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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

Cons. 1 12 57

G.O. No. 1270 Press Mis.

Dated 6-5-57 18 57

Not to be folded or roughly handled

No. 7. Read the following letter from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretary to Government, dated 29th October 1857, No. 4807.

SIR,

1 Letter from the District Engineer Nellore. No. 1985, dated 7th October 1857.
1 Abstract Estimate.
1 Appendix A to do.
1 Statement of Traffic.
2 Plans.

With reference to Extract from the Minutes of Consultation No. 1606, dated 19th August 1857, I have the honor to forward for submission to Government a revised estimate amounting to Rupees (98,730) ninety-eight thousand seven hundred and thirty, for completing the Dorenal, or Central Cuddapah and Nellore road, from Nellore to Kadaranullypaud on the boundary of the Nellore District.

2. Lieutenant Mullins, copy of whose letter is appended, states that an alteration of the rates of Major Boileau's estimates for the Katamanairoo and Pullevole bridges, was the cause of the discrepancy noticed by Government in para. 4, but that the improved plans have been retained. Consequently I am of opinion that the estimates are sufficient to render the works "substantial and secure".

3. The difference between Major Boileau's and Lieutenant Mullins's estimates for minor mosonry works, is stated to be owing to the substitution of road dams for pavements, and the change is decidedly an improvement.

4. The increase in the width of metal was allowed, to afford room for carts to pass each other, which in a less width than 5 yards is found impracticable, without their going on the soft earth of the sides, and in this change I concur.

5. Lieutenant Mullins reports on the present state of this road, which is most unsatisfactory, although the line is evidently one of great commercial value and even now partly in use. Nearly all the roadway is formed, but a very few miles are metalled, and scarcely any tunnels are built, except on 17 miles between Nellore and Kristnapatam.

6. The amount hitherto expended between Kadaranullypaud and Kristnahpatam (71 miles), is 2,13,721, and its completion being estimated at Rupees 98,730, will make a total outlay of Rupees (3,12,451) three lacs twelve thousand four hundred and fifty-one, or (4,400) four thousand and four hundred per mile, and of this sum Lieutenant Mullins considers that (45,000) forty-five thousand will have been wasted during the famine expenditure.

7. Lieutenant Mullins expresses his anxiety for the entry of this estimate in the Budget of 1858-59, in the hope that the removal of the restriction on public expenditure may enable him to prosecute the work during that year.

8. The present estimate does not include the cost of the Looggairoo river bridge (Rupees 38,558), which has been sanctioned, but not commenced.

9. The rates generally appear to be suitable and the amount altogether adequate.

10. I am decidedly of opinion that the early completion of this important road is highly desirable.

Letter from Lieutenant J. MULLINS, District Engineer Nellore; to Colonel C. E. FABER, Chief Engineer, dated 7th October 1857, No. 1985.

SIR,

I have the honor, as directed in Extract from your Proceedings No. 3226, of the 27th August 1857, to submit a revised estimate for the whole of the work required to complete the Dorenal, or Central Cuddapah and Nellore, road from Nellore to Kadaranullypaud, the boundary of the Nellore District.

2. With reference to the remarks of Government in paras. 3 and 4 of Extract Minutes Consultation No. 1606, of the 19th August 1857, I beg to state that in re-submitting the Plans and estimates for the bridges over the Katamanairoo, and Pullavole Vaugoo, I merely made fair

copies of the documents submitted by Major Boileau, with the alterations made in the Central office, and that the increase in the estimated cost of these bridges from 10,720 to 11,020 from 7,920 to 9,050 Rupees respectively, as forwarded with your report K. K. to Government, dated 26th January 1856, was due to the sizes of the bridges being increased, while Major Boileau's rates were retained, while in the 2nd case by retaining the improved bridges, and reducing Major Boileau's rates, the supposed cost of these works was again reduced from 11,020 to 9,860 Rupees and from 9,050 to 8,120 Rupees respectively, as mentioned in your Report XX dated 6th December 1856.

3. I have now in consideration of the enhanced rates of bandy hire and cooly labour slightly raised the rates allowed by you in forwarding the projects for sanction, in the Budget of 1857-58, while at the same time a considerable reduction has been effected on those originally entered in the estimates prepared by Major Boileau; the items for Superintendence have also been reduced, and are shown in detail, and I am of opinion that the works cannot be carried out for less sums than those now proposed, while at the same time the estimates are sufficiently liberal to allow of the bridges being executed in a careful and substantial manner.

