GOVERNMENT OF ANDRA PRADESH, IRRIGATION AND C.A.D DEPARTMENT.

HYDRAULIC PARTICULARS OF WE TO COME TO THE DONDLAVAGU No.1 DISTRIBUTORY

PULIVENDULA BRANCH CANAL SYSTEM PACKAGE No.93B

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M/s. Ratna Infrastructure Projects Private Ltd.

PACKAGE NO.93

REPORT ACCOMPANYING THE REVISED HYDRAULIC PARTICULARS OF DONDLAVAGU DISTRIBUTORY NO.1, TAKING OFF AT KM.28.390 OF PULIVENDULA BRANCH CANAL.

Pulivendula Branch Canal system:

In the original scope of the project the Pulivendula Branch Canal contemplates to provide irrigation facility through its distributory system with a carrying capacity of 15.86 cumees to an extent of 60,000 acres (24,293 hectares) in Khariff season in Ananthapur and Kadapa Districts.

The scope of the projects is divided into two packages.93 & 92 and which were awarded under EPC (Turn Key System) on tender basis to M/s SRK Bhailalbhai (JV) by the Superintending Engineer, GNSS.Circle, Kadapa.

The Package No.93 comprises of head reach of P.B.C. ie., Earth work excavation, C.C. lining, including repairs and improvements to existing structures from Km.0.000 to Km.33.740/33.000/35.025 of Pulivendula Branch Canal, Tumpera Deep cut from Km.0.000 to Km.6.200, Bypass Channel taking off at Km.6.200 of Tumpera Deep cut to fore shore of Chitravathi Balancing Reservoir, was concluded in agreement NO.1 Superintending Engineer/2005-2006, dated:23.7.2005.

Originally the P.B.Canal is an unlined canal which was in use for the last 20 years. Due to inadequate supplies in the canal and poor condition of the canal with insufficient discharging capacity, the quantum of water received is utilized by the ayacutdars of upper reaches only and the water never reached the tail end resulting a gap Ayacut. The distributory system in this package is proposed to be modernized so as to irrigate tail end Ayacut also on par with the head reaches. In this context, in the earlier proposals of Hydraulic Particulars the designs submitted for the distributories in the Head reaches of this package were designed using canal sections having more discharging capacities, which are now proposed to be revised. The Hydraulic Particulars of distributories were revised now using modified Penman method and arriving peak water requirements. Keeping in view the basic parameters and with a view to push required quantum of water up to tail end reaches and to avoid excess drawls in the upper reaches.

The Hydraulic Particulars are finalized based on modified Penman Method and the following are the peak water requirements.

	The state of the s	Length in	Discharge	Discharge	Ayacut in
Sl.	Name of canal / Distributories	Km	REQ	Designed	Acres
No		1277	Cumecs	in Cumecs	60.00
I)	P.B.Canal from Km.0.000 to	35.025	15.860	16.059	60,000
**\	Km.35.025				10.00
II)	Distributories (F)	1.725	0.016	0.019	60.98
l	Singavaram distributory takes off @	1.723			216.22
	Km.1.290 of P.B.C.	3.600	0.057	0.059	216.22
2	Kallur takes off @ Km.3.229 of	3,000			
2	P.B.C. Thondur takes off @ Km.11.595 of	16.000	3.413	3.500	
3	Thondur takes off (W. Kill. 11.373 of				
	P.B.C. Yellanur distributory takes off @	9.140	1.216	1.299	010 00
a)	Km.5.707 of Thondur distributory				12,913.00
	Km.5.707 of Thoridal distributory				
	(Ayacut:4599.70 acres)	14.015	0.603	0.633	
b)	Lomada feeder channel takes off @ Km.9.18 of Thondur distributory				
	Km.9.18 of Thondar distributory				
	(ayacut:2283 acres) Gurujala distributory takes off @	2.362	0.179	0.181	
4	Gurujala distributory takes on the				675.50
	Km.12.65 of P.B.C. Cherlopalli (ayacut:361.59 acres)	3.000	0.096	0.099	
<u>a)</u>	Balapanur distributory takes off @	19.500	3.849	3.884	
b)	Km.16.96 of P.B.C.				
	I R Minor of Balapanur distributory	9.475	0.579	0.5923	14,559.45
a)	(Ayacut:2190.97 acres)				
_	Kamasamudram tank		0.156	0.156	590.00
6	Ramapuram takes off @ Km.23.213	3.425	0.212	0.234	800.87
7	of P.B.C.				
	Kothapalli distributory takes off @	2.650	0.146	0.150	551.43
8	Km.25.068 of P.B.C.				
_	Nakkalapalli takes off @ Km.26.74	2.134	0.154	0.178	583.00
9					
10	of P.B.C. Dondlavagu distributory No.1 takes	3.175	0.208	0.215	785.17
10	off @ Km.28.39 of P.B.C	31115			
	Dondlavagu distributory No.2 takes	2.80	0.153	0.162	574.38
11	off @ Km.30.347 of P.B.C.	2.00			
10	Palur distributory takes off @	12.90	2.425	2.531	
12	Km.32.800 of P.B.C.				
	5R Minor of Palur distributory	6.80	0.399	0.436	9174.22
a)	(Ayacut: 1005.11 acres)				
	(Ayacut:1003.11 acres) Total Ac	res			41484.22

osto altro E merovo conc. Co. structures el Pellearche Sevelo Conducto. 2018, Canal., junto o deco, cut <mark>from Kin.0.00</mark> fo Kin.6.200, and Sugaso C. No. 2018, Canal., junto o Chifravati Balancino, Reservoit.

