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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 1839.Press
Mis.231-232-Dated 10-7-1863.

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Public Works Department,
10th July 1863.*

No. 231. Read the following letter from Captain E. A. FOORD, R. E., Superintending Engineer 6th Division, to Colonel W. I. BIRDWOOD, R. E., Secretary to Government, Public Works Department, dated Tanjore, 15th June 1863, No. 70 :—

SIR,

1 Letter from District Engineer
Tanjore, No. 10, dated 5th
May 1863.

1. I have the honor to forward a letter from the District Engineer of Tanjore containing the information called for by Government in their Order No. 348, of the 11th February 1863.

2. I have retained the Estimate which accompanied the letter, as, since it was made, another portion of the revetment wall has fallen. I inspected the sluice on my way from South Arcot to Tanjore last month, and as the repairs had not then made much progress, on account of freshes in the river, and the working season was far advanced, I have thought it best to defer the repairs till after the monsoon, and another Estimate will be prepared before they are commenced.

3. The sluice can remain closed for one season without injury to the Channel.

From Captain J. MULLINS, Acting District Engineer, to Captain E. A. FOORD, R. E., Superintending Engineer 6th Division, dated Tanjore, 5th May 1863, No. 10 :—

SIR,

• 2 Plans.

1 Specification surplus sluice of
the south Bajen Voikal, lower
Anicut.

1. I have the honor, in forwarding an Estimate, Rupees 1,280, with its accompaniments as per margin,* to furnish the information required by Government in their Order No. 348 of the 11th February 1863.

2. The surplus sluice was built on an Estimate Rupees 2,253-6-0 included in the sanction given by Government in their Order No. 280, of the 3rd March 1837.

The repairs of 1859 were sanctioned by the Collector on the 26th January 1859. Estimate Rupees 1,000. The injury sustained in 1858, and which this Estimate repaired was not especially reported, so far as I can ascertain; but as that was the year in which a flood caused damage to the extent of several lacs of Rupees, all over the District, it is probable that the fall of the wing-wall of a sluice was not considered to require special notice.

3. Lieutenant Mead, in submitting this Estimate, gives in a letter, No. 231 of the 13th instant, the information contained in the subjoined extract.

4. "As far as I can learn, the following is the history of the work :—

"The sluice was originally built with south rear wing as far as D, this was lengthened some fifteen years ago to A.

"In 1858 the lengthened portion fell down, and was rebuilt in 1859, with new foundations from A to B, and on the old foundations which were considered to be good from B to D, the old wall was curved, the new wall built straight.

"In December 1862 the lower portion of the wall fell in, as shown in the plan, and I consider the cause to be want of proper foundation to resist the heavy scour from the surplus sluice. I cannot yet say what depth the foundations were, but do not think it was more than five feet. Had it been known what depth the foundations were, I have but little doubt but that repairs in time would have saved the wall."

5. With regard to the cause of damage in December 1862, as mentioned by Lieutenant Mead, I think that unless the foundations of a wall so situated were laid at a very unusual depth, undermining could be avoided only by one of two arrangements, first, by a floor, and second, by blocks of some material capable of resisting the action of the water, laid at the foot of the wall and extending to some distance from it. The first arrangement is not readily adaptable in the absence of a prolonged wing-wall on the other side. The second can readily be carried out, and is

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10th July 1863.*

provided for in the present Estimate. The upper part of the wall which stood, as shown in the sketch, for a considerable time after the foundations below had been washed out was evidently held in position by the pressure of the undermined portions on either side. It was at first intended to build up under that part but it showed symptoms of giving way, and so it was thought dangerous to allow the workmen to go on with the work before its removal. On this being done a crack showed itself in the wall above or to the west of the damaged portion.

