

8583

Public Works (1896) Department.

G.O., No. 813 J.

DATED 9th October 1896

[Despatch Abstract.]

Channel: Estimate of Rs. 6600 for im-
proving the head sluice — Bank Canal
Kistna Western D., Sanctioned.

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[illegible][illegible]

This extension of sanction expired on the 31st March 1893.

2. In G.O., No. 869 I., dated 26th October 1892, statements of outlay already, and to be, incurred were called for to admit of an application being submitted for a further extension of sanction. With his letter, No. 1111 K.S., dated 30th July 1893, the Superintending Engineer, II Circle, submitted the statements required, viz.:—

No. I statement showing by sub-heads the sanctioned estimates, the expenditure incurred up to end of 1892-93 and the balances of the estimates.

No. II statement showing the items on which expenditure will have to be incurred after 31st March 1893 in completing the delta works. The principal items of this statement have been indicated by an asterisk.

The figures of outlay shown in both statements have been verified and corrected where necessary by the Examiner of Public Works Accounts. The amounts of the estimates entered in statement No. II as submitted by the Superintending Engineer included the sanctions accorded by Government up to end of June 1893, but the statement has been revised in this office so as to include all sanctions up to date. It is recommended that the two abstracts by main and sub heads appended to this note and statement No. II, of which the Superintending Engineer wishes to be furnished with 30 copies, be printed. The great delay in the submission of the statements is attributed by the Superintending Engineer to their bulk and the time required in fair copying and comparing them.

3. The total direct charges to the end of 1892-93 were Rs. 1,00,44,233, leaving Rs. 38,75,551 as the unexpended balance of the sanctioned estimate on 1st April 1893 still to be worked out. Rs. 56,73,820 of the expenditure were spent prior to 1882-83, Rs. 21,40,202 during the period 1882-83 to 1887-88 and the balance Rs. 22,30,211 during 1888-89 to 1892-93. The following are the principal works executed during the last quinquennium:—

Eastern Section—Head Works—The anicut crest was raised by 1 foot of concrete with cast iron grooved posts between which planks can be slipped when required to retain water to the required height after the season for floods. Screw gearing shutters to the Sitanagaram under sluices were provided. Quarters for the Executive and Assistant Engineers at Bezvada were constructed. An office for the Executive Engineer and anicut lascars and lock establishment sheds were also built.

Ryves canal.—One bridge, 6 head sluices, 7 minor sluices, 1 culvert, 2 regulators, 5 distributaries and 2 minor branches were completed.

Ellore canal.—Three outlets, 1 aqueduct, 1 bridge and 5 large distributaries were completed. The canal banks were raised.

Masulipatam canal.—The canal was widened by 13 feet from head to 4 miles 5 furlongs; 2 head sluices and 54 masonry slope drains were constructed.

Bantumilli canal.—Kamalapuram lock, the main distributary, south side channel and one minor channel were completed. The tail lock and lock weir were almost completed. Five head sluices, 2 bridges and 12 minor sluices were also completed. Widening and extension of canal was practically finished.

Bank canal.—The lock and sluice at head of canal were completed. The canal for 13 miles was excavated to full bottom width.

Pulleru canal.—The straight cut, 3 bridges, 4 head sluices, 9 sluices and 3 distributaries were completed.

Pamaru junction canal.—One bridge was constructed.

Polraz canal.—One lock, improvements to 1 head sluice, construction of 5 head sluices, 2 outlets and inlets, 12 minor masonry works, 9 bridges and 7 distributary channels were completed. The canal was widened in the first $7\frac{1}{2}$ miles.

Drains.—The Inampudi, Polraz, Chendrayacodu, Peddakommileru, Pallava and Kanakavalli drains and the Lingala and Vadlamanad affluents were completed. The Lazzabanda drain and Chinnakommileru affluent were widened and the Peddalanka drain was excavated to tentative width.

Western Section—Head Works.—Quarters for the Executive and Assistant Engineers at Duggirala were constructed.

Main canal.—The widening of this canal from 1 to 6 and 9 to 12 miles was in progress.

Bank canal.—One lock weir, 1 rest-house and 2 head sluices were constructed. One channel was extended, the canal was widened and the diversion of the canal at Penumudi was completed.

Commamur canal.—The improvements to canal in 1st to 4th reaches, 1 inlet, 1 surplus sluice, 1 bridge, 12 distributaries, 3 minor masonry works and drainage affluents were completed.

Nizampatam canal.—One bridge and lock establishment quarters at Duggirala were constructed.

Drains.—Iskapalli aqueduct of Bhattiprole drain, Langagunta affluent and 1 bridge were completed. The Tungabhadra drain was widened, and Nallamada and Sakkikalva affluents and the Karenchedu drain were completed. The earthwork improvements to the Romperu drain were almost completed to its junction with Sakkikalva affluent (5 miles 37 chains).

	RS.	
Old outlay	30,81,755	carrying out the extension of irrigation
Outlay incurred on completed works	31,74,637	recently approved (<i>vide</i> paragraph 6), the
Outlay incurred on works in progress	14,35,792	amount available for unforeseen works is,
Outlay to be incurred to complete works (statement No. II.)	26,63,553	as shown in the distribution given in the
Reserve for unforeseen works	3,75,257	margin of the total amount sanctioned for
Total amount sanctioned for works	1,07,30,994	works outlay, Rs. 3,75,257, which represents the unappropriated balance of

that it was unnecessary that any further expenditure should be incurred upon the extension of the Bank canal and the proposed irrigation of 15,000 acres thereby, whilst there is ample area available for irrigation under the Ellore, Ryves and Masulipatam canals.

5. The irrigation under the delta is advancing very rapidly. There was an extension of irrigation from 337,327 acres in 1886-87 to 471,114 acres in 1892-93 and an increase of revenue from Rs. 11,74,582 to Rs. 18,00,680. The financial result during 1892-93 was a net return, after paying interest charges, of 8.87 per cent. on the total capital invested against 7 per cent., the ultimate financial result anticipated.

6 The ultimate area of irrigation as originally contemplated in the project estimates was 475,000 acres, but recent inquiry has shown that it would be unwise to restrict cultivation to that extent. Under the Ellore canal a head sluice and channel for the irrigation of 12,000 acres have already been carried out some years back, but kept closed owing to the restriction placed hitherto upon the extension of irrigation. The Superintending Engineer was there-

fore instructed * to have this sluice opened during the irrigation season and the effects upon the flow and water levels of the Ellore canal carefully gauged and recorded. He was also requested to forward the necessary estimates of the probable cost of putting the Masulipatam and Ryves canal into a condition fit to cope with the increased supply they may be called upon to carry. An estimate, amounting to Rs. 34,200, for widening the former canal was

sanctioned in G.O., No. 356 I., dated 22nd April 1893, but the estimate for the latter canal has not yet been submitted. With these canals rendered efficient there is every probability of an extension in both sections of irrigation to the extent of 100,000 acres beyond what was fixed as the ultimate area.

7. As no excess over the sanctioned estimate for the delta is anticipated, merely an extension of the period of sanction for another 5 years is now necessary.

28th Sept. 1893. (Signed) R. R. E. DRAKE-BROCKMAN, Lt.-Col., R.E.,
Chief Engineer for Irrigation.

STATEMENT showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle.

ENCLOSURES.

STATEMENT showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.				Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-92.	Further expenditure.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	
					RS.	RS.	RS.	RS.	RS.	RS.		
				KISTNA EASTERN SECTION.								
				Head Works.								
1	No. 680 I. of 30th June 1893	(1) C.	..	Curtain wall in rear of Seethanagaram head sluices	3,300	..	3,300	3,300	..	..	..	
2	Do.	..	..	Driving piles in front of Seethanagaram head sluices..	3,200	..	3,200	3,200	..	..	..	
3	....	(1) O.	..	Total ..	6,500	..	6,500	6,500	..	..	..	
				Wire fencing to Public Works Department lands in Buckinghampett ..	..	..	..	..	..	..	..	
				Total (1) Head works ..	6,500	..	6,500	6,500	1,025	1,025	..	
4	No. 666 I. of 6th Augt. 1892	(2) K.	..	Mandipatam canal.	..	..	..	..	1,025	1,025	..	
5	No. 575 I. of 1st July 1890 and	(2) L.	1 12	Quarters for lock establishment at Nidamole ..	1,530	1,104	426	1,530	..	..	..	
6	No. 662 I. of 7th Oct. 1890	..	..	Improving and widening canal ..	1,05,200	80,838	24,362	1,05,200	..	..	..	
7	No. 356 I. of 22nd April 1893	..	..	Do. do. ..	34,200	..	34,200	34,200	..	..	..	
	No. 575 I. of 1st July 1885	..	..	Slabbing trees ..	5,000	..	5,000	5,000	..	..	..	
				Total ..	1,44,400	80,838	63,562	1,44,400	..	..	..	
8	No. 856 I. of 17th Oct. 1892	(3) B.	..	Total (2) Main canals and branches	1,45,930	81,942	63,988	1,45,930	..	..	..	
9	Do.	..	22 0	Compensation for land required for west side channel	3,000	..	3,000	3,000	..	..	..	
10	Do.	..	..	Do. for Medur channel ..	2,800	..	2,800	2,800	..	..	..	
11	Do.	..	..	Do. for Kistnapuram branch of Medur channel.	1,270	..	1,270	1,270	..	..	..	
				Do. Gudapad of Medur channel.	800	..	800	800	..	..	..	
				Total ..	7,870	..	7,870	7,870	..	..	..	Lump sum.
12	No. 856 I. of 17th Oct. 1892	(3) C.	..	Masonry works on west side channel	7,500	..	7,500	7,500	..	..	..	
13	Do.	..	22 0	Medur channel head sluice ..	1,000	273	727	1,000	..	..	..	
14	No. 427 I. of 18th May 1893.	..	..	Do. 5 field masonry sluices ..	500	..	500	500	..	..	..	
15	Do.	..	..	Do. drop No. 1 ..	435	..	435	435	..	..	..	
16	No. 573 I. of 29th June 1893	..	..	Do. drop No. 2 over bridge at 5 miles 1 1/2 furlongs	710	..	710	710	..	..	..	
17	No. 856 I. of 17th Oct. 1892	..	..	Do. drop No. 3 over bridge at 7 miles 6 furlongs ..	575	..	575	575	..	..	..	Lump sum.

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
				KISTNA EASTERN SECTION—cont.							
				Maalipattam canal—cont.							
18	No. 856 I. of 17th Oct. 1892	(3) C.	M. CH.	Medur tail escape	150	..	150	150	..	..	
19	No. 573 I. of 29th June 1893	..	..	Head sluice to Kistnapattam branch	360	..	360	360	..	..	
20	No. 856 I. of 17th Oct. 1892	..	..	Field masonry sluice	100	..	100	100	..	..	
21	No. 573 I. of 29th June 1893	..	..	Road culvert at 2 miles 5 furlongs across Midamole road.	550	..	550	550	..	..	
22	No. 856 I. of 17th Oct. 1892	..	..	Tail escape	100	..	100	100	..	..	
23	No. 573 I. of 29th June 1893	..	..	Head sluice to Gudapad branch	390	..	390	390	..	..	
24	No. 856 I. of 17th Oct. 1892	..	..	Tail escape to do.	100	..	100	100	..	..	
25	No. 755 I. of 2nd Sept. 1893	..	22 0	Surplus weir	4,300	..	4,300	4,300	..	..	
				Total	16,760	273	16,487	16,760	..	..	
26	No. 856 I. of 17th Oct. 1892	(3) L.	..	Distributaries of west side channel	18,000	..	18,000	18,000	..	..	Lump sum.
27	Do. do.	..	22 0	Medur channel	6,850	..	6,850	6,850	..	..	
28	Do. do.	..	..	Kistnapattam branch of Medur channel	3,180	..	3,180	3,180	..	..	
29	Do. do.	..	..	Gudapad branch of Medur channel	1,760	..	1,760	1,760	..	..	
				Total	28,790	..	28,790	28,790	..	..	
30	Appendix D printed in G.O., No. 181 I. of 28th Feb. 1892.	(3) O.	..	Cattle-crossing west side channel	1,500	..	1,500	1,500	..	..	Lump sum.
				Total (3) Distributaries	64,920	273	64,647	64,920	..	..	
				Total, Maalipattam canal	2,00,850	82,215	1,18,635	2,00,850	..	..	
				Pullaru canal.							
31	No. 318 I. of 11th April 1893	(2) B.	..	Compensation for land Do. required for depositing silt	..	145	..	145	145	..	
32	.....	..	..	Do.	8,650	..	3,650	3,650	..	..	
				Total	3,650	145	3,650	3,795	145	..	
33	.....	(2) L.	..	Widening from Panarru to Cowtaram	..	..	22,000	22,000	22,000	..	
34	455 I. of 3rd May 1894	(2) O.	..	Other cattle-crossings	2,745	..	2,745	2,745	..	..	Lump sum.
35	Superintending Engineer's No. 2189 K.S. of 8th Dec. 1891.	..	..	Mile and furlong stones along the Pullaru canal	160	80	80	160	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.				Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total				
1	2	3	4	5	6	7	8	9	10	11	12	
KISTNA EASTERN SECTION—cont.												
Pullaru canal—cont.												
64	No. 449 I. of 17th May 1893	(3) C.	..	Head sluice to Diwan Sahibodu at 6 miles 3 furlongs of Butlerodu	400	..	400	400	..	..	..	Lump sum.
65	Do.	..	..	Head sluice to Venavaram channel at 6 miles 4 furlongs of Butlerodu	500	..	500	500	..	..	..	
66	No. 691 I. of 30th July 1894	..	..	Masonry works on distributaries for which detailed estimates have not been prepared	33,763	574	33,189	33,763	..	..	..	
67	No. 587 I. of 4th July 1893	..	..	Culvert on Karlipad road over Chintalacodu	610	..	610	610	..	..	..	
68	No. 824 I. of 22nd Sept. 1893	..	..	Head sluice to Venelacodu	470	..	470	470	..	..	..	Lump sum.
69	No. 291 I. of 25th May 1891	(3) L.	..	Total	46,583	1,764	44,819	46,583	..	..	..	
70	Superintending Engineer's No. 2989 K.S. of 9th March 1892	..	..	Kalidindicodu left side channel	2,500	2,012	488	2,500	..	..	..	
71	Superintending Engineer's No. 1145 K.S. of 6th Aug. 1892	..	..	Right side channel of Motur channel from 2 miles 63 chains from sluice No. 5.	520	15	505	520	..	..	..	
72	No. 846 I. of 14th Oct. 1892	..	..	Do.	211	..	211	211	..	..	..	Lump sum.
73	No. 601 I. of 8th July 1893	..	..	Right side channel of Gudivada channel	361	..	361	361	..	..	..	
74	No. 573 I. of 29th June 1892	..	..	Left side channel of do.	325	..	325	325	..	..	..	
75	No. 824 I. of 22nd Sept. 1893	..	..	Extending the Penjandra branch No. 1	450	..	450	450	..	..	..	
76	No. 691 I. of 30th July 1894	..	..	Excavating Venelacodu	430	..	430	430	..	..	..	Lump sum.
77	No. 225 I. of 13th March 1893	..	..	Distributaries	71,927	..	71,927	71,927	..	..	..	
78	No. 687 I. of 4th July 1893	..	..	Improving the Butlerodu channel	1,670	..	1,670	1,670	..	..	..	
79	No. 311 I. of 26th Mar. 1885 and No. 591 I. of 29th Nov. 1889	(3) O.	..	Do. the Chintalacodu	1,320	..	1,320	1,320	..	..	..	
80	Do.	..	..	Total	79,714	2,027	77,687	79,714	..	..	..	Lump sum.
81	Do.	..	..	Ananagudem ramp	625	445	180	625	..	..	..	
82	No. 455 I. of 3rd May 1884	..	..	Ananapadi do.	565	..	565	565	..	..	..	
83	Do.	..	..	Rudrapaka do.	562	..	562	562	..	..	..	
84	No. 463 I. of 16th July 1891	..	..	Pamarru cattle crossing	500	..	500	500	..	..	..	Lump sum.
85	Superintending Engineer's No. 2989 K.S. of 29th March 1892	..	..	Palacodu	185	..	185	185	..	..	..	
86	No. 824 I. of 22nd Sept. 1893	..	..	Demarcation stones along Motur channel	770	5	765	770	..	..	..	
87	No. 1473 K.S. of 23rd Sept. 1891.	..	..	Do. to right side channel to Motur channel.	20	..	20	20	..	..	..	
		..	..	Fixing demarcation stones along Venelacodu	10	..	10	10	..	..	..	Lump sum.
		..	..	Do. along Bantumilli canal, south side channel	80	..	80	80	..	..	..	
		..	..	Total	79,714	2,027	77,687	79,714	..	..	..	
		..	..	Ananagudem ramp	625	445	180	625	..	..	..	
		..	..	Ananapadi do.	565	..	565	565	..	..	..	Lump sum.
		..	..	Rudrapaka do.	562	..	562	562	..	..	..	
		..	..	Pamarru cattle crossing	500	..	500	500	..	..	..	
		..	..	Palacodu	185	..	185	185	..	..	..	
		..	..	Demarcation stones along Motur channel	770	5	765	770	..	..	..	Lump sum.
		..	..	Do. to right side channel to Motur channel.	20	..	20	20	..	..	..	
		..	..	Fixing demarcation stones along Venelacodu	10	..	10	10	..	..	..	
		..	..	Do. along Bantumilli canal, south side channel	80	..	80	80	..	..	..	

