SUBARANAREKHA SCHEME (NEW SCHEME)

Sl. No.	Components
1	**Subarnarekha Intake Well**
1.1	**Intake Well**
a	Earthwork excavation for intake well - 19.2 m dia and depth of 5.5 m
b	Construction of RCC intake well with internal dia 4m and depth of 7.3 m . Dewatering process is done during the construction stage provide with coffer Dam
1.2	**Perforated Pipe**
a	Earthwork excavation for perforated pipe - Trench Size - 20.00 m x 1.10 m x 2.35 m (2nos)
b	Providing, lowering, laying, jointing 600mm dia. RCC NP3 Pipe - 2 nos of pipe for 20 m
1.3	**Intake Pipe**
a	Earthwork excavation for intake pipe - Trench Size - 60 m x 4.78 m x 8.96 m (Avg depth - 8.96 m , with a max depth of 14.17 m)
b	Providing ISI standard R.C.C. NP3 pipes in standard lengths of 900mm diameter- 2 nos - 60 m length
c	Providing, lowering, laying and placing in position, shrouding material for porous pipe gallery/slotted pipe gallery/ trench gallery -for 6 to 12mm guage pebbles , 40 mm pebbles for 60 m length, width 2.96 m and 1.13 depth
1.4	**Coffer Dam**
a	Providing, constructing coffer dam in river basin / dam storages as per type design including, dewatering, excavation, filling, the middle portion with B. C. soil of length 80 m and depth 8m.
2	**Subarnarekha Jack Well**
a	Earthwork excavation - Depth 16.74 m and Diameter 33.3 m.
b	Construction of RCC Jackwell with internal dia 9 m and 17.54 m height upto floor slab. Pump room of 5 m height is provided with pump sets and allied lifting equipments with an approach bridge .
c	Approach bridge with length 21 m and 4.5 m width, supported by RCC pedestal.
3	**Raw Water Pumping Main from Subarnarekha Intake to WTP**
a	Earthwork excavation for 900 mm dia pipe (all types of soil, soft rock and hard rock with trench sizes - 600 mx 1.35m X 2.15 m)
b	Supply, Laying , Lowering and Jointing of DI K-9, Dia 900mm for length of 600 m with neessary valves, flow meters, valve chamber and necessary fittings.
4	**60 MLD WTP near Subharnarekha**
a	**As per Drinking Water and Sanitation Dept, Schedule of Rates, Govt. of Jharkand item no.113**, the provision for designing, constructing and commissioning of 60 MLD Conventional Water Treatment Plant including all Civil, Mechanical and Electrical works has been made. The schematic diagram of the WTP is attached in **Annexure.**
5	**Staff Quarters at 60 MLD WTP**
a	Earthwork excavation for foundation with outer dimension 10. 36 m x 9.99 m and for depth of 1.65 m
b	Construction of Double storeyed staff quarters with hall, Kitchen, Verandah, Utility, Bedroom, bathroom and Staircase with total external dimension of 10.36 m x 9.99 m with height of 5.7 m.
c	Water Supply and Drainage Works for Staff Quarters
d	Excavation for GI water pipe line for a trench of 30 m x 0.62 m x 1.00 m
e	Excavation for GSW sewer pipe for a trench of 20 m x 0.70 m x 1.00m
f	Providing and laying GI Pipes of approved make for 70 m
6	**Approach Road to 60 MLD WTP with Side Drain**
a	Earthwork excavation for 900 mlong road (all types of soil, soft rock and hard rock with trench sizes - 900 mx 4m X 2.15 m
b	Construction of road surface with Granular Sub base, Wet Mix Macadam, Prime coat & Tack coat for a length of 900 m and width of 3.75 m
c	Earthwork excavation for drains on both sides with trenches - 800 mx 1.0 m x 0.85 m
d	Providing RCC drain for 800 m on both sides of road of size of 0.8 m x 0.75 m
7	**Clear Water Raising Main**
7.1	Earth work excavation for different diameter of pipes
a	DI K-9, Dia 300mm - Trench size - 55 x 0.73 x 1.53 m
b	DI K-9, Dia 350mm - Trench size - 3833x0.78x1.58 m
c	DI K-9, Dia 400mm - Trench size - 4472 x 0.83 x 1.63 m
d	DI K-9, Dia 500mm - Trench size - 1758 x 0.93 x 1.73 m
e	DI K-9, Dia 600mm - Trench size - 2966 x 1.04 x 1.84 m
f	DI K-9, Dia 700mm - Trench size - 2693 x 1.14 x 1.94 m
g	DI K-9, Dia 1000mm - Trench size - 3729 x 1.45 x 2.25 m
h	DI K-9, Dia 1200mm - Trench size - 4042 x 1.66 x 2.46 m
7.2	Road Cutting and Restoration of existing WBM road for laying pipes for a total length of 10.91 km and width warying from 0.78 m to 1.66m as per pipe diameter
7.3	Cutting and Restoration of PCC road for for a total length of 10.818 km and width warying from 0.73 m to 1.45 m as per pipe diameter
7.4	Supplying centrifugally cast (spun) ductile iron pressure pipe for water supply with socket and spigot ends confirming to IS8329/2000 in standard lengths of class K-9 with valves, flow meters and other appurtenances
a	DI K-9, Dia 300mm for a length of 55 m
b	DI K-9, Dia 350mm for a length of 3833 km
c	DI K-9, Dia 400mm for a length of 4472 km
d	DI K-9, Dia 500mm for a length of 1758 km
e	DI K-9, Dia 600mm for a length of 2967 km
f	DI K-9, Dia 700mm for a length of 2693 km
g	DI K-9, Dia 1000mm for a length of 3729 km
h	DI K-9, Dia 1200mm for a length of 4042 km
8	**Elevated Service Reservoir with OHT ROOM**
8.1	**Earthwork Excavation for ESR**
a	ELSR-1 - Excavation dimensions - 22.5 m dia and 2.5 m depth
b	ELSR-2- Excavation dimensions - 22.5 m dia and 2.5 m depth
c	ELSR 3 - Excavation dimensions - 28 m dia and 2.5 m depth
d	ELSR 4 - Excavation dimensions - 25.5 m dia and 2.5 m depth
e	ELSR 5 - Excavation Dimensions- 22.5 m dia and 2.5 m depth
f	ELSR 6 - Excavation Dimensions - 22.5 m dia and 2.5 m depth
g	ELSR 7 - Excavation Dimensions - 25.5 m dia and 2.5 m depth
h	ELSR 8 - Excavation Dimensions- 12.6 m dia and 2.5 m depth
i	ELSR 9- Excavation Dimensions- 25.5 m dia and 2.5 m depth
j	ELSR 10- Excavation Dimensions - 22.5 m dia and 2.5 m depth

