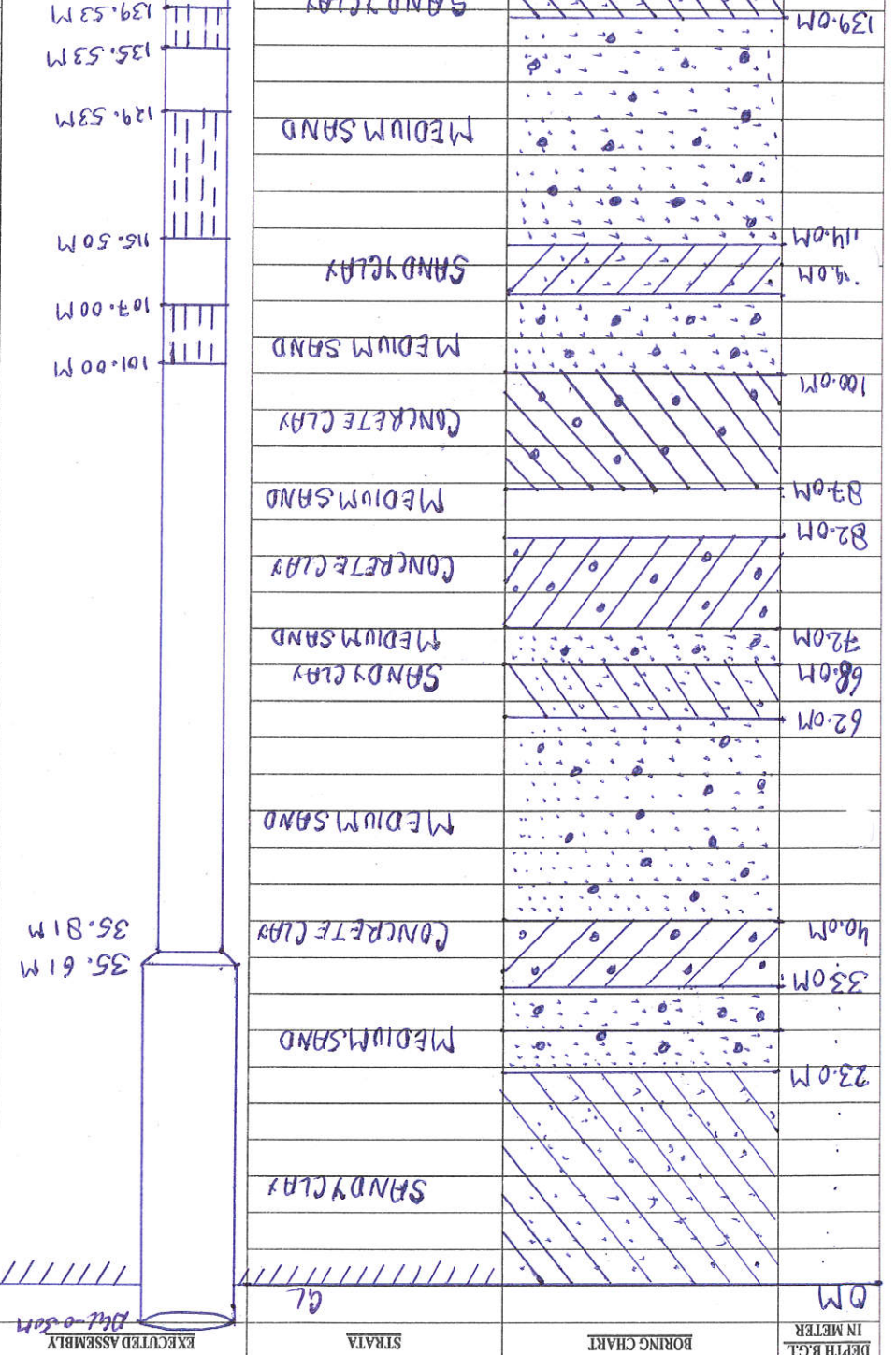
NAME OF THE GRAM PANCHAYAT- CHANDAULI

NAME OF THE VILLAGE- CHANDAULI

DISCHARGE - 750 LPM

LOGGING REPORT

1-	22 - 26	→ 4.0 M
2-	30 - 35	→ 5.0 M
3-	40 - 60	→ 20.0 M
4-	65 - 70	→ 5.0 M
5-	82 - 86	→ 4.0 M
6-	100 - 108	→ 8.0 M
7-	115 - 133	→ 15.0 M
8-	135 - 140	→ 5.0 M
9-	142 - 146	→ 4.0 M





Aqua Xplore

(Groundwater Assessment & Allied Services)

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

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

Ref 1128 - C / AX - 2021 Date 28.11.2021

Geophysical Borehole Logging Report

Name of the site : Chandauli, Block-Gola

District : Gorakhpur

Date : 28.11.2021

Depth logged : 154.0 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:

SI.No.	Depth range(mbgl)	Thickness(m)	Remarks
1	22.0---26.0	4.0	Good all
2	30.0---35.0	5.0	
3	40.0---60.0	20.0	
4	65.0---70.0	5.0	
5	82.0---86.0	4.0	
6	100.0---108.0	8.0	
7	115.0---133.0	15.0	
8	135.0---140.0	5.0	
9	142.0---146.0	4.0	

Note. SI. Nos. 5 & 9 are very-fine sand.

