1. Number of files 12
2. Date of [illegible] 30/6/37
3. Initials of [illegible]

M.L.O. 1—21,000—27-11-35

MADRAS RECORD OFFICE.

Government of Madras.

[illegible] DEPARTMENT.

G.O. No. 76 77 Press Mis.

Dated 7 7 18

Not to be folded or roughly handled.

No. 76. Read the following letter from Major E. LAWFORD, Officiating Chief Engineer; to the Secretary to Government, dated 6th August 1858, No. 2581.

SIR,

I lose no time in acknowledging the receipt of Extract Minutes Consultation No. 1513, dated 2nd August 1858, and in obedience to the orders of Government that I should offer any observations I may think proper on Major Selby's reply to the charge of serious neglect brought against him in connection with the constructive management of the Chetwye Dam, I beg to point out that the actual state of the accounts of that work affords conclusive evidence which no general vindication can refute

2. The mere fact that the settlement of those accounts occupied an intelligent Officer like Lieutenant Tennant "for six weeks to the exclusion of other business" aided though he was by the able Head Accountant of the Collector's Department is an indisputable proof of the confusion and entanglement they had fallen into, while the ascertained result of an unaccounted for sum of Rupees 8,378-10-6 or nearly one-fourth of the aggregate disbursements is an equally overwhelming evidence of serious neglect on Major Selby's part and a fair ground of presumption that dishonesty had been practised by some parties although it is by no means intended to throw any doubt on that Officer's personal integrity.

3. That there were considerable difficulties to be encountered in the operations, and that the failure of the work is due in part to other causes may be admitted without relieving Major Selby from his responsibility as the Officer in executive charge.

4. As to para. IV. of Major Selby's letter I can find no report of the insufficiency of the second estimate.

5. I fail to perceive the value of the opinion quoted in para. V, as the responsibility did not belong to the Revenue Officers.

6. The Acting Civil Engineer did I believe visit the Laterite Quarry, but could not know the quality of the stones so well as the Executive Officer who should have reported it.

7. As to recoveries from Contractors noticed in para. VIII, Lieutenant Tennant's report shows that with one exception no vouchers have been discovered to show if the several Contractors have, or have not fulfilled their contracts.

8. Paras. IX. X. XI. relate to the accounts and although it is true that payments were made by Tahsildars to Contractors according to the Executive Officer's orders, yet as shewn above the value of work done does not correspond to the payments, and for this the Tahsildars were not responsible.

9. As to para. XI. Major Selby has written without actual reference to the accounts and may be held excused for the error it contains, as I find Lieutenant Tennant reports that Overseer Adan's account opens with the charge of Rupees 459-15-7 for work done in the month of April 1856 by Mr. F. Clark, but no accounts are forthcoming by which the charge can be tested. How then could all the payments be entered in Major Selby's own hand?

10. It can answer no useful purpose for me to enter into the last ten paras. of Major Selby's letter. The extreme disorder of the accounts which is the main charge against that Officer is certified by Mr. Robinson, late Acting Collector and by Lieutenants Bean and Tennant, and the general inefficiency of the arrangements is established by their unfortunate result.

11. Referring to para. XIV. I would remark that no objection has been raised to the use of large blocks of latterite in the foundations, but to the quality of the stone forming those blocks and to the use of mud instead of chunam in cementing them, though for this mode of construction Major Selby is not solely responsible.

12. When Major Selby returns to India he will I presume be allowed free access to the papers connected with this subject, but it will be a mere waste of time for the Government to suffer any long discussion on points of detail unless the main charge of "serious neglect" can be refuted.

No. 77. ORDER THEREON, No. 1816; dated 6th September 1858.

Para. 1. In this letter the Officiating Chief Engr. offers, in reference to Extract Minutes Consultation, 2nd August 1858, observations on Major Selby's explanations respecting the charge of serious neglect imputed to him in the matter of the accounts and constructive Agency of the Chetwye Dam.

2. The Officiating Chief Engineer refers principally to a point on which Major Selby has offered no explanation beyond a general declaration that his accounts were right when he made them up finally. Major Lawford says that those accounts required six months to adjust, and that they exhibit a deficit of 8,000 and odd Rupees unaccounted for. The Government are however not prepared to pass an opinion on Major Selby's proceedings in his absence: that Officer will soon return to India and they resolve accordingly to await his arrival, and after affording him free access to the accounts and sufficient time for the preparation and submission of his answer, they will consider the circumstances he may bring forward and record their ultimate decision.

(Signed) T. PYCROFT,
Chief Secretary.

12. Some of these foundations I have been told, have since slightly given but to what extent, not having been favored with a copy of Major Lawfords report I am not aware; but under the circumstances noted in the last three paras, I do not think I could have acted otherwise than I did. It is well known that these sandy bed rivers are the most difficult to deal with and the failure or rather settlement of these foundatations is an accident that might have happened to the most experienced Engineers.

