

(1) Number of pages 6
(2) Date of repair 12/8/80
(3) Initials of the Referencer _____

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

G.O. No.	2023	Press.
B.P. No.		Mis.
Dated	10. 4. 1877	197 .

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No. 748.

Read the following papers:—

From Colonel F. J. MOBERLY, R.E., Superintending Engineer, Chingleput, to the Secretary to Government, Public Works Department, dated Camp, Manaly, 20th December 1876, No. 3,272.

At the request of the President, Municipal Commission of Madras, I have the honor to submit, for the consideration of Government, a proposal which I made to him for the employment of part of the starving crowd now in Madras.

One Sketch.

2. Mr. Burrows consulted me as to the excavation of short branch channels from the East Coast Canal, with the earth from which he proposed to "raise the ground to render it sufficiently free from flood." Misapprehending in some measure his project I pointed out that this would probably still further obstruct the flow of drainage from Veysarpady, &c.

3. I suggested that instead of cutting branches from the canal a continuous channel parallel to it through Satankadu ridge, led into the Red Hill surplus channel, would facilitate the drainage of the low lying parts of Madras, and would keep a considerable number of persons usefully employed for some time.

4. In G.O., No. 1,270, of 5th May 1875, paragraph 3, it is desired that I should deepen the canal when funds are available, with some idea that this would improve its value as a drain. I would respectfully submit that as the lock ponds up the water, and as the only outlet is 6 inches above H.W.M., deepening the canal can be of benefit only to navigation, and cannot affect the drainage.

5. The canal as I now propose may be cut to low water level, and as it is independent of the East Coast Canal will allow of the passage of drainage at almost all times, and with considerable velocity when the tide is ebbing; the earth may be made into a road to Madras.

6. Mr. Burrows' camp at Satankadu is admirably suited for my project; at present I propose cutting only from the Washermanpetta bridge into the Red Hill surplus channel near Sheddiankuppam. It will probably be useful to examine the outfall from Veysarpady and improve it.

7. The channel will cross the road from Tirunottiyur to Ponnery. I had at first thought of putting a long slope into it for the passage of the drainage; but it will be difficult to arrange, and I therefore propose to put a sluice bridge in the road, and to suspend shutters on the lower side so as to bar any entry of water from the Certeliar in exceptionally high floods.

8. I have desired that a line of levels be run over the length which I propose to take up, and have arranged to meet Mr. Burrows on the morning of the 23rd to lay out the work which he thinks very well of.

9. He will, I presume, execute it and remove the people now thronging Madras to it. But he preferred that I should explain it to Government for their sanction. I shall be glad to know that my proposal is approved at an early date.

10. The accompanying sketch from the Survey Map will, I hope, facilitate the comprehension of my project.

11. When this work is completed the occupants of the same camp might excavate a good channel from the sand where Red Hill irrigation ends, through the swamp, so as to define and improve the surplus outlet from the lake.

12. I would call attention to a late letter from me on the subject of this drainage. I have no record in camp of its number and date.

No. 748-A. From the same Officer, dated Mount, 8th January 1877, No. 3,427.

REFERRING to your No. 1,962, of 27th December 1876, I have the honor to offer the following statement in support of the accompanying plan and estimate for cutting a drain from Veysarpady, &c., to the Corteliar, which may supersede my previous letters.

One Estimate.
Two Plans.

2. The drainage of a tract of country south of the Madras Railway, from the neighbourhood of Avady eastwards, enters the East Coast Canal by the Otary nullah, and by the surplus of Veysarpady, Kodangiur tanks, &c., over the low-lying country through which the canal is cut.

3. This water used to find its way by a brook running down what is now Popham's Broadway into the sea through the fort, and into the Coom near the Medical College. Another branch flowed along the west face of Black Town also to the Coom. This latter was a large swamp a very few years ago, as many of us can remember; the People's Park, goods station, and salt platform being shallow reservoirs of water.

4. When the vent by Popham's Broadway and through the fort was closed very much of the water could find its way to the Corteliar near Ennore by the swamps, and Cochrane's canal cut through them and the low ridges separating the minor drainages. This waterway was again obstructed in 1856 by the construction of the lock and weir at Sheddiankuppam, which held up the tide water received from the river through the mouth at Ennore, and the surplus from the Red Hill valley which it crossed near its junction with the Corteliar.

5. The weir crest was fixed at high water mark, so that until this point was reached no water could pass out from the Red Hill stream or from Madras; in 1875 the weir was removed so that the Red Hill water could flow as freely as the height of flood in the Corteliar would allow.