(Handwritten signature)

for Aqua Xplore

CC:

1. Executive Engineer, C.D. (E/M), U.P. Jal Nigam, Gorakhpur.

2. M/S NCC Limited, Gorakhpur - South, SWSM.



TEST REPORT

Name of Customer	Jal Nigam, Gorakhpur
Project	SWSM-JJM 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.



Arvind Kumar Garg
 (Quality Manager)

Approved By:

Alok Kumar Chauhan
 (Technical Manager)

Checked By:

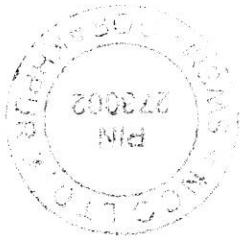
Checked By:



1. PHYSICAL TEST RESULT OF PEA GRAVEL

Sample Unique ID: MT136/TEPL/02

SI. 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	40 Max	IS 2386 (Part-1)-1963, RA-2016	Partical Size >6.3
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			IS 2386 (Part-3)-1963 RA-2016	
		a) Compacted	1.59	NA	
		b) Loose	1.49	NA	



Checked By: Alok Kumar Chauhan (Technical Manager)

Alok Chauhan



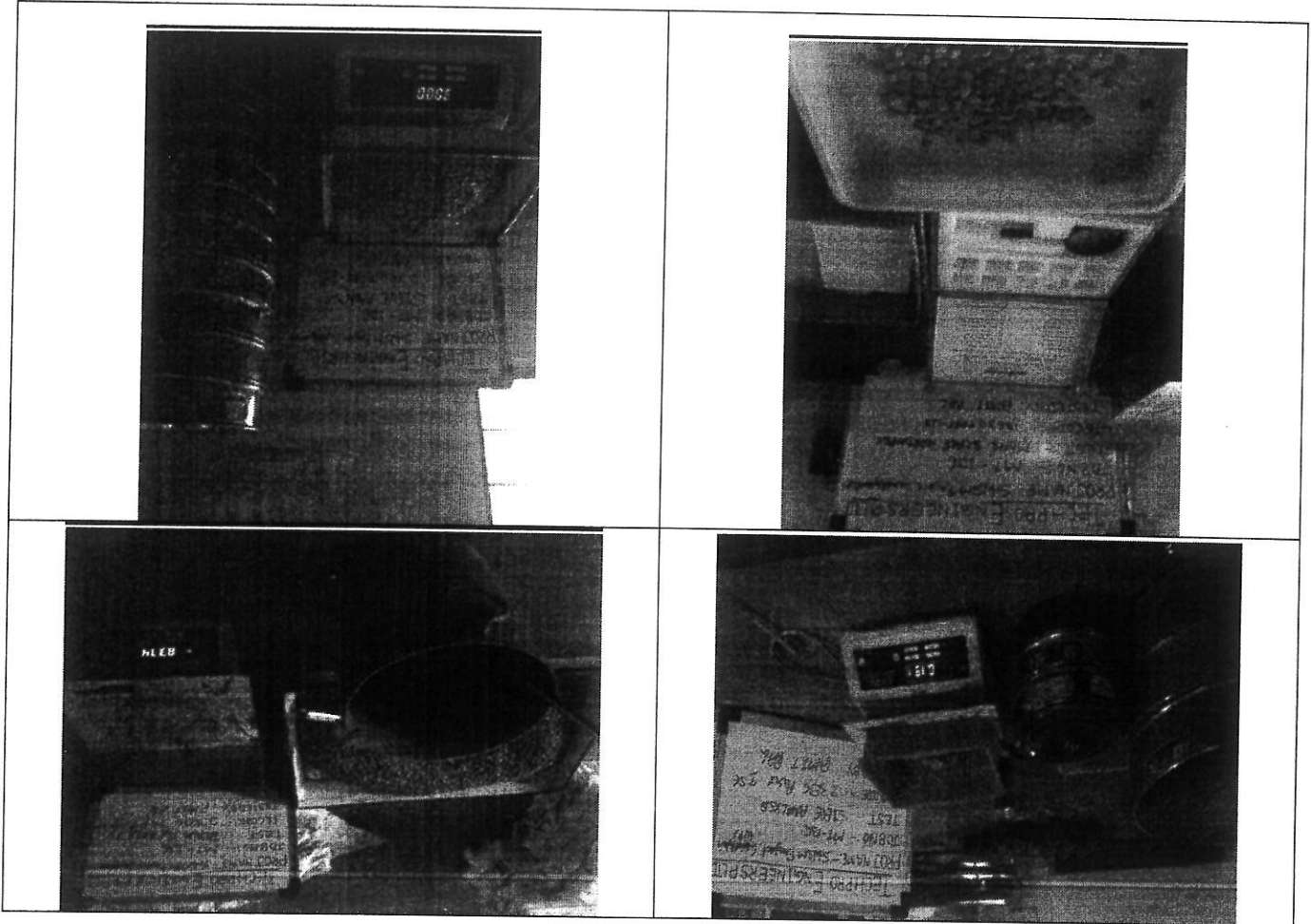
Approved By: Arvind Kumar Garg (Quality Manager)

