GOVERNMENT OF ANDHRA PRADESH

IRRIGATION AND CAD DEPARTMENT

H.N.S.S. PHASE-2,PACKAGE NO.52

AVR HNSS PROJECT - MADAKASIRA BRANCH CANAL- HYDRAULIC PARTICULARSFROM KM 0.000 TO 4.050

SL.No	Reach No	Sub Reach	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			10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	III	1	0.000	0.150	150	18.180	4.40	2.20	1 In	4000	1.5	IN 1	16.940	12.332	1.374	1.236	1.085	18.388	0.037	0	0.037	451.560	451.523	453.760	453.723	
2			0.150	0.200	50	Transition		2.20		4000									0.013	0	0.013	451.523	451.510	453.723	453.710	
3		2	0.200	0.900	700	18.180	5.00	2.20	1 In	3600	1.0	IN 1	15.840	11.223	1.410	1.258	1.165	18.450	0.194	0	0.194	451.510	451.316	453.710	453.516	
4			0.900	0.950	50	Transition		2.20		3600									0.014	0	0.014	451.316	451.302	453.516	453.502	
5		3	0.950	1.225	275	18.180	5.80	2.20	1 In	3300	0.5	IN 1	15.180	10.719	1.416	1.261	1.220	18.510	0.083	0	0.083	451.302	451.219	453.502	453.419	
6	IV		1.225	1.425	200	1ST LIFT GAP																				
7																										
8	V		1.425	3.200	1775	18.180	4.40	2.20	1 In	4000	1.5	IN 1	16.920	12.332	1.374	1.236	1.085	18.388	0.444	0	0.444	473.300	472.856	475.500	475.056	
9			3.200	3.250	50	Transition		2.20		4000									0.013	0	0.013	472.856	472.843	475.056	475.043	
10			3.250	3.500	250	18.180	5.00	2.20	1 In	3600	1.0	IN 1	15.840	11.223	1.411	1.258	1.165	18.450	0.069	0	0.069	472.843	472.774	475.043	474.974	
6			3.500	3.550	50	Transition		2.20		3600									0.014	0	0.014	472.774	472.760	474.974	474.960	
7			3.550	3.850	300	18.180	5.00	2.20	1 In	3300	0.5	IN 1	15.810	10.719	1.416	1.261	1.220	18.510	0.091	0	0.091	472.760	472.669	474.960	474.869	
8			3.850	4.050	200	2ND LIFT GAP													0.972		0.972		490.800	493.000		

Finished Bed Width	Excuted Bedwidth in Physical	Side Slope	Remarks
4.40	4.46	1:1/2:1	For all soil & HDR
5.00	5.12		For F&F strata
5.80	5.83	1/2:1	For HR strata (0.23 side and 0.10 m bed)

Bed level @End	=	490.800	Total lift Height	=	40.212
Bed level @ Start	=	451.560	Bed Fall	=	0.972
Difference	=	39.240	Difference	=	39.240

// t.c.f //

Deputy Executive Engineer
(Designs)
TGP,SRIKALASTI

Sd
(B.V.S.PRAKSA RAO)
Engineer -in-Cheif.
TGP,SRIKALAHSHI

GOVERNMENT OF ANDHRA PRADESH
IRRIGATION AND CAD DEPARTMENT
H.N.S.S. PHASE-2,PACKAGE NO.52
AVR HNSS PROJECT - MADAKASIRA BRANCH CANAL- HYDRAULIC PARTICULARSFROM KM 4.050 TO 8.625

SL. No	Reach No	Sub Reach	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			10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	III	1	4.050	4.500	450	18.18	4.40	2.20	1 IN	4000	1.50	IN 1	16.940	12.332	1.374	1.235	1.085	18.388	0.113	0.00	0.113	490.800	490.688	493.000	492.888	
2			4.500	4.550	50	TRANSITION		2.20		4000	1.25								0.013	0.00	0.013	490.688	490.675	492.888	492.875	
3		2	4.550	5.025	475	18.18	5.00	2.20	1 IN	3600	1.00	IN 1	15.840	11.223	1.411	1.258	1.165	18.450	0.132	0.00	0.112	490.675	490.513	492.875	492.713	
4			5.025	5.225	200	3RD LIFT GAP		2.20																		
5		3	5.225	5.550	325	18.18	5.00	2.20	1 IN	3600	1.00	IN 1	15.840	11.223	1.411	1.258	1.165	18.450	0.090	0.00	0.030	508.800	508.710	511.000	510.910	
6	IV		5.550	5.750	200	4TH LIFT GAP		2.20																		
7			5.750	6.950	1200	18.18	4.40	2.20	1 IN	4000	1.00	IN 1	16.940	12.332	1.374	1.236	1.085	18.388	0.300	0.00	0.330	529.800	528.500	531.000	530.700	
8	V		6.950	7.000	50	TRANSITION		2.20		4000	1.25								0.013	0.00	0.013	528.500	528.487	530.700	530.687	
9			7.000	7.300	300	18.18	5.00	2.20	1 IN	3600	1.00	IN 1	15.840	11.223	1.411	1.258	1.165	18.450	0.083	0.00	0.083	528.487	528.404	530.687	530.604	
10			7.300	7.350	50	TRANSITION		2.20		3600	0.75								0.014	0.00	0.014	528.404	528.390	530.604	530.590	
6			7.350	8.200	850	18.18	5.80	2.20	1 IN	3300	0.50	IN 1	15.180	10.710	1.416	1.261	1.220	18.510	0.258	0.00	0.258	528.390	528.132	530.590	530.332	
7			8.200	8.250	50	TRANSITION		2.20		3600	1.00								0.014	0.00	0.014	528.132	528.118	530.332	530.318	
8			8.250	8.625	375	18.18	5.00	2.20	1 IN	3600	1.00	IN 1	15.840	11.220	1.411	1.258	1.165	18.450	0.104	0.00	0.104	528.118	528.014	530.318	530.214	
																					1.134					