Sl. No.	Components
k	ELSR 11- Excavation Dimensions - 28 m dia and 2.5 m depth
8.2	**Constructing RCC elevated service reservoirs of following capacity with RCC staging consisting of columns, internal and External bracings spaced vertically not more than 4.5 meters centre to centre for ESR having capacity upto 500cum and not more than 6m c/c for having capacity above 500 cum including excavation in all types of strata, foundation concrete, cement plaster with water proofing compound to the container**
a	1.5 MLD Capacity E.L.S.R-1 at Ward -2 serving Ward-1 & 2, Dimensions - 20 m dia , 18 m staging and Pump house Ht. is 5.5 m
b	1.6 MLD Capacity E.L.S.R-2 at Ward-10 serving Ward-10 & 11 .Dimensions- 20 m dia, 25 m staging and Pump house Ht. is 5.5 m
c	2.4 MLD Capacity E.L.S.R-3 at Ward-15 serving Ward-12, 13, 14 & 15. , Dimensions - 25.5 m dia, 25 m staging and Pump house Ht. is 5.5 m
d	1.9 MLD Capacity E.L.S.R -4 at Ward-18 serving Ward-19 & 20. Dimensions - 23 m dia, 25 m staging and Pump house Ht. is 5.5 m
e	1.5 MLD Capacity E.L.S.R -5 at Ward-18 serving Ward-16, 17 & 18. Dimensions- 20 m dia, 20 m staging and Pump house Ht. is 5.5 m
f	1.5 MLD Capacity E.L.S.R-6 at Ward-7 serving Ward-3 & 4 .Dimensions- 20 m dia, 20 m staging and Pump house Ht. is 5.5 m
g	2.0 MLD Capacity E.L.S.R-7 at Ward-5 serving Ward-5,6 & 7. Dimensions- 23 m dia, 25 m staging and Pump house Ht. is 5.5 m
h	1.0 MLD Capacity E.L.S.R-8 at Ward-8 serving Ward-8 & 9. Dimensions- 17 m dia, 22 m staging and Pump house Ht. is 8.7 m
a	2.1 MLD Capacity E.L.S.R -9 at Ward-30 serving Ward-21, 22, 23 & 30. Dimensions- 23 m dia, 15m staging and Pump house Ht. is 5.5 m
b	1.6 MLD Capacity E.L.S.R-10 at Ward-30 serving Ward-24, 27 & 31. Dimensions- 20 m dia, 15m staging and Pump house Ht. is 5.5 m
c	2.5 MLD Capacity E.L.S.R-11 at Ward-23 serving Ward-25,26, 28, 29 & 32. Dimensions- 25.5m dia, 15m staging and Pump house Ht. is 5.5m
9	**Master Balancing Reservoir near NIT Existing GLSR**
a	**Earthwork Excavation-** 25.5 m dia, 2.5 m depth
b	Construction of RCC Master Balancing reservoirs of 2.0 MLD Capacity with 15.0m staging with internal Diameter 23.0 m at Ward No 09 Near NIT Existing GLSR
10	**Distribution System**
10.1	Earth work excavation for different diameter of pipes
a	100 mm dia pipe - Trench Size - 359697m x 0.518 m x 1.318 m
b	150 mm dia - Trench Size - 60958m x 0.57 m x 1.37 m
c	200 mm dia- Trench Size - 19200 mx 0.622m x 1.42m
d	250 mm dia- Trench Size - 10733m x 0.674m x 1.474m
e	300 mm dia - Trench Size - 4545m x0.726m x 1.526m
f	350 mm dia- Trench Size - 6184m x 0.778m x 1.578m
g	400 mm dia- - Trench Size - 2203m x 0.829m x 1.629m
h	450 mm dia- Trench Size - 2721m x 0.88m x 1.68m
i	500 mm dia- Trench Size - 2268m x 0.932m x 1.732m
j	600 mm dia- Trench Size - 1594m x 1.035m x 1.835m
k	700 mm dia- Trench Size - 467m x 1.138mx 1.938m