88	No. 291 I. of 25th March 1891	..	..	Fixing demarcation stones along Kalidindicodu left side channel	170	39	131	170	..	..	..	Lump sum.
89	Superintending Engineer's No. 2777 K.S. of 6th Feb. 1891.	..	..	Ramp at Pedapalaparru	420	362	58	420	..	..	..	
90	No. 2576 K.S. of 26th Jan. 1893.	..	..	Demarcation stones to side channel along Bantumilli canal, south side channel	40	4	36	40	..	..	..	
91	No. 587 I. of 4th July 1893	..	..	Demarcation stones along Chintalacodu	73	..	73	73	..	..	..	
92	No. 601 I. of 8th July 1893	..	..	Do. left side channel of Gudivada channel	14	..	14	14	..	..	..	Lump sum.
93	No. 709 I. of 23rd Aug. 1892	(2) K.	..	Total	4,054	855	3,199	4,054	..	..	..	
94	No. 363 I. of 25th April 1893	..	..	Total (3) Distributaries	1,45,498	6,237	1,39,261	1,45,498	..	..	..	
95	Superintending Engineer's No. 2933 K.S. of 7th March 1892.	(2) O.	..	Total, Pulleru canal	1,92,253	6,542	1,85,711	1,92,253	..	..	..	
96	No. 313 I. of 2nd July 1889	(3) B.	..	Pamarru junction canal.	810	344	466	810	..	..	..	Lump sum.
97	No. 476 I. of 20th May 1892	..	..	Lock lascars' sheds	810	..	810	810	..	..	..	
98	No. 884 I. of 19th Dec. 191	..	..	Total, Pamarru junction canal	810	344	466	810	..	..	..	
99	Superintending Engineer's No. 3123 K.S. of 11th March 1891.	..	..	Do. sheds at Vinjeram	330	..	330	330	..	..	..	
100	No. 581 I. of 1st July 1891	..	..	Demarcation stones from Mudinepalli bridge	300	..	300	300	..	..	..	Lump sum.
101	Superintending Engineer's No. 2909 K.S. of 26th Feb. 1893.	..	..	Total (2) Main canals and branches	630	..	630	630	..	..	..	
102	No. 635 I. of 19th July 1893	..	..	Peddakommleru south side channel	2,014	1,513	501	2,014	..	..	..	
103	....	..	..	Kykalur channel (loss of crop)	3,000	2,999	1	3,000	..	..	..	
104	No. 313 I. of 2nd July 1889	(3) C.	..	Branch No. 1 of Peddakommleru south side channel	4,390	..	4,390	4,390	..	..	..	Lump sum.
105	Do.	..	..	Kallapulleru side channel	550	..	550	550	..	..	..	
106	No. 606 I. of 11th July	..	..	Korlapad channel	610	..	610	610	..	..	..	
107	No. 631 I. of 1st July 1891	..	..	Korlapad side channel	278	..	278	278	..	..	..	
108	No. 313 I. of 2nd July 1889 and Superintending Engineer's No. 2571 K.S. of 13th Feb. 1891.	..	..	Branch No. II, Peddakommleru south side channel	231	..	231	231	..	..	..	Lump sum.
109	Superintending Engineer's No. 2762 K.S. of 13th Feb. 1893.	..	..	Compensation for Chigurukota channel	..	49	..	49	..	..	..	
110	Do.	..	..	Total	11,073	4,551	6,522	11,073	..	..	..	
111	Do.	..	..	Sluice to left bank at 10 miles 1,183 feet	335	42	293	335	..	..	..	
112	Do.	..	..	Do. to right bank at 10 miles 1,320 feet	337	20	317	337	..	..	..	Lump sum.
113	Do.	..	..	Three earthenware pipe sluices at right bank	300	..	300	300	..	..	..	
		..	..	Head sluice to Korlapad channel	1,000	787	213	1,000	..	..	..	
		..	..	Seven minor sluices	300	..	300	300	..	..	..	
		..	..	Peddakommleru north side channel, right bank sluice, at 0 mile 3,000 feet	80	..	80	80	..	..	..	Lump sum.
		..	..	Do. 1 " 720 "	80	..	80	80	..	..	..	
		..	..	Do. 3 miles 1,660 "	80	..	80	80	..	..	..	
		..	..	Do. 4 " 3,950 "	80	..	80	80	..	..	..	
		..	..	Do. 6 " 950 "	174	..	174	174	..	..	..	Lump sum.
		..	..	Total	11,073	4,551	6,522	11,073	..	..	..	
		..	..	Sluice to left bank at 10 miles 1,183 feet	335	42	293	335	..	..	..	
		..	..	Do. to right bank at 10 miles 1,320 feet	337	20	317	337	..	..	..	
		..	..	Three earthenware pipe sluices at right bank	300	..	300	300	..	..	..	Lump sum.
		..	..	Head sluice to Korlapad channel	1,000	787	213	1,000	..	..	..	
		..	..	Seven minor sluices	300	..	300	300	..	..	..	
		..	..	Peddakommleru north side channel, right bank sluice, at 0 mile 3,000 feet	80	..	80	80	..	..	..	
		..	..	Do. 1 " 720 "	80	..	80	80	..	..	..	Lump sum.
		..	..	Do. 3 miles 1,660 "	80	..	80	80	..	..	..	
		..	..	Do. 4 " 3,950 "	80	..	80	80	..	..	..	
		..	..	Do. 6 " 950 "	174	..	174	174	..	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.				Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	
KISTNA EASTERN SECTION—cont.												
Polar canal—cont.												
114	Superintending Engineer's No. 2762 K.S. of 13th Feb. 1893	..	..	Peddakommleru north side channel, right bank sluice, at 7 miles 1,945 feet	188	..	188	188	..	..	..	
115	Do. do. do.	..	..	Do. 8 " 2,285 "	89	..	89	89	..	..	..	
116	Do. do. do.	..	..	Do. 9 " 4,325 "	89	..	89	89	..	..	..	
117	Do. do. do.	..	..	Lingala channel head sluice	..	..	900	900	..	..	..	
118	No. 635 I. of 19th July 1893	..	..	Do. aqueduct	..	..	1,200	1,200	..	..	..	
119	Do. do. do.	..	..	Head sluice to Peddakommleru, branch No. II	480	..	480	480	..	..	..	
120	Do. do. do.	..	..	No. 1 sluice at 0 mile 4,620 feet of do.	100	..	100	100	..	..	..	
121	Do. do. do.	..	..	" 2 do. at 1 " 3,300 "	180	..	180	180	..	..	..	
122	Do. do. do.	..	..	" 3 do. at 2 miles 1,900 "	180	..	180	180	..	..	..	
123	Do. do. do.	..	..	Under-tunnel at the head at 0 miles 3,960 feet	170	..	170	170	..	..	..	
124	No. 247 I. of 10th Mar. 1885	..	..	Head sluice to Rudravaram channel	310	..	310	310	..	..	..	
125	....	..	..	Kykalur road side channel head sluice	..	..	490	490	..	..	..	
Total					4,552	849	6,293	7,142	2,590	..	..	
126	No. 313 I. of 2nd July 1889	(3) L.	..	Ten minor distributaries	4,212	..	4,212	4,212	..	..	..	
127	No. 328 K.S. of 25th Mar. 1891	..	..	Chevrurudu	2,300	..	536	2,836	..	..	..	
128	No. 551 I. of 1st July 1891	..	..	Korlapad channel	1,680	1,764	443	2,300	..	..	..	
129	No. 2909 K.S. of 25th Feb. 1893	..	..	Korlapad side channel	260	..	260	260	..	..	..	
130	....	..	..	Lingala channel	..	..	2,000	2,000	2,000	..	..	
131	No. 635 I. of 19th July 1893	..	..	Peddakommleru, branch No. II	1,950	..	1,950	1,950	..	..	..	
132	....	..	..	Extending and improving Kykalur channel	..	..	3,600	3,600	..	..	..	
133	....	..	..	Do. Peddakommleru south side channel	..	..	1,530	1,530	..	..	..	
134	....	..	..	Rudravaram channel, extending and improving	..	..	4,000	4,000	..	..	..	
135	....	..	..	Kykalur road side channel	..	..	360	360	..	..	..	
Total					10,401	2,999	18,993	21,992	11,590	..	..	
136	Superintending Engineer's No. 3123 K.S. of 11th Mar. 1891	(3) O.	19 50	Demarcation stones along Kallapalem side channel	80	14	66	80	..	..	..	
137	No. 531 I. of 1st July 1891	..	12 5	Do. Korlapad channel	60	10	50	60	..	..	..	
138	No. 984 I. of 19th Dec. 1891	..	3 1	Do. branch No. I, Peddakommleru south side channel	260	43	217	260	..	..	..	
139	No. 313 I. of 2nd July 1889	..	..	Do. on Peddakommleru south side channel	272	..	272	272	..	..	..	
140	Do. do.	..	..	Do. on Peddakommleru south side channel	464	338	126	464	..	..	..	

141	Do. do. do.	..	..	Do. do. do. north side channel	287	224	163	337	..	..	..	
142	Superintending Engineer's No. 3286 K.S. of 25th Mar. 1891	..	..	Do. Chevrurudu	200	50	150	200	..	..	..	
143	Superintending Engineer's No. 2909 K.S. of 25th Feb. 1893	..	..	Do. Korlapad side channel	22	..	22	22	..	..	..	
144	No. 635 I. of 19th July 1893	..	..	Demarcation stones along Peddakommleru south side channel, branch No. II	59	..	59	59	..	..	..	
145	Para 77 of the note printed in G.O. No. 3528 of 22nd Dec. 1875.	(4) B.	..	Total	1,804	679	1,125	1,804	..	..	..	
146	Superintending Engineer's No. 861 K.S. of 2nd July 1890.	..	..	Total (3) Distributaries	27,831	9,088	32,972	42,060	14,229	..	..	
147	Do. do. do.	..	..	Upputeru	150	..	150	150	..	..	..	
148	Do. do. do.	..	..	Compensation for ring channel through Kottada weir	35	..	35	35	..	..	..	
		..	..	Total	185	..	185	185	..	..	..	
		(4) L.	..	Embanking Upputeru	2,710	..	2,710	2,710	..	..	..	
		..	..	Do.	795	..	795	795	..	..	..	
		..	..	Total	3,505	..	3,505	3,505	..	..	..	
		..	..	Total (4) Drainage and protective works	3,890	..	3,890	3,890	..	..	..	
		..	..	Total, Polar canal	32,151	9,088	37,292	46,380	14,229	..	..	
149	No. 30 I. of 13th Jan. 1883	(2) B.	..	Compensation for land—old claims	30	..	30	30	..	..	..	
150	No. 710 I. of 4th Dec. 1890	..	..	Compensation for Bartumilli canal extension to Upputeru.	6,200	441	6,759	6,200	..	..	..	
151	No. 710 I. of 4th Dec. 1890 and No. 411 I. of 6th May 1893.	(2) I.	..	Total	6,230	441	6,789	6,230	..	..	..	
152	Do. do. do.	..	..	Tidal lock near Lakshimpuram	31,000	25,342	5,658	31,000	..	..	..	
153	No. 30 I. of 13th Jan. 1883	..	..	Lock weir near Lakshimpuram	4,910	4,641	269	4,910	..	..	..	
154	No. 363 I. of 23rd April 1893	(2) K.	..	Total	35,910	29,983	5,927	35,910	..	..	..	
155	No. 710 I. of 4th Dec. 1890	..	..	Chandrala rest-house	1,300	..	1,300	1,300	..	..	..	
156	No. 30 I. of 13th Jan. 1883	..	..	Single lock lascat's shed at Kamalapuram	310	..	310	310	..	..	..	
157	No. 349 I. of 1st April 1885 and No. 410 I. of 4th Dec. 1890	(2) L.	..	Total	1,610	..	1,610	1,610	..	..	..	
		..	..	Canal extension	46,980	43,673	3,307	46,980	..	..	..	
		..	..	Widening and deepening	15,300	10,278	5,022	15,300	..	..	..	
		..	..	Widening from Covtaram to Kamalapuram	..	..	3,550	3,550	3,550	..	..	
		..	..	Total	62,280	53,951	11,879	65,830	3,550	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.				Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	
KISTNA EASTERN SECTION—cont.												
Bantumulli canal—cont.												
158	No. 30 I. of 13th Jan. 1893	(2) O.	..	Cottaram ramp	280	..	280	280	..	..	..	Lump sum.
159	Do. do.	..	..	Dargamilli do. .. .	300	..	300	300	..	..	..	
160	Do. do.	..	..	Cherandra do. .. .	420	..	420	420	..	..	..	
161	Do. do.	..	..	Nallagunta do. .. .	290	..	290	290	..	..	..	
162	Do. do.	..	..	Kalagunta do. .. .	190	..	190	190	..	..	..	
163	Do. do.	..	..	Satur do. .. .	300	..	300	300	..	..	..	
164	Do. do.	..	..	Amudalapalli do. .. .	345	..	345	345	..	..	..	
165	Do. do.	..	..	Crattiveinu do. .. .	630	..	630	630	..	..	..	
166	Do. do.	..	..	Chendrala do. .. .	615	..	615	615	..	..	..	
167	No. 110 I. of 4th Dec. 1890	..	..	Demarcation stones along canal extension	480	108	372	480	..	..	..	
				Total ..	3,710	108	3,818	3,710	..	..	..	
				Total (2) Main canals and branches ..	1,09,740	81,483	28,807	1,13,290	3,650	..	..	
168	Superintending Engineer's No. 3199 K.S. of 24th Mar. 1893	(3) B.	..	Old claims—Chennu Addacodu ..	159	..	159	159	..	..	..	
169	No. 490 I. of 28th Nov. 1889	..	..	Compensation for land required for the main distributary	3,436	..	3,436	3,436	..	..	..	
170	Superintending Engineer's No. 2198 K.S. of 29th Nov. 1890	..	..	Right side channel of Kaldindi ..	210	61	159	210	..	..	..	
171	....	..	..	Kamalapuram north side channel ..	1,456	..	1,456	1,456	..	..	..	
				Total ..	6,261	61	6,210	6,261	..	..	..	
172	No. 738 I. of 29th Aug. 1892	(3) C.	..	Fender sluice to the head of Kamalapuram lock weir	1,080	821	259	1,080	..	..	..	
173	No. 412 I. of 6th May 1893	..	..	Head sluice to Lellaboracodu ..	390	..	390	390	..	..	..	
174	No. 690 I. of 28th Nov. 1889	..	..	Sluice to Doddiacodu ..	540	468	72	540	..	..	..	
175	Do. do.	..	..	Sluice to Rallaguntacodu ..	655	479	76	655	..	..	..	
176	Do. do.	..	..	Bridge with regulator on Bantumulli road at 5 miles 2,070 feet	2,202	2,073	129	2,202	..	..	..	
177	Do. do.	..	..	Sluice to road side channel ..	917	803	114	917	..	..	..	
178	Do. do.	..	..	Do. Gaugamamacodu ..	493	434	59	493	..	..	..	
179	Do. do.	..	..	Do. Vaivaka channel ..	882	682	160	842	..	..	..	
180	Do. do.	..	..	Do. Nadinuroodu ..	460	318	142	460	..	..	..	
181	Do. do.	..	..	Do. Arakur channel ..	468	384	84	468	..	..	..	
182	Do. do.	..	..	Do. Tail escape ..	270	124	146	270	..	..	..	
183	No. 257 I. of 23rd Mar. 1893	..	..	Do. Yurincodu on left bank	430	178	252	430	..	..	..	