Arvind Kumar Garg

Approved By:



PHOTOGRAPHS



END OF REPORT

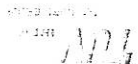
NCC LTD.		SOIL SAMPLE COLLECTION REPORT		SWSM PROJECT - GORAKHPUR, UP		NCC Limited	
1	Name of the Block-	GOLA					
2	Name of the Gram Panchayat-	CHANDAULI					
3	Name of the Borewell Village-	CHANDAULI					
4	Name of the Revenue Village-						
5	Drilling For Housing Pipe (Dia- 200 mm/300 mm)-	300mm					
		Bore For Plain/Slotted 150 mm dia-					
6	Drilling For Housing Pipe- Depth)	150mm					
		36.11M					
7	Total Drilling Depth (m)-	85.89M/24.03M					
8	Electrical Logging Test Depth	167M					
		154M					
Sl no.	Date of Sample Collection	Type of Soil Sample	Depth of Sample Collection (m)	Remarks			
1	22/1/2021	CLAY	0-3				
2	22/1/2021	CLAY	3-6				
3	22/1/2021	FINE SAND	6-9				
4	22/1/2021	MEDIUM SAND	09-12				
5	22/1/2021	FINE SAND	12-15				
6	22/1/2021	FINE SAND	15-18				
7	22/1/2021	FINE SAND	18-21				
8	22/1/2021	MEDIUM SAND	21-24				
9	22/1/2021	MEDIUM SAND	24-27				
10	22/1/2021	MEDIUM SAND	27-30				
11	22/1/2021	FINE SAND	30-33				
12	23/1/2021	FINE SAND	33-36				
13	23/1/2021	MEDIUM SAND	36-40				
14	23/1/2021	MEDIUM SAND	40-42				
15	23/1/2021	FINE SAND	42-45				
16	23/1/2021	FINE SAND	45-48				
17	23/1/2021	FINE SAND	48-51				
18	23/1/2021	FINE SAND	51-54				
19	23/1/2021	FINE SAND WITH GRAVEL	54-57				
20	23/1/2021	FINE SAND	57-60				
21	23/1/2021	CLAY	60-63				
22	23/1/2021	SAND WITH CLAY	63-66				
23	23/1/2021	FINE SAND	66-69				
24	24/1/2021	SAND WITH CLAY	69-71				
25	24/1/2021	MEDIUM GRAVEL	71-74				
26	24/1/2021	MEDIUM GRAVEL	74-77				
27	24/1/2021	FINE SAND	77-81				
28	24/1/2021	FINE SAND	81-84				
29	24/1/2021	FINE SAND	84-87				
30	24/1/2021	FINE SAND	87-90				
31	24/1/2021	FINE SAND	90-93				
32	24/1/2021	CLAY WITH GRAVEL	93-95				
33	24/1/2021	CLAY WITH GRAVEL	95-99				
34	24/1/2021	FINE SAND	099-102				

CLIENT		TPA	NCC LTD
	162 - 167	CLAY WITH GRAVEL	53 26/11/2021
	158 - 162	CLAY WITH GRAVEL	52 26/11/2021
	154 - 158	CLAY WITH GRAVEL	51 26/11/2021
	150 - 154	CLAY WITH GRAVEL	50 26/11/2021
	146 - 150	CLAY	49 26/11/2021
	142 - 146	FINE SAND	48 26/11/2021
	139 - 142	FINE SAND	47 26/11/2021
	135 - 139	FINE SAND	46 26/11/2021
	132 - 135	FINE SAND	45 26/11/2021
	129 - 132	FINE SAND	44 26/11/2021
	126 - 129	FINE SAND	43 25/11/2021
	123 - 126	FINE SAND	42 25/11/2021
	120 - 123	FINE SAND	41 25/11/2021
	117 - 120	FINE SAND	40 25/11/2021
	114 - 117	FINE SAND	39 25/11/2021
	111 - 114	FINE SAND	38 25/11/2021
	108 - 111	CLAY	37 25/11/2021
	105 - 108	FINE SAND	36 25/11/2021
	102 - 105	FINE SAND	35 25/11/2021

