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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Rev. DEPARTMENT

G.O. No. / B.P. No.	2165	Press / Mis.
Dated 16.9.1876		196 .

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B567

2165
1

Proceedings of the Madras Government, Public Works Department,
19th August 1876. *No.* 2,186.

Read the following papers:—

No. 456. From Lieutenant D. McNEIL CAMPBELL, R.E., Executive Engineer in charge Godavery District, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Dowlaishweram, 17th July 1876, No. 1,089.

WITH reference to paragraph 3 of G.O., No. 1,111, of 5th May 1876, I have the honor to forward herewith a statement showing the sanction for distributaries from the lump sums included in the completion project for the several canals in the Eastern Delta under the head "Extraordinary" and (as far as it can be ascertained) the additional acreage irrigated or to be irrigated by these distributaries, and request that you will be good enough to obtain orders of Government for the confirmation of the sanctions already given for the works detailed in the statement. You will notice from the remarks in the statement that the additional land proposed to be irrigated under each distributary cannot be ascertained, and the reason for this is as follows:—Some years ago the irrigation was carried on chiefly by means of palmyra spouts in the main canal banks with small channels leading from them; there were also old masonry sluices and channels constructed at Government expense; this method of irrigation by a number of separate heads being considered objectionable, estimates were prepared out of the lump sum allowed for distribution, for head sluices and channels to run parallel to the main canal and render all the palmyra spouts unnecessary; these channels were of course to irrigate all the land formerly watered by the spouts, &c., and in some cases it appears that it was assumed that additional land would be taken up, though how much this was cannot be ascertained, except in very few cases, as in the plans only the total acreage is mentioned, and it is now impossible to ascertain what the area of cultivation was before the new channels were dug. Such being the case, it is evident that the cost of distribution per acre cannot be given; for, dividing the cost of one of the new sluices and distributaries by the total acreage under it would give a false result, as the cost of the old works should be added to the former. Sometimes the work sanctioned was not intended to cause any increase of cultivation, such as a culvert on a road where there was formerly a breach, a regulator on an old channel to render the distribution of water easier, &c., &c., such works it appears to me should have been charged to Revenue; however this was not done. From the statement the total cost per acre of the whole distribution arrangements under each canal can be seen, and it will be noticed that in every case, except that of the Cocanada and Samulcottah canals, the cost is considerably below Rupees 4 an acre, so that as long as the lump sum sanctioned by Government is not exceeded, there must be a profit, *i.e.*, if the proposed extra land is cultivated wet. In submitting estimates in future a separation will always be made between the land now irrigated and that proposed to be irrigated; but, as this has not been done hitherto except in a very few cases, I am sorry I cannot submit the statement in a more complete form. In the case of the Cocanada and Samulcottah canals the cost of distribution is very high, viz., Rupees 13·21 per acre; the reason of this appears to be that the distribution arrangements were more for the purpose of improving existing cultivation than for extending it.

With reference to your memorandum
o. 49 GD, of the 29th May 1876, I have
he honor to state that the information in
he form required by the Government
rder above alluded to in support of the
timates for the works noted in the
rgin forwarded with my letter, No. 448,
of the 19th May 1876, is embodied in the
statement now forwarded. I therefore request that orders of Government for excesses
over the sanctioned estimates may be obtained.

	Original Estimate.	Excess required sanction.
	Rs.	Rs.
Excavating Thossipudi north side channel	2,410	210
Constructing an aqueduct over south side channel from Thossipudi lock	748	62
Do. from Madapad lock	590	62

Statement showing the sanctions for Distributaries from the lump sums for the several Canals in the Eastern Delta Division, Godavery, under the head "Extraordinary," and the additional acreage irrigated or to be irrigated by them.