184	No. 257 I. of 23rd March 1893	..	..	Sluice to Chennur Addacodu on left bank	460	143	317	460	..	..	..	Lump sum.
185	Do. do.	..	..	Do. Tummidicodu ..	455	145	310	455	..	..	..	
186	Do. do.	..	..	Do. Gorricodu ..	455	147	308	455	..	..	..	
187	Do. do.	..	..	Do. Rallaguntacodu ..	600	154	346	600	..	..	..	
188	Do. do.	..	..	Do. Vondurra ..	610	180	330	610	..	..	..	
189	Do. do.	..	..	Do. Vaivaka channel ..	530	169	361	530	..	..	..	
190	....	..	..	Head sluice to Kamalapuram north side channel	1,040	..	1,040	1,040	..	..	..	
191	....	..	..	No. 1 sluice at 1 mile 7 furlongs and 530 feet of Kamalapuram north side channel	185	..	185	185	..	..	..	
192	....	..	..	" 3 do. at 2 miles 7 furlongs 150 feet	179	..	179	179	..	..	..	
193	....	..	..	" 4 do. at 3 " 7 " 400 "	175	..	175	175	..	..	..	
194	....	..	..	" 5 do. at 4 " 5 " 300 "	162	..	162	162	..	..	..	
195	....	..	..	" 6 do. at 5 " 3 " 200 "	177	..	177	177	..	..	..	
196	....	..	..	" 6 do. at 5 " 6 " 330 "	172	..	172	172	..	..	..	
197	....	..	..	Head sluice to Bantumulli north side channel ..	..	..	600	600	..	..	..	
				Total ..	13,847	7,702	6,145	14,247	600	..	..	
198	No. 590 I. of 20th Nov. 1889	(3) L.	..	Minor channel	3,150	..	3,150	3,150	..	..	..	
199	No. 3199 K.S. of 24th March 1893	..	..	Chennur Addacodu ..	671	107	564	671	..	..	..	
200	....	..	..	Improvements to distributaries of main distributary	..	..	5,000	5,000	..	..	..	
201	....	..	..	Do. to Kamalapuram south side channel	..	..	1,000	1,000	..	..	..	
202	....	..	..	Kamalapuram north side channel ..	3,890	..	3,890	3,890	..	..	..	
203	....	..	..	Bantumulli ..	..	..	2,400	2,400	..	..	..	
				Total ..	7,411	107	15,704	15,811	8,400	..	..	
204	No. 590 I. of 20th Nov. 1889	(3) O.	..	Demarcation stones along Bantumulli main distributary	418	62	356	418	..	..	..	
205	Superintending Engineer's No. 2198 K.S. of 29th Nov. 1890	..	..	Do. along left side channel of Bantumulli canal ..	36	14	16	30	..	..	..	
206	Superintending Engineer's No. 3199 K.S. of 24th March 1893	..	..	Do. along Chennur Addacodu ..	20	..	20	20	..	..	..	
207	Superintending Engineer's No. 1032 K.S. of 5th Aug. 1891	..	..	Do. along right side channel of Kamalapuram south side channel	150	24	126	150	..	..	..	
208	....	..	..	Do. along Kamalapuram north side channel	134	..	134	134	..	..	..	
				Total ..	752	100	652	752	..	..	..	
				Total (3) Distributaries ..	27,071	7,960	28,111	28,071	9,000	..	..	
209	Superintending Engineer's No. 2244 K.S. of 12th Dec. 1891	(2) B.	..	Total, Bantumulli canal ..	1,36,811	92,443	56,918	1,49,361	12,550	..	..	
210	No. 314 I. of 2nd June 1888	(2) F.	32	Rest-house at Perilede ..	30	..	30	30	..	..	..	
211	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876	(2) I.	..	Inlet ..	190	..	190	190	..	..	..	
212	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876	..	..	Kalaparru bridge towpath ..	430	..	430	430	..	..	..	
213	No. 304 I. of 7th April 1893	..	..	Eloore ..	455	..	455	455	..	..	..	
				Wharf wall at Eloore ..	11,300	402	10,898	11,300	..	..	..	
				Total ..	12,185	402	11,783	12,185	..	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the M ^r s Government or other authority.	Main and sub head.	Mileage.	Names of works.	EXPENDITURE.					Increase.	Decrease.	Remarks.
					Amount sanctioned estimate.	Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1		2	3	4	5	6	7	8	9	10	11	12
214	No. 314 I. of 2nd June 1888	(2) O.	9 75	KISTNA EASTERN SECTION—cont. Ellore canal—cont. Nakkalam cattle-crossing .. ..	.. ..	436	..	436	..	..	..	
215	No. 314 I. of 2nd June 1888	(3) B.	11 70	Kosavapalli channel	..	200	..	200	..	..	..	Lump sum.
216	No. 226 I. of 13th March 1893	..	14 30½	Ungutur channel	3,370	..	3,370	3,370	..	..	..	
217	Do. do.	..	..	Do. right side channel	105	..	..	105	..	..	..	
218	Do. do.	..	..	Do. left do.	720	..	..	720	..	..	..	
219	No. 314 I. of 2nd June 1888 and 2 I. of 4th January 1892.	..	17 26	Ponukumad channel	910	..	..	910	..	..	..	
220	Do. do.	..	..	Do. right side channel	50	..	..	50	..	..	..	
221	Do. do.	..	..	Do. left do.	160	..	..	160	..	..	..	
222	No. 397 I. of 2nd May 1893	..	..	Do. left side extension	310	..	..	310	..	..	..	
223	No. 226 I. of 13th March 1893	..	20 41	Chirivada channel	2,489	..	..	2,489	..	..	..	
224	No. 65 I. of 21st January 1892	..	23 36	Viravalli do.	1,640	..	..	1,640	..	..	..	
225	Do. do.	..	..	Do. right side channel	410	..	..	410	..	..	..	
226	No. 314 I. of 2nd June 1888 and No. 897 of 1st November 1891.	..	26 2	Kakulapad channel	1,030	..	..	1,030	..	..	..	
227	No. 635 I. of 9th July 1884	..	36 20	Mupparu do.	450	..	..	450	..	..	..	
228	No. 373 I. of 28th April 1893	..	..	Demarcating land for Madepalli channel	300	..	..	300	..	..	..	
229	No. 576 I. of 22nd July 1891	..	..	Wutur right side channel	137	..	..	137	..	..	..	
230	Do. do.	..	..	Do. left do.	130	..	..	130	..	..	..	
231	No. 2 I. of 4th January 1892	..	30 40	Pedepad channel	830	..	..	830	..	..	..	
232	Do. do.	..	..	Do. right side channel	110	..	..	110	..	..	..	
233	Do. do.	..	..	Do. left do.	170	..	..	170	..	..	..	
234	No. 455 I. of 18th May 1893	..	28 60	Gogunta channel	163	..	..	163	..	..	..	
235	No. 488 I. of 2nd June 1893	..	..	Do. do. extension	1,930	..	..	1,930	..	..	..	
236	Do. do.	..	..	Do. right side channel	180	..	..	180	..	..	..	
237	Do. do.	..	..	Do. left do.	340	..	..	340	..	..	..	
238	No. 496 I. of 6th June 1893	..	40 10	Chataparru channel	910	..	..	910	..	..	..	
239	....	..	23 91	Tippanagunta channel	..	..	..	..	..	..	..	
				Total	17,044	..	17,444	17,444	400	..	..	

No.	Para. 50 of the note printed in	(3) C.	Mileage.	Names of works.	EXPENDITURE.					Increase.	Decrease.	Remarks.
					Amount sanctioned estimate.	Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
240	Para. 50 of the note printed in											
241	No. 3528 of 22nd Dec. 1876.	..	11 70	Kesrapalli channel	..	..	..	..	..	..	..	
242	No. 226 I. of 13th Mar. 1893	..	14 30½	Ungutur do. head sluice	2,340	..	..	2,340	..	..	..	
243	Do. do.	..	..	Drop No. 1	600	..	..	600	..	..	..	
244	Do. do.	..	..	Do. " 2	350	..	..	350	..	..	..	
245	Do. do.	..	..	Tail escape	395	..	..	395	..	..	..	
246	Do. do.	..	20 41	Chirivada channel, head sluice	1,362	..	..	1,362	..	..	..	
247	Do. do.	..	..	Drop No. 1	685	..	..	685	..	..	..	
248	Do. do.	..	..	Do. " 2	670	..	..	670	..	..	..	
249	Do. do.	..	..	Do. " 3	430	..	..	430	..	..	..	
250	Do. do.	..	..	Do. " 4	450	..	..	450	..	..	..	
251	No. 635 I. of 9th July 1884	(3) C.	39 43	Minor sluices, Mupparu channel	390	..	294	684	..	..	..	
252	No. 314 I. of 2nd June 1888	..	39 54	Madepalli channel, under-tunnel	1,741	..	651	2,392	..	..	..	
253	Do. do.	..	39 73	Do. do.	1,234	..	798	2,032	..	..	..	
254	Do. do.	..	..	Do. do.	1,234	..	92	1,326	..	..	..	
255	No. 576 I. of 22nd July 1891	..	..	Water channel drop	1,350	..	260	1,610	..	..	..	
256	No. 897 I. of 21st Nov. 1891	..	..	Under-tunnel at 11,240 feet of Kakulapad channel	390	..	460	850	..	..	..	
257	Do. do.	..	..	Field masonry sluice, No. 1, left bank	900	..	440	1,340	..	..	..	
258	Do. do.	..	..	Do. " 2 do.	140	..	4	144	..	..	..	
259	Do. do.	..	..	Do. " 3 do.	140	..	4	144	..	..	..	
260	Do. do.	..	..	Do. " 4 do.	150	..	..	150	..	..	..	
261	Do. do.	..	..	Do. " 1, right bank	180	..	..	180	..	..	..	
262	Do. do.	..	..	Do. " 2 do.	140	..	..	140	..	..	..	
263	No. 397 I. of 2nd May 1893	..	..	Improvements to left side vent, Punakumad left side channel	180	..	..	180	..	..	..	
264	Do. do.	..	..	Aqueduct	120	..	..	120	..	..	..	
265	No. 2 I. of 4th Jan. 1892	..	..	Pedepad channel, drop No. 1	1,730	..	..	1,730	..	..	..	
266	Do. do.	..	..	Do. do. " 2	400	..	366	766	..	..	..	
267	Do. do.	..	..	Do. do. " 3	370	..	318	688	..	..	..	
268	Do. do.	..	30 40	Four field masonry sluices	640	..	98	738	..	..	..	
269	No. 595 I. of 7th July 1893	..	..	Road culvert to Punukollu road	680	..	148	828	..	..	..	
270	No. 65 I. of 21st Jan. 1892	..	..	Viravalli channel, drop No. 1	320	..	99	419	..	..	..	
271	Do. do.	..	..	Do. do. " 2	290	..	64	354	..	..	..	
272	Do. do.	..	..	Do. do. " 3	190	..	5	195	..	..	..	
273	Do. do.	..	..	Do. do. field masonry sluice No. 1	210	..	2	212	..	..	..	
274	No. 488 I. of 2nd June 1893	(3) C.	28 60	Gogunta channel, head sluice	2,380	..	..	2,380	..	..	..	
275	Do. do.	..	..	Do. do. drop No. 1	620	..	..	620	..	..	..	
276	Do. do.	..	..	Do. do. " 2	520	..	..	520	..	..	..	
277	Do. do.	..	..	Do. do. " 3	530	..	..	530	..	..	..	
278	Do. do.	..	..	Do. do. " 4	470	..	..	470	..	..	..	
279	Do. do.	..	..	Chataparru channel, head sluice	1,050	..	..	1,050	..	..	..	
280	No. 486 I. of 6th June 1893	..	40 10	Do. do. drop No. 1	600	..	..	600	..	..	..	
281	Do. do.	..	..	Do. do. " 2	..	..	..	..	..	..	..	
282	Do. do.	..	..	Tippanagunta channel, masonry works	..	..	..	..	..	..	..	
283	Do. do.	..	23 1	Kesrapalli channel	27,841	..	5,862	33,703	..	..	..	
284	Para. 50 of the note printed in	(3) L.	11 70	Ungutur channel, excavation	650	..	..	650	..	..	..	
285	No. 3528 of 22nd Dec. 1876.	..	..	Do. earthenware pipes	4,560	..	..	4,560	..	..	..	
286	No. 226 I. of 13th Mar. 1893	..	14 30½	Ungutur right side channel, excavation	460	..	..	460	..	..	..	
287	Do. do.	..	..	Do. do.	60	..	..	60	..	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	EXPENDITURE.				Increase.	Decrease.	Remarks.
					Amount of sanctioned estimate.	Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
KISTNA EASTERN SECTION—cont.											
Ellore canal—cont.											
288	No. 226 I. of 13th Mar. 1893	..	..	Ungutur right side channel, earthenware pipes	70	..	70	70	..	..	..
289	Do.	..	..	Ungutur left side channel, excavation	620	..	620	620	..	..	..
290	Do.	..	..	Do. do. earthenware pipes	140	..	140	140	..	..	..
291	No. 2 I. of 4th Jan. 1892, para. 60 of the note printed in G.O. No. 328 of 22nd Dec. 1876.	..	..	Ponukundam channel, excavation	2,110	1,657	453	2,110	..	..	..
292	No. 397 I. of 2nd May 1893	..	..	Do. left side channel, extension	370	..	370	370	..	..	..
293	Do.	..	..	Do. earthenware pipes	100	..	100	100	..	..	..
294	Do.	..	..	Do. Palmyra spouts	30	15	15	30	..	..	..
295	No. 228 I. of 13th Mar. 1893. Para. 60 of the note printed in G.O. No. 3528 of 22nd Dec. 1876.	(3) L.	20 41	Chirivada channel, excavation	4,954	..	4,954	4,954	..	..	..
296	Do.	..	..	Do. earthenware pipes	610	..	610	610	..	..	..
297	No. 576 I. of 22nd July 1891	..	..	Vinavalli channel, box sluices and spouts	280	8	277	280	..	..	..
298	Do.	..	..	Vinavalli right side channel, excavation	280	247	33	280	..	..	..
299	Do.	..	..	Do. Palmyra spouts	20	..	20	20	..	..	..
300	Do.	..	..	Kakulapad channel	1,950	1,461	489	1,950	..	..	..
301	Do.	..	..	Do. six box sluices	300	..	300	300	..	..	..
302	Do.	..	..	Side channel to Mupparra channel	408	313	95	408	..	..	..
303	No. 303 I. of 7th April 1893	..	..	Madepalli channel, extension	2,150	..	2,150	2,150	..	..	..
304	No. 644 I. of 18th Sept. 1886	..	39 11	Channel parallel to Ellore canal on left of do.	570	..	570	570	..	..	..
305	Do.	..	..	Do. on right of do.	44	24	878	400	..	..	..
306	Do.	..	..	Side channel right of Madepalli channel	43	..	44	44	..	..	..
307	Do.	..	39 54	Do. earthenware pipes	2,490	..	43	43	..	..	..
308	No. 488 I. of 2nd June 1893	..	28 60	Gogunta channel, right side channel, excavation	150	..	2,490	2,490	..	..	..
309	Do.	..	..	Do. earthenware pipes	210	..	150	150	..	..	..
310	Do.	..	..	Gogunta channel, left side channel, excavation	80	..	210	210	..	..	..
311	Do.	..	..	Do. earthenware pipes	630	..	80	80	..	..	..
312	Do.	..	..	Gogunta channel, right side channel, excavation	160	..	630	630	..	..	..
313	Do.	..	..	Do. earthenware pipes	780	..	160	160	..	..	..
314	No. 496 I. of 6th June 1893	..	..	Chataparru channel, excavation	80	..	780	780	..	..	..
315	Do.	..	..	Do. earthenware pipes	292	214	80	80	..	..	..
316	No. 576 I. of 22nd July 1891	(3) L.	..	Wutur right side channel	1,560	1,287	78	1,560	..	..	..
317	Do.	..	..	Pedapad channel	1,377	..	173	1,377	..	..	..
318	No. 456 I. of 18th May 1893	..	..	Do. left side channel, extension	..	..	2,000	2,000	..	..	..
319	Do.	..	..	Tippasagunta channel	..	..	..	..	2,000	..	..
Total					28,988	5,321	25,667	30,989	2,000	..	..

11TH OCTOBER 1893, No. 857 I., PUBLIC WORKS.

16

11TH OCTOBER 1893, No. 857 I., PUBLIC WORKS.

17

320	No. 467 I. of 17th Nov. 1886	(3) O.	..	Madepalli channel, cattle-crossing	394	..	394	394	..	..	..	..
321	Do.	..	..	Do. demarcation stones	..	..	..	..	..	..	..	..
322	No. 226 I. of 13th Mar. 1893	14 30	..	Ungutur channel	260	..	260	260	..	..	..	..
323	Do.	..	..	right side channel of do.	10	..	10	10	..	..	..	..
324	Do.	..	..	left do.	40	..	40	40	..	..	..	..
325	Do.	20 41	..	Chirivada channel	250	..	250	250	..	..	..	..
326	No. 897 I. of 21st Nov. 1891	..	..	Kakulapad channel	200	..	200	200	..	..	..	..
327	Do.	..	..	Ponukundam channel	140	25	115	140	..	..	..	..
328	Do.	..	..	Do. right side channel	10	..	10	10	..	..	..	..
329	Do.	..	..	Do. left side do.	20	..	20	20	..	..	..	..
330	No. 397 I. of 2nd May 1893	..	..	Do. do. extension	30	..	30	30	..	..	..	..
331	No. 2 I. of 4th Jan. 1892	..	..	Pedapad channel	100	13	87	100	..	..	..	..
332	Do.	..	..	Do. right side channel	12	..	12	12	..	..	..	..
333	Do.	..	..	Do. left side do.	50	..	38	50	..	..	..	..
334	No. 455 I. of 18th May 1893	..	..	Do. do. extension	60	..	60	60	..	..	..	..
335	No. 576 I. of 22nd July 1891	..	..	Wutur channel	21	..	21	21	..	..	..	..
336	Do.	..	..	Do. right side channel	18	..	18	18	..	..	..	..
337	Do.	..	..	Do. left do.	140	..	140	140	..	..	..	..
338	No. 65 I. of 21st January 1892	..	..	Vinavalli channel	30	..	30	30	..	..	..	..
339	Do.	..	..	Do. right side channel	30	..	30	30	..	..	..	..
340	No. 488 I. of 2nd June 1893	28 60	..	Gogunta channel	130	..	130	130	..	..	..	..
341	Do.	..	..	Do. right side channel	30	..	30	30	..	..	..	..
342	Do.	..	..	Do. left side do.	90	..	90	90	..	..	..	..
343	No. 496 I. of 6th June 1893	(3) O.	..	Chataparru channel	140	..	140	140	..	..	..	..
Total					2,185	73	2,412	2,485	300	..	..	..
Total (3) Distributaries					76,058	11,056	70,702	81,758	6,700	..	..	..
344	No. 314 I. of 2nd June 1888	(4) B.	8 40	Nakkalam drain	160	..	160	160	..	..	..	..
345	Do.	..	10 20	Kesavapalli do.	308	..	308	308	..	..	..	..
346	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876	..	16 0	Avatipalli do.	300	..	300	300	..	..	..	..
347	Do.	..	17 0	Atukur drain	80	..	80	80	..	..	..	..
348	Do.	..	19 0	Pottipad drain	50	..	50	50	..	..	..	..
349	No. 314 I. of 2nd June 1888	..	23 10	Ampapuram do.	255	..	255	255	..	..	..	..
350	No. 410 I. of 2nd June and No. 410 I. of 14th May 1891.	..	..	Vinavalli do.	250	..	250	250	..	..	..	..
351	Do.	..	25 5	Narasapuram drain	90	..	90	90	..	..	..	..
352	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876.	..	24 0	Canunole drain	225	..	225	225	..	..	..	..
353	Do.	..	27 0	Perikere do.	170	..	170	170	..	..	..	..
354	Do.	..	28 0	Ramileru do.	80	..	80	80	..	..	..	..
355	No. 314 I. of 2nd June 1888	..	29 70	Totagudem do.	50	..	50	50	..	..	..	..
356	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876.	..	31 0	Panukollu do.	40	..	40	40	..	..	..	..
357	No. 314 I. of 2nd June 1888	..	33 40	Pedapad do.	100	..	100	100	..	..	..	..
358	Do.	..	35 77	East Tamimiluru flood bank	70	..	70	70	..	..	..	..
359	Para. 50 of the note printed in No. 3528 of 22nd Dec. 1876.	..	37 10	Wutur drain	300	..	300	300	..	..	..	..
360	Do.	..	39 5	West Tamimiluru drain	100	..	100	100	..	..	..	..
361	Do.	..	..	Jadipudi drain	480	..	480	480	..	..	..	..
362	No. 653 I. of 13th Nov. 1890	..	..	Compensation for Budameru widening	..	..	..	..	..	..	..	..