6. A bank was thrown across the old Cochrane's Canal near the head of the lock channel, and the surplus water in the East Coast Canal was allowed to flow over the flat space lying between the two streams.

7. All these arrangements, whether for the improvement of Madras or of the salt and other boat traffic, materially obstructed the drainage from Veysarpady and Perambore, &c., the residents of which suburbs addressed Government in December 1874. The Committee appointed to consider the subject reported in April 1875, and Government passed Order No. 1,270 of 5th May 1875.

8. In this Report the Committee suggested the leaving low half a mile of the west bank of the canal to 6 inches above H.W. springs and deepening it.

9. The length of flat already at this level is nearly a mile; but no water could pass out till it rose 6 inches above H.W. mark, and really no relief was afforded. I regret that I cannot understand the object of deepening the canal, as its power of receiving and discharging drainage is regulated by the height of the weir. Whatever depth there might be it would be filled by the sea to H.W.M.

10. Before the lock was built the East Coast Canal did carry off the drainage by the line which the Committee consider "its best outlet, the Ennore-backwater." My present proposal is to make another canal parallel to the navigable one, but without any lock, down to low water mark into the Red Hill surplus channel, now opened by the removal of the weir.

11. The existing East Coast Canal proves the practicability of the work; but I was anxious to avoid the trouble to my already hard worked subordinates of taking levels for the details till the principle was approved; which approval appeared to Mr. Burrows necessary before he could employ the coolies thrown on his hands from Madras. With this view I addressed my No. 3,272 of 20th December to you.

12. As I said above, the line must cut through low ridges which separate the minor drainage, precisely as the East Coast Canal does. It also crosses two roads, one from Washermanpettah to the Red Hills, the other from Trivatur to Ponnery; in the former of these a bridge has been already built; for a new bridge in the latter a plan and estimate are herewith forwarded. I propose to hang shutters from the face walls to keep out any water from the Corteliar, which may in unusual floods come up the drain if the Ennore bar should not have opened early enough; the shutters will open of themselves as soon as the Veysarpady water has acquired any head.

13. For the present I do not propose to cut the drain beyond the road from Washermanpettah, because the Cotton Canal, a branch from the East Coast Canal, is in use as a night-soil depot. When this is removed, as is proposed by Mr. Burrows, to a point further north, the drain might be carried with great advantage to the railway, the earth removed from it being used in making up the tow-path, and preventing the ingress of any drainage water north of the railway into the East Coast Canal, which will very considerably diminish our work in clearing above Sheddiankuppam lock.

14. The bed of the channel is laid out 1 foot below what I believe to be low water mark at Sheddiankuppam, but this amount of earth is only just sufficient for the general amount required for the road alongside, and in the low portion near Trivatur we shall need to cut 3,860 cubic yards more to get the roadway out of floods. This may be obtained by pits in the width of the channel or from the East Coast Canal berm. Allowance is made in the estimate for it.

No. 67—W.

No. 748-B.

Note by the Chief Engineer for Irrigation.

The Superintending Engineer, Chingleput, in his letter No. 3,427, of the 8th instant, notices the changes in the neighbourhood of and to the north of Madras, which have, in his opinion, obstructed drainage, and, though some of his conclusions might be questioned, it is admitted by all that the drainage is defective, and his proposal to cut a drain parallel to the coast canal as a famine relief work appears worthy of

consideration. No cross section of the drain has been furnished, neither has the estimated cost at ordinary rates been stated. The length of drain proposed to be first undertaken, viz., from Washermanpettah bridge to the south end of the Ennore backwater near Shaddiankuppam lock is a little under 4 miles.

2. Were the lock just referred to removed, the efficiency of the canal as a drain would be much increased, and in this way the canal could be made to do all that a drain of similar capacity could accomplish. The lock was built to improve the navigation by admitting water from the Ennore backwater at high tide and retaining it when the tide fell. The lock consequently obviated the necessity for cutting the canal down to as low a level as would otherwise have been requisite. The removal of the lock would then be followed by a need of deepening the canal, so as to afford a sufficient depth for navigation at low water. The construction of a parallel drain will, as Colonel Moberly observes, keep out of the canal a good deal of silt which now falls into it. The removal of the lock would tend to lower the water level in the Coom, and to neutralize the effect of the Junction Canal now under formation in maintaining a high level by the inflow of water from the Covelong backwater during the prevalence of the southerly winds.

On the whole, then, the balance of advantage is, it is thought, decidedly in favor of a parallel drain which, to benefit Veysurapady materially, will have to be carried south from the temporary terminus at Washermanpettah bridge to the railway.

