M.R.O. 1—77,005—8-6-37.

M.R.O. 1—4,002—16-9-48.

(1) Number of pages 10

(2) Date of repair 25.11.49

(3) Initials of the Referencer

MADRAS RECORD OFFICE

Government of Madras

Revenue DEPARTMENT

G.O. No. F.R. 1995 Press Original
~~B.P. No.~~ ~~Mis.~~

Dated 20th September 1878.

Not to be folded or roughly handled

GOVERNM

REVENUE

20th Sept[illegible]ber 18

Famine

Read the following paper :—

No. 288. Endorsement of the Unde[illegible]
Department, dated 10th Septem[illegible]

Read the following letter from Lieu[illegible]
Officiating Superintending En[illegible]
FOORD, R.E., Chief Enginee[illegible]
4th September 1878, No. 2,816 [illegible]epartment, dated Vellore,

In F.R. Department, No. 1,761, 15th August, and No. 1,828, 22nd August.

WITH reference to G.O., No. 647-I, dated 17th August 1878, I have the honor to submit copy of Mr. Cotton's letter, No. 625, dated 26th ultimo, with report of progress, and two tabular statements showing the estimated amounts of main items of work, and the actual as well as probable sums of expenditure against them.

2. As Mr. Cotton has given explanation regarding each head of outlay, I need make only a few further remarks.

Kaveripak Main Channel.—The cross sections taken originally at long intervals did not represent at all accurately the requisite widening, as it has been necessary to remove the old bank at parts entirely down to the bed level of the channel. The old channel was very irregular in section; at one point being quite wide enough, and at another point not half of the full width. So that unless many more sections had been measured, especially at the narrow points, the calculations of cubic content of earth to be taken away could not be at all correct. Under the heavy falls of rain that we have had on the line of channels in the last month, the new earthwork has naturally settled down, and the slopes have been somewhat furrowed.

There is excess expenditure on the masonry, about Rupees 3,760. There was difficulty about the foundations, owing to the presence of water at a short distance below the surface of the channel bed. This large channel with its deep sand holds water in suspension in a manner as the large Palar River does. To assist the clearance for the foundations a small channel was dug for some distance down the centre of the large channel so as to carry off a good deal of the water and lower its level in the excavation. An ordinary provision for foundation work was therefore not sufficient in the actual circumstances.

At certain bends in the channel, there was stone revetment in the old banks on the side where the current ran strongest. No provision was made for the removal of the stone-work or replacing it.

There was no separate item for tools and plant for this channel; but there is a general item under this head in the abstract of the whole set of estimates. A proportion is due to each channel really, but there is an apparent excess upon any one estimate. The camp construction is a separate item specially ordered; and the expenditure is debitable to Famine rather than to the work itself.

3. *Govindavadi Channel.*—The earthwork on this channel is much in excess in quantity, and the sections as explained above were not frequent enough to give anything like accuracy in the cubical content of excavation. The materials are brought to site for five of the drops, and they are being brought in for the rest of the masonry works. There will be excess again on the foundations of some of these works, for river-irrigation channels run close by, and the water soaks

…ary to resort to many picottahs to lay …een made not to commence any work …e the first week in October, so that the …eshes of the north-east monsoon that may …th of October. The demolition of the old …lious, and costs more than was estimated. …done by Wudders, but the Wudders will …for payment by measurement and therefore …ture on camp construction, tools, &c., are …e is an additional item of Minor Sluices, …small works that were omitted in the …o the channel to dispose of surplus water …irrigation channel, as there is a liability …Govindavadi channel and as there is no …age. The other work is an under-tunnel …on channel below the bed of the Govinda-

…er means of getting …
to convey the water of a small …
…vadi channel.

4. I visited the works the end of last month: the Palar River had come down in flood, and fortunately the Kaveripak main channel was ready to receive water. The depth of water in the channel was restricted to 2½ feet according to verbal instructions previously given by Colonel Mullins. Water has now being going down for several days, and the Kaveripak large tank is already nearly full, quite independent of the regular north-east monsoon.

TRANSFERRED with reference to G. O., P.R. No. 1,761, dated 15th August 1878, to the Revenue (Famine) Department.

(Signed) P. MONTGOMERIE, Major, R.E.,
Under-Secy. to Govt., P. W. D.

ENCLOSURE No. 1.

From W. G. L. COTTON, Esq., Executive Engineer, Palar Anicut Channels, to Lieut.-Colonel H. L. PRENDERGAST, R.E., Officiating Superintending Engineer, North Arcot, dated Ranipet, 26th August 1878, No. 625.