C7

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.				Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	
KISTNA EASTERN SECTION—cont.												
Ellore canal—cont.												
363	No. 495 I. of 9th Sept. 1890	..	..	Compensation for raising the Budameru flood bank from Mojarru to Aripirala.	104	..	104	104	..	..		
364	....	(4) C.	..	Total ..	3,292	..	3,292	3,292	..	..		
365	Para. 50 of the note printed in No. 3238 of 22nd Dec. 1876.	(4) L.	27 0	Ten foot bridges across drains	..	..	..	..	..	..		
366	Do.	..	28 0	Perikood drain	300	..	300	300	..	..		
367	Do.	..	31 0	Ramileru do.	60	..	60	60	..	..		
368	Do.	..	35 77	Punkollu do.	20	..	20	20	..	..		
369	Do.	..	37 10	Wutur do.	300	..	300	300	..	..		
370	Do.	..	39 5	West Tammileru drain	2,500	..	2,500	2,500	..	..		
371	Do.	..	..	Jalipudi drain	300	..	300	300	..	..		
372	No. 314 I. of 2nd June 1888	..	8 40	East Tammileru drain	2,165	..	2,165	2,165	..	..		
373	Para. 60 of the note printed in No. 3238 of 22nd Dec. 1876.	..	10 21	Nakkalam drain	425	..	425	425	..	..		
374	Do.	..	16 0	Kosavapalli do.	300	..	300	300	..	..		
375	Do.	..	17 0	Aratapalli do.	400	..	400	400	..	..		
376	Do.	..	19 0	Attukur do.	490	..	490	490	..	..		
377	No. 314 I. of 2nd June 1888	..	21 20	Pottipad do.	150	..	150	150	..	..		
378	Para. 58 of the note printed in No. 3238 of 22nd Dec. 1876	..	22 60	Anipuram drain	2,187	1,835	1,832	3,187	..	..		
379	Do.	..	..	Nelivaga do.	830	..	830	830	..	..		
380	No. 653 I. of 13th Nov. 1890	..	24 0	Cannanole do.	1,405	..	1,405	1,405	..	..		
381	No. 495 I. of 9th Sept. 1890	..	..	Widening the last 3 miles of the Budameru Raising flood bank to the Budameru ..	19,120	3,065	8,872	19,120	..	..		
Total ..					36,958	20,168	16,790	36,958	..	..		
Total, (4) Drainage and protective works ..					40,250	20,163	25,082	45,250	6,000	..		
Total, Ellore canal					1,29,149	31,626	1,08,223	1,39,849	10,700	..		
Ryres canal.												
382	No. 145 I. of 12th Feb. 1885	(3) B.	..	Doosapad channel	6,980	4,298	2,662	6,980	..	..		
383	No. 354 I. of 11th May 1886	..	..	Juvvanapudi branch of Kunderu channel	1,782	1,620	162	1,782	..	..		
384	No. 406 I. of 25th July 1890	..	..	Aripirala branch	1,070	..	1,070	1,070	..	..		
											Lump sum.	
											Lump sum.	

385	Do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
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Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

EXPENDITURE.											
No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total			
1	2	3	4	5	6	7	8	9	10	11	12
KISTNA EASTERN SECTION—cont.											
Ryves canal—cont.											
419	No. 354 I. of 11th May 1886	(3) O.	..	Kunderu channel, cattle ramp at Katur	197	..	197	197	..	..	..
420	No. 563 I. of 16th July 1891	..	..	Do. demarcation stones	330	..	330	330	..	..	..
421	Do.	..	..	Lingavaram channel	240	..	240	240	..	..	..
422	Do.	..	..	Noharali codu do.	410	79	331	410	..	..	..
423	Do.	..	..	Juvvanapudi branch channel	260	..	260	260	..	..	..
424	Do.	..	..	Dosapad channel do.	800	..	800	800	..	..	..
425	Do.	..	..	Kelavapannala branch do.	200	..	200	200	..	..	..
426	Do.	..	..	Komatigunta channel do.	240	..	240	240	..	..	..
427	....	..	..	Demarcation stones for left side channel of dosapad channel from below Arripura branch head sluice.	27	..	27	27	..	..	..
428	No. 563 I. of 16th July 1893	..	..	North side channel of Dosapad channel from below Arripura branch channel, head sluice	400	..	400	400	..	..	..
429	....	..	..	Demarcation stones for side channel from left bank of Dosapad channel at 10 miles 300 feet.	30	..	30	30	..	..	..
430	....	..	..	Improvements to ramps on Dosapad channel and providing revetments.	..	..	3,000	3,000	3,000	..	..
Total					3,134	79	6,055	6,134	3,000	..	..
Total (3) Distributaries					34,833	6,285	46,048	52,333	17,500	..	..
Total, Ryves canal					34,833	6,285	46,048	52,333	17,500	..	..
Bank canal.											
431	....	(2) B.	..	Compensation	..	..	5,000	5,000	5,000	..	..
Total (2) Main canals and branches					..	..	5,000	5,000	5,000	..	..
Total, Bank canal					..	..	5,000	5,000	5,000	..	..
Drain from Inampudi aqueduct to Dayyaru aiva.											
432	No. 962 I. of 14th Nov. 1885	(4) B.	..	Compensation for land	5,710	1,849	3,861	5,710	..	..	..

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Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	EXPENDITURE.				Increase.	Decrease.	Remarks.
					Amount sanctioned estimate.	Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
KISETTA EASTERN SECTION—cont.											
Dammidi drain.											
450	No. 128 I. of 5th Feb. 1894	(4) C.	..	Outlet sluices	1,865	..	1,865	1,865	..	..	..
451	Superintending Engineer's No. 2953 K.S. of 7 Mar. 1893.	(4) O.	..	Demarcation stones	95	..	95	95	..	..	..
Total, Dammidi drain					1,960	..	1,960	1,960	..	..	..
Pallakommilera drain.											
452	No. 128 I. of 5th Feb. 1894	(4) O.	..	Road dam	199	..	199	199	..	..	..
453	Do.	..	..	Do.	360	..	360	360	..	..	..
Total					559	..	559	559	..	..	..
454	Superintending Engineer's No. 2953 K.S. of 7th Mar. 1893.	(4) O.	..	Demarcation stones along Chinnakkommilera drain	100	..	100	100	..	..	..
Total, Pallakommilera drain					659	..	659	659	..	..	..
Pedlanka drain.											
455	No. 546 I. of 18th June 1892	(4) B.	..	Pedlanka main drain	1,000	43	957	1,000	..	..	..
456	Do.	..	..	Utukur affluent	150	..	150	150	..	..	..
457	Do.	..	..	Kondangi affluent	266	..	266	266	..	..	..
458	Do.	..	..	Pedatummidi affluent	200	..	200	200	..	..	..
459	Do.	..	..	Amudalapalli do.	200	50	250	200	..	..	..
460	Do.	..	..	Kalindicodu, now converted into a drain	2,150	..	2,150	2,150	..	..	..
Total					3,950	93	3,857	3,950	..	..	..
461	No. 1005 I. of 28th Nov. 1892	(4) C.	..	Bridge on Bantamilli road across Kalindicodu drain	7,200	..	7,200	7,200	..	..	..
462	No. 546 I. of 18th June 1892 and No. 128 I. of 5th Feb. 1894.	(4) L.	..	Pedlanka main drain	86,250	63,934	2,326	66,250	..	..	..
463	Do.	..	..	Utukur affluent	1,310	..	1,310	1,310	..	..	..
464	Do.	..	..	Kondangi affluent	1,530	..	1,530	1,530	..	..	..
465	Do.	..	..	Pedatummidi do.	2,030	22	2,052	2,030	..	..	..
466	Do.	..	..	Amudalapalli do.	1,790	..	1,790	1,790	..	..	..
467	Do.	..	..	Kalindicodu, now converted into a drain	55,787	2,536	58,323	55,787	..	..	..
468	Do.	..	..	Pedatummidi affluent	..	..	..	..	..	..	..

469	....	..	..	Widening Pedalanka drain from Korukollin to the Uppu-teru.	..	..	..	..	..	..	..
470	No. 546 I. of 18th June 1892	(4) O.	..	Cattle ramps along main drain	1,18,707	66,500	1,07,207	1,63,707	40,000	40,000	..
471	Do.	..	..	Do.	415	..	415	415	..	..	..
472	Do.	..	..	Bench mark stones for do.	1,000	..	1,000	1,000	..	..	..
473	Do.	..	..	Do.	160	32	128	160	..	..	..
474	Do.	..	..	Kalindicodu drain	210	..	210	210	..	..	..
475	Do.	..	..	Utukur affluent	77	..	77	77	..	..	..
476	Do.	..	..	Kondangi do.	68	..	68	68	..	..	..
477	Do.	..	..	Pedatummidi affluent	104	..	104	104	..	..	..
478	No. 1441 W. of 31st May 1893	..	..	Amudalapalli do.	99	..	99	99	..	..	..
Flags and pegs for surveying the drain					12	..	12	12	..	..	..
Total					2,145	32	2,113	2,145	..	..	..
Total, Pedalanka drain					1,32,012	66,632	1,20,387	1,77,012	45,900	..	..
Lazabanda drain.											
479	No. 179 I. of 26th Feb. 1893	(4) B.	..	Isakaparru affluent	..	..	..	..	..	..	Lump sum.
480	Do.	..	..	Compensation for land	945	265	680	945	..	..	..
481	No. 3169 K.S. of 22nd Mar. 1893.	..	..	Dokiparru affluent	1,990	..	1,990	1,990	..	..	..
482	No. 3228 K.S. of 27th June 1893.	..	..	Venturumalli do.	140	..	140	140	..	..	..
Total					465	..	465	465	..	..	..
483	No. 179 I. of 26th Feb. 1893	(4) C.	..	Masonry works	3,540	265	3,275	3,540	..	..	Lump sum.
484	No. 3169 K.S. of 22nd Mar. 1893.	(4) L.	..	Dokiparru affluent	17,412	..	17,412	17,412	..	..	..
485	No. 3228 K.S. of 27th Mar. 1893.	..	..	Venturumalli affluent	210	..	210	210	..	..	..
486	No. 179 I. of 26th Feb. 1893	(4) L.	..	Improvements	1,179	..	1,179	1,179	..	..	..
Total					59,559	..	59,559	59,559	..	..	Lump sum.
487	Do.	..	..	Cattle-crossing	60,948	..	60,948	60,948	..	..	..
Total, Lazabanda drain					6,576	..	6,576	6,576	..	..	..
Sultanagarum drain.											
488	Appendix D. of No. 181 I. of 28th Feb. 1892.	(4) B.	..	Compensation for land	87,476	265	87,211	87,476	..	..	..
489	Do.	..	..	Earthwork	412	..	412	412	..	..	Lump sum.
Total, Sultanagarum drain					2,415	..	2,415	2,415	..	..	..
Kanakavalli drain.											
490	Superintending Engineer's No. 3089 K.S. of 10th Mar. 1891.	(4) B.	..	Compensation for land	2,827	..	2,827	2,827	..	..	Do.
Total					2,720	1,844	876	2,720	..	..	..

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.				Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	
				KISTNA EASTERN SECTION—cont.								
				<i>Kanakavalli drain—cont.</i>								
491	Superintending Engineer's No. 3089 K.S. of 10th Mar. 1891.	..	..	Raising bund on the land side ..	670	..	670	670	..	..		
492	No. 7676 I. of 2nd Sept. 1893 ..	..	..	Compensation for widening and improving ..	273	..	273	273	..	..		
				Total ..	3,663	1,844	1,819	3,663	..	..		
493	Do. do. (4) C.	..	..	Building dry stone inlets ..	1,150	977	173	1,150	..	..		
494	No. 767 I. of 2nd Sept. 1893 ..	..	..	Demolishing and reconstructing Inampadi bridge ..	400	..	400	400	..	..		
495	Do. do. ..	..	..	Improving the drop wall of Inampadi aqueduct ..	30	..	30	30	..	..		
				Total ..	1,580	977	603	1,580	..	..		
496	Do. do. (4) L.	..	..	Widening and improving ..	4,400	..	4,400	4,400	..	..		
497	No. 141 I. of 16th Mar. 1889 ..	..	..	Demarcation stones ..	1,057	..	1,057	1,057	..	..		
498	No. 767 I. of 2nd Sept. 1893 ..	..	..	Do ..	197	..	197	197	..	..		
				Total ..	1,254	..	1,254	1,254	..	..		
				Total, Kanakavalli drain ..	10,897	2,821	8,076	10,897	..	..		
				<i>Guddur swamp.</i>								
499	Appendix D. of 181 I. of 28th Feb. 1892. (4) B.	..	..	Compensation for land ..	375	..	375	375	..	..	Lump sum.	
500	Do. do. (4) C.	..	..	Masonry works ..	1,500	..	1,500	1,500	..	..	Do.	
501	Do. do. (4) L.	..	..	Earthwork ..	5,625	..	5,625	5,625	..	..		
				Total, Guddur swamp ..	7,500	..	7,500	7,500	..	..		
				<i>Ellamalli drain.</i>								
502	No. 2963 K.S. of 7th Mar. 1892. (4) O.	..	..	Demarcation stones ..	20	..	20	20	..	..		
				Total, Kistna Eastern section ..	9,98,223	2,93,459	8,32,913	11,26,372	1,28,149	..		

[illegible]

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.				Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	
520	Para. 10 of the note printed in No. 3573 of 19th Dec. 1874, and S. E's. No. 784 K.S. of 5th July 1891.	..	..	KISTNA WESTERN SECTION—cont. Nizampatam canal—cont. Minor masonry sluices in the 1st reach of west side channel	1,680	15	5,665	5,680	4,000	..	Lump sum.	
521	....	..	..	Masonry works on west side channel ..	..	..	6,000	6,000	6,000	..		
522	....	..	..	Do. on east do. ..	..	..	6,000	6,000	6,000	..		
523	....	..	..	Minor masonry sluices on east side channel ..	..	..	10,000	10,000	10,000	..		
524	Para. 10 of the note printed in No. 3573 of 19th Dec. 1874 and G.O. No. 404 I. of 5th May 1893.	(3) L.	..	West side channel extension ..	13,839	2,495	37,314	39,839	26,000	..		
525	Do.	..	..	Do. branch channel ..	3,340	..	3,340	3,340	..	..		
526	....	..	..	Improvements to east side channel ..	1,640	..	1,540	1,540	15,000	..		
527	....	..	..	Do. west do. ..	..	..	15,000	15,000	15,000	..		
528	Para. 10 of the note printed in No. 3573 of 19th Dec. 1874 and G.O. No. 404 I. of 5th May 1893.	(3) O.	..	West side channel extension demarcation stones ..	4,880	..	34,880	34,880	30,000	..		
529	....	..	..	Do. branch channel ..	330	..	330	330	..	..		
				Total ..	140	..	140	140	..	..		
				Total (3) Distributaries ..	470	..	470	470	..	..		
				Total, Nizampatam canal ..	20,989	2,495	74,494	76,989	56,000	..		
				Bank canal.	40,024	2,495	1,09,129	1,11,624	71,600	..		
530	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(2) D.	..	Head sluice improvements ..	3,390	..	3,390	3,390	..	..		
531	Do.	(2) F.	..	Inlets near Vallabhapuram ..	7,275	..	7,275	7,275	..	..		