Canals.	Provision for Distributaries.		Total.	Additional Acreage to be irrigated.	Rate per Acre.	Estimates already sanctioned.			Remarks.
	Masonry.	Earthwork.				Amount.	Acreage.	Rate per Acre.	
1	2	3	4	5	6	7	8	9	10
Cocanada Canal	21,000	8,000	29,000	2,194	13·21	25,545	37,710	...	
Excavating the Thossipudi north side channel	...	...	...	...	...	2,410	9,000	...	The figures entered in column 8 are the total of the acreages (now irrigated and proposed to be irrigated) under the channels, the increase of cultivation due to execution of the distributaries cannot be ascertained, as most of the works were made for the sake of a better regulation of water-supply by providing proper channels with head sluices and regulators instead of allowing the irrigation to be carried on by means of numerous palmyra spouts and small channels. In fact, the works appear to have been designed more with the idea of improving existing cultivation than of extending it. In some cases the total acreage cannot be
Constructing head sluice to side channel from Thossipudi channel on north side	...	...	...	...	...	995			
Do. an aqueduct over do. do. ...	...	...	...	...	...	805			
Excavating Thossipudi south side channel	...	...	...	...	...	2,370	5,200	...	
Constructing head sluice to side channel from Thossipudi channel on south side	...	...	...	...	...	942			
Do. an aqueduct over do. do. ...	...	...	...	...	...	748			
Do. head sluice to Palthodoo Bodi channel	...	...	...	...	...	590	2,500	...	
Do. an aqueduct over do.	...	...	...	...	...	450			
Completing the Madapad south H. L. channel	...	...	...	...	...	2,770	800	...	
Constructing an aqueduct over do. ...	...	...	...	...	...	590			
Do. culvert on Woondoor road south of do.	...	...	...	...	...	1,690			
Widening Karapa Bodi channel ...	...	...	...	...	...	250	12,160	...	
Extension of do.	...	...	...	...	...	1,160			
Constructing a tunnel under Sampara Bodi channel	...	...	...	...	...	270			

Proceedings of the Madras Government, Public Works Department,
19*th August* 1876 *No.* 2,186.

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Statement showing the sanctions for Distributaries from the lump sums, &c.—*(Continued.)*

Canals.	Provision for Distributaries.		Total.	Additional Acreage to be irrigated.	Rate per Acre.	Estimates already sanctioned.			Remarks.
	Masonry.	Earthwork.				Amount.	Acreage.	Rate per Acre.	
1	2	3	4	5	6	7	8	9	10
Constructing a regulating dam to Sampara and Karapa Bodi channels ...	...	...	...	...	...	1,450			ascertained, and it is believed that such works were designed simply for the purpose of remedying defects in existing channels.
Do. a head sluice west of Chintapilly lock	...	...	...	...	...	1,960			From the above observations it will be seen that it would be useless to fill up column 9 by dividing figures in column 8 by those in column 7, as the result would prove nothing.
Do. a regulating dam across Kykavole channel	...	...	...	...	...	650		...	
Excavating north side channel above Madapad lock	...	...	...	...	...	750	850	...	
Constructing a sluice at the head of north side channel from 7th to 9th mile	...	...	...	...	...	700			
Excavating a side channel from Montclair channel sluice on the south bank of Cocanada canal	...	...	...	...	...	240	850	...	The above remarks apply to the distribution arrangements of all the canals in the delta.
Constructing a head sluice to do. ...	...	...	...	...	...	335			
Excavating an irrigation channel on the left bank of Cocanada canal from 27th mile to Raypoor	...	...	...	...	...	680	1,500	...	
Constructing head sluice to do. do. ...	...	...	...	...	...	690			
Excavating an irrigation channel on the right bank of Cocanada canal from 5th to 6¼ mile	...	...	...	...	...	650	600	...	
Constructing head sluice to do. ...	...	...	...	...	...	460			
Do. a regulating dam for Vandra channel	...	...	...	...	...	390	850	...	
Do. do. to Yendamoor channel. ...	...	...	...	...	...	550	3,400	...	
						25,545	37,710		
Coringa Canal	18,000	8,000	26,000	10,810	2·45	...	...	...	
Excavating channel from Yerupilly sluice to Vella south side sluice	...	...	...	...	...	1,350	1,100	...	The same remark applies equally to this channel as to the Cocanada channel.
Constructing head sluice to do. ...	...	...	...	...	...	530			
Excavating Cazoolur irrigation channel	...	...	...	...	...	990	5,300	...	
Constructing head sluice to do. ...	...	...	...	...	...	1,220			
Excavating Itapoody irrigation channel.	...	...	...	...	...	1,020	2,000	...	
Constructing head sluice to do. ...	...	...	...	...	...	1,000			
Deepening and widening Seela drainage channel	...	...	...	...	...	440	...	...	
Constructing head sluice to Kongode channel	...	...	...	...	...	430	1,000	...	
Do. do. to Vella north side H. L. channel	...	...	...	...	...	1,308	8,900	...	
Do. do. to Vella south do. do. ...	...	...	...	...	...	828	5,600	...	
Do. do. above Alamoor lock on the right bank of Coringa canal	...	...	...	...	...	900	7,600	...	
Constructing a regulator No. 1 on Yanamadala irrigation channel	...	...	...	...	...	680	...	...	
Do. do. No. 2 do. do. ...	...	...	...	...	...	590	...	...	
Do. do. No. 1 on Yendamoor do. ...	...	...	...	...	...	630	...	...	
Do. do. No. 2 do. ...	...	...	...	...	...	800	...	...	
Do. tunnel below Thammulla channel	...	...	...	...	...	380	400	...	
Do. a teakwood trough to carry irrigation channel over the backwater near Munjair lock	...	...	...	...	...	600	850	...	
Do. do. over Wodoor Bodi channel over Chodaram drain...	...	...	...	...	...	690	...	...	
						14,386	32,750		
Mundapett Canal	9,000	2,000	11,000	7,071	1·55	...	...	...	
Revised, *vide* G.O., No. 1,281, dated 22nd May 1876	4,467	7,403	11,870						
Excavating a channel for Matasveram village	...	...	...	...	...	1,351	...	...	
Constructing head sluice to do. ...	...	...	...	...	...	87	...	...	