Finished Bed Width	Excuted Bedwidth in Physical	Side Slope	Remarks
4.4	4.46	1:1/2:1	For all soil & HDR
5	5.12	1:1	For F&F strata
5.8	6.03	1/2:1	For HR strata (0.23 side and 0.10 m bed)

Bed level @End	=	490.800	Total lift Height	=	38.347
Bed level @ Start	=	528.014	Bed Fall	=	1.134
Difference	=	37.214	Difference	=	37.214

// t.c.f //

Deputy Executive Engineer
(Designs)
TGP,SRIKALASTI

Sd
(B.V.S.PRAKSA RAO)
Engineer -in-Cheif.
TGP,SRIKALAHSHI

GOVERNMENT OF ANDHRA PRADESH

IRRIGATION AND CAD DEPARTMENT

H.N.S.S. PHASE-2,PACKAGE NO.52

AVR HNSS PROJECT - MADAKASIRA BRANCH CANAL- HYDRAULIC PARTICULARS FROM KM 10.000 TO KM 19.598/20.000

SL. No	Reach No	Sub Reach	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			10	11	12	13	14	15	16	17	18	19	20	21	22	23
1		1	10.000	12.000	2000	20.64	5.50	2.20	1 IN	4300	1.50	IN 1	19.360	13.432	1.441	1.276	1.081	20.928	0.465	0.00	0.465	517.800	517.335	520.000	519.535	Cutting 3 to 5 m
2			12.000	12.050	50	Transition		2.20		4300									0.012	0.00	0.012	517.335	517.323	519.535	519.523	
3		2	12.050	12.850	800	20.64	5.80	2.20	1 IN	3600	1.00	IN 1	17.600	12.023	1.464	1.289	1.194	21.010	0.222	0.00	0.222	517.323	517.101	519.523	519.301	Cutting 5 to 8 m
4			12.850	12.900	50	Transition		2.20		3600									0.014	0.00	0.014	517.101	517.087	519.301	519.287	
5		3	12.900	13.550	650	20.64	5.50	2.20	1 IN	4300	1.50	IN 1	19.360	13.432	1.441	1.276	1.081	20.928	0.151	0.00	0.151	517.087	516.936	519.287	516.136	Cutting 3 to 6 m
6			13.550	13.600	50	Transition		2.20		4300									0.012	0.00	0.012	516.936	516.924	516.136	519.124	
7		4	13.600	14.450	850	20.64	5.50	2.20	1 IN	5300	2.00	IN 1	21.780	15.339	1.420	1.263	0.964	20.997	0.160	0.00	0.160	516.924	516.764	519.124	518.964	Full banking
8			14.450	14.500	50	Transition		2.20		5300									0.009	0.00	0.009	516.764	516.735	518.964	518.955	
9		5	14.500	17.700	3200	20.64	5.50	2.20	1 IN	4300	1.50	IN 1	19.360	13.432	1.441	1.276	1.081	20.928	0.744	0.00	0.744	516.735	516.011	518.955	518.211	Cutting 3 to 5 m &Partial banking
10			17.700	17.750	50	Transition		2.20		4300									0.012	0.00	0.012	516.011	515.999	518.211	518.199	
11		6	17.750	18.800	1050	20.64	5.80	2.20	1 IN	3600	1.00	IN 1	17.600	12.023	1.464	1.289	1.194	21.010	0.292	0.00	0.292	515.999	515.707	518.199	517.907	Cutting 3 to 6 m
12			18.800	18.850	50	Transition		2.20		3600									0.014	0.00	0.014	515.707	515.693	517.907	517.893	
13		7	18.850	19.000	150	18.18	5.80	2.20	1 IN	3300	0.50	IN 1	15.180	10.719	1.416	1.261	1.220	18.510	0.045	0.00	0.045	515.693	515.648	517.893	517.848	Cutting 10 to 14 m
14			19.000	19.200	200	LIFT GAP														0.00	0.000	515.648	561.100	517.848	563.300	
15			19.200	19.250	50	Transition		2.20	1 IN	3300									0.015	0.00	0.015	561.100	561.085	563.300	563.285	
16		8	19.250	19.525	275	18.18	TUNNEL			1330									0.207	0.00	0.207	561.085	560.578	563.285	563.078	
17			19.525	19.575	50	Transition		2.50		8000									0.006	0.00	0.006	560.578	560.572	563.078	563.072	
18		9	19.575	19.598/ 20.000	23	18.18	6.00	2.50		8000	1.5	IN 1	24.375	15.014	1.623	1.381	0.858	20.914	0.003	0.00	0.003	560.572	560.569	563.072	563.069	Cutting 3 to 5 m
																			2.383	0.00	2.383					

// t.c.f //

Sd/-(dt.29.10.07)
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Sd/-(dt.27.10.2007)
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