532	G.O. No. 358 I. of 22nd April 1893.	(2) F (1)	33 5 1	Syphon sluice ..	3,320	..	3,320	3,320	..	..	
533	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(2) H.	..	Kollipara surplus weir channel ..	2,865	..	2,865	2,865	..	..	
534	E. I's. No. 105 K.S. of 6th Nov. 1892. and No. 528 I. of 13th June 1892.	(2) I.	..	Head lock improvements ..	500	..	500	500	..	..	
535	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	..	..	Tidal lock ..	26,620	..	26,620	26,620	..	..	
536	Do.	..	..	Do. weir at Adivipalem ..	8,700	2,283	6,417	8,700	..	..	
537	No. 360 I. of 24th April 1893 ..	..	..	Permanent sheds for lock establishment ..	..	..	7,440	7,440	..	..	
538	* No. 283 I. of 12th May 1888 ..	(2) L.	..	Bank canal improvements ..	35,820	2,283	40,977	43,260	7,440	..	
539	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874 and E. I's. Memo. No. 28 K.S. of 7th Feb. 1889.	(2) O.	..	Ramps ..	1,13,715	66,039	47,676	1,13,715	..	..	
540	Do.	..	..	Eight cattle crossings ..	970	..	970	970	..	..	
541	Superintending Engineer's No. 2817 K.S. of 9th Feb. 1891.	..	..	Fixing demarcation stones on both sides of Bank canal ..	8,780	3,150	5,630	8,780	..	..	
542	....	..	..	Eight additional cattle crossings ..	2,200	1,029	1,171	2,200	..	..	
543	Superintending Engineer's No. 1495 K.S. of 16th Sept. 1892.	(3) A.	..	Total ..	..	..	6,250	6,250	..	..	
544	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(3) B.	..	Total (2) Main canals and branches ..	11,950	4,179	14,021	18,200	6,250	..	
545	Do.	..	..	Granite bench mark stones at south end of north and south lines of Vellatur block under Vellatur channel.	1,78,335	72,501	1,19,524	1,92,025	13,690	..	
546	Do.	..	..	Kollur channel ..	250	37	213	250	..	..	
547	Do.	..	..	Vellatur channel ..	940	..	940	940	..	..	
548	Do.	..	..	Isakapalli channel ..	870	..	870	870	..	..	
549	Do.	..	..	Aravapalli channel ..	585	..	585	585	..	..	
550	Do.	..	..	Ullipalem do. ..	505	..	505	505	..	..	
551	Do.	..	..	Allipattu do. ..	715	..	715	715	..	..	
552	Do.	..	..	Kuchinapadi channel ..	595	..	595	595	..	..	
553	Do. and No. 227 I. of 9th March 1891.	..	..	Potameraka do. ..	1,070	..	1,070	1,070	..	..	
554	Do.	..	..	Tedayapalem branch ..	190	..	190	190	..	..	
555	No. 637 I. of 6th June 1884 ..	..	..	Kuchanapudi north channel ..	129	..	106	129	..	..	
556	Do.	..	..	Do. channel extension ..	100	27	73	100	..	..	
557	Do.	..	..	Eduapalli channel ..	124	26	98	124	..	..	
558	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(3) C.	..	Total ..	6,538	76	6,462	6,538	..	..	
559	Do.	..	..	Kollipara channel ..	705	..	705	705	..	..	
560	Do.	..	..	Kollur side channel ..	640	..	640	640	..	..	

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.				Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1	2	3	4	5	6	7	8	9	10	11	12	
KISTNA WESTERN SECTION—cont.												
568	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	..	..	Kollar channel	Rs. 1,920	..	Rs. 1,920	1,920	..	..	..	
569	Do. do. do. do. do.	..	..	Vellatur channel	1,600	..	1,600	1,600	..	..	..	
570	Do. do. do. do. do.	..	..	Do. side channel	450	..	450	450	..	..	..	
571	Do. do. do. do. do.	..	..	Vemavanam do.	700	..	700	700	..	..	..	
572	Do. do. do. do. do.	..	..	Jagajjuru channel	990	..	990	990	..	..	..	
573	Do. do. do. do. do.	..	..	Aravapalli do.	440	..	440	440	..	..	..	
574	Do. do. do. do. do.	..	..	Ullipalem do.	3,030	391	2,639	3,030	..	..	..	
575	Do. do. do. do. do.	..	..	Alkapara do.	3,815	584	3,231	3,815	..	..	..	
576	Do. do. do. do. do.	..	..	Kuchinapudi do.	3,415	614	2,901	3,415	..	..	..	
577	No. 227 I. of 9th March 1891	..	7	Nallur channel	270	102	168	270	..	..	..	
578	Do. do. do. do. do.	..	..	Do. drop 100 feet below	260	99	161	260	..	..	..	
579	No. 537 I. of 6th June 1884	..	..	Minor channels	13,534	..	13,534	13,534	..	..	..	Lump sum.
580	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874.	(3) L.	..	Total	31,769	2,025	29,744	31,769	..	..	..	
581	Do. do. do. do. do.	..	..	Kollar channel	6,370	..	6,370	6,370	..	..	..	
582	Do. do. do. do. do.	..	..	Vellatur channel	16,720	..	16,720	16,720	..	..	..	
583	Do. do. do. do. do.	..	..	Jagajjuru do.	2,110	..	2,110	2,110	..	..	..	
584	Do. do. do. do. do.	..	..	Isakapalli do.	19,330	734	18,596	19,330	..	..	..	
585	Do. do. do. do. do.	..	..	Aravapalli do.	2,465	..	2,465	2,465	..	..	..	
586	Do. do. do. do. do.	..	..	Ullipalem do.	3,430	..	3,430	3,430	..	..	..	
587	Do. do. do. do. do.	..	..	Alkapara do.	2,720	..	2,720	2,720	..	..	..	
588	Do. do. do. do. do.	..	..	Kuchinapudi channel	2,635	..	2,635	2,635	..	..	..	
589	Do. do. do. do. do.	..	..	Nallur channel	1,400	1,023	377	1,400	..	..	..	
590	Do. do. do. do. do.	..	..	Do. No. 1 branch	1,010	..	1,010	1,010	..	..	..	
591	Do. do. do. do. do.	..	..	Do. No. 2 do.	290	..	290	290	..	..	..	
592	Para. 15 of the note printed in No. 3573 of 19th Dec. 1874 and No. 227 I. of 9th Mar. 1891.	..	..	Potameraka channel	4,120	2,159	1,961	4,120	..	..	..	
593	No. 537 I. of 6th June 1884	..	..	Minor channels	9,862	..	9,862	9,862	..	..	..	Lump sum.
594	Do. do. do. do. do.	..	..	Total	72,462	3,916	68,546	72,462	..	..	..	

583	No. 246 I. of 13th Mar. 1891	(3) O.	..	Nallur channel demarcation stones	..	160	32	128	160	..	..	..
584	Do. do. do. do. do.	..	..	Do. No. 2 branch do.	..	50	9	41	50	..	..	..
585	No. 124 I. of 9th Feb. 1885	(2) B.	..	Total (3) Distributaries	..	210	41	169	210	..	..	..
586	Do. do. do. do. do.	..	..	Total, Bank canal ..	..	1,11,229	6,095	105,134	1,11,229	..	..	..
587	Do. do. do. do. do.	..	..	Commamur canal.	..	2,89,564	78,596	224,658	3,03,254	13,690	..	..
588	Do. do. do. do. do.	..	..	1st, 2nd and 3rd reaches	..	12,428	..	12,428	..	..	..	..
589	Do. do. do. do. do.	..	..	New cut from the Guntur nallah to the culvert	..	875	..	875	..	..	..	..
590	Do. do. do. do. do.	..	..	Vejendia quarries	..	975	..	975	..	..	..	..
591	Do. do. do. do. do.	..	..	Apperu outfall channel ..	..	170	..	170	..	..	..	..
592	Do. do. do. do. do.	..	..	Stop bank between Alleru and Apperu	..	720	..	720	..	..	..	..
593	Do. do. do. do. do.	..	..	Emilera diversion bank ..	..	900	..	900	..	..	..	..
594	Do. do. do. do. do.	..	..	Total	..	16,068	13,931	2,137	16,068	..	..	..
595	No. 797 I. of 9th Oct. 1882	(2) F.	23 20	Nakkavagu aqueduct	..	22,570	..	22,570	22,570	..	..	..
596	Do. do. do. do. do.	..	..	Surplus vents to Kollimerla aqueduct	..	..	..	..	..	..	..	..
597	Do. do. do. do. do.	..	..	Kollimerla new aqueduct ..	..	..	..	..	..	..	..	..
598	Do. do. do. do. do.	..	..	Pondrapad aqueduct	..	..	..	..	..	..	..	..
599	No. 797 I. of 9th Oct. 1882	..	49 39	Widening Alleru surplus sluices	..	..	..	..	..	..	..	..
600	No. 429 I. of 4th May 1892	..	..	Apperu inlet	..	380	..	380	380	..	..	..
601	Do. do. do. do. do.	..	..	Inlet and outlet below Inkollu bridge	..	3,060	2,178	882	3,050	..	..	..
602	Superintending Engineer's No. 2949 K.S. of 7th Mar. 1892.	(2) F. (1)	..	Constructing stone drain in left bank of Commamur canal 1/2 and 1/4.	..	26,010	2,178	1,06,552	1,08,730	82,720	..	..
603	No. 406 I. of 6th May 1893	(2) I.	19 4	Reconstructing and extending revetment in rear of Kollimerla weir.	..	610	156	354	610	..	..	..
604	Do. do. do. do. do.	..	..	Permanent sheds for lock establishment	..	2,600	..	2,600	2,600	..	..	..
605	Do. do. do. do. do.	..	..	Santa ravur wharf	..	..	..	..	..	..	..	..
606	Do. do. do. do. do.	..	..	Improvements to 1st reach	..	2,600	..	2,430	24,430	21,830	..	..
607	Do. do. do. do. do.	..	11 0	Do. 2nd do.	..	68,379	..	..	..	..	..	..
608	Do. do. do. do. do.	..	8 30	Do. 3rd do.	..	60,252	..	..	..	..	..	..
609	Do. do. do. do. do.	..	to 18 70	Do. 4th do.	..	41,529	..	..	..	..	..	..
610	Do. do. do. do. do.	..	to 30 58	Do. 5th do.	..	32,210	..	..	..	..	..	..
611	Do. do. do. do. do.	..	to 46 30	Cost of original line from Firangidiba to Romperu	..	46,656	..	..	..	..	..	..
612	Do. do. do. do. do.	..	to 55 30	Petty supervision at 3 per cent.	..	18,202	..	..	..	..	..	..
613	Do. do. do. do. do.	..	..	Total	..	8,017	..	..	..	..	..	..

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	EXPENDITURE.					Increase.	Decrease.	Remarks.
					Amount sanctioned estimate.	Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1		2	3	4	5	6	7	8	9	10	11	12
609	....				KISTNA WESTERN SECTION—cont.							
					Commamur canal—cont.							
610	No. 359 I. of 24th April 1893				Contingencies	5,345						
					Constructing revetment to left slope	2,80,590	2,34,235	11,095	2,45,330			Balance 35,260
					Total	2,86,090	2,34,235	16,595	2,60,830			not required and surrendered.
611	No. 797 I. of 9th Oct. 1882	(3) B.	7 50		Left bank Tungabhadra side channel	3,31,278	2,50,500	1,50,068	4,00,568	1,04,560		
612	Do.				Pundia channel	2,470	1,940	530	2,470			
613	No. 612 I. of 12th July 1893	(3) B.	23 10		Bapatla channel	1,600	1,600	1,600	1,600			
614	Do.		29 17		Do. first east branch	600	32	468	600			
615	Do.				Do. first west	600		600	600			
616	Do.				Cherukur channel	230		700	700			
					Total	6,100	1,972	4,128	6,100			
617	No. 343 I. of 24th Sept. 1887	(3) C.	7 50		Tungabhadra side channel, head sluice	1,360		1,354	1,360			Lump sum.
618	Do.				Do. bridge at T-nali road and elsewhere	9,150		9,150	9,150			Do.
619	Do.				Do. Aruanda sluice	530		530	530			
620	....				Do. aqueduct			5,000	5,000			
621	....				Do. Aknata sluice	2,000		1,600	1,600			Lump sum.
622	No. 343 I. of 24th Sept. 1887				Do. minor channels	109	24	85	2,009			
623	No. 520 I. of 13th June 1885				Yedapalli channel, Tail escape	630		630	630			
624	No. 343 I. of 24th Sept. 1887				Cherokla do. head sluice	150		150	150			
625	Do.				Do. minor channel and sluices	400		400	400			
626	Do.				Do. tail escape weir	380		380	380			
627	Do.				Do. minor channels	200		200	200			
628	Do.				Pundia channel, head sluice	900		900	900			
629	Do.				Commamur tank supply channel, minor channels	2,040		2,040	2,040			
630	Do.				Appticatia channel do.	600		600	600			
631	Do.				Ravanappa do. do.	530		530	530			
632	Do.				Tail escape weir	800		800	800			
633	Do.				Minor channels	200		200	200			Lump sum.
634	Do.				Retar side channel head sluice							
635	Do.				Minor channels							
636	....				Total							

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	EXPENDITURE.					Increase.	Decrease.	Remarks.
					Amount sanctioned estimate.	Expenditure incurred to end of 1892-93.	Further expenditure.	Total.				
1		2	3	4	5	6	7	8	9	10	11	12
637	No. 612 I. of 12th July 1853	(3) C.	29 17		Dividing sluice for first east and west branches	2,950		2,950	2,950			
638	Do.				Head sluice to Kunkatapalem branch	1,330		1,330	1,330			
639	Do.				Do. to Mulapalem do.	1,790		1,790	1,790			
640	Do.				Do. to Cherukur channel	760		760	760			
641	Do.				Bapatla first west branch, tail escape weir	440		440	440			
642	Do.				Drop at 2 1/2 mile and 410 feet of Mulapalem	720		720	720			
643	Do.				No. 1 sluice at 9/2 mile of Kunkatapalem branch	360		360	360			
644	Do.				" 2 do. at 6 mile of do.	590		590	590			
645	Do.				" 3 do. at 1-1/4 mile of do.	620		620	620			
646	Do.				" 1 do. at 0-1 mile and 66 feet of Mulapalem branch.	560		560	560			
647	Do.				" 2 do. at 1-1/2 " and 396 " of do.	590		590	590			
648	Do.				" 3 do. at 2-0 " and 396 " of do.	620		620	620			
649	Do.				" 4 do. at 2-5 " and 396 " of do.	650		650	650			
					Total	33,069	30	39,539	39,569	6,500		
650	No. 797 I. of 9th Oct. 1882	(3) L.	7 50		Tungabhadra side channel	8,660		8,660	8,660			Lump sum.
651	Do.				Do. minor do.	4,100		4,100	4,100			Do.
652	No. 620 I. of 13th June 1885		8 30		Chebrole do. channels	300		300	300			Do.
653	No. 797 I. of 9th Oct. 1882		13 30		Mannava channel	600		600	600			Do.
654	Do.		21 20		Commamur tank supply channel	1,800		1,800	1,800			Do.
655	Do.		23 10		Pundia channel	7,450		7,450	7,450			Do.
656	Do.				Do. minor channels	1,700		1,700	1,700			Do.
657	Do.				Retar channel minor channels	500		500	500			Do.
658	No. 612 I. of 12th July 1893		23 70		Bapatla channel from head to 5 furlongs 1,960 feet	1,960		1,960	1,960			
659	Do.		27 17		Do. from 5 to 2 miles and 250 feet	1,630		1,630	1,630			
660	Do.				Bapatla minor channels	6,000		6,000	6,000			
661	Do.				Do. 1st east branch	2,880		2,880	2,880			
662	Do.				Do. 1st west do.	2,860		2,860	2,860			
663	Do.				Do. Mulapalem branch	5,080		5,080	5,080			
664	Do.				Do. Kunkatapalem branch	3,140		3,140	3,140			
665	Do.				Do. Cherukur channel	150		150	150			
					Total	48,880		48,810	48,810			
666	No. 797 I. of 9th Oct. 1882	(3) O.			Tungabhadra side channel, seven cattle crossings	2,000		2,000	2,000			Lump sum.
667	No. 612 I. of 12th July 1893				Bapatla channel, Kunkatapalem branch—							
668	Do.				No. 1 cattle crossing at 5 1/2 furlongs	550		550	550			
669	Do.				" 2 do. at 1 mile 1/2 furlong	480		480	480			
670	Do.				" 3 do. at 1 " 4 furlongs	520		520	520			
					Bapatla channel, Mulapalem branch—							
671	Do.				No. 1 cattle crossing at 2 miles 4 1/2 furlongs	910		910	910			
672	Do.				" 2 do. at 2 miles 4 1/2 furlongs	960		960	960			
673	Do.				" 3 do. at 4 " 3 furlongs	1,010		1,010	1,010			
674	Do.				Demarcation stones for Bapatla channel	1,170		1,170	1,170			
675	Do.				Do. for Mulapalem branch	270		270	270			
676	Do.				Do. for Kunkatapalem branch	330		330	330			
					Total	7,740		12,740	12,740	5,000		
					Total (3) Distributaries	95,719	2,002	1,05,217	1,07,219	11,500		

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
KISTNA WESTERN SECTION—cont.											
Gundur nallah.											
677	Superintending Engineer's No. 118 K.S. of 13th April 1890.	(4) O.	..	Compensation for land	144	78	66	144	..	..	
678	Superintending Engineer's No. 3061 K.S. of 11th March 1893.	(4) L.	..	Cutting approach of Nakkavagu straight to the aqueduct. Total, Gundur nallah ..	760	..	760	760	..	..	
				Total, Commamur canal ..	904	78	826	904	..	..	
679	Superintending Engineer's No. 2422 K.S. of 31st Dec. 1890, and No. 1624 K.S. of 9th Oct. 1891, and No. 1059 I. of 15th Dec. 1892.	(4) A.	..	Establishment for surveying and levelling boundary mark stones. Repalle drain.	4,27,901	2,62,580	2,66,111	6,08,691	1,16,050	35,250	
680	No. 889 I. of 8th Nov. 1893	(4) B.	..	Repalle drain	330	..	330	330	..	..	
681	Do.	..	..	Nandivelugu affluent	18,300	2,390	15,910	18,300	..	..	
682	Do.	..	..	Jaggadigunta do.	600	..	600	600	..	..	
683	Do.	..	..	Gunderu do.	210	..	210	210	..	..	
684	Do.	..	..	Nagarum do.	960	..	960	960	..	..	
		..	..	Total ..	810	..	810	810	..	..	
685	Do.	(4) C.	8 20	Bridge	20,880	2,390	18,490	20,880	..	..	
686	....	..	..	Do.	7,430	..	7,430	7,430	..	..	
		..	..	Total ..	..	..	15,000	15,000	15,000	..	
687	No. 889 I. of 8th Nov. 1893	(4) L.	..	Repalle drain	7,430	..	22,430	22,430	15,000	..	
688	Do.	..	..	Nandivelugu affluent	1,42,700	1,07,003	65,692	1,72,700	30,000	..	
689	Do.	..	..	Jaggadigunta do.	2,050	1	2,049	2,050	..	..	
690	Do.	..	..	Gunderu affluent	1,760	1	1,759	1,760	..	..	
691	Do.	..	..	Nagarum do.	9,390	..	9,390	9,390	..	..	
		..	..	Total ..	4,826	..	4,826	4,826	..	..	
		..	..	Total, Repalle drain ..	1,60,726	1,07,010	83,716	1,90,726	30,000	..	
		..	..		1,89,366	1,09,400	1,24,966	2,54,366	45,000	..	