4. The excess of Rupees 4,909 for minor masonry works, in the estimate of last year, above the sum allowed in Major Boileau's estimate, was principally owing to the substitution of road dams for rough stone pavements.

The alterations made in this respect, as also in the revision of the tunnels and smaller bridges, will be seen from the subjoined comparative abstracts.

Major Boileaus Estimate,	Revised Estimate.
84 Tunnels,	100 Tunnels.
38 Small bridges,	22 Small bridges.
58 Pavements,	58 Road dams.

Of the 38 small bridges abovementioned many were more properly speaking ordinary tunnels, being arches of 6, 7, 8, 9 and 10 feet span, and, in order to facilitate the construction of these works, I as far as possible, made all the tunnels of the spans commonly used, such as 1-1½ 2, 3 and 4 yards and by so doing the chance of mistakes was lessened, and it became easy to direct the proper quantities of materials to be prepared for each work.

5. The width of the metalling was increased by me from 4 yards to 5, because, with the former width, 2 bandies cannot pass without going off on to the soft ground at the side, and thus cutting up the edges of the metalling. The yoke poles of a common bandy seldom measure less than 6 feet, and often very nearly 7, so that 5 yards is not one inch too much. I should have inserted 6 yards in the estimate, which is indeed the width allowed for a 2nd class Government road in the sections prepared by the Acting Superintending Engineer, Northern Circle, and approved of by Government No. 92 dated 14th January 1857, had I not thought that the extra expense would not be sanctioned. I have myself tried 4 yards and found that it could not be kept in order, and, prior to the receipt of the abovementioned sections, I also tried a 5 yard wide embankment, and found that in wet weather it was so much injured by the bandy wheels going close to the edge that, even for District roads of the 2nd class, I should recommend embankments 6 or 6½ yards wide at top and metalling 5 yards.

6. The present condition of the Dorenal road, as well as its importance as a trade line, I had the honor to remark upon in my Report on the operations of the Department during the year 1856-57. As will be seen by the estimate which allows only Rupees 4,602 for earth work, nearly all the roadway is formed, and the little work of this description that remains to be done is near Pullavole. Small quantities of metalling have been collected on portions of the road west of Sungum, but no part of the roadway is metalled there, nor have any masonry works whatever been constructed to the west of the Beerapairoo bridge at Sungum. No part of this line except a mile or two here and there is available for cart traffic, nor can it be made so until the tunnels are built. Between Sungum and Nellore, a distance of 20 miles, a ghaut of 1½ miles has been opened, and is in good order, some 7 or 8 tunnels have been built, about 4 miles of road metalled, and temporary bridges erected over all the unbridged Nullahs and channels, and this part of the road is in constant use by a very considerable traffic. The 17 miles east or south east of Nellore have been more recently considered, and very properly so, as a separate

road, and as the Nellore and Krishtnapatam road a separate estimate, amounting to Rupees 16,650 was sanctioned for its completion, of which Rupees 14,933-1-10* have been spent, and, with the exception of 4 miles of metalling remaining to be done, all the earthwork metalling and masonry works have been completed.

* Up to 30th August 1857.

Taking the line from Kadanellypaud to Kristnapatam as one line the distance is 71 miles and the expenditure will altogether amount to.

	Rs.
Famine Sanctions...	1,42,000
Beerapairoo bridge sanctioned and completed ...	12,551
Boogair bridge sanctioned but not commenced... ...	38,558
Bridge over Atmakoor supplying channel... ...	3,959
Supplemental sanction for Kristnapatam road... ...	16,650
Revised estimate for completing road from Nellore to Kadanullypaud...	98,730
Total.....	3,12,451

or Rupees 4,400¾ per mile.

7. In para. 2 of Extract Minutes Consultation, No. 92 of the 14th January 1857, it is mentioned that the supposed cost of 2nd class roads, in which class the Dorenal road has been placed is about 3,682 Rupees per mile, and therefore, with the amount still required for completion, this road will have exceeded the average cost of a road of this class by about Rupees 700 per mile. In para. 4 of my letter No. 1321 dated 25th November 1856. I estimated that from Rupees 500 to 600 per mile had been wasted, owing to the peculiar circumstances under which the grants of Rupees 2,000 a mile had been laid out, and while admitting that the waste of some Rupees 45,000 is a most unsatisfactory fact, it must be remembered that the saving of a large number of people from starvation was a corresponding benefit, and however much the agency employed to superintend the expenditure may have been wanting in those qualifications, which ensure the utmost economy, it must not be forgotten that no other agency was available, and that were circumstances again to arise necessitating the employment of large numbers of people of all description, on public works, and were untrained agency again placed in charge of those works, a result equally unsatisfactory would certainly be the result. I wish I could add that there would now be no chance of having such an agency to deal with, but I fear that so long as Officers and Overseers are removed and remanded to their regiments, just when their services are becoming of some use, and when they are beginning to learn how work should be carried on, the money allotted for public works will never be laid out to advantage, or with economy.

