Public Works (1895) Department.

G.O., No. 245

DATED 3rd September

[Despatch Abstract.]

Ord- Agencies in connection with the Madras Railway - Letter to the Government of India forwarding the Agent's letter requesting sanction to the establishment of —— at certain places -

[P.W. 25.
5,000—30-11-96.]

Indexed.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
	416	R	20-6-95				

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

31st July 1895, No. 493 R., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

From the Acting Agent, South Indian Railway, to the Consulting Engineer for Railways, dated Trichinopoly, 3rd June 1895, No. 511.

Referring to your letters Nos. 912 and 1665 of the 14th of March and 24th of May last, I have the honour to forward, herewith, as required by paragraph 39 (III), Chapter V, Volume II of the Public Works Department Code, a completion estimate accompanied by a schedule of works showing the estimated further expenditure, Rs. 1,21,741, required to bring the Máyavaram-Muttupet Railway up to the proper standard of efficiency, and shall be glad to receive early sanction to the same.

For those items on which expenditure in excess of 5 per cent. of the provision made therefor in the project estimate has been incurred, revised estimates will be submitted.

From the Joint Secretary to the Government of Madras, Public Works Department, Railway Branch, to the Secretary to the Government of India, Public Works Department, dated Ootacamund, 20th June 1895, No. 416 R.

With reference to paragraph 39 (III), Chapter V, Volume II, Public Works Code, I am directed to forward, for the sanction of the Government of India, a completion estimate for the Máyavaram-Muttupet Railway amounting to Rs. 25,21,156, or Rupees 1,80,397 less than the amount (Rs. 27,01,553) of the sanctioned estimate.

2. The schedule of works required to bring the line to the proper standard of efficiency after the close of the construction estimate on the 31st March 1895 amounts to Rs. 1,21,741, and has been included in the completion estimate.

3. I am to request that the sanction of the Government of India may be accorded to the final estimate of Rs. 25,21,156 in lieu of the amount already sanctioned for the construction estimate.

From the Under Secretary to the Government of India, Public Works Department (Railway Construction), to the Joint Secretary to the Government of Madras, Public Works Department, Railway Branch, dated Simla, the 19th July 1895, No. 862 R.C.

I am directed to acknowledge the receipt of your letter No. 416 R., dated 20th June 1895, forwarding a completion estimate for the Máyavaram-Muttupet Railway, together with a schedule of the works required to bring the line up to a proper standard of efficiency after the close of the construction estimates.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
	429	R	26-6-95				

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

30TH JULY 1895, No. 492 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers:—

From the Agent, South Indian Railway, dated 25th March 1895, No. 278.
" " " 17th April 1895, No. 356.

ENCLOSURE.

From the Chief Engineer, to the Agent, South Indian Railway, dated Trichinopoly, 13th April 1895, C. No. 5181 A/825.

[Your last letter No. 5463/537 of 5th instant.]

In continuation of my letter B. No. 5181 A/700 of 27th March 1895, and in explanation of the plan No. 47/95, and estimate forwarded therewith, I submit the following remarks.

The provisional sanction of the Board to an approximate estimate amounting to Rs. 30,671 has already been accorded to the inclusion of that sum in the budget estimate, but the detailed estimate since submitted for sanction amounts to Rs. 34,374.

The proposals are, as in the similar case of the main line embankment breached on miles 252 and 253 in the floods of 1884 and 1893, to lower the line on to a causeway which, while keeping the rails above ordinary flood level, will permit extraordinary floods such as may be expected to occur about once in 10 years, to flow away over the railway with but short, if any, interruption to traffic.

My proposals were submitted to the Superintending Engineer of the VI Public Works Department Circle, and that officer * wrote in answer to my reference:—

* Major O. V. Boddy, R.E.