Bhattiprolu drain.												
		(4) B.		Bhattiprolu drain	..	..	..	..	..	..	..	Lump sum.
		(4) L.		Earthwork	..	..	..	28,166	48,166	20,000	..	Do.
		(4) O.		Miscellaneous works	..	..	..	2,439	2,439	..	..	
		..		Granite bench mark stones along Gunduru-Bhattiprolu drain.	..	..	..	170	145	170	..	
				Total	..	..	..	2,609	2,584	..	..	
				Total, Bhattiprolu drain	..	..	..	30,775	55,775	25,000	..	
Pedapalli drain.												
		(4) C.		Aqueduct	..	..	..	..	5,000	5,000	..	
		(4) L.		Earthwork	..	..	..	..	5,000	5,000	..	
				Total, Pedapalli drain	..	..	..	..	10,000	10,000	..	
Nizampatam drain.												
		(4) C.		Bridge at 4 miles	..	..	..	6,740	6,740	..	..	
		(4) L.		Earthwork	..	..	..	6,801	6,801	..	..	
				Total, Nizampatam drain	..	..	..	13,541	13,541	..	..	
Tungabhadra drain.												
		(4) A.		Survey establishment for Tenali affluent	..	..	..	330	328	330	..	
		(4) B.		Main drain	..	..	..	3,560	769	3,500	..	
		..		Tenali affluent	..	..	..	12,150	12,150	..	..	
		..		Nallamada affluent	..	..	..	3,000	772	3,000	..	
				Total	..	..	..	18,650	13,691	18,650	..	
		(4) C.		Masonry works	..	..	..	62,175	1,80,000	1,80,000	1,17,825	
		..		Rolled iron-girder bridge near Ponnur	..	..	..	11,600	9,157	11,600	..	
		16 41		Total	..	..	..	73,775	1,89,157	1,91,600	1,17,825	
		(4) L.		Excavating main drain	..	..	..	2,01,111	1,80,857	2,76,111	75,000	
		..		Nallamada affluent	..	..	..	1,32,065	59,353	1,52,065	20,000	
		..		Tenali affluent	..	..	..	56,658	50,321	56,658	..	

10892
57850
15592

Statement showing the principal items on which expenditure will have to be incurred after 31st March 1893 in completing Delta works, II Circle—cont.

34

11TH OCTOBER 1893, No. 857 I., PUBLIC WORKS.

No.	Proceedings of the Madras Government or other authority.	Main and sub head.	Mileage.	Names of works.	Amount of sanctioned estimate.	EXPENDITURE.			Increase.	Decrease.	Remarks.
						Expenditure incurred to end of 1892-93.	Further expenditure.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12
KISTNA WESTERN SECTION—cont.											
Tungabhadra drain—cont.											
709	No. 447 I. of 9th May 1892	..	..	Kunderu affluent	13,751	..	13,751	13,751	..	..	..
710	Do.	..	..	Kollimera affluent	1,25,185	..	1,25,185	1,25,185	..	..	..
711	Do.	..	..	Doppalapudi affluent	5,510	..	5,510	5,510	10,000	..	..
712	Do.	..	..	Pundia affluent	45,600	..	45,600	45,600	..	..	..
				Total	6,79,840	1,94,303	4,90,577	6,84,880	1,05,000	..	..
713	No. 99 I. of 2nd Feb. 1885	(4) O.	..	Wooden gauges of main drain	420	..	..	..	..	..	..
714	Do. and No. 447 I. of 9th May 1892	..	..	Bench mark stones for do.	214	..	..	..	..	..	..
715	No. 447 I. of 9th May 1892	..	..	Furlong stones for main drain	300	1,000	2,329	3,389	..	..	..
716	Do.	..	..	Mile stones for do.	150	..	..	..	..	..	..
717	Do.	..	..	Four ramps for do.	2,000	..	..	..	..	..	..
718	Do.	..	..	Demarcation stones for main drain	305	..	..	..	..	..	..
719	Do.	(4) O.	..	Bench mark stones for Tenali affluent	2,892	81	2,811	2,892	..	..	..
				Total	6,281	1,141	5,140	6,281	..	..	..
				Total, Tungabhadra drain	6,78,916	2,02,813	6,08,893	9,01,741	2,22,825	..	..
Rompuru drain.											
720	No. 286 I. of 3rd Sept. 1877	(4) B.	..	Compensation for land	1,000	..	1,000	1,000	..	..	..
721	Do.	..	..	Parachuravagu	500	..	500	500	..	..	..
				Total	1,500	..	1,500	1,500	..	..	..
722	.....	(4) C.	..	Bridge	..	..	..	..	..	..	..
723	No. 286 I. of 3rd Sept. 1877, No. 15 I. of 10th Jan. 1877 and No. 377 I. of 12th August 1889.	(4) L.	..	Rompuru drain	..	..	..	..	15,000	..	..
724	No. 286 I. of 3rd Sept. 1877	..	..	Rapatla affluent	98,900	65,497	33,403	98,900	..	..	..
725	Do.	..	..	Parachuravagu	14,800	..	14,800	14,800	..	..	..
				Total	16,250	..	16,250	16,250	..	..	..

11TH OCTOBER 1893, No. 857 I., PUBLIC WORKS.

35

726	Do.	do.	..	Swarna affluent	4,400	..	4,400	4,400	..	..
727	Do.	do.	..	Alleru do.	10,870	..	10,870	10,870	..	..
728	Do.	....	..	Perali creek new cut	..	..	70,000	70,000	..	..
			Total ..		1,45,260	65,497	1,49,763	2,15,260	70,000	..
			Total, Bomperu drain ..		1,46,760	65,497	1,66,263	2,31,760	85,000	..
				Koppali drain.						
729	No. 39 I. of 14th Jan. 1893	(4) B.	..	Compensation for land	1,540	..	1,540	1,540	..	..
730	Do.	(4) C.	..	Bridge at 40 feet	1,650	320	1,330	1,650	..	..
731	Do.	(4) L.	..	Excavation	1,910	..	1,910	1,910	..	..
			Total, Koppali drain ..		5,100	320	4,780	5,100	..	..
732	No. 859 W. of 29th Mar. 1893	(4) A.	..	Clearing jungle in connection with survey operations of certain canals and drains ..	90	..	90	90	..	..
733	*	....	..	Ten inspection bungalows at Rs. 2,500 each	..	..	..	..	..	..
			Total, Kistna Western section ..		23,94,068	11,42,333	18,30,640	29,72,973	6,14,165	35,250
			Total, Kistna Delta system ..		33,92,291	14,35,792	26,63,553	40,99,345	7,42,314	85,260

Abstract of Statement II.

Total amount provided for works (column 9 of statement II) 40,99,345
 Outlay to end of 1892-93 (column 9 of statement I) 76,92,184
 Deduct outlay incurred against current sanctions (column 7 of statement II) 14,35,792

Balance available for unforeseen works 3,75,257

Total, I works 1,07,30,994

(Signed) J. W. MARTIN,
Superintending Engineer, II Circle.

STATEMENT showing the amount of the Kistna Delta completion estimates by Main and Sub heads to correspond with the Statement No. II sent with this office letter, No. 1111 K.S. of the 30th July 1893.

36

11TH OCTOBER 1893, No. 857 I., PUBLIC WORKS.

Particulars.	(1) HEAD WORKS.						(2) MAIN CANALS AND BRANCHES.													
	2	3	4	5	Total.		7	8	9	10	11	12	13	14	15	16	17	18	19	Total.
					Buildings.	Miscellaneous.														
1	Land.	Works.	Buildings.	Miscellaneous.		Total.	Preliminary expenses.	Land.	Regulators.	River and hill torrent works.	Other cross drains.	Bridges.	Escapes.	Navigation works.	Buildings.	Earthwork.	Miscellaneous.	Maintenance.		
Old outlay	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Outlay on completed works	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Head works	..	6,500	..	1,025	7,525	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Eastern Section.																				
Masulipatam canal	..	..	..	..	..	..	..	3,795	..	..	..	..	..	..	1,530	1,44,400	3,105	..	1,45,930	..
Fulleru do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22,000	..	..	28,900	..
Panarru junction canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	810	..	..	810	..
Polraz canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	330	300	..	630	..
Bantumilli do.	..	..	..	..	..	..	..	6,230	..	..	..	..	..	..	..	65,830	3,710	..	1,13,240	..
Ellore do.	..	..	..	..	..	..	..	30	..	190	..	..	..	..	..	..	..	..	12,841	..
Ryres do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bank do.	..	..	..	..	..	..	..	6,000	..	..	..	..	..	..	..	..	..	..	6,000	..
Kanakavalli drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Drain from Inampudi aqueduct to	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dayyapu calva	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lazabanda drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Uppalur do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sultanagaram drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gudur swamp	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chendraya drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Polraz do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pullana do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dammidi do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pedakommilera drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pedalaraka do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ellamilli do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	15,065	..	190	..	..	..	48,093	4,280	2,32,230	7,551	..	3,07,401	..

Statement showing the amount of the Kistna Delta completion estimates by Main and Sub heads to correspond with the statement No. II, &c.—cont.

11TH OCTOBER 1893, No. 857 I., PUBLIC WORKS.

37

Particulars.	(3) DISTRIBUTARIES.						(4) DRAINAGE AND PROTECTIVE WORKS.					
	Preliminary ex- penses.		Land.		Works.		Earthwork.		Miscellaneous.		Total.	
	1	2	3	4	5	6	7	8	9	10		
Old outlay	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	
Outlay on completed works	..	..	..	..	..	..	..	..	..	..	..	
Head works	..	..	..	..	..	..	..	..	..	..	..	
Eastern Section.												
Masilupatam canal	7,870	16,760	28,790	1,500	54,920	..	..	..	..	..	2,00,850	
Pullaru do.	15,147	46,583	79,714	4,064	1,45,498	..	..	..	..	..	1,74,398	
Pamarru junction canal	..	..	..	..	..	..	..	..	..	..	810	
Poltaz canal	11,122	7,142	21,992	1,804	42,060	..	185	..	..	3,690	46,380	
Bantumulli do.	5,261	14,247	15,811	752	36,071	..	..	..	..	..	1,49,861	
Ellore do.	17,444	30,988	30,988	2,485	81,758	..	3,292	..	..	45,250	1,39,849	
Ryres do.	11,175	10,038	24,986	6,134	52,333	..	..	..	..	..	52,333	
Bank do.	..	..	..	..	..	..	..	..	..	..	6,000	
Kanakavalli drain	..	..	..	..	..	..	3,663	1,580	4,400	1,254	10,897	
Drain from Inampudi aqueduct to	..	..	..	..	..	..	..	..	..	..	..	
Dayyapu calva	..	..	..	..	..	..	5,710	..	..	5,710	5,710	
Lazabanda drain	..	..	..	..	..	..	3,540	17,412	60,948	5,576	87,476	
Uppalur do.	..	..	..	..	..	..	..	6,717	4,469	261	11,447	
Sultanagarain drain	..	..	..	..	..	..	412	..	2,415	..	2,827	
Gundur swamp	..	..	..	..	..	..	375	1,500	6,625	..	7,500	
Chendraya drain	..	..	..	..	..	..	..	..	4,859	..	4,859	
Poltaz do.	..	..	..	..	..	..	..	21,598	13,709	190	35,427	
Pullava do.	..	..	..	..	..	..	..	2,505	1,865	1,576	4,081	
Dannidi do.	..	..	..	..	..	..	..	1,865	..	95	1,960	
Pedakommilera drain	..	..	..	..	..	..	..	550	..	100	650	
Pedalanka do.	..	..	..	..	..	..	3,960	7,200	1,63,707	2,145	1,77,012	
Ellamilli do.	..	..	..	..	..	..	..	..	..	20	20	
Total	68,019	1,25,611	2,02,281	16,729	4,12,640	..	21,137	65,867	2,95,736	16,076	3,98,806	
											11,18,847	

Statement showing the amount of the Kistna Delta completion estimates by Main and Sub-heads to correspond with the statement No. II, &c.—cont.

Particulars.	(1) HEAD WORKS.						(2) MAIN CANALS AND BRANCHES.												
	2	3	4	5	6	Total.	1	2	3	6	7	8	9	11	12	15	16	18	19
	Land.	Works.	Buildings.	Miscellaneous.			Preliminary ex- penses.	Land.	Regulators.	River and hill torrent works.	Other cross drain- age works.	Bridges.	Escapes.	Navigation works.	Buildings.	Earthwork.	Miscellaneous.	Maintenance.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<i>Western Section.</i>																			
Main canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nizampatam canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bank	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Commamur do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Repalle drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bhatiprole drain	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pedapalle do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Koppalle do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tungabhadra do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rompuru do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nizampatam do.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Miscellaneous drains	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Inspection bungalows	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grand Total, Western Delta	..	6,500	..	1,025	7,525	..	..	16,068	3,390	1,16,005	3,830	17,390	2,865	74,290	23,000	9,42,947	21,664	12,23,449	..
Unforeseen works	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total requirements for I Works	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for I Works including old outlay	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Statement showing the amount of the Kistna Delta completion estimates by Main and Sub heads to correspond with the statement No. II, &c.—cont.

Particulars.	(3) DISTRIBUTARIES.						(4) DRAINAGE AND PROTECTIVE WORKS.					
	Preliminary ex-penses.		Land.		Works.		Earthwork.		Miscellaneous.		Total.	
	1	2	3	4	5	6	7	8	9	10	11	
<i>Western Section.</i>												
Main canal ..	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	
Nizampatam canal ..	..	..	810	..	..	810	..	..	..	..	..	
Bank ..	..	1,800	39,839	34,880	..	76,889	..	..	..	..	..	
Commamur do. ..	250	6,538	31,769	72,462	470	1,11,229	..	..	..	..	..	
Repalle drain ..	..	6,100	38,669	48,810	210	1,07,219	..	..	..	..	..	
Bhatiprole drain ..	..	..	..	..	12,740	..	..	..	..	..	..	
Pedapalle do. ..	..	..	..	..	..	..	..	..	..	..	..	
Tungabhadra do. ..	..	..	..	..	..	..	..	..	..	..	..	
Rompuru do. ..	..	..	..	..	..	..	..	..	..	..	..	
Nizampatam do. ..	..	..	..	..	..	..	..	..	..	..	..	
Miscellaneous drains ..	..	..	..	..	..	..	..	..	..	..	..	
Inspection bungalows ..	..	..	..	..	..	..	..	..	..	..	..	
Total ..	250	14,438	1,11,997	1,56,152	13,420	2,96,247	760	47,570	2,42,564	11,53,503	29,72,973	
Grand Total, Western Delta ..	250	82,457	2,37,598	3,58,433	30,149	7,08,887	760	68,707	3,08,421	14,40,239	40,98,345	
Unforeseen works ..	..	..	..	..	..	..	..	..	..	..	..	
Total requirements for I Works ..	..	..	..	..	..	..	..	..	..	..	..	
Total for I Works including old outlay ..	..	..	..	..	..	..	..	..	..	..	..	

(Signed) J. W. MARTIN,
Superintending Engineer, II Circle.

ABSTRACT comparing the revised amounts with the estimates printed in Proceedings, Madras Government, No. 577 I., dated 1st October 1888.