TUV INDIA PRIVATE LIMITED

INSPECTION-RELEASE NOTE / CERTIFICATE

Form No. : F / INSP / IRN / 03 - RT; Revision Date: 13.03.2020 Page 1 of 2



TUV (India) Contact No: 8116449388
 GAF Number: 17-08-2021

Project Name & Location: Gorenkhpur South Project, State water and sanitation mission, TUV India Branch, Noida

TUV India Client: M/s. DADU PIPES PVT LTD
 End User Name: NCC Limited

DEC / P/MC / EPC Name: Not Applicable
 DEC / P/MC / EPC Asgmt. Number: Not Applicable

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

Sub Vendor Name & Location: Not Applicable
 P.O. Number: Not Applicable

Item Description: (if applicable)
 P.O. Number: NCC/ROK/SWS/MUP-G(S)/PO/21
 DL: 10.08.2021

PO	Item No.	Item Description	UOM	P.O. Quantity	Offered Quantity	Accepted Quantity	Cumulative 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	DPP/QP/02 Rev 0	Not Applicable	Approved by client
3)	Drawing(s)	Not Applicable	Not Applicable	Not Applicable
4)	Datashet(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.

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 / Stockist from their responsibility towards the Client / End User to supply the genuine material / Items and documents in full compliance with applicable Order, Specification, Technical, Quality, Quantity, Country, Warranty, Guarantee, requirements, supplies / Manufacturers / sources is wholly legally responsible for genuineness of the material / Items and documents. TUV India Pvt. Ltd. (TUV Nord Group) (REGD. & HEAD OFFICE), 601, Kameja Plaza - 1, LBS Marg, Ghatkopar (West), Mumbai - 400086, Maharashtra, India. Tel: + 91 22 66477000. Email: inspection@tuv-india.com Website: www.tuv-india.com

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
 CHANDAULI
 1/1

S. No	District Name	Sub District Name	Block Name	Gram Panchayat Name	2011 Census Code	Revenue Village Name	Habitations Name
1	GORAKHPUR	GOLA	GOLA	CHANDAULI	187689	CHANDAULI	CHANDAULI

Table 1: List of Village and Habitations

Village Population Summary

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

S. NO	DESCRIPTION	GROWTH FACTOR WRT Y-2011	POPULATION	SC/ST	HOUSE HOLDS
1.	As per Census 2011	1	2493	841	386
2.	Initial Stage 2022	1.24	3100	1046	480
3.	Middle Stage 2037	1.7	4230	1427	655
4.	Ultimate Stage 2052	2.31	5750	1940	890

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

Pipeline Type	Material	Class	Diameter(mm)	Length (m)
Distribution Mains	HDPE	PN-6 PE100	63	4.645
Distribution Mains	HDPE	PN-6 PE100	75	4.10
Distribution Mains	HDPE	PN-6 PE100	90	2.14
Distribution Mains	HDPE	PN-6 PE100	110	1.77
Distribution Mains	HDPE	PN-6 PE100	125	3.70
Distribution Mains	HDPE	PN-6 PE100	140	8.12
Distribution Mains	HDPE	PN-6 PE100	160	7.01
Distribution Mains	HDPE	PN-6 PE100	180	0
Distribution Mains	HDPE	PN-6 PE100	200	0
Total Length (m)				7.329

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 Chandauli 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	256606.00	256606
2.00	Drilling of Borehole for Tubewell construction by DC/R/C/DTH Rig Machine including transportation, erection, dismantling of Rig and associated T&F 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	MSEWRW plain pipe,As per IS 4270				
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	MSEWRW Pipe slotted pipe as per IS 8110				
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, 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&F, labour, etc.				
4.01	Lowering up to 100 Mtr. Deep				
4.02	100 MMØ MSERW Plain/Slotted Pipe	Mtr.		129.45	
4.03	150 MMØ MSERW Plain/Slotted Pipe	Mtr.	64.00	281.00	17984
4.04	200 MMØ MSERW Plain/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 Plain/Slotted Pipe	Mtr.	63.00	376.00	23688