"I have the honour to inform you that the Cauvery flood bank is being made up to its original section and that it is proposed to cut this bank whenever land floods cause the water to head up to a dangerous height against it, an eventuality not likely to happen more than once in 10 years. Your proposal to lower your line on to a heavy stone causeway is, in my opinion, a sound one. The level should be such that ordinary floods will not interfere with the train service. The maximum flood level of the Cauvery at Kodamurti bridge may be taken at 225·41 † feet and ordinary floods at 2 feet below this or 223·41 ‡ feet. I presume that you do not intend to alter rail level over your Kodamurti bridge. This level is 234·18 ‡ feet. I am disposed to think that a rail level of 225 feet on your proposed causeway would be sufficiently low. This would entail a drop of 9·18 feet below rail level of Kodamurti bridge and could be obtained in about 1,000 feet, which would bring the causeway to about the site of last year's breaches.

† As reported to me now; in my list it is given as 233·88 inches.

‡ To these levels add 124·15 feet to adapt them to South Indian Railway datum, which is 124·15 inches below mean sea level.

"2. The maximum flood level at Kodamurti bridge caused by land floods is 232·73 feet which would indicate that, under similar conditions, about 7 feet of water would stand on the causeway if rail level is fixed at 225 feet."

The only departure from Major Boddy's views is, that I propose to raise rail level on the causeway higher than he suggests by about one foot in order to keep it slightly above instead of at the maximum flood level of the river Cauvery, in the hope that this may result in preventing any but abnormal and infrequent land floods from rising over rail level.

These land floods have hitherto, since the construction of the railway, acted with unusual severity and concentrated force on the Erode branch owing to the main line embankment between 250–5 and 252–4 miles first pending the drainage up, and then, when breached, suddenly setting free a vast body of water to rush across country to swell the volume of land floods already accumulated against the Erode branch embankment.

The lowering of the main line now being carried out on the miles * specified will allow these floods to flow freely away instead of accumulating, and so, greatly modify their action on the Erode branch which will not therefore, it is expected, be so severely tried in future.

* 252 and 253 miles.

The Public Works Department have closed the raised bank of the river Cauvery, which was breached opposite the railway during the floods of November 1893, but it is intended † by that department to cut this bank, if and when any extraordinary land flood rises to a dangerous height at the confluence of the Kodamurti and Cauvery rivers; the Kodamurti being the channel by which the drainage of the country here discharges with the Cauvery.

† As stated in Major Boddy's letter previously quoted.

Neither the railway nor the public road bridges of 240 lineal feet and 180 lineal feet waterway, respectively, are anything like adequate to pass the extraordinary flood drainage of the country into the Cauvery at this point. The railway will, however, get over this difficulty by lowering the line and allowing such floods to flow away over it, the Public Works Department intend to meet it by the expedient of cutting the Cauvery bank and letting the floods which cannot find an outlet owing to the inadequacy of the public road bridge, flow away through the cut into the Cauvery.

From the Joint Secretary to the Government of Madras, Public Works Department, Railway Branch, to the Secretary to the Government of India, Public Works Department, dated Ootacamund, 26th June 1895, No. 429 R.

With reference to endorsement No. 117 R., dated 26th February 1894, forwarding a copy of the Proceedings of this Government No. 116 R. of the same date, I am directed to forward herewith, for the sanction of the Government of India, an estimate amounting to Rs. 34,374, chargeable in the proportion of Rs. 23,252 to Capital and Rs. 11,122 to Revenue, for lowering on to a causeway that portion of the Erode branch of the South Indian Railway between the 253rd and 254th miles which was seriously breached by the floods of November 1884 and 1893.

2. The description given in the Agent's letter No. 1144, dated 19th November 1894, copy of which was forwarded with my letter No. 20 R. of 16th January 1895, of the causeway to be constructed on the main line, as also the reasons advanced for adopting the method described therein, apply to the proposal now submitted. A copy of the Chief Engineer's letter ‡ to the Agent on the subject is also enclosed.

‡ No. C. 5181 A–825, dated 13th April 1895.