13. With reference to the superstructure I can vouch for its good quality both the materials and the Workmanship being first-rate.

14. I can also I think, although the original Estimate has been exceeded, feel satisfied that the work executed during my connection with the Bridge was cheap. The excess for which I submitted the Supplemental Estimate for Rupees 15,900, I think I have already given full explanation of, and moreover as the Secretary to Government Bengal observed that the extra width of road alone was quite sufficient to account for the whole of the excess. This Estimate calculated by the cost of the work already performed, I then considered ample to complete the Bridge itself; but I acknowledge my error in having omitted the approaches.

15. Of the 2nd supplemental Estimate for Rupees 22,500 it appears by para 26 of the Minutes of Consultation under reference, that Rupees 12,684 is for additional support for the Foundations, which it is observed "was altogether unperceived by the Acting District Engineer," on my departure only two slight cracks, large enough only to admit the blade of a knife had shewn themselves. The first of these I think in No. 6 pier. I had plastered up, after which a 5 foot fresh came down the river and it never opened the slightest shewing the settlement was most trivial and final. I took advice from Engineers more experienced than myself and came to the conclusion there was no cause for alarm as there is more or less settlement in every Bridge more especially in sandy bed rivers.

16. With reference to the latter part of para. 23 of the Extract Minutes of Consultation under reference, I respectfully observe 1st, that from the original Plan having been so much deviated from, and from the fact of its having been Estimated before the Railway works were commenced, it became really useless. 2ndly with reference to the remark that the work must have been carefully supervised I have the honor respectfully to observe, that considering the cheapness, the quality and, with the exception of the slight settlement of some of the Foundations, which was the result of an error of judgment, the general stability of the work, I trust I may be considered exempt from this charge; and. 3rdly, with reference to the 1st Supplemental Estimate being utterly untrustworthy, the Estimate was made as I observed in para. 14 for the completion of the Bridge only.

17, I first became aware of the insufficiencyof the original Estimate about the end of 1856, and intended to submit the Supplemental Estimate about June in time to be sanctioned before fresh funds were required and several times requested the Assistant Engineer in charge to forward it, but in consequence of the smallness of his Office and quantity of work in hand and constant travelling, I suppose he had not time to prepare it sooner and I forwarded it shortly before I left the District.

Letter from JAMES H. DOPPING, Esq., Acting District Engineer of North Arcot; to Colonel C. E. FABER, Chief Engineer, dated Vellore 22nd June 1858, No. 305.

SIR,

I have the honor to acknowledge the receipt of Extract from Minutes of Consultation No. 1060, under date the 4th Instant on the subject of the Vellore Bridge and beg herewith to enclose an original letter and other papers as per margin* received from Mr. Horgan through Lieutenant Clay.

* 1 Letter from Mr. Horgan to the Executive Engineer of North Arcot No 41, dated the 17th June 1858.
1 Statement shewing the amount of expenditure and nature of work performed in each month on the Vellore Bridge from the date of commencement to the 30th April 1858.
1 Comparative statement of expenditure on the Vellore Bridge from the date of commencement to the 30th April 1858.

2. Mr. Horgan has, it would appear gone through the history of the work, with considerable care, and has given all the information he can on the subject, but I regret, he is unable to render the particulars in such a way as to show the actual amount of work performed by each superintendent.

3. After a re-consideration of the circumstances I trust you will agree with me in believing such to be quite impossible.

4. In my office there are not any records which could add to this information.

5. It will further appear evident from the history of this work, that the constant shifting of the Superintendents must have, not only tended to cause enormous confusion, but, more or less want of interest on the part of each person in charge.

6. It is however due to Mr. Horgan to except him from this remark, as will be seen from a personal inspection of the work done, as also from a Comparison of the quantity.*

* The arch work of the last arch is now being done, it ought to be keyed this week.

7. One weeks expenditure in his time equalling one months *and even quarter's* of his predececcessors.

8. I would however beg here to remark that, I consider the 1st para. of the Extract Minutes Consultation under reference is *harsh in the extreme* when it is recollected that there is no one in the Department of Public Works *now* who has been in any way connected with this work and moreover that all those who *have been* in charge of this Bridge have been in point of experience *mere boys.*

9. None having perhaps, ever even seen a bridge in progress.

10. In the 8th para. It would appear that the instructors therein alluded to became necessary from a similar want of experience on my part, more particularly when connected with para. 26, but I trust that in justice to me *and my profession* generally you will be good enough to explain to Government the facts as they really stand, as I presume from the circumstance of the Extract Minutes Consultation having been printed the contents thereof have gone forth to the world.

11. Paras. 9-10-11-12-13 and 16 only go to show that latterly the work was carried on at a pace wholly unexpected, but I would beg to observe, not more rapidly than was necessary to ensure its safety.