I HAVE the honor to forward in compliance with your Memorandum No. 2,410, dated 19th instant, a report explaining the progress that has been made in carrying out the main Kaveripak tank and Govindavadi channels.

2. The expenditure is given to the 31st July; since that a further credit of Rupees 55,000 has been given for this month, which will be nearly expended by the end of the month—greater progress will have been made on the prickly-pear clearance, and the earthwork of the 6th, 7th and 8th miles, and the portion incomplete on the 2nd mile is finished.

3. The approximate estimate, I submit, shows a requirement of Rupees 1,39,655 to complete the two channels on the 31st July; but this will be reduced on the 31st August by about Rs. 45,000, leaving a probable requirement of Rs. 94,655.

4. I have the honor to add that the work is being carried out under the Chief Engineer's Memorandum No. 24, dated 12th March 1878, and under the plans and estimates submitted for the Govindavadi channel by Mr. Rundall; the original plans have not been received by me as approved, but the works have been started under the copies handed to me from your office.

5. The improvements to the main sluice shutters and the Govindavadi and Mahendravadi division sluices have not yet been started.

6. I am having with the extra establishment placed at my disposal data collected for the preparation of a revised estimate in detail, which I will submit if desired.

(True Copy.)

(Signed) L. L. PRENDERGAST, Lieut.-Colonel, R.E.,
Offig. Superintending Engineer, North Arcot.

ENCLOS…

KAVERIPAK…

ESTIMATE.—Approved of by the Chief Engine… 12th March 1878, and under which the wor…
ESTIMATE REVISED.—As per statement enclosed

EARTHWORK.—The work was commenced on … bed and embankment, three miles, has now bee… the amount allowed by the estimate being 25, … unprovided for in the estimate, and the rates l… of the gangs consisting of weak people could n… diem. I refer to a gang of 8 or 10 men and 22 … The work has therefore cost 1 Anna 10 Pies p… cubic yards at a cost of Rs. 38,137, but I have … cubic yards in es… the banks still require attention and repairs until t… …nsolidated.

PRICKLY-PEAR.—This work has been comple… … Rs. 6,977-12-4, or about 1,163 Rs. per running mile, the estimate being 4,050 or … per mile. This work was very heavy and deep and difficult to clear and it is almost impossible to task the famine coolies employed on such works.

MASONRY CONSTRUCTION.—The two falls have been completed, and I was able to open the channel on the 14th instant, and pass 1½ feet of water down. They will be completed at a cost of Rs. 20,161. The items exceeded being the balin… and excavation; also extra concrete in foundations, which was quite unavoidable; the work has been done by cooly labor under my own supervision.

	RS.	A.	P.
ESTABLISHMENT.—The items for supervision in the estimate, amounted to	908	9	0
The actual cost has been	585	4	8

Items not included in estimate—

REVETTING.—There is no provision for this, and the removal of the old work, and repack… ing it, was absolutely necessary. It has cost so far Rs. 595-14-6, but there is yet more to do near the drops.

TOOLS AND PLANT.—This also is not provided for, and shows an outlay of Rs. 401-5-7, chiefly for carriage of taluk tools and purchase of such tools not to be had in the district.

CAMP CONSTRUCTION.—There is no provision for this expenditure; and for the formation of the first camp and the construction of hospitals and huts, and employment of a sanitary establishment for some 15,000 coolies daily a considerable outlay was necessary in the first instance. The expenditure due to the channel was Rs. 4,003-5-6.

NURSERIES.—These were not started until the work on this channel was nearly done, and they only cost Rs. 81-11-0; there was no provision in the estimate for this item.

The following expenditure has also to be incurred:—

	RS.
Land	1,000
Head Sluice	4,900

The former will not, I think, be sufficient. I therefore submit a statement showing the actual expenditure to 31st July, and the probable amount required to complete the work, showing an excess on estimate of Rs. 30,978. The channel is completed with a width throughout of 215 feet and bank 9 feet high, the old channel having had width of bed varying from 100 feet in places to 300 feet, and banks in some places only 8 feet above bed. Some provision should be made for the watching and caring for the banks until they become consolidated and hard.

GOVINDAVADI CHANNEL.

	RS.
Estimate approved of by Chief Engineer in his Memorandum No. 24-N-A, dated 12th March 1878	1,38,400
Revised as per statement enclosed	2,11,648
Excess to complete ...	73,248

EARTHWORK.—The earthwork is completed (with the exception of small portions in the 2nd mile and at the drop) as far as the 5th mile at a cost of Rs. 73,551-8-8. The cost of earthwork is in excess owing to some error in the sections, and their being taken at very long intervals the quantity obtained being insufficient, and to very heavy work in the 2nd mile, also to low rates.

nel, or 465,891 cubic yards more which, as
yard.

this was Rs. 15,200. The work is completed
completed at a cost of Rs. 8,447-15-2 ; 7 running
the Civil authorities and by labor in October last
te estimate. There is still 12 miles of bank to

ress with these works :—
d crest nearly completed.
asonry in progress.
d work demolished, foundation out.
on, foundation out.
on, old work being destroyed.
—Materials under collection.
will be soon finished.
demolishing old work will be exceeded.