BOQ Item No.	Description	Unit	Qty	Rate	Amount
4.08	200 MMØ MSERW Plane/Slotted Pipe	Mtr.		499.19	
4.09	300 MMØ MSERW Plane/Slotted Pipe	Mtr.		745.58	
4.10	Lowering from 201 Mtr. To 300 Mtr. Deep				
4.11	150 MMØ MSERW Plane/Slotted Pipe	Mtr.		385.19	
4.12	200 MMØ MSERW Plane/Slotted Pipe	Mtr.		459.00	
4.13	300 MMØ MSERW Plane/Slotted Pipe	Mtr.		606.62	
4.14	Lowering from 301 Mtr. To 400 Mtr. Deep & above				
4.15	150 MMØ MSERW Plane/Slotted Pipe	Mtr.		426.53	
4.16	200 MMØ MSERW Plane/Slotted Pipe	Mtr.		499.00	
4.17	300 MMØ MSERW Plane/Slotted Pipe	Mtr.		643.94	
5.00	Supply and unconsolidated packing of gravel with suitable size Supply and Packing of Gravel Works	Cum	45.00	7500.00	337500
6.01	Development of Tube well				
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 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:- Check Valve PN 1.0 DPCV dia 100 mm	Nos		27519.8	
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 :- 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	Nos	1.00	46305	46305
9.10	1 Tonne	Nos	1.00	58432.5	58432.5
9.11	2 Tonne	Nos	1.00	273000	273000
10.00	Turbidity & Chlorine analyzer	Nos	1.00	126000	126000
11.00	Hydrostatic Level Sensor:- Providing and installation hydrostatic level sensor at all tubewell pumping system including all accessories etc. complete in all respect as per instructions of Engineer -in-charge.	Nos	1.00	126000	126000
12.00	Stabilizer				
12.01	2 KVA	Nos		12777.78	
12.02	5 KVA	Nos		25555.56	
12.03	7.5 KVA	Nos		44722.22	
12.04	10 KVA	Nos		12777.78	
12.05	15 KVA	Nos		166111.11	
12.06	20 KVA	Nos		191666.67	
12.07	25 KVA	Nos		204444.44	
12.08	30 KVA	Nos		230000	
12.09	40 KVA	Nos		281111.11	
12.10	50 KVA	Nos		319444.44	
12.11	60 KVA	Nos		345000	
13.00	Column Pipe:- SITC of Column pipe of MS pipe for connecting submersible pumps				
13.01	32 mm Dia size - MS pipe	Mtr.		500	
13.02	40 mm dia size - MS pipe	Mtr.		666.67	
13.03	50 mm dia size - MS pipe	Mtr.		921	
13.04	65 mm Dia size - MS pipe	Mtr.		1066.67	
13.05	80 mm Dia size - MS pipe	Mtr.		1400	
13.06	100 mm Dia size - MS pipe	Mtr.	30.00	1567	47010
13.07	150 mm Dia size - MS pipe	Mtr.		2167	
14.00	Chlorinating System:- Supply, installation of chlorinating system with dosing pump 0-6 LPH capacity with 100 Litres(1wt+1s) tanks, valves, pipes with required accessories (Automatic dosing system for chemical injection)	JOB	1.00	112000	112000
15.00	Fluoride Removal Plant:- Supplying, installation, testing, commissioning of Fluoride removal plant for required capacity including transportation and labour charges as complete. (Vendor have to select the technology based on capacity (Electrolytic-de fluoridation plant or media based system). Rates for 400 KLD/ 500 LPM	LS		8062500	
16.00	Iron Removal Plant:- Supplying, installation, testing, commissioning of Iron removal plant which includes vessel, media, piping valves etc. for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		6062500	
17.00	Arsenic Removal Plant:- Supplying, installation, testing, commissioning of Arsenic removal plant which include vessel, media, piping valves etc. for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		9000000	
18.00	TDS and Hardness Removal Plant:- Supplying, installation, testing, commissioning of reverse osmosis plant which includes pump, micron cartridge filter, high pressure pump, reverse osmosis membrane, cleaning system and required piping and valves etc. complete for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		13125000	
19.00	Tube Well Electrification:- Internal electrification of tube well	LS	1.00	20000	20000

BOQ Item No.	Description	Unit	Qty	Rate	Amount
20.00	Solar Power Plant:- STC 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 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 15mm th. around RCC, as per departmental type design and drawing (Drawing No. D-1) and as per specifications laid down in the bid document, including supply of all material, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.	No.	1.00	52000	52000
23.00	MS Wicket Gate :- Supply and fixing of 1.2m wide MS wicket gate including fabrication and supply of steel and construction of boundary wall pillars etc. as per specifications laid down in the bid document, including supply of all material, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.	No.	1.00	19000	19000
24.00	Interlocking Pavement:- Construction of Interlocking pavement for approach to water works, as per departmental type design and drawing and as per specifications laid down in the bid document, including supply of all materials , labour, T&P etc. required for proper completion of work as per instructions of Engineer -in -charge.	Sqm.	262.20	1070.5	280685
25.00	Granular Sub Base:- Construction of granular sub base by providing coarse grade materials, spreading in uniform layers including watering and compaction complete.	Cum	52.44	2800	146832
26.00	Construction of WBM:- Construction of WBM by providing grade materials, spreading in uniform layers including watering and compaction complete.	Cum	65.55	3029	198551
27.00	Earth Filling:- Earth filling work for proper leveling of water work site, in accordance with the contour map and Grid map of existing site enclosed (Drawing no.D-1), including leveling, dressing, excavation and filling of earth where necessary and also including all labour, materials, T&P etc. required for proper completion of works and also including 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 (drawing no-D-2) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer-in-charge.	Job	1.00	597000	597000
30.00	Pump House (2.5x3.0x3.0):- Provide all materials, labour, T&P etc. complete and construct Pump house size (2.5x3.0x3.0)m Chlorinating room size (1.5x1.3x3.0)m as per departmental type design and drawing (drawing no-D-2) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer-in-charge.	Job		404000	
31.00	By-pass Chamber:- Provide all materials, labour, T&P etc. complete and constructed 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
32.01	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	

