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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

G.O. No.	628	Press
B.P. No.		Mis.

Dated 1 . 4 . 1875 196 .

Not to be folded or roughly handled

No. 468. Read the following letter from Lieutenant-Colonel J. F. FISCHER, R.E., District Engineer, Madura, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Poreacolum, 16th February 1875, No. 4,746:—

ADVERTING to G. O., of the 25th June 1874, No. 1,712, I have the honor
1 Comparative Statement. to report that I have now personally
1 Estimate for Travellers' Bungalow at Cumbum. examined the Goodaloor Ghaut, and
1 Plan of do. beg to submit the accompanying re-
marks and statements for the consideration and orders of the Government.

2. As regards the item for "Sundries and Superintendence" in the revised estimate of Rupees 51,900, I beg to remark that I am unable now to supply any details, as I find, on an examination of the accounts, that this sum has been actually expended, and in the comparative statement herewith sent I have entered the several items of the original sanctioned estimate and the actual outlay incurred; Lieutenant Greer's, R.E., explanations regarding this matter are as follow:—
"The large excess in this item is owing partly to the amount put down in the estimate being much too small. In an out-of-the-way place like the Goodaloor jungles, where several camps had to be built each year for the coolies, elephant fires kept up every night, and several other extra things not required in a civilized place, 5 per cent. is not sufficient, when it includes superintendence as well. The excess is also partly due to the collection and stock of the stores, &c., required for the culverts, being included under the head of "Sundries." The actual excess on the original sanctioned estimate is only 3.2 per cent., and is very creditable to that officer's management, care and attention to his duties, and it is to be regretted this was shown in a revised estimate and not in a comparative statement.

3. I find it necessary now to submit a supplemental estimate to repair damages, restore the catch-drains in places, and to make sundry improvements to the work; the amount of this is Rupees 4,000 after deducting the sum of Rupees 1,870 already sanctioned in the Government Order under reply.

4. Much of the damage done to the ghaut is alleged to be from the rainfall, but I am inclined to think the revetment walls have been seriously injured by the wild elephants. The place is infested with these animals, and a herd of these passing over the road at any point where much new revetment work has been done are sure to injure it.

5. I propose to give up the masonry catch-drains, to open out the existing ones and convey their waters to the natural outfalls and across the road by the culverts on it or by road dams. The rainfall on rock should, I consider, be allowed to come down to a drain on the inner side of the road and passed across it at the salient angles as much as possible, and not be carried along to the re-entering ones where the natural drainages are crossed. The outlet of a drain in such a position will have far less drop than in a ravine.

6. I think it very advisable in many places to widen the road by blasting than attempting to keep up so much revetment which is liable to such extensive injuries.

7. I regret to say two of the larger bridges have got bad cracks in their wing walls, and will probably require to be rebuilt; some of the culverts built are too small and must be replaced by longer ones, others have given way and require to be restored; but in such a locality it was very difficult to get any good chunam, and in ghaut works this is very common, and it would have been far better, in the first instance, to have used timber structures, and re-placed these, as soon as the road was opened, by more durable materials.

8. I do not think the drainage across the road has been at all sufficiently provided for. Telford and other English Engineers, who had to provide for rapid wheel traffic, were very careful in this matter, and sectioned their ghaut roads so as to pass as much of the rainfall as possible, under and across their roads, always sloping them inwards to facilitate this, as well as to raise the outer wheels of their vehicles, and prevent material being washed off and lost. I trust I may be allowed to say I cannot approve of the sectioning of this road, and cannot but consider the omission to give the earthwork cuttings proper slopes a most lamentable error, certain to cause great inconvenience and expense in the future.

9. I do not find anything to show why the line of road was taken through the pass on the west side of the Tavalum hill instead of that on the east, which is 500 or 600 feet lower, so far as I could see; this route appeared to be quite feasible, and if it could have been adopted would have avoided the necessity for the zigzags in the middle of the ghaut, where these are placed in the very worst possible position, and must entail great expense in maintaining; if the Government have no objections I would endeavour to rectify this part of the ghaut even now, but it would almost necessitate its reconstruction, but if successful would improve the gradient very much, making it probably 1 in 20, or less, instead of 1 in 10.

10. I beg to send the estimate for the bungalow, called for in G. O., of the 25th July 1874, No. 1,338, and would propose to construct it at Goodaloor. Cumbum, the next village on our side, is five miles off, and for people using this ghaut a ten-mile march after coming down or preparing to go up the ghaut will probably be very inconvenient.