10.2	Supply, lowering, laying, Jointing, Testing of centrifugally cast (spun) ductile iron pressure pipe for water supply with socket and spigot ends confirming to IS8329/2000 in standard lengths of class K-7 with all appurtenances
a	100mm dia DI K7 Pipe - 359697 m
b	150mm dia DI K7 Pipe - 60958 m
c	200mm dia DI K7 Pipe - 19200 m
d	250mm dia DI K7 Pipe - 10733 m
e	300mm dia DI K7 Pipe - 4545 m
f	350mm dia DI K7 Pipe - 6184 m
g	400mm dia DI K7 Pipe - 2203 m
h	450mm dia. DI K7 Pipe - 2721 m
i	500mm dia. DI K7 Pipe - 2268 m
j	600mm dia. DI K7 Pipe - 1594 m
k	700mm dia. DI K7 Pipe - 467 m
10.3	Providing and laying 49335 House service connection
11	**Compound Wall**
11.1	**Compound Wall for OHTs- 1,2,3,4,5,6,7,8,11**
a	Earthwork excavation for 1,2,3,4,5,6,7,8,11 (for Length -140mtr.) foundation trench dimensions - 132.20 m x 1.35 m x 1.60 m
b	Construction of brick work compound wall in CM (1:6)in super structure for a length of 140 m including foundation and columns with gate.
11.2	**Compound Wall for ESR - 9 & 10 (Total Length -365 mtr.)**
a	Earthwork excavation for 9 & 10 (Total Length -365 mtr.) foundation trench dimensions - 357.20 m x 1.35 m x 1.60 m
b	Construction of brick work compound wall in CM (1:6)in super structure for a length of 365 m including foundation and columns with gate.
11.3	**Compound Wall for 60 MLD WTP (Total Length -772mtr.)**
a	Earth work excavation Compound Wall for 60 MLD WTP(Total Length -772mtr.), trench dimensions - 746.20 m x 1.36 m x 1.60 m
b	Construction of brick work compound wall in CM (1:6)in super structure for a length of 772 m including foundation and columns with gate.
12	**National Highway & Railway Crossing**
a	NH Crossing- 500mm dia. DI K7 carieer Pipe, provide **800mm dia. 10mm thick MS Pipe** as casing, 50m length
b	NH Crossing- 600mm dia. DI K9 carieer Pipe, provide **900mm dia. 10mm thick MS Pipe** as casing 50m length
c	NH Crossing- 1000mm dia. DI K9 carieer Pipe, provide **1200mm dia. 10mm thick MS Pipe** as casing, 50m length
d	NH Crossing- 150mm dia. DI K7carieer Pipe, provide **300mm dia. 10mm thick MS Pipe** as casing, 50m length
e	Railway Crossing- 350mm dia. DI K9 carieer Pipe, provide **700mm dia. 10mm thick MS Pipe** as casing, 50m length
f	Railway Crossing- 500mm dia. DI K9 carieer Pipe, provide **800mm dia. 10mm thick MS Pipe** as casing, 50m length
13	**Dismantling of Kulupatanga OHT**
a	Dismantling of Kulupatanga OHT - 1.68 MLD
14	**Rehabilitation works for Gamhariya OHT**
a	Providing CC plastering and painting tack coat
15	**Rehabilitation works for NIT GLSR - 1**
a	Providing CC plastering and painting tack coat
16	**Rehabilitation works for NIT GLSR - 2**
a	Providing CC plastering and painting tack coat
17	**SCADA**
a	Providing sufficient automation and appurtenances for SCADA implementation in Water Supply scheme