8. Since last submitting this estimate, I have had traffic returns taken at the Beerapairoo bridge, near Sungum, and the result* justifies me, I think, in considering, that not only will this road prove to be a very important line of communication, but that, not excepting the northern Trunk road, it will, when extended through Cuddapah to Bellary, carry the largest traffic of any line in the District. Cotton, Indigo, spices, and Oil seeds are the principal articles of commerce, and all of these products admit of almost unlimited extension, provided the transport is facilitated sufficiently to make them saleable at the coast at remunerative prices.

* Additional return enclosed.

9. At the end of last year Rupees 215-12-5 out of the original grants remained unexpended; all but about 60 Rupees of this sum has now been laid out, and the tunnels to be completed are reduced from 100 to 96. The total estimated amount for completing the road is Rupees 98,730, and I am of opinion that provided the subordinates who may be appointed to carry out the work have had some experience, the road will be finished for about 10 per cent under this sum; should however, as has always hitherto been the case, new and inexperienced men be sent, it is more than probable that as great a per centage above the sum will be necessary. Taking into consideration the difficulty of procuring a sufficient number of trained men, and supposing that the Overseers in charge of the bridges at the Boogairoo, Pullavole Vaugoo, and Katamunnairoo,

will at the same time be able to look after 6 to 10 miles of road near these bridges, I have reduced the item for general superintendence by about 1000 Rupees.

10. In conclusion I hope that the explanations and information above furnished will be considered sufficient. Had more time been available and had not the more pressing duties of the Marahmut Department prevented me from detaching an Assistant Overseer for such a purpose, I would have submitted a detailed survey plan of the road shewing the work done, the nature of the soil, &c.; but as it is important that the project should, if possible, be entered in the Budget of 1858-59, in order that, whenever the present restriction on public works is removed, some little progress at all events may be made, the omission of such a plan will I trust be excused.

Statement of the Traffic on the Dorenal line of road at Beerapairoo bridge.

Name of the place.	Daily average carts.	Daily average Animals.	Daily average of foot passengers.	Remarks.
Beerapairoo bridge near Sungum ...	25½	39	35	

(Signed) JOHN MULLINS, Lieut.,
District Engineer Nellore.

No. 8. ORDER THEREON, No. 2178; dated 25th November 1857.

Pursuant to the orders contained in Extract Minutes of Consultation of the 19th August last No. 1606, the Chief Engineer now forwards a revised estimate amounting to Rupees 98,730 for completing the Dorenal or Central Cuddapah and Nellore road, from Nellore to Kadaranelly-paud, the boundary of the Nellore District, including a Bridge over the Pullavole Vaugoo, and another across the Katamunnairoo river, as also minor masonry works. A letter from the District Engineer is also submitted, affording information on the several points noticed by Government in the order above quoted. The Right Honorable the Governor in Council admits the importance of putting this communication in an efficient state as early as practicable, but he is precluded from ordering the entry of the estimate in the Budget for 1858-59; as, from the computation made in this Office, the sum which will be available on the 1st of May next for expenditure under the head of "communications" in the Nellore District under estimates already sanctioned will be nearly 2½ lacs. The Government therefore resolve to return the estimate to the Chief Engineer, and direct that it be re-forwarded for entry in the Budget of 1859-60.

(Signed) H. FORBES,
Acting Secretary to Government.

Central Office of P. Works,
Fort Saint George,
29th October 1857.

No. 1807.

'Public'

From,
The Chief Engineer.

To,
The Secretary to Government P.W.D.

Sir,

With reference to Extract from the Minutes of Consultation No. 1606, dated 19th August 1857, I have the honor to forward for submission to Government a revised estimate amounting to Rupees (98,730) Ninety eight thousand Seven hundred and thirty, for completing the Dorenal, or Central Cuddapah and Nellore Road, from Nellore to Kadaranullypaud on the boundary of the Nellore District.