3. The Board of Directors have, in their letter No. 151, dated 10th May 1895, approved of the work.

4. The approval of the Chief Engineer for Irrigation, Madras, has also been obtained.

From the Under Secretary to the Government of India, Public Works Department (Railway Construction), to the Joint Secretary to the Government of Madras, Public Works Department, Railway Branch, dated Simla, the 23rd July 1895, No. 883 R.C.

I am directed to acknowledge the receipt of your letter No. 429 R., dated 26th June last, and in reply to convey the sanction of the Government of India to the estimate therewith submitted, amounting to Rs. 34,374, of the cost of lowering on to a causeway that portion of the Erode branch of the South Indian Railway between the 253rd and 254th miles, which has been seriously breached by floods.

2. I am also to forward, for information, copy of a note on the subject prepared in the office of the Consulting Engineer to the Government of India for State Railways.

3. The sanction accorded in paragraph 1 above is chargeable in the proportion of Rs. 23,252 to Capital and Rs. 11,122 to Revenue, and has been registered as No. 4, South Indian Railway, of 1895.

ENCLOSURE.

Copy of a note dated 10th July 1895, prepared in the office of the Consulting Engineer to the Government of India for State Railways.

It would be better, instead of making the central part of the causeway level for 1,000 feet, to make it lower at the centre and higher at the ends by using grades of, say, about 1 in 400, meeting in the middle.

2. The pitching on section A might be reduced somewhat, the stone so gained being used to increase the apron of the centre section C.

ORDER—dated 30th July 1895, No. 492 R., Public Works.

Communicated to the Agent, South Indian Railway, for information.

2. This sanction has been registered as No. 9 R. of 1895–96.

(True Extract.)

Under Secy. to Govt., P.W.D.,
Railway Branch.

To the Agent, South Indian Railway.
„ Examiner, Railway Accounts, Madras.

Exd. M. Pahilvan.
Spare Copies

RAILWAY.

Govt. of {1895} Madras.

PUBLIC WORKS.

Dated July, 30th.

Read. *Encl.*

G.O., 30th July 1895, No. 492 R.

JULY.

Causeway

Government of India sanction to the estimate of Rs. 34,374 for lowering on to a — that portion of the Erode branch of the South Indian Railway between the 253rd and 254th miles, which has been seriously breached by floods, communicated to the Agent.

Copy

South Indian Railway

Letter from the Chief Engineer to the Agent dated Trichinopoly 13th April 1895 No. C/5181 A/825

Your last letter No. 5463/537 of 5th instant.
Lowering line on Erode Branch.

In continuation of my letter No. B 5181 A of 27th March 1895. and in 7th explanation of the plan No. 42/225 and estimate forwarded therewith, I submit the following remarks:—

The provisional sanction of the Board to an approximate estimate amounting to Rs 30,695 has already been recorded & the inclusion of that sum in the Budget Estimate but the detailed estimate since submitted for sanction amounts to Rs 34,374.

The proposals are, as in the similar case of the main line embankment breached on miles 252 and 253 in the floods of 1886 and 1893, to lower the line on to a causeway which while keeping the rails above ordinary flood level, will permit extraordinary floods, such as may be expected to occur about

over

once in 10 years to flow away over the Railway with but short, if any, → interruption to Traffic.

My proposals were submitted to the Superintending Engineer of the VI Public Works Department Circle and that Officer wrote in answer to my reference.

① Major O.V. Boddy R.E.

"I have the honor to inform "you that the Cauvery flood bank "is being made up to its original → "section and that it is proposed to "cut this bank whenever land floods "cause the water to head up to a "dangerous height against it, an → "eventuality not likely to happen more "than once in 10 years, your proposal "to lower your line out to a heavy "stone causeway is in my opinion, "a sound one. The level should be "such that ordinary floods will not "interfere with the Rail Service. The "maximum flood level of the Cauvery "at Kodamurti bridge may be taken "at 225.*41' and ordinary floods at "2 feet below this or 223.*41'. I presume "that you do not intend to alter rail "level over your Kodamurti Bridge. "This level is 234.*18'. I am disposed to "think that a rail level of 225' on your "proposed causeway would be sufficient- "ly low. This would entail a drop of "9.18' below rail level of Kodamurti "Bridge and could be obtained in about "1000 feet which would bring the Cause- "way to about the Dike of last years breaches

* "As reported "to me earlier, in my "list it is quoted "as 233.68"

* To these levels add 126.15' to adopt them to S.I.R. datum which is 126.15' below mean sea level.