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E=411502.2869
N=2525028.4069

E=411735.6190
N=2524876.6551

E=411567.9226
N=2524830.3915

178

208

178

208

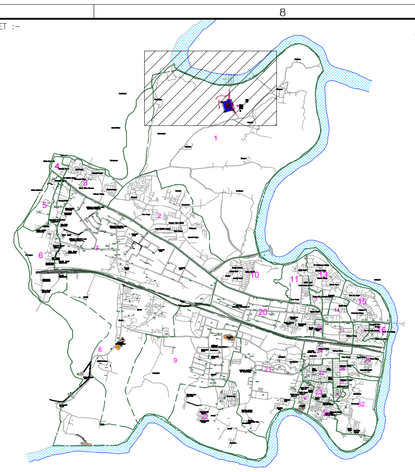
140

GATE

N

PUMP - 2W+2S
FLOW -25000 LPM
HEAD -75.00m

INDEX TO SHEET :-



ADITYAPUR KEY MAP

LIST OF UNITS

S.NO.	DESCRIPTION	SIZE	QTY
1.	CASCADE AERATOR	ø15.30	1
2.	STILLING BASIN	ø7.60	1
3.	PARSHALL FLUME	9.1X0.3X1.4	1
4.	ALUM AND LIME STORAGE & MIXING BUILDING	3.00X3.00	1
5.	FLASH MIXER	ø3.10	1
6.	DISTRIBUTION CHAMBER	ø10.00	1
7.	CLARI FLOCULATOR	ø17.0	1
8.	CLARI FLOCULATOR	ø40.40	1
9.	SLUDGE COLLECTION PIT	ø26.50	1
10.	FILTER BEDS (8 NOS BED)	60.00X30.00	1
11.	CLEAR WATER RESERVOIR	20.00X33.00X4.00	1
12.	ELECRTICAL SUB STATION	30.00X30.00	1
13.	ADMIN BUILDING INCLUDING LAB	28.00X18.00	1
14.	CHEMICAL HOUSE BLOWER & CHLORINATOR	20.00X15.00	1
15.	WORK SHOP	10.00X10.00	1
16.	STAFF QUARTERS	12.00X12.00	1
17.	PUMP HOUSE	20.00X15.00	1
18.	SECURITY ROOM	3.00X3.00	1