12. That the estimate was erroneous there can be no doubt, but no one in this District at present can be saddled with the blame and those at a distance in the Central Office, could not have known the nature of the approaches as also the increase of width unless specially reported.

The Concluding portion of para. 26, I must say appears severe when it is considered the really shameful state in which all the accounts of this Division of the District were in, when I took charge and the confusion which must have ensued on the various charges at the same time, it will I trust be borne in mind that I had frequently stated the estimate would not be sufficient and further that if the centres and other materials were sold, the allowance at the time would not really and Bona fide be exceeded.

	Rs.	A.	P.
Original Estimate	72,000	0	0
1st Additional sanction	10,000	0	0
2nd Do. Do.	5,900	0	0
Excess sanctioned	4,000	0	0
Additional sanction	10,000	0	0
Total Rupees.....	1,01,900	0	0
Total expenditure.....	97,642	15	2
Balance.....	4,258	0	0

In conclusion I beg to exhibit in the margin the present state of the finances of this work with a request that you will most strongly recommend the immediate sanction of the remainder.

Letter from Mr. D. HORGAN, Assistant Executive Engineer, in charge of Palaur Bridge ; to Lieutenant A. D. CLAY, Executive Engineer, 1st section North Arcot, dated Vellore 17th June 1858, No. 41.

SIR,

With reference to your letter No. 59 under date 12th June subject* as per margin, I have the honor to state, that after carefully looking over the records of the Palaur bridge I an still unable to prepare any thing like a correct history of the progress of the work, I will however endeavour to give you all the information I have been able to arrive at, and which I have obtained partly from those employed on the work, and partly from the records.

* Calling for a history of the Palaur Bridge Works &c.

2. The work appears to have been commenced on or about the 1st March 1855, under the immediate Supervision of Lieutenant Rideout, the amount of expenditure up to the 30th of June I find to be 4,892-9-6, but on what work or how this sum has been laid out there are no records to shew, it is however probable that the expenditure was incurred in preparing materials, lining out bridge, excavating foundation &c., The building and sinking of wells was also I believe commenced during his Superintendence.

3. Lieutenant Rideout was succeeded by Lieutenant Mayne, I find from a copy of† his Progress Report for the month of June 1855, that previous to his having taken charge of the bridge, the accounts were not in detail. Lieutenant Mayne in Column " remarks" of his report says " this is the first Monthly Report of this work and as no details account of work people &c. was kept at first, nothing but an approximation to the value of the several works could be made, so I have not attempted one". Lieutenant Mayne remained in charge until the end of October or beginning of November 1856, when the Piers were well advanced towards completion. The amount expended from 1st July 1855 to the 31st October 1856, is Rupees 35,141-8-0.

† Lieutenant Mayne's.

4. Lieutenant Boyd succeeded Lieutenant Mayne in November 1856, and on the 31st December the state of the work was as follows.

Two	abutments	7 feet	high.
Two	Piers	7 ,,	,,
Two	Do.	6 ,,	,,
Thirty-five	Do.	5 ,,	,,
Two	Do.	5½ ,,	,,

A good stock of bricks on hands. On or about the 28th February the brick work of the Piers was completed, but the stone cut-waters were not finished until about the end of May 1857. Arch work was commenced in July or August, and was continued up to the 31st December, on which date Lieutenant Boyd and Sub-Overseer Pursooramen were killed by the fall of the centering of Arch No. 9. The expenditure from November 1856 to the 31st December 1857 is Rupees 25,699-4-11. Ten arches were completed.

5. After the 31st December 1857, work was discontinued for nine or ten days, and when resumed Lieutenant Mayne again took charge of the work and so continued until the 15th‡ or 16th February 1858. Lieutenant Mayne was succeeded by Lieutenant Clay, who assumed charge on the 20th February, Arch No. 15 being at the time under progress. The expenditure from the 1st January to the 20th February 1858 amounts to Rupees 5,248-2-2.

‡ 11th Succeeded by Mr. Dopping who remained in charge with Mr. Rideout under him until the 20th. J. H. D.

6. On the 4th March arch work was discontinued, and again resumed on the 16th. On the 22nd of March I assumed charge of the bridge, on which date Arch No. 17 was under progress and centering No. 18. By the end of March the 17th arch was keyed. During the month of April six Arches were built, six centering struck and seven put up. Arch No. 23 was keyed on the 29th of April, and No. 24 was all but completed within the month, it was closed early on the 1st May. The sinking of wells also was commenced for the front retaining wall. The expenditure from the 20th February to the 30th April 1858, was Rupees 9,228-1-4.

7. During the month of May 9 Arches were keyed and 8 uncentered, and on the 31st two more were under progress. Well sinking which was commenced towards the end of April was discontinued on the 4th May owing to heavy rains and freshes. The work is now progressing fast, and I have every hope of being able to report the completion of the arches on the 30th Instant.