Statement showing the sanctions for Distributaries from the lump sums, &c.—*(Concluded)*.

Canals.	Provision for Distributaries.		Total.	Additional Acreage to be irrigated.	Rate per Acre.	Estimates already sanctioned.			Remarks.
	Masonry.	Earthwork.				Amount.	Acreage.	Rate per Acre.	
1	2	3	4	5	6	7	8	9	10
Excavating new irrigation channel on the north side of Mundapett canal from the iron girder bridge to Chodaram									
Do. channel from Chodaram channel...	...	...	...	...	...	1,466			
Moiety of the estimated cost of Rs. 900 for constructing head sluice to do. ...	...	...	...	...	...	157	5,700	...	
Excavating channel No. 1 on the left bank of Mundapett canal	...	...	...	...	...	450			
Constructing sluice No. 4 near the 11th mile sluice on the left bank of Mundapett canal	...	...	...	...	...	2,600			
Do. for channel No. 1 on the left bank of do.	...	...	...	...	...	620	2,700	...	
Excavating a channel on the right bank of Mundapett canal	...	...	...	...	...	580			
Constructing a sluice No. 3 below Yaditna sluice on the right bank of Mundapett canal	...	...	...	...	...	1,670	1,000	...	
Excavating a drainage channel to drain the Sonaswaram lands	...	...	...	...	...	600			
Constructing a tunnel under Nadurbada irrigation channel	...	...	...	...	...	159	...	...	
Constructing a regulating dam to Mundapett irrigation channel	...	...	...	...	...	300	...	...	
Do. head sluice to Ramchendrapoor irrigation channel on the left bank of Mundapett canal at 18th mile ...	...	...	...	...	...	320	1,600	...	
						910	1,500	...	
Do. to Chelloor and Moochumilly channels. Do. right bank	...	...	...	...	...	600	...	...	
						11,870	12,500		
Bank Canal	5,600	7,500	13,100	33,518	0·39	...	...	...	
Nil.									
Ingeram Canal	9,000	2,000	11,000	4,100	2·67	...	...	...	
Excavating channel from sluice on the right bank of Ingeram canal from 22nd to 24th mile	...	...	...	...	...	900	1,500	...	
Constructing head sluice to do. ...	...	...	...	...	...	620			
Excavating channel on the right bank of Ingeram canal from 24th to 27th mile	...	...	...	...	...	1,920	2,700	...	
Constructing head sluice to do. ...	...	...	...	...	...	730			
Excavating an irrigation channel on the left bank of Ingeram canal at the 22nd mile to irrigate down to the 27th mile	...	...	...	...	...	1,850	1,500	...	
Constructing head sluice to do. ...	...	...	...	...	...	660			
						6,680	5,700		
Samulcottah Canal	8,500	15,200	23,700	1,205	19·66				
Excavating a channel from sluice at 12½ mile	...	...	...	...	...	3,800	4,520	...	
Constructing sluice No. 3 to do. ...	...	...	...	...	...	1,040			
Excavating a channel from sluice at 19½ mile	...	...	...	...	...	2,050	5,460	...	
Constructing sluice No. 4 to do. ...	...	...	...	...	...	1,090			
Excavating channel from sluice at 22½ mile	...	...	...	...	...	2,760	6,200	...	
Constructing sluice No. 5 to do. ...	...	...	...	...	...	1,200			
Regulating weir for Pundoolapaka channel	...	...	...	...	...	610	1,050	...	
Constructing sluice No. 1 at 5½ mile ...	...	...	...	...	...	650	1,680	...	
Do. No. 2 at 9½ „ ...	...	...	...	...	...	650	1,305	...	
Do. No. 6 at 26½ „ ...	...	...	...	...	...	1,160	5,000	...	
						15,010	25,215		

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ABSTRACT OF FOREGOING.