"breaches.

"2. The maximum flood level at "Kodaumrti bridge caused by land "floods is 232.73' which would indi- "cate that under similar condition "abont 7 feet of water would stand "on the causeway if rail level is fixed "at 225'."

The only departure from Major Boddy's views is, that I propose to raise rail level on the Causeway higher than he suggests by about one foot in order to keep it slightly above instead of at the maximum flood level of the River Cauvery, in the hope that this may result in preventing any but abnormal and infrequent land floods from rising over rail level.

These land floods have hitherto, since the construction of the Railway acted with unusual severity and concentrated force on the Erode Branch owing to the main line embankment between 250/5 miles and 252/4 miles, first ponding the drainage up, and then when breached, suddenly setting free a vast body of water to push across country to swell the volume of land floods already accumulated against the Erode Branch embankment.

The lowering of the main line now being carried out on the 252+253 miles* specified will allow these floods

to

* 252+253 miles.

to flow freely away instead of accumulating; and so greatly modify their action on the Erode Branch which will not therefore, it is expected, be so severely tried in future.

The Public Works Department have closed the raised bank of the River Cauvery which was breached opposite the Railway during the floods of November 1893, but it is intended by that department to cut this bank if and when any extraordinary flood rises to as dangerous height at the confluence of the Kodamurti and Cauvery rivers; the Kodamurti being the channel by which the drainage of the Country here discharges with the Cauvery.

2 As stated in Major Bradley's letter formerly quoted

Neither the Railway nor the Public road bridges of 240 lineal feet and 180 lineal feet waterway respectively are anything like adequate to pass the extraordinary flood drainage of the Country into the Cauvery at this point. The Railway will however get over this difficulty by lowering the line and allowing such floods to flow away over it, the Public Works Department intend to meet it by the expedient of cutting the Cauvery bank and letting the floods which cannot find an outlet owing to the

the inadequacy of the public road bridge, flow away through the cut into the Sewers.

Agents' office,
Trichinopoly
15th April, 75

I have &c.
Thos Cotton
Superintendent of Irrigation
Chief Clerk.

REGISTER
No. 1726
FILE

No. 356

South Indian Railway Co., Ld.

AGENT'S OFFICE,

TRICHINOPOLY, 17th April 1895.

From

THE AGENT,

SOUTH INDIAN RAILWAY,

To

THE CONSULTING ENGINEER

FOR RAILWAYS,

MADRAS.

Sir,

In continuation of my letter No. 278 of the 25th ultimo (vide your letter No. 1101 of the 1st instant) regarding the lowering of the line between the 253rd and 254th miles on the Erode Branch, I have the honor to enclose copy of a letter from the Chief Engineer on the proposed work.

I have the honor to be,

Sir,

Your most obedient Servant

William & Betts.

Agent

1 Enclosure by Book Post

no further action can be taken till Board's sanction is received. awaited FFF. 19/4

papers filed in

1895 prepared ... the office of ...

REGISTER

No. 1726.95
LETTER No. 356 17.4.95
FROM A

B/-

No. 429 R.

Government of Madras.

PUBLIC WORKS DEPARTMENT,

RAILWAY BRANCH.

To

8 Dec

THE SECY. TO THE GOVT. OF INDIA,

P. W. DEPARTMENT.

Ootz the 26th June 1895.

