GOVERNMENT OF ANDHRA PRADESH

IRRIGATION AND CAD DEPARTMENT

(H.N.S.S. PHASE-2,PACKAGE NO.4)

HYDRAULIC PARTICULARS HNSS MAIN CANAL(STAGE-II) FROM KM 260.000 TO 260.800 AND FROM KM 271.000 TO KM 279.119/280.000

SL. No	Reach No	Reach in KM			Hydraulic Particulars											Loss (m)			Bed Level		Full Supply Level		Remarks	
		From	To	Distance (In Mts)	Required Discharge (Cumecs)	Bed Width (In Mts)	F.S.D (In Mts)	Surface Fall	Side Slopes	A(m2)	P(m)	R(m)	R=2/3	Velocity M/Sec	Designed Discharge (Cumecs)	Due To Bed Fall	Due to CM & CD Structures	Total	At Start (M)	At End (M)	At Start (M)	At End (M)		
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	1	260.000	260.800	800	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.963	71.425	0.065	0.00	0.065	456.163	456.098	459.863	459.798	FSL AT KM 260.000 AS PER AGREEMENT BASIC PARAMETERS +459.863	ALL SOILS,HDR & F&F (FSL CUTTING)
3	3	271.000	271.050	50	Transition		3.70	1:10950								0.005	0.00	0.005	455.159	455.154	458.859	458.854		
4		271.050	272.100	1050	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.963	71.425	0.085	0.00	0.085	455.154	455.069	458.854	458.769	PARTIAL CUTTING AND FULL CUTTING	ALL SOILS,HDR & F&F
5	4	272.100	272.150	50	Transition		3.70	1:13650								0.004	0.00	0.004	455.069	455.065	458.769	458.765		
6		272.150	272.450	300	71.300	15.00	3.70	1:15000	2.00:1	82.880	31.547	2.627	1.904	0.864	71.580	0.020	0.00	0.020	455.065	455.045	458.765	458.745	PARTIAL CUTTING AND BANKING	AKS / H.R AND F&F
7	5	272.450	272.500	50	Transition		3.70	1:12300								0.004	0.00	0.004	455.045	455.041	458.745	458.741	-	
8		272.500	273.900	1400	71.300	14.00	3.70	1:.9600	1.00:1	65.490	24.465	2.677	1.928	1.093	71.590	0.146	0.00	0.146	455.041	454.895	458.741	458.595	FULL AND DEEP CUTTING	F&F AND H.R
9	6	273.900	273.950	50	Transition		3.70	1:12300								0.004	0.00	0.004	454.895	454.891	458.595	458.591	-	
10		273.950	274.750	800	71.300	15.00	3.70	1:15000	2.00:1	82.880	31.547	2.627	1.904	0.864	71.580	0.053	0.00	0.053	454.891	454.838	458.591	458.538	PARTIAL CUTTING AND BANKING	STREAM CROSSING U.T PROPOSED
11	7	274.750	274.800	50	Transition		3.70	1:13650								0.004	0.00	0.004	454.838	454.834	458.538	458.534		
12		274.800	276.050	1250	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.963	71.425	0.102	0.00	0.102	454.834	454.732	458.534	458.432	FULL CUTTING	ALL SOILS,HDR & F&F
13	8	276.050	276.100	50	Transition		3.70	1:13650								0.004	0.00	0.004	454.732	454.728	458.432	458.428	-	
14		276.100	277.050	950	71.300	15.00	3.70	1:15000	2.00:1	82.880	31.547	2.627	1.904	0.864	71.580	0.063	0.00	0.063	454.728	454.665	458.428	458.365	PARTIAL CUTTING AND BANKING	U.T PROPOSED
15	9	277.050	277.100	50	Transition		3.70	1:13650								0.004	0.00	0.004	454.665	454.661	458.365	458.361		
16		277.100	277.400	300	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.963	71.425	0.024	0.00	0.024	454.661	454.637	458.361	458.337	PARTIAL CUTTING AND FILLING	ALL SOILS,HDR & F.F
17	10	277.400	277.450	50	Transition		3.70	1:13650								0.004	0.00	0.004	454.637	454.633	458.337	458.333		