	Sanctioned estimate (vide G.O., No. 577 I., 1st October 1888.)	REVISED ESTIMATE.		
		Outlay to end of 1892-93.	Further outlay.	Total.
Old outlay	Rs.	Rs.	Rs.	Rs.
1. Head works—	30,81,755	30,31,755	..	30,81,755
Head works—				
2. Land ..	3,445	5,875	..	5,875
3. Works ..	1,27,917	51,849	8,500	58,349
4. Buildings ..	41,081	90,622	..	90,622
5. Miscellaneous ..	..	2,590	1,025	3,615
Total, 1 Head works ..	1,72,443	1,50,936	7,525	1,58,461
Eastern Section.				
2. Main canals and branches—				
Main canal—				
2. Land ..	5,188	5,188	..	5,188
3. Regulators ..	14,344	11,344	..	14,344
7. Bridges ..	1,550	1,260	..	1,260
9. Navigation works ..	7,844	7,844	..	7,844
11. Buildings ..	..	1,488	..	1,488
12. Earthwork ..	1,04,962	1,04,962	..	1,04,962
Total, Main canal ..	1,33,888	1,35,084	..	1,35,084
Masulipatam canal—				
2. Land ..	1,878	5,951	..	5,951
6. Other cross drainage ..	23,117	22,994	..	22,994
7. Bridges ..	..	..	..	..
9. Navigation works ..	1,872	1,780	..	1,780
11. Buildings ..	..	3,350	426	3,776
12. Earthwork ..	2,65,801	1,61,439	63,562	2,25,001
15. Miscellaneous ..	6,125	5,070	..	5,070
Total, 2 Main canals and branches ..	2,97,793	2,00,584	63,988	2,64,572
3. Distributaries—				
2. Land ..	4,725	6,225	7,870	14,095
3. Works ..	17,889	10,661	16,487	27,148
4. Earthwork ..	56,919	39,447	28,790	68,237
6. Miscellaneous ..	1,500	..	1,500	1,500
Total, 3 Distributaries ..	81,033	56,333	54,647	1,10,980
Total, Masulipatam canal ..	3,78,826	2,56,917	1,18,635	3,75,552
Pulleru canal—				
2. Main canals and branches—				
2. Land ..	6,775	5,469	3,650	9,119
3. Regulators ..	6,668	6,668	..	6,668
4. Falls and weirs ..	6,373	6,373	..	6,373
12. Earthwork ..	90,748	90,006	22,000	1,12,006
15. Miscellaneous ..	6,881	3,719	2,945	6,664
Total, 2 Main canals and branches ..	1,17,445	1,12,235	28,595	1,40,830
3. Distributaries—				
2. Land ..	30,946	12,001	13,556	25,557
3. Works ..	83,945	29,990	44,819	74,809
4. Earthwork ..	1,78,942	51,141	77,687	1,28,828
6. Miscellaneous ..	19,314	6,236	8,199	9,435
Total, 3 Distributaries ..	3,18,147	99,368	1,39,261	2,38,629
Total, Pulleru canal ..	4,35,592	2,11,603	1,67,856	3,79,459
Pamarru junction canal—				
2. Main canals and branches—				
2. Land ..	92	92	..	92
7. Bridges ..	3,850	3,528	..	3,528
11. Buildings ..	..	344	466	810
Total, Pamarru junction canal ..	3,942	3,964	466	4,480
Polraz canal—				
2. Main canals and branches—				
2. Land ..	6,517	2,279	380	2,609
3. Regulators ..	1,240	3,441	..	3,441
7. Bridges ..	5,900	..	..	..
8. Escapes ..	1,932	1,932	..	1,932
9. Navigation works ..	80,897	79,517	..	79,517
11. Buildings ..	4,633	2,031	..	2,031
12. Earthwork ..	89,902	50,604	..	50,604
15. Miscellaneous ..	7,069	7,027	300	7,327
Total, 2 Main canals and branches ..	1,47,090	1,46,831	630	1,47,461

Abstract comparing the revised amounts with the estimates, printed, &c.—cont.

	Sanctioned estimate (vide G.O., No. 577 I., 1st October 1888.)	REVISED ESTIMATE.		
		Outlay to end of 1892-93.	Further outlay.	Total.
	Rs.	Rs.	Rs.	Rs.
Eastern Section—cont.				
Polraz canal—cont.				
3. Distributaries—	378	408	..	408
1. Preliminary expenses ..	15,825	9,479	6,561	16,040
2. Land ..	46,582	40,603	6,293	46,896
3. Works ..	98,852	70,470	18,993	89,463
4. Earthwork ..	6,930	879	1,125	2,004
5. Miscellaneous ..	..	..	..	..
Total, 3 Distributaries ..	1,68,567	1,21,839	32,972	1,54,811
4. Drainage and protective works—				
2. Land ..	150	65	185	185
3. Works ..	3,505	1,007	3,505	4,512
4. Earthwork ..	3,655	1,072	3,690	4,762
Total, 4 Drainage and protective works ..	3,19,312	2,69,742	37,292	3,07,034
Total, Polraz canal ..				
Bantumilli canal—				
2. Main canals and branches—				
1. Preliminary expenses ..	339	76	5,789	76
2. Land ..	785	785	..	785
3. Regulators ..	6,190	..	..	..
7. Bridges ..	6,460	..	..	..
8. Escapes ..	76,485	57,019	5,927	62,946
9. Navigation works ..	4,549	2,679	1,610	4,289
11. Buildings ..	43,460	59,887	11,879	71,766
12. Earthwork ..	3,230	474	3,602	4,076
15. Miscellaneous ..	..	..	..	..
Total, 2 Main canals and branches ..	1,41,498	1,21,670	28,807	1,50,477
3. Distributaries—				
1. Preliminary expenses ..	292	295	5,210	295
2. Land ..	1,945	2,427	6,545	7,637
3. Works ..	3,837	14,740	6,545	21,285
4. Earthwork ..	9,210	14,539	15,704	30,243
5. Miscellaneous ..	768	111	652	763
Total, 3 Distributaries ..	16,052	32,112	28,111	60,223
Total, Bantumilli canal ..	1,57,550	1,53,782	56,918	2,10,700
Ellore canal—				
2. Main canals and branches—				
2. Land ..	1,05,535	1,24,224	30	30
5. River and hill torrent works ..	2,430	2,254	190	1,24,414
6. Other cross drainage works ..	..	12,534	..	2,254
7. Bridges ..	885	402	11,783	12,534
9. Navigation works ..	..	2,838	..	12,185
11. Buildings ..	..	16,334	..	2,838
12. Earthwork ..	4,265	3,513	436	16,334
15. Miscellaneous ..	..	..	..	3,949
Total, 2 Main canals and branches ..	1,13,115	1,62,099	12,439	1,74,538
3. Distributaries—				
2. Land ..	9,831	5,417	17,444	22,861
3. Works ..	20,937	25,558	25,179	50,737
4. Earthwork ..	24,807	15,515	25,667	41,182
5. Miscellaneous ..	766	840	2,412	3,252
Total, 3 Distributaries ..	56,341	47,330	70,702	1,18,032
4. Drainage and protective works—				
1. Preliminary expenses ..	2,538	11	3,292	11
2. Land ..	..	366	5,000	3,293
3. Works ..	34,080	42,370	16,790	5,366
4. Earthwork ..	10,120	..	..	59,160
5. Miscellaneous ..	..	..	..	..
Total, 4 Drainage and protective works ..	46,738	42,748	25,082	67,830
Total, Ellore canal ..	2,16,194	2,52,177	1,08,223	3,60,400
Ryves canal—				
2. Main canals and branches—				
2. Land ..	10,350	9,976	..	9,976
3. Regulators ..	20,884	20,541	..	20,541
4. Falls and weirs ..	5,815	5,815	..	5,815

Abstract comparing the revised amounts with the estimates printed, &c.—cont.

		Sanctioned estimate (vide G.O., No. 577 I., 1st October 1888).	REVISED ESTIMATE.		
			Outlay to end of 1892-93.	Further outlay.	Total.
Eastern Section—cont.					
Ryves canal—cont.					
2. Main canals and branches—cont.					
5. River and hill torrent works	..	5,599	5,599	..	5,599
7. Bridges	..	30,613	30,506	..	30,506
11. Buildings	..	2,853	2,853	..	2,853
12. Earthwork	..	3,81,572	3,74,733	..	3,74,733
15. Miscellaneous	..	1,641	1,641	..	1,641
Total, 2 Main canals and branches		4,59,327	4,51,664	..	4,51,664
3. Distributaries—					
2. Land	..	13,303	9,884	5,257	15,141
3. Works	..	35,719	36,767	9,882	46,649
4. Earthwork	..	65,108	61,418	24,854	86,272
5. Miscellaneous	..	4,857	4,424	6,055	10,479
Total, 3 Distributaries		1,18,987	1,12,493	46,048	1,68,541
4. Drainage and protective works—					
2. Land	..	457	185	..	185
3. Works	..	721	717	..	717
4. Earthwork	..	1,171	970	..	970
Total, 4 Drainage and protective works		2,349	1,872	..	1,872
Total, Ryves canal		5,80,183	5,66,029	46,048	6,12,077
Bank canal—					
2. Main canals and branches—					
2. Land	..	10,257	22,817	5,000	27,817
3. Regulators	..	6,940	9,276	..	9,276
5. River and hill torrent works	..	3,58,500	112	..	112
6. Other cross drainage works	..	6,650	..	..	..
7. Bridges	..	44,650	..	..	..
8. Escapes	..	5,830	..	..	..
9. Navigation works	..	17,195	18,859	..	18,859
11. Buildings	..	8,460	..	..	..
12. Earthwork	..	3,35,555	91,462	..	91,462
15. Miscellaneous	..	9,665	87	..	87
16. Maintenance	..	32,000	..	..	..
Total, 2 Main canals and branches		8,35,702	1,42,613	5,000	1,47,613
3. Distributaries—					
2. Land	..	21,017	..	..	..
3. Works	..	48,585	..	..	..
4. Earthwork	..	1,16,615	..	..	..
Total, 3 Distributaries		1,86,217	..	..	..
Total, Bank canal		10,21,919	1,42,613	5,000	1,47,613
4. Drainage and protective works—					
1. Sub-section—					
Drain along left bank of Masulipatam canal—					
2. Land	..	607	607	..	607
4. Earthwork	..	931	931	..	931
5. Miscellaneous	..	68	54	..	54
Total, Drain along left bank of Masulipatam canal		1,596	1,592	..	1,592
Kanakala drain—					
2. Land	..	1,908	..	..	..
3. Works	..	2,725	..	..	..
4. Earthwork	..	14,687	..	..	..
Total, Kanakala drain		19,320	..	..	..
Devarapalli drain—					
4. Earthwork	..	333	..	..	..
Taleru (Divi) drain—					
2. Land	..	1,333	..	..	..
3. Works	..	2,500	..	..	..
4. Earthwork	..	16,667	..	..	..
Total, Taleru (Divi) drain		20,500	..	..	..

Abstract comparing the revised amounts with the estimates printed, &c.—cont.

		Sanctioned estimate (vide G.O., No 577 I., 1st October 1888).	REVISED ESTIMATE.		
			Outlay to end of 1892-93.	Further outlay.	Total.
		RS.	RS.	RS.	RS.
Eastern Section—cont.					
Gudimotu drain—		667	..	..	..
2. Land	..	3,166	..	..	..
3. Works	..	4,500	..	..	..
4. Earthwork	..	8,333	..	..	..
Total, Gudimotu drain ..		167	..	..	..
Mopidevi drain—		211	211	..	211
4. Earthwork	..	..	..	..	..
Sivaganga drain—		..	..	..	..
2. Land	..	..	..	..	..
Drain from Inampudi aqueduct to Dayyapu calva—		5,710	1,849	3,861	5,710
2. Land	..	51,610	47,793	..	47,793
4. Earthwork	..	..	575	..	575
5. Miscellaneous	..	..	..	..	..
Total ..		57,320	50,217	3,861	54,078
3. Sub-section--					
Uppuluru drain—		1,033	1,033	..	1,033
2. Land	..	6,717	..	6,717	6,717
3. Works	..	12,968	8,499	4,469	12,968
4. Earthwork	..	261	..	261	261
5. Miscellaneous	..	..	..	..	..
Total, Uppuluru drain ..		20,979	9,532	11,447	20,979
Chendroyakodu drain—		19,740	4,024	..	4,024
2. Land	..	23,805	18,950	..	18,950
3. Works	..	82,763	52,585	..	52,585
4. Earthwork	..	3,119	141	4,718	4,859
5. Miscellaneous	..	..	..	..	..
Total, Chendroyakodu drain ..		1,29,427	75,700	4,718	80,418
Polrazakodu main drain and affluents—		23,830	2,559	..	2,559
2. Land	..	28,731	10,269	18,743	29,012
3. Works	..	90,042	68,928	13,709	82,637
4. Earthwork	..	4,716	1,511	190	1,701
5. Miscellaneous	..	..	..	..	..
Total, Polrazakodu main drain and affluents ..		1,47,319	83,267	32,642	1,15,909
Kolleru embankment—		904	..	..	..
2. Land	..	17,935	..	..	..
4. Earthwork	..	..	..	..	..
Total ..		18,839	..	..	..
4. Sub-section--					
Pullava main drain and affluents—		850	484	..	484
2. Land	..	2,505	..	2,505	2,505
3. Works	..	21,787	24,445	..	24,445
4. Earthwork	..	365	430	1,146	1,576
5. Miscellaneous	..	..	..	..	..
Total, Pullava main drain and affluents ..		25,507	25,359	3,651	29,010
Damidi drain—		220	97	..	97
2. Land	..	1,865	..	1,865	1,865
3. Works	..	6,986	5,107	..	5,107
4. Earthwork	..	448	398	95	493
5. Miscellaneous	..	..	..	..	..
Total, Damidi drain ..		8,519	5,602	1,960	7,562
Peddakommileru main drain and affluents—		2,200	1,313	..	1,313
2. Land	..	3,762	..	550	550
3. Works	..	37,590	61,275	..	61,275
4. Earthwork	..	424	2,900	100	3,000
5. Miscellaneous	..	..	..	..	..
Total, Peddakommileru main drain and affluents ..		43,976	65,488	650	66,138
Peddalanka drain and affluents—		3,410	212	3,867	4,079
2. Land	..	945	..	7,200	7,200
3. Works	..	84,090	56,500	1,07,207	1,63,707
4. Earthwork	..	778	32	2,113	2,145
5. Miscellaneous	..	..	..	..	..
Total, Peddalanka drain and affluents ..		89,223	56,744	1,20,387	1,77,131

Abstract comparing the revised amounts with the estimates printed, &c.—cont.

		Sanctioned estimate (vide G.O., No. 577 I., 1st October 1888).	REVISED ESTIMATE.		
			Outlay to end of 1892-93.	Further outlay.	Total.
Eastern Section—cont.		RS.	RS.	RS.	RS.
4. Sub-section—cont.					
Lingala drain—					
2. Land .. .. .	.. .. .	476	476	..	476
4. Earthwork .. .. .	.. .. .	3,052	3,052	..	3,052
5. Miscellaneous .. .. .	.. .. .	1,099	..	..	..
Total, Lingala drain ..		4,627	3,528	..	3,528
5. Sub-section—					
Lazzabanda drain and affluents—					
2. Land .. .. .	.. .. .	18,975	4,166	3,275	7,441
3. Works .. .. .	.. .. .	40,612	16,170	17,412	33,582
4. Earthwork .. .. .	.. .. .	1,55,011	90,283	60,948	1,51,231
5. Miscellaneous .. .. .	.. .. .	7,618	1,377	5,576	6,953
Total, Lazzabanda drain and affluents ..		2,22,216	1,11,996	87,211	1,99,207
Sultanagaram drain—					
2. Land .. .. .	.. .. .	601	189	412	601
4. Earthwork .. .. .	.. .. .	2,415	..	2,415	2,415
Total, Sultanagaram drain ..		3,016	189	2,827	3,016
Kanakavalli drain—					
1. Preliminary expenses .. .. .	.. .. .	1,117	1,844	1,819	3,663
2. Land .. .. .	.. .. .	16,815	10,107	603	10,710
3. Works .. .. .	.. .. .	8,760	12,763	4,400	17,163
4. Earthwork .. .. .	.. .. .	492	..	1,254	1,254
Total, Kanakavalli drain ..		27,184	24,714	8,076	32,790
Gudur swamp—					
2. Land .. .. .	.. .. .	375	..	375	375
3. Works .. .. .	.. .. .	1,500	..	1,500	1,500
4. Earthwork .. .. .	.. .. .	5,625	..	5,625	5,625
Total ..		7,500	..	7,500	7,500
Saradayapeta drain—					
2. Land .. .. .	.. .. .	1,600	1,600	..	1,600
Juvikanama drain—					
4. Earthwork .. .. .	.. .. .	..	2,203	..	2,203
Yellamalli drain—					
15. Miscellaneous .. .. .	.. .. .	..	..	20	20
Total, Eastern section ..		41,05,598	25,09,853	8,25,388	33,35,241
Western Section.					
Main canal—					
2. Main canals and branches—					
2. Land .. .. .	.. .. .	10,870	10,734	..	10,734
3. Regulators .. .. .	.. .. .	15,702	15,702	..	15,702
5. River and hill torrent works .. .. .	.. .. .	465	465	..	465
7. Bridges .. .. .	.. .. .	610	..	..	..
8. Escapes .. .. .	.. .. .	2,124	2,124	..	2,124
9. Navigation works .. .. .	.. .. .	212	212	..	212
11. Buildings .. .. .	.. .. .	..	1,264	..	1,264
12. Earthwork .. .. .	.. .. .	5,21,506	4,46,326	1,37,185	5,83,511
15. Miscellaneous .. .. .	.. .. .	2,405	2,613	3,464	6,077
Total, Main canals and branches ..		5,53,894	4,79,440	1,40,649	6,20,089
3. Distributaries—					
3. Works .. .. .	.. .. .	..	..	810	810
Total, Main canal ..		5,53,894	4,79,440	1,41,459	6,20,899
Nizampatam canal—					
2. Main canals and branches—					
7. Bridges .. .. .	.. .. .	19,486	11,095	17,390	28,485
9. Navigation works .. .. .	.. .. .	600	629	6,600	7,229
12. Earthwork .. .. .	.. .. .	10,645	..	10,645	10,645
Total, 2 Main canals and branches ..		30,731	11,724	34,635	46,359
3. Distributaries—					
2. Land .. .. .	.. .. .	..	..	1,800	1,800
3. Works .. .. .	.. .. .	8,702	3,588	37,344	40,932
4. Earthwork .. .. .	.. .. .	8,787	6,732	34,880	41,612
5. Miscellaneous .. .. .	.. .. .	..	..	470	470
Total, 3 Distributaries ..		17,489	10,320	74,494	84,814
Total, Nizampatam canal ..		48,220	22,044	1,09,129	1,31,173

Abstract comparing the revised amounts with the estimates printed, &c.—cont.