Canals.	Provision for Distributaries.		Total.	Additional Acreage to be irrigated.	Rate per Acre.	Estimates already sanctioned.			Remarks.
	Masonry.	Earth-work.				Amount.	Acreage.	Rate per Acre.	
1	2	3	4	5	6	7	8	9	10
Cocanada Canal	21,000	8,000	29,000	2,194	13·21	25,545	37,710	...	
Coringa do.	18,000	8,000	26,000	10,810	2·45	14,386	32,450	...	
Mundapett do.	9,000	2,000	11,000						
Revised ...	4,407	7,463	11,870	7,071	1·55	11,870	12,500	...	
Bank Canal	5,600	7,500	13,100	33,518	0·39	...	...	...	
Ingeram do.	9,000	2,000	11,000	4,110	2·67	6,680	5,700	...	
Samulcottah do.	8,500	15,200	23,700	1,205	19·66	15,010	25,215	...	
	71,100	42,700	113,800	58,908	1·93	73,491	113,875	...	

DOWLAISHWERAM,
3rd July 1876.

(Signed) D. McNEIL CAMPBELL, Lieut., R.E.,
Executive Engineer, Godavery District.

Proceedings of the Madras Government, Public Works Department,
19th August 1876. No. 2,186.

No. 456-A. From Lieutenant D. McNEIL CAMPBELL, R.E., Executive Engineer in charge Godavery District, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Dowlaishweram, 17th July 1876, No. 1,095.

WITH reference to your memorandum No. 50 GD, of the 29th May 1876, I have the honor to submit herewith a statement, showing the information in the form required by G.O., No. 1,111, dated 5th May [illegible], regarding the additional acreage to be irrigated under the proposed channel on the right bank of the Cocanada canal from the 27th mile to near Covoor, and to request you will be good enough to obtain sanction of Government for the estimates forwarded with my letter, No. 425, of the 15th May 1876. Explanation as to why detailed information regarding the increase of cultivation cannot be given will be found in my letter, No. 1,039, dated 17th July 1876.

Statement showing the additional Area to be irrigated under the proposed Irrigation Channel on the right bank of Cocanada Canal from the 27th mile to near Covoor.

Canals.	Provision for Distributaries.		Total.	Additional Acreage to be irrigated.	Rate per Acre.	Estimates already sanctioned.		Rate per Acre.	Remarks.
	Masonry.	Earthwork.				Amount.	Acreage.		
1	2	3	4	5	6	7	8	9	10
Cocanada Canal	21,000	8,000	29,000	2,194	13·21	...	...	...	As figures in column 8 include present irrigated land, it would be useless to fill up column 9, *vide* remark in statement forwarded with letter, 17th July 1876.
Total amount of estimates sanctioned up to date, as per statement forwarded with letter, No. 1,039, dated 17th July 1876 ...	...	...	...	...	...	25,545	37,710	...	
Amount of estimates submitted for sanction with letter, No. 425, of the 15th May 1876	...	...	...	...	...	1,660	*2,500	...	* Including present irrigated area.
Total...	...	...	...	...	...	26,395	40,210	...	

(Signed) D. McNEIL CAMPBELL, Lieut., R.E.,
Executive Engineer, Godavery District.

DOWLAISHWERAM,
4th July 1876.

Proceedings of the Madras Government, Public Works Department,
19th August 1876. *No.* 2,186.

No. 14[illegible].