SL. No	Reach No	Reach in KM			Hydraulic Particulars											Loss (m)			Bed Level		Full Supply Level		Remarks	
		From	To	Distance (In Mts)	Required Discharge (Cumecs)	Bed Width (In Mts)	F.S.D (In Mts)	Surface Fall	Side Slopes	A(m2)	P(m)	R(m)	R=2/3	Velocity M/Sec	Designed Discharge (Cumecs)	Due To Bed Fall	Due to CM & CD Structures	Total	At Start (M)	At End (M)	At Start (M)	At End (M)		
18		277.450	278.725	1275	71.300	15.00	3.70	1:15000	2.00:1	82.880	31.547	2.627	1.904	0.864	71.580	0.085	0.00	0.085	454.633	454.291	458.333	457.991	PARTIAL CUTTING AND FILLING	AQUEDUCT PROPOSED
19	11	278.725	278.775	50	Transition		3.70	1:13650								0.004	0.00	0.004	454.291	454.287	457.991	457.987		
21	12	278.775	279.000	225	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.963	71.425	0.018	0.00	0.018	454.287	454.269	457.987	457.969	PARTIAL CUTTING AND FILLING	ALL SOILS,HDR & F.F
22		279.000	279.050	50	Transition		3.70	1:10950								0.005	0.00	0.005	454.269	454.264	457.969	457.964		
23	13	279.050	279.190/ 280.000	69	71.300	14.00	3.70	1: 9600	1.00:1	65.490	24.465	2.677	1.928	1.093	71.590	0.007	0.00	0.007	454.264	454.297	457.964	457.957	FSL AT KM 260.000 AS PER AGREEMENT +457.957 START OF Pkg-5	ALL SOILS,HDR & F.F

Co-efficiect of Rugosity :0.018

1) THE PROPOSED ALIGNMENT AND H.P.'S FURNISHED BY ENC/TGP/SKHT VIDE LR. NO. ENC/SKHT/HNSS/PHASE-II, DT. 22-02-2008 ARE VETTED AND APPROVED.

2) THE H.P'S ARE APPROVED SUBJECT TO PROVIDING OF NECESSARY PROTECTION WORKS AS PER SITE CONDITIONS IN EMBANKMENT AND BED FILLING REACHES FROM KM. 273.950 TO KM.274.750 AND FROM KM. 276.100 TO KM. 277.050 & 277.450 TO KM 278.725

3).THE REAR SLOPES OF THE CANAL IN THE ELAKUNTLA CHERUVU PORTION SHOULD PROPOSED WITH NECESSARY PROTECTION WORKS.

// t.c.f //

Sd/-(dt.02.12.07)
Executive Engineer
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APPROVED
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(I.S.N.RAJU)
Chief Engineer
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GOVERNMENT OF ANDHRA PRADESH

IRRIGATION AND CAD DEPARTMENT

(H.N.S.S. PHASE-2,PACKAGE NO.4 FROM KM 260.000 TO 280.000)