11. The maintenance grant for this ghaut is Rupees 440 per mile. I would beg to solicit that this be increased to Rupees 480 per mile or Rupees 40 a month; this will enable us to pay for a sufficient establishment of mile coolies, hut them properly, and keep a Superintendent on the ghaut to watch it constantly, and keep it free from wild elephants by fires. Peracalom is, I believe, the largest taluq in this Presidency. One Taluq Overseer cannot possibly manage it, and hitherto it has been much neglected. I sent an additional Local Fund Overseer to assist in the ghaut works, but he got fever at once, and is now dangerously ill and weak. There are some people at the place who were trained under Lieutenant Greer, and one of these I would select for this special duty if the additional maintenance grant is sanctioned.

CHIEF ENGINEER'S MEMORANDUM.

An analysis of these estimates shows that out of the original number of fifty-six culverts in the sanctioned estimate only fifty-one were built; out of which were

omitted entirely four first-class culverts, while three additional road tunnels were substituted for four third-class culverts. This quite bears out the apprehensions expressed in paragraph 4 of my memorandum recorded with G. O., No. 1,712, of 25th June 1874, that a sufficiency of under drainage had not been provided. In the supplemental estimate it is proposed to build three third-class culverts according to the original estimate, and to replace two first-class culverts that have been destroyed. But it would seem to me that at least two more first-class culverts were required to complete the original number; and I recommend the addition of Rupees 600 to the estimate on that account.

2. I quite approve of the widening of the road proposed; and hope that detailed measurements of each portion of the road requiring to be widened are on record, to ensure this being effectually done. I must again reiterate the principles laid down as to cross section of ghaut roads in paragraph 3 of my memorandum above alluded to; under drains being substituted for the surface road dams, to which Lieutenant-Colonel Fischer proposes to trust more than I approve. There is no question of rapid wheel traffic in the Goodaloor Ghaut.

3. I am utterly incredulous of the possible ghaut head 500 or 600 feet lower than the actual ghaut head, imagined by Lieutenant-Colonel Fischer. That he should have rested a day without satisfying his doubts on matter of such immense importance, not only as regards the Goodaloor Ghaut, but the supply of water from the Perryar river, is incredible in one holding the position that he does. He should not have hazarded a conjecture so derogatory to the reputation of every officer connected with either work. His examination of the ground will turn out to have been most superficial.

(Signed) G. W. WALKER, Colonel, R.E.,

20th February 1875.

Chief Engineer, D.P.W.

No. 469.

ORDER THEREON, 18th March 1875, No. 764.

CIVIL WORKS, No. 22.

His Excellency the Governor in Council sanctions a total excess of Rupees 6,174 on the sanction of Rs. 48,000 for the new Goodaloor Ghaut, accorded in G. O., No. 1,826, of 16th July 1873. The specific items of excess, aggregating Rupees 4,000, should be separated from those of the supplemental estimate now submitted that amount to Rupees 1,870, as the latter are for repairs and the amount is to be provided from the repair allotment, according to G. O., No. 1,712, of 25th June 1874.

2. The District Engineer will take an early opportunity of personally satisfying himself on the subject of the ghaut head, which the Chief Engineer considers to be a matter of such importance that it should not have been left in doubt by him for a moment. He will likewise cause the Chief Engineer's instructions in this and his former memorandum to be acted on. The bungalow plan and estimate of Rupees 4,800 are sanctioned. The Board of Revenue will be requested in the Revenue Department to settle whether it should be built at Cumbum or Goodaloor. The District Engineer is understood to be of opinion that the stage from Cumbum to the first bungalow within Travancore limits would be too far. But Goodaloor

*Proceedings of the Madras Government, Public Works Department,
18th March 1875.*

may be less eligible than Cumbam as a halting place on considerations of health, and supplies of food and carriage.

3. The necessity of increasing the mileage allowance of the ghaut from Rupees 440 to Rupees 480 is not apparent.

(True Extract.)

Connaught Colonel, R.E.,
Secretary to Government.

To the District Engineer, Madras.
" Controller of Public Works Accounts.
" Revenue Department.

Exd. S. T. Austin.
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No 1048
Primer Department
Calcutta 1875

PUBLIC WORKS.

Calcutta 1875

THE DIRECTOR GENERAL, MADRAS,

to, to, to

Calcutta 1875

and - 23rd

End

Calcutta 1875, No. 704

MARCH

Nos. 408-409

No. 628. *Glaze*—A total excess of 174, on the auction for the same, and remarks. Also, the estimate of 1875, and the Board of Revenue, to be referred to, should be put in the next September. The proposal for the same, and the surplus of the same, should be referred to.

Ch. 628. 1 April 1875

With order

Referred to the Board of Revenue for their
as to where the Mangalore, referred to in June 1875
the above G. O. should be built.

No 628

1 April 75

in the Board of Revenue