No. 456-B. *Note by the Chief Engineer for Irrigation.*

With the former letter the District Engineer transmits a statement prepared as directed in G.O., No. 1,111, of the 5th May last, showing all the sanctions already given to estimates for minor distribution works against the lump sum provisions on account in the sanctioned* estimates of the several canals of the Eastern Section of the Godavery Delta, and it will be seen that, owing to these provisions being partly for improving the distribution arrangements of the old irrigation and partly for the supply of new lands, it is not practicable to compare the area of the latter with the amount provided, or to show, as had been intended, the progress of expenditure in relation to the extended acreage under the several canals. The abstract at the end of the statement shows how the case stands. The additional area under the Cocanada canal was expected to be only acres 2,194, and the provision for distribution works is Rupees 29,000, and the estimates amounting to Rupees 25,545 there against sanctioned are connected with the irrigation of 37,710 acres, or on the average 0·68 of a Rupee per acre will be expended on improvements. Again, the additional acreage to be irrigated by the Samulcottah canal was acres 1,205, and the lump sum provision is Rupees 23,700, estimates amounting to Rupees 15,010 have been sanctioned for the irrigation partly of new and partly of old land of the extent of 25,215 acres, or on the average nearly 0·60 of a Rupee per acre. These are the extreme cases in the one direction, viz., that of old canals which have been themselves improved and the distribution under which has been, either because the old arrangements were no longer applicable or were objectionable, rearranged. For the other four canals the lump sum provision was small compared with the additional acreage, but for all except the Bank canal for which no distribution estimates have yet been passed, the actual acreage connected with the new or improved works is in excess of the total additional acreage expected to be irrigated.

2. The District Engineer asks for the confirmation of the sanctions given before the orders contained in G.O., No. 1,111, of the 5th May last, were issued. The total of these distribution estimates is Rupees 73,491.

3. In the letter No. 1,095, the District Engineer asks for the sanction of an estimate of Rupees 1,660 for a distributary on the right bank of the Cocanada canal in the 27th mile. The estimate was originally submitted for sanction in May last, No. 425, 15th May. and was kept back for the information required by the G.O. of the 5th May already above referred to. The lump sum provision and the amounts already sanctioned are as follow :—

——	Lump sum Estimates.	Estimates already sanctioned.	Present Estimate.	Total of Estimate.	Balance.
	Rs.	Rs.	Rs.	Rs.	Rs.
Masonry works	21,000	14,265	810	15,075	...
Earthwork	8,000	11,280	850	12,130	...
	29,000	25,545	1,660	27,205	1,795

* By Government of India.

The acreage to be supplied by the c utary now estimated for is 2,500, which includes, and is chiefly, old irrigatio he estimate provides for a head sluice and a channel 2 miles long, and the classi on is—

Co
3 *Distributaries.*—Chann A Canal.
C. Works—Head sluice . 27th mile.
L. Earthwork ... ... Rs. 810
... ... 850
1,660

The estimate is recommended for sanct

OOTACAMUND,
3rd August 1876. (Signed) JOHN MULLINS, Lt.-Col., R.E.,
Chief Engineer for Irrigation.

To the Secretary to Government, Public Works Department.

No. 457. ORDER THEREON, 1 th August 1876, No. 2,186.

IRRIGATION, No. 49.

Account.

THE sanction of the estimates, amounting to Rupees 73,491, for distributaries, Eastern Delta, Godavery, is confirmed as follows :—

108 I. of 1876-77.
1. Cocanada Canal ... ... Rs. 25,545
2. Coringa do. 14,386
3. Mundapett do. 11,870
4. Ingeram do. 6,680
5. Samulcottah do. 15,010

The registered numbers of the tions are shown above.

2. The estimate of Rupees I) for a distributary in the right bank of the Cocanada canal, 27th mile, is sanctio as follows :—

GODAVE EASTERN DELTA.

C ADA CANAL.

Fund.—Capital Extraordinary
Main-head.—(3) Distributaries Rs.
Sub-heads.—C. Works 810
Do. —L. Earthworks 850
Amount of estimate ... 1,660

3. This estimate has been re red as No. 109-I of 1876-77.

e Extract.)

Colonel,
Offg. Under Secy. to Govt., P.W.D.

To the District Engineer, Godavery.
" Collector of do.
" Chief Engineer for Irrigation.
" Examiner of Public Works Ac
" Revenue Department.

Exd. E. C. Shunker.

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PUBLIC WORKS.

To

THE DISTRICT ENGINEER,
GODAVERY,
&c., &c., &c.

Dated August 19th.

Issued

Rcd. 16th Sept

G. O., 19th August 1876, No. 2,186.

AUGUST.

Nos. 456-457.

Eastern Delta, Godavery.—Sanctioning estimates amounting to Rupees 41,591 for distributaries in the Cocanada and Coringa canals in the —. No. 2165

Communicated to Chief Engr

16 Sept 1876

11 Estabs Drawing

New No. Scott. I (i)-1—Old No. M.R.O. 1—10,006—10-6-68.

(1) Number of pages