8. The Statement shewing the expenditure and nature of work performed in each month from the date of commencement of operations to the 30th April 1858, I have endeavoured to fill into the best of my judgement and belief. The records are in such an irregular state that very little information indeed can be obtained on referring to them ; there are no letters or general observations or in short any books whatever, in the bridge office, to throw any light on how the work was carried on. The little information that I have endeavoured to give, I obtained by looking over daily accounts, and some few copies of Progress Reports which I met with when searching through the old records.

9. The comparative Statement I regret to say I have been unable to fill in, as there are no accounts to shew the details of expenditure, and to attempt drawing a comparison between the amount of estimate and work performed from the old records would be an endless task. It must be borne in mind that the work was commenced on the 1st March 1855, and that the accounts were never abstracted during the past three years, so that had every document been kept in the most perfect order, it would now be a work of months in place of days for one person to abstract them so as to exhibit the actual cost of each item of the estimate; an approximation cannot even be arrived at without great difficulty, and loss of time.

P. S. I take this apportunity to bring to your notice that I have no office establishment, and that consequently all papers and documents must be made out by myself, and for this I have little time, as I am employed the greater part of the day in Superintending the bridge.

(Signed) D. HORGAN,
~~Lieutenant.~~

Letter from Captain C. C. JOHNSTON, Officiating Consulting Engineer for Railway; to Major E. LAWFORD, Superintending Engineer in charge of Central Office P. W., dated 28th June 1858, No. 115.

SIR,

In returning the original document received with your letter No. 1437 dated the 26th Instant, I have the honor to request you will obligingly refer to my Reports as District Engineer of North Arcot from January to September 1856, (inclusive) for any opinion I may have offered on the progress and quality of the work at the Palaur Bridge.

2. I would observe that, the original design of the Bridge had been altered before I joined the District, and that there was nothing in the then early stage of the work, to lead me to question the sufficiency or otherwise of the Estimate.

Extracts from the Diary of Observations made by Captain JOHNSTON, in 1856 when District Engineer of North Arcot regarding the progress of the works at the Palaur Bridge.

" I inspected the works in progress both at the Agarum bridge, 2 miles west of Pullicondah,
January 1856. " and at the Palaur, the former of 11 Arches of 30 feet span, and the
" latter of 43 Arches of 43 feet, Brick-making, and stone cutting are
" being actively carried on, and the sinking of wells has been recommenced.

" I inspected the Palaur, and Agarum Bridges, on which the progress made has been most
March 1856. " satisfactory, the masonry works to the springing of the arches will all
" be completed this season, and by June next, at the latest, I shall hope
" to see both the Bridges open for traffic.

April 1856. " The Palaur Bridge at Vellore is progressing most satisfactorily,
" and the foundations are I believe, to be completed by the end of
" next month.

" At the time of my inspecting the Vellore Bridge, there remained only the wells to three
June 1856. " Piers, and the wing walls on the south bank to be sunk, and I
" have no doubt the piers, and abutments will be completed without
" difficulty, before the monsoon, to the springing of the arches.

No. 36. ORDER THEREON No. 1798; dated 2nd September 1858.

It is observed that the Government of India in their letter of 16th July 1858, above recorded have sanctioned* the second supplemental estimate for the completion of the Palaur Bridge, and have expressed their entire concurrence in the remarks made by this Government in Extract from the Minutes of Consultation of the 4th June last, regarding the defects of the original estimate, the want of care in preparing the revised estimate, and the imperfect, dilatory, and superficial manner in which the whole matter

* 16th July 1858. No. 3323.

has been dealt with by the Chief Engineer. Under these circumstances the Government think it unnecessary to trouble the Government of India by laying before them the letter from the Officiating Chief Engineer 6th July and its enclosures. The explanation which it purports to submit is in no degree satisfactory and the Government after its perusal continue of opinion that the remarks in the Extract Minutes of Consultation dated 4th June 1858, No. 1060 are fully borne out. Reference having however been made in Extract Minutes of Consultation 4th June 1858, para. 26 to Mr. Dopping it is but just to that Gentleman to mention that he had nothing to do with the original or first supplemental estimate and that he only assumed charge of the District in February 1858.

(Signed) T. PYCROFT,
Chief Secretary.

Central Office of Public Works
Fort Saint George 6 July 1858.

№ 1719

From

The Offg Chief Engineer

To

The Secretary to Government
Public Works Department

Public Communications

Sir,

In obedience to the orders of Govern-
ment under date 4th June 1858 №1060, I have the
honor to submit a report on the construction of
the Palaur Bridge at Vellore, shewing as far as
circumstances permit, the causes of those errors
which have led to such very heavy and unexpected
demands for increased expenditure, and the
parties who are mainly responsible for them.