ITEMS.—The it

THE CAMP CONSTRUCTION—

SUPERVISION.—Estimate for ... Rs. 4,421-3-3, and the Nurseries Rs. 235-10-7. ... has cost Rs. 1,470-9-5, being about 1¼ per cent. on the expenditure as will be seen by the accompanying statement.

TOOLS AND PLANT.—The expenditure is Rs. 200.

SUMMARY.—I now submit a statement showing the actual expenditure to 31st July 1878, and the probable expenditure to complete the work showing an excess on estimate of Rs. 73,248. For the expenditure given against both these channels, it will be seen that eight miles of channel have been completed ; that two masonry works have been completed ; and that expenditure is going on on nine more ; and arrangements made for the early commencement of the remainder ; also that three camps have been constructed and necessary covering supplied to ... to some 15,000 coolies daily at work.

That since the work commenced, the coolies employed have been numbered in—

March 1878		
April „	8,932	
May „	108,273	
June	399,122	
July	355,271	
	440,880	
Total ...	1,312,478	

and that three Nurseries have supplied food to the following numbers of children under 7 years :—

May	759
June	4,930
July	6,966
Total ...	12,655

The estimates I now submit for the two channels amount to

	RS.	RS.
		2,95,526
Main channel	83,878	
Govindavadi channel	2,11,648	
Total ...		2,95,526

The total received from the Examiner up to the 31st July 1878 was—

	RS.
For Main channel	36,700
Govindavadi channel	1,22,100
Total ...	1,58,800

There is therefore a sum of Rs. 1,36,726 required to complete the work of these two channels.

(Signed) W. G. L. COTTON,
Executive Engineer, Palar Anicut Channel.

(True Copy.)

(Signed) H. J. PRENDERGAST, Lieut.-Colonel, R.E.,
Officiating Superintending Engineer, North Arcot.

Channel, amou...

2. The Chief E...
forward for the excess ...
ones sanctioned in G.O., No. 1,90...

To the Public Works Department.
„ the Examiner of Public Works Accounts.
„ the Chief Engineer for Irrigation with two enclosures to be returned.
„ the Financial Department.
„ the Board of Revenue.
„ the Collector of North Arcot.
„ the Accountant-General.

Exd. W. H. French.

Govt. of Madras

REVENUE.

To

The PUBLIC WORKS DEPARTMENT,

&c., &c., &c.

Dated September 2018.

Printed October 2nd.

Read.

Encl.

G.O., 2011 September 1878. P. R. No. 1,995.

8,839.

...ek and Gondalavadi Channels in the ... District—Sanctioning the revised ... amounting in the aggregate to Rs. ... the ——; and requesting the Chief ... Irrigation, to review the causes of ... for the detailed estimates sanctioned ... th September 1878, No. 1,906.

...d

F. No. 7780.

...vellapak Main Chan...

Rs

...te estimate was 36,700

...- d'to — 51,00

...tter was sanctio... D

...1906 of 5th Instt.

...ed estimates are now

...bmitted amounting to

83878 - There is therefore

an excess requiring sanction

of Rs 30,978 -

Govindavadi channel

Rs

Approximate estimate was 122,100

detailed estimate was 138,400

The latter was sanctioned in

G.O. No 1906 of 5th Instant.

Revised estimates are now

submitted amounting to

Rs 211,648 - There is there-

fore, an excess requiring

sanction of Rs 73,248

The total excess on these

two portions of the entire

work is Rs 104,226

Various reasons are

assigne...

egned for this excess
hich are probably
but as is usually
in the Public Wor
partment, Genera
but not so frequently
the Irrigation Branch,
the excess statements are
not reviewed by the
Chief Engineer, whose
opinion as to the validity
of excess statements
should always, I venture
to think, be recorded.

18/9

M.R.O. 1—77,006—S.-d.-37.

11

289–289

Kwanipaka

Chemist

after revised

No. 1586 of this Sr.

30 Sept 78

9

M.S. P.W. Departt

M.S. Examiner Sp. W. Accts

M.S. Chief Inspr Brys

with 3 encls to the retn

Finl. dept.

C.P. of Revenue

Collr of R. Accts

Accts General