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, joining 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 joining materials for proper completion of work, Construction of bed blocks in 1:2:4 PCC with cement, coarse sand and approved stone grit / butler fly valves as per departmental type design chambers for sluice / overflow chamber and washout chamber to suitable 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

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		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 KL 10 M Staging	Job		1296250.00	
32.23	25 KL 12 M Staging	Job		1363750.00	
32.24	For 2 m Staging (5% additional per Meter)	Run		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	2753.96	214.61	591027
35.00	Mixed Soil with Kankar	Cum	2753.96	249.27	686479
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	

BOQ Item No.	Description	Unit	Qty	Rate	Amount
42.06	Sluice valve - 100 mm dia	Nos	2.00	14455.00	28910
42.05	Sluice valve - 125 mm dia	Nos	2.00	14505.00	29010
42.04	Sluice valve - 150 mm dia	Nos	1.00	17626.00	17626
42.03	Sluice valve - 200 mm dia	Nos		27304.00	
42.02	Sluice valve - 250 mm dia	Nos		48109.00	
42.01	Sluice valve - 300 mm dia	Nos		64042.00	
	Isolating Sluice Valve				
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.				
41.03	63 mm dia HDPE Pipe PN6, PE 100	m	4645.00	125.8	584341
41.02	75 mm dia HDPE Pipe PN6, PE 100	m	410.00	169.2	69372
41.01	90 mm dia HDPE Pipe PN6, PE 100	m	214.00	229.5	49113
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.				
40.14	80 mm dia Ductile Iron K-7	m		909.49	
40.13	100 mm dia Ductile Iron K-7	m		1007.11	
40.12	125 mm dia Ductile Iron K-7	m		1301.41	
40.11	150 mm dia Ductile Iron K-7	m		1497.48	
40.10	200 mm dia Ductile Iron K-7	m		1848.32	
40.09	250 mm dia Ductile Iron K-7	m		2564.5	
40.08	300 mm dia Ductile Iron K-7	m		3151.6	
	Ductile Iron Pipe (K-7)				
40.07	80 mm dia Ductile Iron K-9	m		905.41	
40.06	100 mm dia Ductile Iron K-9	m		1191.41	
40.05	125 mm dia Ductile Iron K-9	m		1411.41	
40.04	150 mm dia Ductile Iron K-9	m	35.00	1728.48	60497
40.03	200 mm dia Ductile Iron K-9	m		2332.32	
40.02	250 mm dia Ductile Iron K-9	m		3103.5	
40.01	300 mm dia Ductile Iron K-9	m		3877.6	
	Ductile Iron Pipe (K-9)				
40.00	Supply of following sizes (D.I.) pipes for rising main/distribution system conforming to latest/relevant I.S. 8329/2000 Specifications with all joining 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 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.				

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.	4.00	9700.00	38800
42.08	Scour valve - 80 mm dia	Nos			
42.09	Scour valve - 100 mm dia	Nos			
42.10	Scour valve - 150 mm dia	Nos			
42.11	Scour valve - 200 mm dia	Nos			
42.12	Scour valve - 250 mm dia	Nos			
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	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.	Nos			
42.18	20 mm	Nos			
42.19	50 mm	Nos			
42.20	80 mm	Nos			
42.21	150 mm	Nos			
42.22	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 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	2.00	24500.00	49000
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	No.	9.00	25800.00	232200
43.03	Sluice Valve Chamber (Surface Box Type):- Dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.			
43.04	Fire Hydrant chamber (800 (L) X 1250 (W) X 1000 (H) mm)	No.	2.00	18500.00	37000
43.05	Air Valve Chamber				
43.06	350 (L) x 350 (W) x 500 (H) mm	No.	4.00	9000.00	36000
43.07	Scour Valve Chamber				
43.08	dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.	4.00	29670.00	118680
43.09	PRV Valve Chamber - 1000 (L) x 1200 (W) x 1300 (H) mm	No.			
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 M5 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. RCC work as per instructions of Engineer - in - charge.	No.			
				28380.00	