2. The Bridge was Estimated by
Captain Collyer in 1854, and though some
of the items are certainly scanty, and the
approaches are almost altogether omitted, yet
I believe the amount (Rupees 72,673.) would
have proved sufficient if the original dimensions
had been adhered to, and the work had been
efficiently superintended. Lieutenant Rideout
who

× Sanction of the Govt of India communicated in Ex: Mins: Govt: №264 dated 10th Febr 1855.

who commenced the work in March 1855, was very soon succeeded by Lieutenant Mayne, the District being under the charge of Lieutenant A. S. Moberly till August. The Bridge was under Lieutenant Mayne until November 1856, while Captain Johnston was District Engineer, during which time, the expenditure was Rupees 35,144-8, or about half of the Estimate, but as Captain Collyer had in the mean time directed an increased width of 1½ foot of roadway, and a greater length of cutwater, the expenditure did not bear its proper proportion to the progress of the work, and for the excess thus caused of, not 20, but probably 12 per cent on the Original Estimate, Captain Collyer appears to be responsible, as he likewise is for the omission of those works, for securing the foundations which experience shews to be highly expedient, if not essential in such situations.

3 The records of the operations are not complete enough to shew what serious errors, productive of excessive expense took place under Lieutenant Mayne's management, although it was the first large work he had superintended, and the same remark may apply to the period during the year 1857, when the Bridge was superintended

superintended by the late Lieutenant Boyd, an Officer who arrived in India in 1856, but under whom Overseer Howard a good practical Subordinate was employed.

4. In July 1857 I visited the Bridge on my way from Salem to Madras, and recorded the following Remarks, "The workmanship and "materials appeared to me unexceptionable, but "the cost will certainly exceed the Estimate, "and I desired Lieutenant Boyd to lose no "time in submitting a comparative statement "of Estimate and expenditure to the 30th June, "and an Estimate of the expense of completing "the Bridge." This Estimate was prepared by Lieutenant Boyd, but was not sent in by Lieutenant Mayne until 1st November, and it omitted the flooring, the want of that defence not having then been manifested. It is thus perfectly clear that such excess of expenditure took place prior to 1st July 1857, as should have led the Acting District Engineer to scrutinize the accounts but this duty certainly was not performed.

5. During the remainder of the year 1857, the work proceeded under Lieutenant Boyd, whose death from the fall of a centering

centering took place on the 31st December, on which Lieutenant Mayne again took Executive charge till appointed to Bangalore, when he was relieved by Lieutenant Clay, who was almost immediately succeeded by Assistant Engineer Horgan, an experienced Officer, under whom the work has been carried forward with an efficiency and vigour which certainly did not attend the earlier operations.

6. On the whole it appears to me that the excess of cost in the Bridge construction, is due first to the inadequacy of the Estimate, and the subsequent change of plan, Secondly to insufficiency of control and neglect to check the accounts as the work proceeded, Thirdly to the increase of prices and rates of labour, and last but not least, to the weakness of part of the foundation which rendered necessary a perfect flooring under the Bridge.

7. It is impossible for me to assign to each cause, or each Officer a proportionate share of effect or responsibility, nor, considering the inexperience of the two Officers chiefly concerned (Lieutenants Mayne and Boyd) do I regard the result with much surprise. The attention of Captain Johnston, when District

X
13

District Engineer, was so occupied with the introduction of the new system of general Executive management, that he probably could not afford much time for leaving his residence at Arcot to attend to the Bridge, but aware as he must have been of Captain Colliyer's alterations, it was certainly his duty to have scrutinized the Estimate and Accounts.

8. The papers forwarded with this letter are marginally stated, and I would particularly call attention to the statement drawn up by Mr. Horgan.

I have the honor to be
Sir,
Your Most Obedient Servant
L. Lawford Major
Offg Chief Engineer.

1 Letter No 47 dated 19th June 1858 from the Executive Engineer at Bangalore.
1 Do No 305 dated 22d June 1858 from the Dy Engr of North Arcot with 3 Enclosures.
1 Do No 115 dated 28th June 1858 from the Offg Consulting Engr for Railways.
1 Extract from Capt Johnston's Diaries.

Central Office of P.W.
Fort Saint George
6th July 1858.

2 + 2 W.C.B.D

Extracts from the Diary of Observations made by Captain Johnston in 1856 when District Engineer of North Arcot regarding the progress of the works at the Palaur Bridge.

January 1856. "I inspected the works in progress "both at the Agarum bridge, 2 miles west "of Pullicondah, and at the Palaur, the for-"mer of 11 Arches of 30 feet span, and the "latter of 43 Arches of 43 feet, Brick making, "and stone cutting are being actively carried "on, and the sinking of wells has been recom-"menced."

March 1856. "I inspected the Palaur, and "Agarum bridges, on which the progress "made has been most satisfactory, the mason-"ry works to the springing of the arches "will all be completed this season, and by "June next, at the latest, I shall hope to "see both the bridges open for traffic."