NOTE :-

1. ALL CHAINAGE AND LEVELS ARE IN METER.
2. HFL: HIGH FLOOD LEVEL- 129.357m

No.	DATE	REVISION	DRAWN	CHECKED	APPROVED

CONSULTANT:

Infrastructure Development Corporation (Karnataka) Ltd. (iDECK)
9/7, K.C.N. Bhavan, Yamunabai Road, Madhavnagar Extension,
Off Race Course Road, Bangalore 560001

PROJECT TITTLE:

Adityapur Water Supply Scheme

DRAWING TITTLE:

ADITYAPUR
PROPOSED WTP LAYOUT MAP
60MLD CAPACITY

DWG. No.: UD/WS/AT/FDPR/WTP/LAY/07

SCALE: 1:1500 | DRAWN BY: SGP

CHECKED BY: PS | APPROVED BY: SSR | REVISION | DATE: 26-03-2018

SITARAMPUR SCHEME (EXISTING + REHABILITATION)

Sl. No.	Components
1	**Demolition of existing Jackwell in Karkai River at Bhua Village**
a	Demolition of existing Jackwell at Bhua including Cement plastering, concrete and other works
2	**Proposing new Jackwell in Karkai River at Bhua Village**
a	Earthwork Excavation - depth 14.7 m , 33.1 m dia
b	Construction of RCC Jack well at Bhua - Inner dia -9m, Height upto floor slab- 20 m and Above floor slab, Pump house height is 5.5 m.
c	Construction of Approach Platform for existing approach bridge to new Jackwell. Dimensions - 20x 15 x0.7 m
3	**Pump house at Sitrampura dam**
a	Earthwork excavation for pump house footing - 4.4 m x 4.4 m x 2.0 m at 5 locations
b	Earthwork excavation for approach bridge pedestal footing - 2.90 m x 2.90 mx 2.00 m at 16 locations
c	Construction of pump house with pump arrangement. Dimensions- 9 m x 6m
d	Approach Bridge - 14 m length and 4.5 m width
4	**Raw Water Pumping Main from Bhua Intake to WTP at Sitarampura of 600mm Dia. DI K-9 Pipe of Length 4100mtr.**
a	Earthwork excavation - trench size - 4100 m x 1.04 m x 1.84 m
b	Providing, lowering, laying, aligning, fixing of centrifugally cast (spun) ductile iron pressure pipe for water supply with socket and spigot ends confirming to IS 8329/2000 in standard lengths of class K-9 - DI K9 pipes - 600 mm dia - 4100 m length with all necessary appurtenances
c	Dismantling and reinstating CC road for 2170 m
d	Dismantling and reinstating WBM road for 419 m
5	**Dismantling of Existing WTP - 1 at Sitarampur Dam**
a	Dismantling of Pucca brick , RCC - Filter house, storage room and other building and compound wall
6	**Dismantling of Existing WTP - 2 at Sitarampur Dam**
a	Dismantling of Pucca brick , RCC - Filter house, storage room and other building and compound wall including Stair case
7	**30 MLD Water Treatment Plant at Sitarampur**
a	**As per Drinking Water and Sanitation Dept, Schedule of Rates, Govt. of Jharkand item no.113**, the provision for designing, constructing and commissioning of 30 MLD Conventional Water Treatment Plant including all Civil, Mechanical and Electrical works has been made. The schematic diagram of the WTP is attached in **Annexure.**
8	**Clear Water Raising Main at Sitarampur**
a	Earthwork excavation for 600 mm dia pipe - Trench Size- 3132 m x 1.04 m x 1.32 m
b	Dismantling and reinstating CC road for 1140 m
c	Dismantling and reinstating WBM road for 1990 m
d	Providing, lowering, laying, aligning, fixing of centrifugally cast (spun) ductile iron pressure pipe for water supply with socket and spigot ends confirming to IS 8329/2000 in standard lengths of class K-9 - DI K9 pipes - 600 mm dia - 3132 m length with all necessary appurtenances
9	**Rehabilitation of Compound Wall for 200 mtr. and Constructing New Compound Wall for 340 mtr. at 30 MLD WTP (Sitrampura Dam)**
a	Earthwork Excavation - Trench Size - 332.20 m x 1.35 m x 1.63 m
b	Providing 25mm thick damp proof course with cement concrete M-150 with nominal mix of (1:2:4) with approved quality of stone chips of 20mm to 6mm size for a length of 200 m
c	Colour Washing and Whitewashing of compound wall
d	Construction of brick work compound wall in CM (1:6)in super structure for a length of 340 m including foundation and columns with gate.
e	Providing gate for compound wall