2 Lieutenant Mullins, copy of whose letter is appended, states that an alteration of the rates of Major Boileau's estimates for the Katamanairoo and Pullevole Bridges, was the cause of the discrepancy noticed by Government in Para. 4, but that the improved plans have been retained. Consequently I am of opinion that the estimates are

are sufficient to render the works "substantial and secure."—

3 The difference between Major Boileau's and Lieutenant Mullins's estimates for minor masonry work, is stated to be owing to the substitution of Road dams for Culverts, and the change is decidedly an improvement.

4 The increase in the width of metal was allowed, to afford room for carts to pass each other, which in a less width than 5 Yards is found impracticable, without their going on the soft earth of the sides, and in this change I concur.—

5 Lieutenant Mullins reports on the present state of this Road, which is most unsatisfactory, although the line is evidently one of great commercial value and even now partly in use. Nearly all the Roadway is formed, but a very few miles are metalled, and scarcely any culverts are built, except on 17 miles between Nellore & Christnapatam.

6 The amount hitherto expended between Kaveripaud and Christnapatam (71 miles) is 21372, and its completion being estimated at Rupees 98730, will make a total outlay of Rupees (312,451) Three Lacs twelve thousand four hundred and fifty one, or (£4,400) Four thousand and four hundred per mile.

and of this sum Lieutenant Mullins considers that (45,000) Forty five thousand will have been wasted during the famine expenditure.

7 Lieutenant Mullins expresses his anxiety for the entry of this estimate in the Budget of 1858/59, in the hope that the removal of the restriction on public expenditure may enable him to prosecute the work during that year.—

8 The present estimate does not include the cost of the Coodgairoo River bridge (Rupees 38538), which has been sanctioned, but not commenced.

9 The rates generally appear to be suitable and the amount altogether adequate.—

10 I am decidedly of opinion that the early completion of this important Road is highly desirable.

I have the honor to be,
Sir,
Your most Obt Servant.

Central Office of P. W.
Fort Saint George,
29th October 1857.

A. W. Stratton Colonel
Chief Engineer

To,
The Secretary to Government P. W. D.

Endorsed

P.W.D.

No 2175

Copy transmitted from the Municipal of Commissioners

Dated 25th November 1857.

Read the following

Letter from the Colonial Engr

(Nellore Division 29th October 1857 No 4807)

Forwarded to the orders

Countersigned Chas Trevelyan

of Council of the 19th August

Last No 1604, the Chief Engr

now forwards a Revised Estimate

amounting to the Rupees

(98130 for completing the Doren-

and Cuddapah Road from Nell-

and Nellore Road from Nellore

Nellore to Pudaparre Ley

Pond, the boundary of the

Nellore District Estimate

a

Encl. 25th Nov 1857. No. 1-2-3
" 29th Oct 1857. No. 4-5-6.

P. Works 1857 Department
Dis. Cons 1st No 2747.

From
The Chief Engineer.

To
The Secretary to Government
P.W.D.

Dated 29th
Received 31st } October 1857

No. 4807.

Enclosures 6 Nos.

I. C. No. 2175. 25th Nov. 1857.

Submits a Revised estimate
for Rupees (98130) Ninety eight
Thousand Seven hundred and thirty
for completing the Dorenal or Entra
Cuddapah and Nellore Road from Nell
to Kadaramullypaud on the boundary
of the Nellore District for entry in the
Budget of 1858/59.

217 Nov 21st

a Bridge over the Pullwole Vangoo and another across the Pattanmmairoo river, as also minor masonry works. A letter from the District Engineer is also submitted, affording information on the several points noticed by Government in the order above quoted. The Right Honorable the Governor in Council admits the importance of putting this communication in an efficient state as early as practicable, but he is precluded from ordering the entry of the Estimate in the Budget for 1858/59, as from the computation made in this Office, the sum which will be available on the 1st. of May next for expenditure under the head of "Communications" in the N. Shore District, will be nearly 2½ lacs. The Government therefore resolve to return the Estimate to the Chief Engineer, and direct that it be reforwarded for entry in the Budget of 1859/60.

By Order

9 Copies to the Chief Engr.
Dis. 26/7
Retd. with 6 orgl. Encs. 19/12/57

Cons: 25th Augt 57 No 163.
" 20th Jany " " 546.

Public Works 1857 Deptt.
Dy to Cons: 1st Decr.

No 2178.

Extract Mins of Cons:
Dy 25th Novr 57.

Declining to order the entry of the Estimate for completing the Darenah or Central Cuddapah and Nellore Road from Nellore to Kadaranelly pand. the boundary of the Nellore District in the Budget of 1858/59, and directing that it be reforwarded for entry in the Budget of 1859/60.

No 748.

Cl Jany 1858