April 1856. "The Palaur Bridge at Vellore "in progressing most satisfactorily, and the "foundations are I believe, to be completed "by the end of next month."

No. 35

P. Works 1858 Depart.

From The Offg Chief Engineer

To The Secretary to Government Public Works Depart.

Dated 6th July 1858

[illegible]

imperfect

June 1856.

"At the time of my inspecting
"the Vellore bridge, there remained only the
"wells to three piers, and the wing walls on
"the south bank to be sunk, and I have no
"doubt the piers, and abutments will be com-
"pleted without difficulty, before the
"monsoon, to the springing of the arches."

(True Extracts)

Central Office of P.W.
Fort Saint George
6th July 1858.

L Lawford Major
Offg Chief Engineer.

Memo

I have kept these Papers some time, knowing the interest the R.H. the Govr took in the case as one which had called for very severe remarks on the part of Govt.

His Lordships illness has precluded me from laying the Papers before him as proposed by the Hon.ble W. Elliot & under medical ~~prohibition~~ I must now refrain from bringing the debate to his Lordships notice.

I am not aware - from what I gather from general conversation with him - that he would have any lengthened observations to make, or that there would be any reason to expect him to give a different opinion from his colleagues in Council, except perhaps on one point namely the forwarding the /so called/ explanation to the Govt of India. On this point he might perhaps differ, & if

Encloses in a letter
from
The Right Hon.ble Frederick
Shore
The Secretary to Government
Fort William Judicial Dept.

Letter
Rec.d 2 Feb.y 1858.

No 11/11
Dl 1/Aug/58

Copy of Extract from
the Diary of Lieutenant
made by Captain Abbott
in 1856 within District Cuttack
Extract Proceedings
of the Govr of the North
Western Provinces
Political Dept.

might venture an opinion I should say that the Govt having promised to lend it, it will be expected. The Govt of India have not yet noticed the Proceedings of the Govt on the subject. When they do, I have no doubt they will ask why the promised explanation has not been sent.

As having drafted the orders contained in Mil Cs of 6th June 1858, I may perhaps be permitted to say that I consider from the papers now forwarded, that the remarks contained in para 23 of those Mil Cs be fully borne out.

Capt Collyer, regnl Estimate was so "carelessly framed" that it was necessary afterwards to add to it materially, & these alterations being made without authority throws much of the blame on that officer (see para 2 of Major Rawlinson's letter of 6th July

That the work has been "carelessly superintended" is evident from the papers

Capt Johnstone ought to have sentenced the Estimate & accounts more closely X on succeeding Capt Collyer (para 7 of Major Rawlinson's letter) & the work for a considerable period was under the supervision of officers evidently not qualified for the duty: viz Lieut Mayne & Lieut Boyd.

Lieut Mayne acknowledges in his letter of 19th June to Chief Engr that in taking charge of the work he "had little or no practical experience whatever" & he then built with the foundations which are now found to be unsafe. Lieut Boyd was employed on the bridge during 1857. He had not been a year in the country at that time & of course quite inexperienced. He was unfortunately killed by the fall of the centering. Mr Dorling the present Actg Divisional Engineer states "all those who have been in charge of the Bridge have been in point of service mere boys; none having perhaps seen a bridge in progress"

The first detailed Estimate

was utterly untrustworthy. This is evident from the very fact of its being followed by another for 22500 Rupees. and Lieut Maycock admits in para 14 that he omitted to think of the "approaches".

As to the ~~manner~~ terms in which para 23 of the E&M C speaks of the manner in which the subject has been canvassed before Government by the Chief Engineer, I need not comment. Proceedings. Hon explained in the E&M C.

Major Lawford in para 6 of his letter gives some the reasons for the excess of Estimates which of course should be taken into consideration

As Mr Doppings name has been mentioned in the E&M C (para 26) it would be but fair to him to mention that he had nothing to do with the ~~Estimates either original or supplemental~~ [illegible] except in first supplemental Estimate & only assumed charge of the District in ——— 1858

W. H. Baisley

Asst to

Memorandum on letter from the Officiating Chief Engineer dated 6th July 1858 No 719, regarding the Palaur bridge.

In Extract from the Minutes of Consultation of the 4th June last No 1061, the Government reviewed the correspondence which had taken place regarding the Palaur bridge, consequent on an application from the Chief-Engineer for sanction to a second supplemental estimate for the completion of that structure; and after noticing that the Government of India, when sanctioning the first Supplemental estimate, had remarked on the meagre information afforded as to the causes of excess over estimate, the Government desired (para 27) that the Chief Engineer would furnish them with a history of the progress of the bridge from its commencement stating the parties under whom, and the period during which, the work had been from time to time carried on. They also requested to be informed, whether the call for the entire additional outlay had been the result of imperfect-

imperfect estimates, or of imperfect Superintendence, and if so, to whom the blame was attributable. They further desired that it might be stated how much each of the causes assigned had contributed to the excess over the estimate; and they added that, whatever the causes might have been, they expected the Chief-Engineer to point out exactly where the blame lay, both for their own satisfaction and that of the Government of India: In reply to this requisition the Officiating Chief-Engineer has now submitted a report, showing the causes of those errors which have led to the heavy and unexpected demands for increased expenditure, and the parties who, in his opinion, are mainly responsible for them.