		Sanctioned estimate (vide G.O., No. 577 I., 1st October 1888).	REVISED ESTIMATE.		
			Outlay to end of 1892-93.	Further outlay.	Total.
		RS.	RS.	RS.	RS.
Western Section—cont.					
Bank canal—					
2. Main canals and branches—		700	700	700	700
1. Preliminary expenses		2,050	2,432	..	2,432
2. Land		3,390	..	3,390	3,390
3. Regulators		7,275	..	7,275	7,275
5. River and hill torrent works		..	..	3,320	3,320
6. Other cross drainage works		19,310	..	..	19,310
7. Bridges		2,865	..	2,865	2,865
8. Escapes		82,610	67,565	40,977	1,08,542
9. Navigation works		4,961	5,342	..	5,342
11. Buildings		1,13,715	75,980	47,676	1,23,656
12. Earthwork		10,063	4,380	14,021	18,401
15. Miscellaneous		..	..	..	..
Total, 2 Main canals and branches ..		2,46,239	1,56,399	1,19,524	2,75,923
3. Distributaries—		1,041	213	1,254	1,254
1. Preliminary expenses		7,548	464	6,462	6,926
2. Lands		53,888	8,710	29,744	38,454
3. Works		81,765	9,610	68,546	78,156
4. Earthwork		..	1,845	169	2,014
5. Miscellaneous		..	..	..	..
Total, 3 Distributaries ..		1,43,201	21,670	1,05,134	1,26,804
Total, Bank canal ..		3,89,440	1,78,069	2,24,658	4,02,727
Commamur canal—					
2. Main canals and branches—		384	384	384	384
1. Preliminary expenses		16,068	13,931	2,137	16,068
2. Land		2,593	2,593	..	2,593
3. Regulators		2,44,434	1,85,821	1,06,552	2,92,373
5. River and hill torrent works		..	156	354	510
6. Other cross drainage works		45,876	45,896	..	45,896
7. Bridges		1,40,078	1,43,727	24,430	1,68,157
9. Navigation works		3,928	3,927	..	3,927
11. Buildings		3,07,055	2,47,616	16,595	2,64,211
12. Earthwork		9,662	17,560	..	17,560
15. Miscellaneous		..	..	..	..
Total, 2 Main canals and branches ..		7,69,594	6,61,611	1,50,068	8,11,679
3. Distributaries—		159	..	159	159
1. Preliminary expenses		19,588	7,058	4,128	11,186
2. Land		58,659	26,308	39,539	65,847
3. Works		1,49,707	67,939	48,810	1,16,749
4. Earthwork		2,000	1,045	12,740	13,787
5. Miscellaneous		..	..	..	..
Total, 3 Distributaries ..		2,30,314	1,02,509	1,05,217	2,07,726
4. Drainage and protective works—		78	..	78	78
2. Land		..	66	66	66
3. Works		..	1,423	760	2,183
4. Earthwork		..	..	..	..
Total ..		..	1,501	826	2,327
Total, Commamur canal ..		9,99,908	7,65,621	2,56,111	10,21,732
4. Drainage and protective works—		891	..	891	891
Drainage channel from Emileru stream to Feringhi- dibba inlet—		9,528	5,403	..	5,403
2. Land		..	..	..	..
4. Earthwork		..	..	..	..
Total ..		10,428	6,294	..	6,294
Repalle drain—		198	330	528	528
1. Preliminary expenses		21,698	2,706	18,490	21,196
2. Land		39,847	36,409	22,430	58,839
3. Works		1,79,824	1,27,906	83,716	2,11,622
4. Earthwork		5,140	4,060	..	4,060
5. Miscellaneous		..	..	..	..
Total, Repalle drain ..		2,46,509	1,71,279	1,24,966	2,96,245

Abstract comparing the revised amounts with the estimates printed, &c.—cont.

					Sanctioned estimate (vide G.O., No. 577 I., 1st October 1888).	REVISED ESTIMATE.		
						Outlay to end of 1892-93.	Further outlay.	Total.
Western Section—cont.					RS.	RS.	RS.	RS.
4. Drainage and protective works—cont.								
Bhattiprolu drain—								
2. Land	..	..	..	..	..		5,000	5,000
3. Works	..	..	..	..	15,601	22,684		22,684
4. Earthwork	..	..	..	..	28,166	2,158	48,166	60,324
5. Miscellaneous	..	..	..	..	2,439	25	2,584	2,609
Total					46,206	24,867	55,750	80,617
Peddapalli drain—								
2. Land	..	..	..	..	123	96		96
3. Works	..	..	..	..			5,000	5,000
4. Earthwork	..	..	..	..	2,210	1,930	5,000	6,930
Total					2,333	2,026	10,000	12,026
Nizampatam drain—								
2. Land	..	..	..	..	3,350			
3. Works	..	..	..	..	6,740		6,740	6,740
4. Earthwork	..	..	..	..	6,801		6,801	6,801
Total					16,891		13,541	13,541
Tungabhadra drain—								
1. Preliminary expenses	..	..	..	..		252	328	580
2. Land	..	..	..	..	17,172	4,959	13,691	18,650
3. Works	..	..	..	..	99,794	2,497	1,89,157	1,91,654
4. Earthwork	..	..	..	..	4,92,153	1,87,966	4,90,577	6,78,543
5. Miscellaneous	..	..	..	..	6,152	1,141	5,140	6,291
Total					6,15,271	1,96,815	6,98,893	8,95,708
Romperu drain—								
2. Land	..	..	..	..	2,593	976	1,500	2,476
3. Works	..	..	..	..	21,790		15,000	15,000
4. Earthwork	..	..	..	..	1,59,717	99,190	1,49,763	2,48,953
Total					1,84,100	1,00,166	1,66,263	2,66,429
Vetapalem-Kunderu drain below Vetapalem—								
4. Earthwork	..	..	..	..		2,699		2,699
Koppalla drain—								
2. Land	..	..	..	..			1,540	1,540
3. Works	..	..	..	..			1,330	1,650
4. Earthwork	..	..	..	..		320	1,910	1,910
Total, Koppalla drain						320	4,730	5,100
1. Preliminary expenses							90	90
2. Main canals and branches—								
11. Buildings							25,000	25,000
Total, Western section					31,13,200	13,49,640	18,30,640	37,80,280
Unforeseen works					2,57,998		3,75,257	3,75,257
Total for works					1,07,30,994	76,92,184	30,38,810	1,07,30,994
Establishment					25,07,268	18,33,752	6,73,516	25,07,268
Tools and plant					6,68,043	5,23,564	1,44,479	6,68,043
Loss by exchange					20,000	9,929	10,071	20,000
Total					1,39,26,305	1,00,59,429	38,66,876	1,39,26,305
Less receipts on capital account					6,521	15,196	—8,675	6,521
Net Total					1,39,19,784	1,00,44,233	38,75,551	1,39,19,784
Indirect Charges.								
Capitalized abatement of Land Revenue					5,52,200	4,16,204	1,35,996	5,52,200
Leave and pension allowances					4,28,960	3,34,667	94,293	4,28,960
Total indirect charges					9,81,160	7,50,871	2,30,289	9,81,160
Grand Total					1,49,00,944	1,07,95,104	41,05,840	1,49,00,944

(Signed) R. R. E. DRAKE-BROCKMAN, Lt.-Col., R.E.,
Ag. Secretary to Govt., P.W.D.

28th Sept. 1893.

ORDER—dated 11th October 1893, No. 857 I., Public Works.

The statement showing the works of the Kistna delta system on which expenditure has still to be incurred is approved and will be printed with the two abstracts appended to the note by the Chief Engineer for Irrigation.

2. The Superintending Engineer, II Circle, will expedite the submission of the estimate called for by the Chief Engineer for Irrigation for rendering the Ryves canal efficient for the contemplated extension of irrigation under that canal.

3. Ordered that a copy of these Proceedings be forwarded to the Government of India with a request that the extension of sanction accorded to the Kistna delta completion estimates in the Government of India letter, No. 10 I., dated 22nd January 1889, which expired on the 31st March 1893, be extended for a further period of 5 years from 1st April 1893.

[Here enter No. 858 I., dated 11th October 1893.]

(True Extract.)

(Signed) R. R. E. DRAKE-BROCKMAN, Lt.-Col., R.E.,
Ag. Secretary to Govt., P.W.D.

To the Chief Engineer for Irrigation, with two statements
" Superintending Engineer, II Circle.
" Examiner, Public Works Accounts.
" Revenue Department.

Exd. C. A. Munisawmy.
Spare Copies

1891/10/93

IRRIGATION.
ACCOUNT.

Govt. of {1893} Madras.
PUBLIC WORKS.

Dated October, 11th.

Recd.

Encl.

G.O., 11th Oct. 1893, No. 857 I.

OCTOBER.

Kistna Delta System

The statement showing the works of the —
on which expenditure has still to be incurred,
approved, and a copy of these Proceedings
ordered to be forwarded to the Government
of India for an extension of the sanction to
the completion estimates for a period of five
years from 1st April 1893.

IRRIGATION.
ACCOUNT.

Government {1896} of Madras.
PUBLIC WORKS.

Recd.

Enclosures

Regd.

1896.

Spare copies

G.O., No. 813 I., 9th October 1896.

OCTOBER.

Channel

Estimate of Rs. 6,600 for improving the head sluice —, Bank Canal, Kistna
Western division, sanctioned.

No 813. I of 9th October 1896.
PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 6 P

READ the following

Handwritten: Supp. Eng. a C. with No 1373 K. W. 925.8.96

The following estimate is sanctioned from the balance of the provision made for item 710 of the statement printed in P.W. G. No. 857. I, of 11th Oct/93:—
Capital Expenditure not charged to Rev.

49. Irrigation
Kistna Delta System
Western Section
I. Works.
Bank Canal
2. Main Canals and Branches.
11. Earthwork.

Improving the head sluice channel.
Estimate Rs. 6,600

This sanction is registered as No. 111 I. of 1896-97.

Handwritten: Rueds 12/9 96

No. 813 I., 9TH OCTOBER 1896.

ORDER—No. 813 I., dated 9th October 1896.

The following estimate is sanctioned from the balance of the provision made for item 710 of the statement printed in Proceedings of Madras Government, No. 857 I., dated 11th October 1893:—

Capital Expenditure not charged to Revenue.
49 Irrigation.
Kistna Delta System.
Western Section.
I. Works.
Bank Canal.
2. Main Canals and Branches.
11. Earthwork.
Improving the head sluice channel.

Estimate Rs.
2. This sanction is registered as No. 111 I. of 1896-97. ... 6,600

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineer, II Circle, with four enclosures.
" Examiner, Public Works Accounts.

Exd. T. K. Narayana Aiyangar.

Handwritten notes and signatures:
7/10/96
signature of Chief Engineer
13/11/96
To the Chief Engineer for Irrigation
Supp. Eng. with 4 enclosures
Ex. Rev.
12/9 1896
L. C. 2869 25/10
Rueds 12/9 96

Public Works (1896) Department.

Receipt
CURRENT No. ⁸⁵⁸³~~27948~~

Order

From

*The Suppy Engineer
II Circle.*

No. 1373 K.W.

Dated 25th August 1896.

Received 28th ~~da~~ 24.9.96

Enclosures 4 5 (plan)

Spare copies

SUBJECT.

*Head sluice Channel
of the Thistna Western
Div. — Forwards for sanc-
tion an estimate of Rs 6600
for improvements to the*

025440 RY/10

*7.5.2.8/10
VCE
9/10*

G.O.	No.	Department.	Date.
	8572	Ms.	11-10-9

[illegible]

Беззвезда

Dated 25 August 1896

From, Major W. L. C. Baddley R. E.
Esquire,

Superintending Engineer,
II Circle.

To.

The Chief Engineer
For Irrigation

Enclos.

Sir,

1 dr. Ester

1 Report.

Tracing

1 Data

4

Sir, I have the honour to forward herewith for your, approval & sanction of Government plan & estimate amounting to Rs: 6600 for improving the Head Suez channel of the Bank canal, Kistna Western Division and to request that you will be so good as to sanction the estimate from the balance of the provision as per item No 710 of the Statement printed with G.O. No. 8572 dated " 4 October 1893.

2. The report which accompanies the estimate explains the necessity for

for the work.

I have the honour to be,
Sir,

FOR TRANSMISSION
25 APR 1908
No. 17928

Your most Obedt Servant From,

W. Baddley Major R.E.

Supg. Engineer, II Circle

The Superintending Engineer,
II Circle.

The

Dated

Received

18

Enclosures.

NO.

SUBJECT.

From

279 Rs

The Supg Engineer
Second Circle

To The Chief Engineer
For Irrigation

Dated 25 August 1896

Encls 4

No. 1373 NW

Head Sluice channel
of the Bank Bana G. N. W.

— Forwards for
sanction, an estimate
of Rs 6600 for
improvements to —

Report to accompany estimate for
improving the Head sluice channel
of the Bank Bana G.

1. Amount of Estimate Rs 6600.
2. The estimate is prepared under instructions of the Superintending Engineer.
3. The Head Sluice channel of the Bank Canal is in very bad order.

The scour hole in rear of it has gone down to 16 ft below true bed level at the deepest point, the sides continue to scour out & the revetments slope & cannot be properly maintained.

Owing to the strong current from the Head Sluice, navigation into & out of the lock is difficult & the left Bank below the lock is also being eroded.

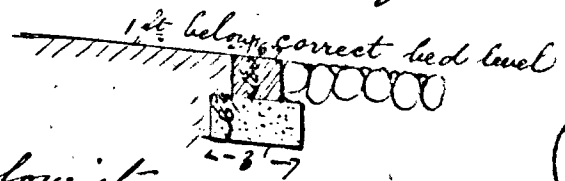
4. The estimate provides for the following works:
 - (1) To demolish the small piece of revetment on Right bank of Head Sluice channel & rebuild it in a new alignment with a masonry footing wall & a 9 ft apron & continue it to the end of the 30 ft apron in rear of the retaining wall.
 - (2) To demolish the existing revetment in left bank of lock channel below sounding line No. 11 & rebuild it in a

correct alignment & continue it to 100 ft below the 30 ft apron in rear of retaining wall.

A masonry footing wall is not required to this extent but it will be taken down to 2 ft below correct bed level.

(3) To construct a cross retaining wall with a 30 ft apron as shown on survey.

The retaining wall to be of the sections shown in sketch & its top ^{and the} apron below it will be laid at 1 ft below true bed level.

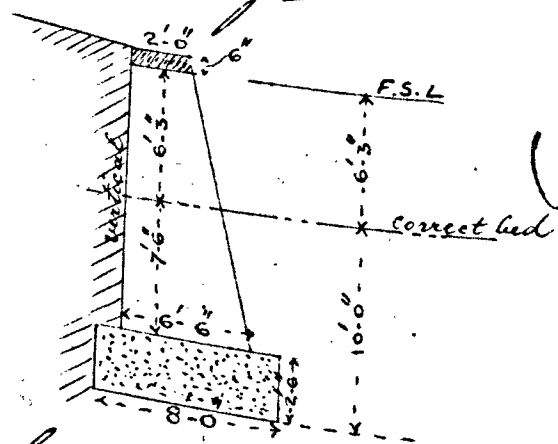


(1)

The object of this is that it may be found necessary hereafter to run the canal 7 ft instead of 6 ft deep.

(4) To demolish the existing revetment between sounding lines Nos 5 & 6 at nose of lock island & build masonry wall running out to a point $2\frac{1}{2}$ ft wide at sounding line No. 9.

The foundation of this wall will average about 10 ft below correct bed level & the average section will be somewhat as shown in sketch.



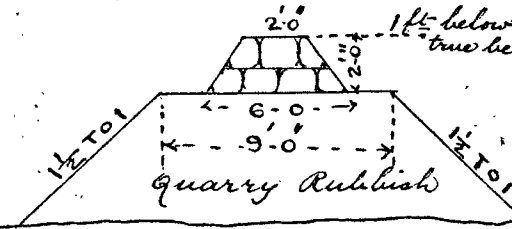
(2)

This wall is necessary to protect the boats entering & leaving the lock channel from the action of the strong current

which flows down the Head Sluice channel.

(5) A bank across the whole width of the chl on sounding line No. 9, a partial cross bank on sounding line No. 6 & a connecting bank as shown in the survey.

The two banks on sounding lines will have the section shown in sketch.



The stone wall on the top of the quarry rubbish bank will be built in mortar across the lock chl to prevent damage from fishing bamboos. The connecting bank will be found entirely of quarry rubbish.

The object of the connecting bank is (1) to protect foundations of the masonry nose wall against scour & (2) to restrict the space & facilitate sealing when the foundations of the wall are being put in. The other cross banks are intended to check the scouring action in the bed.

(6) A special provision of 10 per cent under Contingencies to meet unforeseen expenditure which is likely to occur in laying the foundations of the nose wall at the required level, it may be necessary to put in some piling for this work & to allow for earth work

4

[Handwritten signature]



06/12/2016