HYDRAULIC PARTICULARS HNSS MAIN CANAL(STAGE-II) FROM KM 260.800 TO 271.000

SL. No	Reach No	Reach in KM			Hydraulic Particulars											Loss (m)			Bed Level		Full Supply Level		Remarks	
		From	To	Distance (In Mts)	Required Discharge (Cumecs)	Bed Width (In Mts)	F.S.D (In Mts)	Surface Fall	Side Slopes	A(m2)	P(m)	R(m)	R=2/3	Velocity M/Sec	Designed Discharge (Cumecs)	Due To Bed Fall	DueTo CM & CD Structures	Total	At Start (M)	At End (M)	At Start (M)	At End (M)		
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	1	260.800	260.850	50	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.963	71.425	0.004	0.00	0.004	456.098	456.094	459.798	459.794	FSL AT KM 260.00 AS PER AGREENENT +459.863	ALL SOILS H.D.R & F&F (FSL CUTTING)
2		260.850	260.900	50	Transition		3.70	1:10950								0.005	0.00	0.005	456.094	456.089	459.794	459.789		
3	2	260.900	263.350	2450	71.300	14.00	3.70	1: 9600	1.00:1	65.490	24.465	2.677	1.928	1.093	71.590	0.255	0.00	0.255	456.089	455.834	459.789	459.534	FULL CUTTING	F&F
4		263.350	263.400	50	Transition		3.70	1:10950								0.005	0.00	0.005	455.834	455.829	459.534	459.529	-	
5	3	263.400	264.550	1150	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.963	71.425	0.093	0.00	0.093	455.829	455.736	459.529	459.436	PARTIAL CUTTING	ALL SOILS,HDR & F&F
6		264.550	264.600	50	Transition		3.70	1:10950								0.005	0.00	0.005	455.736	455.731	459.436	459.431	-	
7	4	264.600	265.350	750	71.300	14.00	3.70	1:.9600	1.00:1	65.490	24.465	2.677	1.928	1.093	71.590	0.078	0.00	0.078	455.731	455.653	459.431	459.353	FULL CUTTING	H.D.R & F&F
8		265.350	265.400	50	Transition		3.70	1:10950								0.005	0.00	0.005	455.653	455.648	459.353	459.348		
9	5	265.400	265.875	475	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.963	71.425	0.039	0.00	0.039	455.648	455.609	459.348	459.309	PRTIAL CUTTING, FILLING	ALL SOILS,HDR ,F&F
10		265.875	265.925	50	Transition		3.70	1:13650								0.004	0.00	0.004	455.609	455.605	459.309	459.305	-	
11	6	265.925	266.600	675	71.300	15.00	3.70	1:15000	2.00:1	82.880	31.547	2.627	1.904	0.864	71.580	0.045	0.00	0.045	455.605	455.560	459.305	459.260	BED FILLING ABOUT 2 METERS	UT PROPOSED
12		266.600	266.650	50	Transition		3.70	1:12300								0.004	0.00	0.004	455.560	455.556	459.260	459.256		
13	7	266.650	267.200	550	71.300	12.60	3.70	1:.9600	1.50:1	67.160	25.941	2.589	1.885	1.063	71.791	0.057	0.00	0.057	455.556	455.499	459.256	459.199	FULL CUTTING	ALL SOILS,HDR & F& F
14		267.200	267.250	50	Transition		3.70	1:12300								0.004	0.00	0.004	455.499	455.495	459.199	459.195		
15	8	267.250	268.550	1300	71.300	15.00	3.70	1:15000	2.00:1	82.880	31.547	2.627	1.904	0.961	71.580	0.087	0.00	0.087	455.495	455.408	459.195	459.108	FULL BANKING	UT PROPOSED
16		268.550	268.600	50	Transition		3.70	1:12300								0.004	0.00	0.004	455.408	455.404	459.108	459.104		

SL. No	Reach No	Reach in KM			Hydraulic Particulars										Loss (m)			Bed Level		Full Supply Level		Remarks	
		From	To	Distance (In Mts)	Required Discharge (Cumecs)	Bed Width (In Mts)	F.S.D (In Mts)	Surface Fall	Side Slopes	A(m2)	P(m)	R(m)	R=2/3	Velocity M/Sec	Designed Discharge (Cumecs)	Due To Bed Fall	DueTo CM & CD Structures	Total	At Start (M)	At End (M)	At Start (M)	At End (M)		
17	9	268.600	269.700	1100	71.300	14.00	3.70	1:.9600	1.00:1	65.490	24.465	2.677	1.928	1.093	71.590	0.115	0.00	0.115	455.404	455.289	459.104	458.989	FULL AND DEEP CUTTING	H.D.R & F&F
18		269.700	269.750	50	Transition		3.70	1:10950								0.005	0.00	0.005	455.289	455.284	458.989	458.984		
19	10	269.750	269.950	200	71.300	14.50	3.70	1:12300	1.50:1	74.190	27.841	2.665	1.922	0.863	71.425	0.016	0.00	0.016	455.284	455.268	458.984	458.968	FSL AND TBL CUTTING	ALL SOILS,HDR & F& F
20		269.950	270.000	50	Transition		3.70	1:10950								0.005	0.00	0.005	455.268	455.263	458.968	458.963		
21	11	270.000	271.000	1000	71.300	14.00	3.70	1:.9600	1.00:1	65.490	24.465	2.677	1.928	1.093	71.590	0.104	0.00	0.104	455.263	455.159	458.963	458.859	FULL CUTTING	H.D.R & F& F

Co-efficiect of Rugosity : 0.018

Note:- 1) The Hp's of the Package from Km 260.800 to Km 271.000 furnished by C.E(P) Anantapur is Vetted and approved.

2) The CE(P) Anantapur shall ensure necessary protected works in embackment / bed filling reach from Km 265.925 to Km 266.600.

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Sd/-(dt.07.12.07)
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APPROVED
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(I.S.N.RAJU)
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