2 Major Sanford first states that the original estimate for the bridge was prepared by Captain Collyer in 1854, and that, although some of the items are certainly scanty, and the approaches almost altogether omitted, he believes that the amount would have proved sufficient, if the original dimensions had been adhered to, and the work efficiently superintended.

3 With regard to the parties under whom, and the period during which, the work had been carried on, it appears from Major Sanford's report, and the letter from Mr Horgan, the Assistant Executive Engineer, that the bridge was commenced by Lieut^t Rideout in March 1855, the District being then under the charge of Lieut^t A.S. Moberly, and that the amount of expenditure from March to the end of June 1855, was Rupees 4892. Lieut^t Rideout was succeeded by Lieut^t Mayne, who remained in charge till November 1856, the District Engineer being Captain Johnston, and the amounts of expenditure, from 1st July 1855 to 31st October 1856, Rupees 35,144, or about half the original estimate. Major Sanford however observes that "as Captain Collyer had in the meantime directed an increased "width of 1½ foot of road way, and a greater length "of cut water, the expenditure did not bear its "proper proportion to the progress of the work, and "for the excess thus caused of, not 20, but probably "12 per cent on the original estimate, Captain

Collyer

"Collyer appears to be responsible, as he likewise
"is for the omission of those works, for securing
"the foundations, which experience shews to be highly
"expedient, if not essential in such situations."

4 In his letter to the Chief Engineer dated 19th June 1858, Lieut. Maynes enters into an explanation of his connection with the Bridge, and after premising that it was the first work on which he had ever been employed, and that he had for sometime no efficient Subordinate, or any Superior to advise him in his difficulties, he states (paras 9 to 12) the circumstances under which the foundations of some of the piers had slightly fallen in, and urges that, as the bed of the river is sandy, the same accident might have happened under the most experienced Engineer. With regard to the first Supplemental estimate, and the remarks regarding it in para 23 of Extract from the Minutes of Consultation of the 1st June last, Lieut. Maynes refers to the explanation already furnished as to the causes which had led to it, and quotes in support of its necessity the opinion expressed by the Officiating + Secretary to Government of India, that the extra width of roadway (ordered by Captain Collyer) was alone sufficient to cause the whole of the excess; but he acknowledges his error in having

+ 9th April 1858 in Comn. 11th May.

having omitted the approaches. With reference to the allegation of careless Supervision, he appeals to the cheapness, the quality, and (with the exception of the slight Settlement of some of the foundations, which he admits to be the result of an error of judgment) the general Stability of the work. And as regards the untrustworthiness of the first Supplemental estimate, he contends that, as already explained, it provided for the completion of the bridge only.

5 Captain Johnston, in reply to a communication from the Central Office, + referred to his Reports as District Engineer of North Arcot for his opinion on the progress and quality of the work at the bridge, and observes "that the "original designs had been altered before he joined "the District, and that there was nothing in the "then early stage of the work, to lead him to "question the sufficiency or otherwise of the "estimate."

+ Letter to Supt. Engr. in charge of the Central Office Public Works dated 28th June 1858.

6 Lieut. Maynes was succeeded by Lieut. Boyd, who had charge of the bridge from November 1856 to 31st December 1857, when he was killed by the fall of a centering; the expenditure during that period being Rupees 25,699. Major Lawford

Sanford observes that the records "are not
"complete enough to show what serious errors,
"productive of excessive expenses, took place under
"Lieut.t Maynes management, although it
"was the first large work he had Superintended,
"and the same remark may apply to the period
"during the year 1857 when the bridge was
"Superintended by the late Lieut.t Boyd."
He states however that on his visit to the
Bridge in July 1857, he desired Lieut.t Boyd
to prepare a comparative Statement of Estimate
and expenditure to the 30th June, and an
estimate of the expenses of completing the bridge.
The estimate was accordingly prepared by Lieut.t
Boyd, but was not sent in by Lieut.t Maynes,
(the acting District Engineer) until 1st November,
and it omitted the flooring, the want of that
defect not having then been apparent. Major
Sanford is of opinion however that such excess
of expenditure took place prior to 1st July 1857,
as should have led the acting District Engineer
to scrutinize the accounts, but that this duty
was not performed by that officer.

7 After the death of Lieut.t Boyd
on

on the 31st December 1857, Lieut.t Maynes
again took charge of the bridge for a short
time. He was relieved by Lieut.t Clay,
who was almost immediately after succeeded
by Mr. Morgan, under whose Superintendence
the work is admitted by the present acting
District Engineer, and by Major Sanford,
to have been carried on with efficiency and
vigor.