WTP Area

4.19Acres

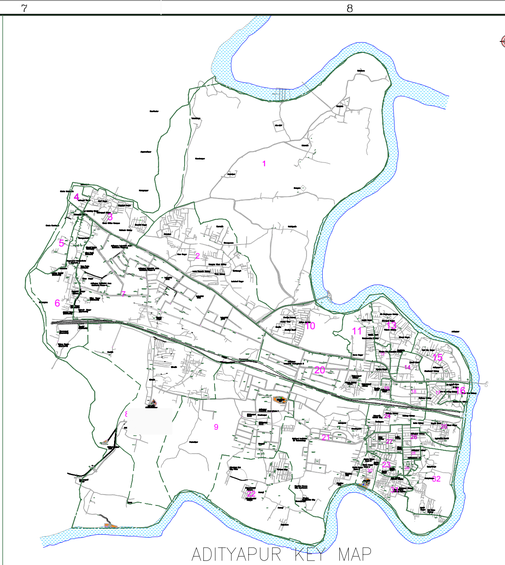
Acres=4 Guntas=7.70

16967.09Sqmt

182632.25Sqft

AREA

2.43 Acres
243.25 Cents
9844.201 Sqmts
105962.105 Sqft



ADITYAPUR KEY MAP

LIST OF UNITS

S.NO.	DESCRIPTION	SIZE in (M)	QTY
1.	CASCADE AERATOR	ø10.00	1
2.	STILLING BASIN	ø5.00	1
3.	PARSHALL FLUME	0.3M	1
4.	ALUM AND LIME STORAGE & MIXING BUILDING	3.00X3.00	1
5.	FLASH MIXER	ø3.50	1
6.	DISTRIBUTION CHAMBER	ø10.00	1
7.	FLOCULATOR	ø17.10	1
8.	CLARI FLOCULATOR	ø37.60	1
9.	SLUDGE COLLECTION PIT	ø26.50	1
10.	FILTER BEDS (6 NOS BED)	7.90X6.30	1
11.	CLEAR WATER RESERVOIR	12.00X8.00X4.00	1
12.	ELECRTICAL SUB STATION	20.00X20.00	1
13.	ADMIN BUILDING INCLUDING LAB	28.00X18.00	1
14.	CHEMICAL HOUSE BLOWER & CHLORINATOR	20.00X15.00	1
15.	WORK SHOP	10.00X10.00	1
16.	PUMP HOUSE	20.00X15.00	1
17.	SECURITY ROOM	3.00X3.00	1

NOTE :–

1. ALL CHAINAGE AND LEVELS ARE IN METER.

No.	DATE	REVISION	DRAWN	CHECKED	APPROVED

CONSULTANT:

Infrastructure Development Corporation (Karnataka) Ltd. (iDECK)
9/7, K.C.N. Bhavan, Yamunabai Road, Madhavnagar Extension,
Off Race Course Road, Bangalore 560001

PROJECT TITTLE:

Adityapur Water Supply Scheme

DRAWING TITTLE:

ADITYAPUR
PROPOSED WTP LAYOUT MAP AT SITARAMPUR
30 MLD CAPACITY

DWG. No.:			
UD/WS/AT/FDPR/WTP/LAY/09			
SCALE: 1:1500			DRAWN BY: SGP
CHECKED BY: PS	APPROVED BY: SSR	REVISION	DATE: 26-03-2018