6. The Estimate received from Lieutenant Mead amounted to Rupees 1,110, and it was sent to the Collector and received that Officer's countersignature. During the time thus occupied, however, I received a further report from Lieutenant Mead, which rendered it probable that the foundations allowed by that Officer, as shown in the section on his sketch, would prove insufficient, and, being in camp not far from the Anicut, I went there, examined the state of the work and prepared the section and Estimate now forwarded, and which I have not thought it necessary to send to the Collector as the difference is not one which would influence that Officer's approval of the work.

7. It will be seen that some of the charges in the Estimate, such as baling, &c., are large, but I went carefully into the subject, and I believe that too large a margin has not been allowed. For instance, the baling has already cost Rupees 140-8-9, this being due entirely to the repeated rains and freshes in the river, and my allowance is for twenty days more baling with two Picottahs. It is possible that one Picottah may be found to be enough, if the weather be finer, and I pointed this out to the Assistant Overseer and told him to economize as far as possible.

8. The specification gives full particulars of the work to be done, and on Lieutenant Mead's plan I have sketched in the position of the hole in rear of the surplus sluice. I am not sure that the cubes to be laid down as a floor will stand the rush of water, but this arrangement is proposed because there is no time to construct a regular floor this season, and I think that, even should the cubes be more or less displaced, they will provide for the safety of the wall for this year, and then, should it be resolved to construct a masonry apron next year, these materials will be available for the purpose. It is certainly much to be regretted that a proper apron was not in the first instance provided, for, although the soil is a tenacious clay, it cannot possibly stand the force of water moving at so high a velocity. The wing-wall foundations were built with cubes and these were easily displaced when the soil in which they were laid was washed away. The surplus sluice itself is not in a very satisfactory state, though it is in no danger, for it was first built half its present width, and there are evidences of settlement in the foundations of the rear walls, but, if further scooping out in rear be put a stop to, the work will do good service for many years.

9. I may mention in conclusion that the closing of the under-sluice vents, south branch, and the repairs to the Anicut have been stopped for a time by the fresh which rose to $1\frac{1}{2}$ feet above the crown, but which had gone down to about 3 inches when I was at the Anicut.

No. 232.

ORDER THEREON, 10th July 1863, No. 1,839.

The Government will await the receipt of the Estimate referred to, in submitting which the Superintending Engineer 6th Division will be so good as to state his own opinion on the causes of the accident to the Rajen Voikal surplus sluice, and the party responsible for the defective nature of the repairs executed in 1859.

(Signed) W. I. BIRDWOOD, Colonel, R. E.,
Secretary to Government.

Vol 1002 No 70 of 15th June/63

Tanjore, 4th 101/-
From Mr.
The Asst Dist Engineer,
Tanjore,
To
The Superintending Engineer,
6th Division

Dated 5th May 1863
Recd 5th June 1863.
83

No 10709/1999/63

Resolving for sanction
in Estimate No 1280
for repairs to the
the South Rajah
Voial Surplus Drain
Lower Amnicul

(Signed) W. I. BIRDW
Secreta

No 1839.

5

The Government will await
the receipt of the Estimate referred to, in sub-
mitting which the Superintending Engineer will
will be so good as to state his own opinion on
the causes of the accident to the Rajah Voial
Surplus Drain, and the party responsible for
the defective nature of the repairs executed in
1859.

Chapman
10th July 1863

To The Supg Engr 6th Division & Recd 11th July

X382

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R Pro 3 March 1837 No 13-14
R Pro 11 Feb 1863 - 167-168

P 9 1863 D. 2
From P. 10 of 100 to July
The Supg. Eng. 1999
6th Division.

To,
The Secretary to Govt.

Further C. 1344
of 1864

Dated 15 } June 1863.
Received 19 }
No 81.
No 70.

Forwards letter from the
District Engineer Tanjore furnish-
ing information called for by
Government in order no 348
dated 11th February 1863 re-
garding the surplus sluice
of the South Rajah Vittal
of the Lower Coleroon amment.
No 1839-10th July.
With an order p

No 231-232.

c. 26th June 1863 No 30

(Signed) W. I. BIRD
Secret