BQ Item No.	Description	Unit	Qty	Rate	Amount
44.01	Reinforced Cement Concrete:- Design and construct Thrust Block made in Reinforced Cement concrete (1:1.5:3), with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, as per technical requirements.	Cum	1.92	13656.33	26220
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	11.40	420.00	4788
44.03	Reinforcement of Thrust Blocks:- 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	0.10	109838.98	10541
45.00	Staff Quarter / Office Room:- Provide all materials labour, T&P etc. and construct single room staff quarter / office room at water works site identified by the Engineer-in-charge as per department type design and drawing and specifications of civil works laid down in the bid document, including all material labour, T&P etc complete for proper completion of work as per instructions of Engineer - in - charge. (Drawing No.D-7)	No	1.00	970600	970600
46.00	Recharge Mechanism:- Water recharge Mechanism within the water works campus	Sqm	16.00	52500.00	840000
47.00	Backfilling of Earth:- Backfilling of abandoned tube well with available Earth	Cum		107.00	
48.00	Assess replacement items				
48.01	Pumping Plant:- SITC of Pumping plant including pumps with motors, starter, panel, 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	Nos		1500.00	
48.19	32 mm Dia size - MS pipe	Nos		2000.01	
48.20	40 mm dia size - MS pipe	Nos		2763.00	
48.21	50 mm dia size - MS pipe	Nos		3200.01	
48.22	65 mm Dia size - MS pipe	Nos		4200.00	
48.23	80 mm Dia size - MS pipe	Nos		4701.00	
48.24	100 mm Dia size - MS pipe	Nos		6501.00	
48.25	150 mm Dia size - MS pipe	Nos			

BOQ Item No.	Description	Unit	Qty	Rate	Amount
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
50.00	Dismantling of Roads:- Dismantling of Following type of surfaces including sorting out and stacking of servicable materials and disposal of unservicable materials upto a distance of 50m as per instructions of Engineer-in-charge.				
50.01	B.O.E. Surface	Sqm	820.00	100.00	82000
50.02	Bituminous Surface	Sqm	961.00	200.00	192200
50.03	Interlocking Road	Sqm	303.00	155.00	46965
50.04	C.C. Road	Sqm	1248.00	329.96	411790
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	820.00	350	287000
51.02	Bituminous surface	Sqm	961.00	1534.82	1474962
51.03	Interlocking Road	Sqm	303.00	1070.5	324362
51.04	C.C. Road	Sqm	1248.00	1560.71	1947766
52.00	Nala/Culvert Crossing:- Provision for following types of Culvert crossing -along the alignment of pipe line complete as per instructions of Engineer-in-charge. (casing of pipe is done by concreting)				
52.01	Nala/Culvert Crossing (width -3.5 m) upto Dia 300 mm	Nos	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 mt from normal ground level up to top of casing pipe including excavation & filling of Pit, Dewatering arrangement, Supporting system for soil, also including supply and fixing of 2 no Sluice valve ISI Mark, construction of sluice valve chamber etc. all complete work including supply & fixing specials in carrier pipe over main pipe, as per specification given in the bid documents including supply of all materials, labour T&P etc. for proper completion of work as per instruction of Engineer.				
52.04	Railway Line crossing (Up to Dia 350 mm)	Nos	60000		
52.05	National Highway road crossing (Up to Dia 350 mm)	Nos	40000		
52.06	State Highway road crossing (Up to Dia 350 mm)	Nos	27000		

BoQ Item No.	Description	Unit	Qty	Rate	Amount
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	
52.07	Road Crossing:- Excavation in foundation of trench of proper size in soil mixed with moorum, Shingle, Kanakar, soft rock, hard rock, including refilling, dressing and ramming earth or sand or bajri, ballast, including providing, supply, carting, lowering, laying and jointing of casing pipe of RCC NP-3 with appropriate size, with rubber ring joint, sand filling in gap inside RCC pipe, insertion of distribution pipe into the casing pipe including supply of T&P, including concrete of 150 mm thick in pipe 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.				
53.00	Functional House Tap Connection:- Making house connection should be done atleast 2 m inside the boundary wall with provision of tap from distribution line to outer wall of house, with supply of 1 m G.I. pipe (15 mm) (above ground) & average 5 mtr. MDPE Pipe (20 mm) (below ground) including specials, saddle, Tap, etc. of suitable size, T&P etc. including excavation, laying and jointing for proper completion of work as per instructions of Engineer as per Dwg 12 (excluding road restoration)	Nos.	480.00	3500	1680000
54.00	Stand Post:- Construction of single tap pillar type stand post as per type design	Nos.	8.00	10000	80000
55.00	Operation and Maintenance:- Operation and Maintenance for 10 years of water supply schemes after completion including staff required for operation and maintenance, chemicals, all materials, specials T & P for operation and maintenance, excluding electricity charges. (2% of Capex cost for first year of O&M) Note:- 6% Inflation Factor considered for arriving the O&M Cost from Second Year onwards. Cost of DPR Preparation @ 1% of CAPEX Cost of DPR	Rs			
55.01	Electromagnetic flow meters	%			
56.01	150mm	Nos.		150000	
56.02	200mm	Nos.		190000	
56.03	250mm	Nos.		225000	
56.04	300mm	Nos.		260000	
56.05	350mm	Nos.		330000	
56.06	400mm	Nos.		420000	
56.07	450mm	Nos.		500000	
56.08	500mm	Nos.		550000	
57.00	Soft Starter :-				
57.01	soft starter with RS485 port -400V,7.5KW Rating	Nos		60000	
57.02	soft starter with RS485 port -400V,15KW Rating	Nos		70000	
57.03	soft starter with RS485 port -400V,22KW Rating	Nos		85000	
57.04	soft starter with RS485 port -400V,30KW Rating	Nos		100000	
57.05	soft starter with RS485 port -400V,45KW Rating	Nos		125000	
57.06	soft starter with RS485 port -400V,55KW Rating	Nos		140000	