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-	Loss of head in mis due to	Struc- tures	14	5.850	3.900	0 950	5.300	16.500	AT STAR	DEFERENCE
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For : Rotna Infrastructure, Projects Pvt. Ltd.

General Manager & P.A. Holder. (D.V. RAMANAIAH)

HANTE OF WORK, LEVEL SEE LEARN NOW ACCURATE ACCURAGE AS INDEPONDENCES OF Pullyantiffe Shareh, Canal from Kun.0.00 to Km.33.740/3

TENSED HYDRAULO PART OUTARS OF DONDLAVAGU DISTRIBUTORY NO.1 FROM KM 0.000 TO KM 3.173. OFF TOKE AT KM 28.380 OF F.B.C.

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ed fall Cirulo- 13 14 14 14 14 14 14 14	Loss of head in mts. due to
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For : Ratna Infrastructure, Projects Pvt. Ltd.

(D.V. RAMANAIAH) General Manager & P.A. Holder.

NAME OF MOSK. FACKAGE 93: Earth work excavation. C.C. lining & improvements to structures of Pullyendule Struct. Canal from Kin 0.000 to Km.33.740 / 33.000 and to distributery substructures of Pullyendule Structures of Fullyendule Structures of Structures of Fullyendule Structures of Structu

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11117	AT END	, A.Z.	0.16	0.20	0.30	0.30	တ	mts.	F.S.D. in
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18.012	220.548 18.152	738 700	1 in 1900	1 in 2100	1 in 2400	1 in 2500	10	Culiaco	Curiaca fall
			0.025	0.025	0.025	0.025	11	n'	Value of
	10		0.2243	0.2476	0.2973	0.3077	12	sec	Velo-city
	BED LE	1.512 8FD 1.512	0.829	0.200	0.267	0.216	13	Bed fall	Loss of h
	BED LEVEL AT END	1.512 16.500 BED LEVEL AT START	5.800	0.950	3 900	5.850	14	Struc- tures	Loss of head in mts due to
	NO.	ART 18.012	6.629	1.150	4.167	6.066	15	Total	due to
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For : Ratna Infragtructure Projects Pvt. Ltd.

(D.V. RAMANAIAH)
General Manager & P.A. Holder.

STATEMENT SHOWING THE DETAILES OF STRUCTURES OF DONDLAVAGU NO. 1 DISTRIBUTORY

SI. No.	Chainage in Km.	Depth of Drops in Mts.	Remarks	Other Structures At Km.
1	0.120	1.10	Existing Structure	
2	0.160	0.60	Existing Structure	
3	0.240	0.50	Existing Structure	
4	0.300	0.60	Existing Structure	
5	0.320	0.60	Existing Structure	
6	0.364	0.60	Existing Structure	
7	0.400	0.60	Existing Structure	
8	0.460	0.60	Existing Structure	
9	0.540	0.65	Existing Structure	
	Total	5.85	· ·	
10	0.580	0.30	Existing Structure	
11	0.600	0.30	Existing Structure	
12	0.657	0.45	Existing Structure	
13	0.710	0.30	Existing Structure	
14	0.720	0.40	Existing Structure	
15	0.800	0.50	Existing Structure	
16	0.836	0.50	Existing Structure	
17	0.975	0.60	Existing Structure	
18	1.115	0.40	Existing Structure	
19	1.180	0.15	Existing Structure	
	Total	3.90		
20	1.252	0.50	Existing Structure	
21	1.440	0.45	Existing Structure ,	
	Total	0.95		
22	1.700	0.20	Existing Structure	
23	1.720	0.10	Existing Structure	
24	1.780	0.50	Existing Structure	
25	2.030	0.50	Existing Structure	
26	2.425	0.80	Existing Structure	
27	2.500	0.80	Existing Structure	
28	2.705	1.00	Existing Structure	
29	2.930	0.70	Existing Structure	
30	2.950	0.40	Existing Structure	C.T.
31	3.075	0.60	Existing Structure	
32	3.120	0.20	Existing Structure	
	Total	_5.80		

For: Ratna Infrastructural Projects Pvt. Ltd.

(D.V. F. San Jahn)

General Mai A. Holder.

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