SIR,

With reference to Gr. document No: 1787 dated 26th February 1894. forwarding a copy of the Proceedings of this Government No: 116R of the same date, I am directed to forward herewith, for the sanction of the Govt. of India, an estimate amounting to Rs 34,374 chargeable in the proportion of Rs 23,252 to Capital and Rs 11,122 to Revenue, for converting into causeway that portion of the Erode Branch of the S. I. Rly between the 253rd and

District R. Office
26.6.95

1895 prepared in the Office of [illegible]

From

THE AGENT,

SOUTH INDIAN RAILWAY,

Trichinopoly,

To

THE CONSULTING ENGINEER FOR

RAILWAYS,

Madras.

Dated
Received

189 .

No.

ENCLOSURE.

254th miles which has seriously breached the floods of November 1884 and 1893.-

2. The description given in the Agent's letter No. 1444 dy 19th November 1894 copy of which was forwarded with letter No. 20 R, dy 16th January 1895, of the causeway to be constructed on the main line, as also the reasons advanced for adopting the method described therein, apply to the proposal now submitted. A copy of the Chief Engineer's letter to the Agent on the subject is also enclosed.

3. The Board of Directors have, in their letter No. 157 dy 10th May 95, approved of the work.

4. The approval of the Chief Engineer for Irrigation has also been obtained.-

B/- No. 429. R. dated 26.6.95-

x No. 1587A/825 dy 13th April 95

Documents accompanying
Estimate with plan
+ Chief Engineer's letter &
Agent's to above

4/7 Fwd 25 R

No. 883 R.C.

GOVERNMENT OF INDIA.

All communications should be addressed to the Secretary.

PUBLIC WORKS DEPARTMENT.

RAILWAY CONSTRUCTION.

9 9.

To

The Joint Secretary to the Government of Madras,

Public Works Department, Railway Branch.

Simla, the 23rd July 1895.

Sir,

I am directed to acknowledge the receipt of your letter No. 429 R., dated 26th June last, and in reply to convey the sanction of the Government of India to the estimate therewith submitted amounting to Rs. 34,374 of the cost of lowering on to a causeway that portion of the Erode Branch of the South Indian railway between the 253rd and 254th miles, which has been seriously breached by floods.

2. I am also to forward for information copy of a note on the subject prepared in the Office of the Consulting Engineer to the Government of India for State Railways.

3. The sanction accorded in paragraph 1 above is chargeable in the proportion of Rs. 23,252 to Capital and Rs. 11,122 to Revenue and has been registered as No. 4 South Indian Railway of 1895.

I. have the honour to be,

Sir,

Your most obedient servant,

H. A. Talbot

Under Secretary.

Document accompanying :-

Copy of note dated 10th July 1895 prepared in the Office of the Consulting

DD P.T.O.

P. W. (GU... 5778.

Engineer to the Government of India for State Railways.

Encl 1
Recd: 29-7-95

Note

Copy of a note dated 10th July 1895, prepared in the Office of the Consulting Engineer to the Government of India for State Railways.

10 S.D

--------oo0oo--------

It would be better, instead of making the central part of the causeway level for 1000 feet, to make it lower at the centre and higher at the ends by using grades of, say, about 1 in 400, meeting in the middle.

2. The pitching on section A might be reduced somewhat, the stone so gained being used to increase the apron of the centre section C.

--------oo0oo--------

AD

C.B

A. Inspection Note

(R) Form No. 3.

A No 492 R dt 30-7-95.

PUBLIC WORKS DEPARTMENT,
RAILWAY BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following

Dwd 5-1
5778/95

Letter from the Agent S.M.R. G.O. No: 278 dt 25th March 1895
Letter from do do 356 dt 17th April 95
Letter from the Joint Secy to Govt: P.W.D. Rly Branch } G.O. No: 429 R dt 26th June 1895
Letter from the Joint Secy to Govt: P.W.D. } G.O. No: 883 R dt 23rd July 95

Communicated to the Agent S. M. R for information.

2. This question has been registered as No: 9. R dt 1895-96.

DR
29-7-95

To The Agent S. M. R
" Examiner Rlys Central Circle Madras

To The Chief Engineer for Railways
& His Excellency the Governor
for information.

A. referred to above.