BQ 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	Auto Phase Reversal Unit:-				
58.01	100 Amp rating	Nos		45000	
58.02	125 Amp rating	Nos		50000	
58.03	160 Amp rating	Nos		70000	
58.04	200 Amp rating	Nos		120000	
58.05	250 Amp rating	Nos		135000	
58.06	315 Amp rating	Nos		140000	
58.07	400 Amp rating	Nos		150000	
58.08	500 Amp rating	Nos		190000	
58.09	630 Amp rating	Nos		225000	
59.00	Radar type Level transmitter	Nos	1.00	120000	120000
60.00	Control Panel:- control panel for all power equipments with IP 54 protection	Nos	1.00	120000	120000
61.00	Cabling for Tube Well:- complete cabling for tubewell including all power and control cables of all equipments at pump house and OHT	Nos	1.00	60000	60000
62.00	Master Control PLC:- Master control plc with CPU, SCADA software including GSM / GPRS modem, necessary firewall, ethernet switch, CCTV system	Nos		2665000	
63.00	Installation testing and commissioning	Nos	1.00	60000	60000
Additional Items					
A1-1	110 mm dia HDPE Pipe PN6, PE 100	m	177.00	321	56817
A1-2	125 mm dia HDPE Pipe PN6, PE 100	m	370.00	378	139860
A1-3	140 mm dia HDPE Pipe PN6, PE 100	m	812.00	498	404376
A1-4	160 mm dia HDPE Pipe PN6, PE 100	m	701.00	630	441630
A1-5	180 mm dia HDPE Pipe PN6, PE 100	m		779	
A1-6	200 mm dia HDPE Pipe PN6, PE 100	m		951	
A1-7	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
A1-8	Provision for aborticulture for development of water works	LS	1.00	50000	50000
A1-9	Battery Backup with Accessories for 2 Kw Load	Nos	2.00	92800	185600
A1-10	40 Watts Solar Street Lights inbuilt with all accessories	Nos	4.00	30000	120000
A1-11	SITC of DG for Electricity support				
A1-11-1	7.5 KVA	Nos		240000	
A1-11-2	10 KVA	Nos		260000	
A1-11-3	15 KVA	Nos		306000	
A1-11-3	20 KVA	Nos		370000	
A1-11-3	25 KVA	Nos	1.00	389000	389000
A1-11-3	30 KVA	Nos		405000	
A1-11-3	40 KVA	Nos		483000	
A1-11-3	45 KVA	Nos		495000	
A1-11-3	50 KVA	Nos		555000	
A1-11-3	62.5 KVA	Nos		569000	
A1-12	Electromagnetic flow meters				
A1-12-1	100mm Electromagnetic flow meters	Nos	1.00	100000	100000
A1-12-2	80mm Electromagnetic flow meters	Nos		80000	

Estimate for Chandauli Gram Panchayat	
Water Supply Scheme	
Under - SWSM	
Block - Gola, District - Gorakhpur	
General Abstract of Cost (Comprehensive)	
Estimate Number	Description of Sub-Estimate
Amount	(Rs. Lacs)
E-1	Construction of Pump House
E-2	Pipelines - Raw Water Rising Main
E-3	Construction of Over Head Tank - 1 Nos
E-4	Pipelines - Distribution Network
E-5	Construction of Boundary Wall
E-6	Construction of Approach Road & Ancillary Civil Works
E-7	Construction of Staff Quarters
E-8	Survey, Investigation & Preparation of Detailed Project Report
	Net Cost of the Civil Works of the Scheme
	187.55
(B) Electrical & Mechanical Works	
E-9	Drilling Construction & Development of Tube Well - 1 Nos
E-10	Pumping Plant & Chlorination Plant
E-11	Solar Power Plant
E-12	Electrical & Instrumentation
	Net Cost of the Electrical & Mechanical Works of the Scheme
	67.01
	Total Net Cost of the Scheme (A + B)
	254.56