The present use of Cotton's Canal as a night-soil depôt is somewhat remarkable. Possibly the Superintending Engineer's remark is not to be taken to mean that the soil is deposited in the canal.

Paragraph 13 of Superintending Engineer's letter.

3. The drain will necessarily have but a very small fall, about 3 inches a mile for the bed, and to be efficient its dimensions must be fixed with some reference to the area, the drainage from which it is intended to carry off. There will probably be no difficulty in securing ample dimensions, if it be carried out as a famine relief work when the harvest in the neighbourhood is over.

4. The proposed bridge of three 6 feet spans at Satankadu appears to be small, but in the absence of information as to the size of the drain, and as to the data on which its size will be determined, no definite opinion can be given. The flooring should be extended considerably on the north side and somewhat on the south. The wings, if arranged like those of a head sluice with concave splays on the lower and convex curves on the upper side, would be better. Looking at the level of the foundations, the item for baling (Rupees 45) seems small.

FORT ST. GEORGE,
23rd January 1877.

(Signed) J. MULLINS, Lieut.-Col., R.E.,
Chief Engineer for Irrigation.

No. 748-C. From Colonel F. J. MOBERLY, R.E., Superintending Engineer, Chingleput, to the Secretary to Government, Public Works Department, dated Camp, Nallur, 17th February 1877, No. 4,003.

REFERRING to G.O., No. 206, of 22nd January, I have the honor to call attention to my No. 3,427, of the 8th January. In it I proposed a plan for draining a con-

siderable portion of the low ground near Veysarpady, &c., by cutting a channel behind the embankment of East Coast Canal, and building a tunnel with shutters in the approach of the bridge across the East Coast Canal, carrying the road from Tirnuttiyur to Ponnery. These shutters suspended on the lower side of the tunnel would keep the Corteliar flood back.

2. I proposed cutting this channel, see paragraph 13, only as far as the road from Washermanpettah to Manaly. In this causeway is a good bridge of three vents, clearly intended for the passage of such a drain as I am proposing, but access to it is barred by a canal dug by Sir A. Cotton for the conveyance of laterite from the Red Hills to the backwater in Madras roads.

3. At the west end of the causeway is a good road slope by which the surplus of Kogandiyur tank passes into the East Coast Canal, south of Satankadu. By this means a considerable area of ground would be drained in even my original project.

4. The Cotton Canal, branching from the East Coast Canal, is now used as a night-soil depôt, and its banks bar all passage to the bridge in Manaly causeway; but if this latter were fitted with shutters we might remove some of the banks of the Cotton Canal, and discharge a very considerable quantity of rainfall from the Veysarpady tank, and Otary nullah, and yet be able to regulate the East Coast Canal for navigation. The probable cost of the shutters is Rupees 300.

5. If the Municipality would give up the Cotton Canal we might carry the drain up to the railway. A gap might be left in the East Coast Canal embankment near the railway bridge if necessary; but I am under the impression that a considerable discharge might be passed under the railway by existing vents, which might have invert floors built, if required, to lower the Otary more rapidly.

6. This is a mere matter of detail, if my plan generally is approved I believe we shall relieve Veysarpady, Perambore, &c., very considerably.

No. 749.

ORDER THEREON, 29th March 1877, No. 1,079.

CIVIL WORKS, No. 56.

The proposals of the Superintending Engineer, Chingleput, for constructing a drain parallel to, and to the west of, the East Coast Canal, between Cotton's Canal and the surplus channel of the Red Hills Tank near Sheddiankuppam, are generally approved for execution as a famine relief work, subject to the revision by the Chief Engineer of the details of the project, which has not, it is remarked, been brought forward by Colonel Moberly in as a complete form as Government could have desired.

(True Extract.)

Colonel,
Acting Joint Secy. to Govt., P.W.D.,
Buildings and Roads Branch.

To the Superintending Engineer, Chingleput.
" Chief Engineer, Buildings and Roads Branch.
" Revenue Department.

Ed. S. T. Austin.

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Govt. of Madras.

PUBLIC WORKS.

To

THE SUPERINTENDING ENGINEER,
CHINGLEPUT.
&c. &c. &c.

Dated March 29th.

Issued

Recd. a 6.

Encl.

G. O., 29th March 1877, No. 1,679.

MARCH

Nos. 748-749.

In B. M. 8/11 April 77

2023

Communicated to the
R. P. B. W.

21 10 April 77

Drawn parallel to road, in the vicinity of the
East Coast Canal between Cotton's Canal and
the railway channel of the Red Hills Road,
near Chidambaram, Chingleput District.
The proposal to undertake the construction
of a — as a relief work approved with
sanction.