8 Major Sanford attributes the
excess of expenditure to the following causes.
1st Inadequacy of the original estimate, and
Subsequent change of plans.
2dly Insufficiency of control and neglect to
check the accounts as the work proceeded.
3dly Increase of prices and rates of labor.
4thly Weakness of part of the foundation which
rendered necessary a perfect flooring under
the bridge.

9 With regard to the enquiry how
much each of the causes assigned had influ-
enced the excess over the estimate, Major
Sanford considers it impossible to assign to
"each cause, or each officer, a proportionate
share

"share of effect or responsibility, nor considering
"the inexperience of the two officers chiefly
"concerned (Lieuts Thuyne & Boyd) does he
"regard the result with much surprise." With
respect to Captain Johnston, the then Distant
Engineer, Major Sanford is of opinion that
as that officer was aware of Captain Collyers
alteration of the original design, it was clearly
his duty to have scrutinized the estimate and
accounts.

10. In the letter to the Govern-
ment of India, dated 4th June last,
soliciting sanction to the second Supplemental
estimate, a fuller report has been promised as
to the causes of excess over expenditure; and
it now remains to be decided, whether the
circumstances represented in the present Report
are such as to absolve any, or all the officers
concerned, from responsibility, with respect to
the causes which have led to the demand
for increased expenditure.

It is unlucky that the promise
was made seeing how little the late
Secretary has effected in this matter.

I conclude however that this is
all the explanation that Lt. Sanford can
look to them - It will be for them to
say whether it shall be submitted
to the Govt of India and if so with
what comments it shall be accom-
panied -

17-7-58

The Report is most unsatisfactory
and of course cannot be allowed to lie over
for the cold weather. The chief cause of the mischief
appears to be the very objectionable
system pursued in the Dept of
P.W. of trading about officers
from place to place, apparently
without any sufficient reason
Here we have had four distinct officers
employed each in succession in the execution of
the work - a most important one
two of them quite new men who
had never seen a Bridge work
before - The Chief Engr does not appear to
have exercised
his power of locating officers judiciously
this for the future, & see that mischief of
the kind cannot occur - The papers had better be
sent to Mr
Davis Mr

W.C. 1795 P.W.D.

Extract from the Minutes of Consultation
Under date the 2d ~~August~~ Sept.r 1858.

Read again letter
from the Government of India
dated 16th July and recorded in
Diary to Consultation 24th August
1858 N.o 1661.

Read also the following
letter from the Officiating Chief
Engineer.

2 Reports with reference to
Cons.n Mins. Cons. N.o 1060 dated 1st June 1858
on the construction of the Palaur Bridge
at Vellore, and in shewing as far as
circumstances will permit the causes
which led to the increased expenditure
and the parties mainly responsible
for them, requests attention to the
statement drawn up by Mr. Morgan.

+ 16th July 1858 N.o 3323.

| Here enter 6th July 1858 N.o 1719 |

It is observed that
the Government of India in
their letter of 16th July 1858 above
recorded have sanctioned the
second supplemental Estimate
for the completion of the
Palaur

Should not submit this report
to the Court of Judicature.

I would wish a clause to the P.W.D. Rule
to be added which keeps before
the Engineers such measures should
be adopted to secure them being
effectually carried out both as
regards the Native Agency,
the Masonry part of them as bonds
& Rules should hold the Sub
& of the Circle responsible for due
execution of the same.

The errors sometimes noticed - must be attributed
to ignorance, indifference & grossly
bad & careless workmanship - & to the Rule
cast responsibility of the like occurring
& already put forward regarding Rules
just enforced & strictly observed

Palaun Bridge, and have
expressed their entire concurren
in the remarks made by the
Government in Extract from
the Minutes of Consultation
of the 4th June last regarding
the defects of the original
estimate, the want of care in
preparing the revised estimat
and the imperfect, dilatory,
and superficial manner in
which the whole matter has
been dealt with by the Chief
Engineer. Under these cir-
cumstances the Government
think it unnecessary to trouble
the Government of India by
laying before them the letter
from the Officiating Chief Eng
6th July, and its enclosures.
The explanation which it
purports to submit is in n
degree satisfactory and the
Government after its perusal

continue

ultimate decision.

JJ

To Colonel the Hon'ble Chief Engr. Dated 7th

Public Works 1858 Dept.
Dy. to Couns. 4th. Septr.

A.D. 1816.
Extract Mins. of Couns.
Dy 6th. Septr. /58.

Memd. Surveyor Genl. to pass an opinion on Lieut. Talby's proceedings in his absence. Resolved accordingly to await his arrival, & after affording him presence to state the account, and sufficient time for the preparation and submission of his answer, will consider the circumstances he may bring forward, & record their ultimate decision.

No. 76477.

C25 Aug. to 11th Sept.