M.R.O. 1—77,006—8-6-37.

(1) Number of pages 14

(2) Date of repair 6.12.38

(3) Initials of the Referencer

CF

MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

G.O. No.	Press / Mis.
Dated	18

245 - 246 7/8

Not to be folded or roughly handled

No. 245. Read the following letter from the Acting Superintending Engineer, 7th Division, to the Secretary to Government, Public Works Department, Fort St. George, dated Coimbatore, 4th April 1872, No. 3 :—

With reference to G. O., No. 2138, dated 19th August 1871, and paragraph 8 of my report, No. 196, dated 7th December 1871, I have the honour to state that, with the exception of the Koodatye Bridge in Malabar on the line of road between Tambercherry and Areacode, *via* Tiroovambady, which line in my letter, No. 204, dated 20th December 1871, I proposed should be abandoned, I have inspected the whole of the bridges in question, and beg to report on them as follows.

2. The Range Officer notes that he considers the reason of the Koodatye Bridge having failed to be in consequence of insufficient waterway, and that the work which was constructed under the personal supervision of Private Hyde, of the 16th Lancers, late an Overseer in the Department, was badly done. As the bridge is not required, I recommend the materials be sold or transferred to some other work.

3. The Mahé Bridge, which I carefully examined, is an old timber structure on timber piles. It is in such a rotten condition that it requires to be reconstructed entirely. I fear the funds available in the district will not allow of iron girders being used, and that both this and several similar bridges on the Cannanore and Calicut Road must simply be reconstructed of timber. I have, however, addressed the President of the Local Fund Board on the subject, and will provide him with such estimates as the Board may be in a position to furnish allotments for.

4. The Naringapully Bridge, situated at the 5th mile from Palghaut on the road to Coimbatore, which fell on the night of 15th November 1871, is a masonry bridge of five arches. It was originally built many years ago ; during some heavy freshes in 1857 it was destroyed, and again whilst being reconstructed in 1859 met with accident, but eventually was completed in 1861, and showed every sign of being a substantial work until the time under notice. I inspected the bridge on the 23rd of February 1872, and examined the foundation as far as I was able. The foundations of three of the piers and the abutments are built on rock exposed above the bed of the river ; but, though the records in my office showed all the foundations to be upon rock, I had some doubt about the foundation of the second pier from the left bank of the river being so. Here nothing but sand with bits of bamboos and trees sticking out of it was visible, and the masonry appeared rent, and to have moved, in two or three places as close to the site of the pier as the debris would admit of. I bored with an iron bar which entered easily into the sand to a depth of about seven feet when it apparently came in contact with wood. I, therefore, directed the Range Officer to have the foundation further examined, and the result is that about the centre of the pier, at a depth of $5\frac{1}{4}$ feet below the present sandy bed of the river, rock with very steep sides described as being "like the back of a bloodsucker" has been found. The cause of the accident is evidently attributable to this rock not having been tabled before the pier was built upon it. It is reported that before the bridge fell the bays were blocked up with huge trees, clumps of bamboos, bushes, &c., &c. From the buried timber in the vicinity of this pier the water evidently swept out a tremendous hole in the sand on either side of the sloping rock the pier was built on. The other bays of the bridge all being blocked up, and the bed of the river between them being rocky, most of the discharge of the river found its way by this outlet at a terrific

increased velocity, and thus the masonry on the sloping sides of the rock must have soon been destroyed, and the pier washed away, the arches speedily following it. The materials used in the construction of the bridge are of the best description, the mortar very hard, and the bricks very good, so the loss of the bridge can, in my opinion, only be attributed to the failure of the second pier from the causes already given. The Naringapully Bridge is situated on the line of road from Coimbatore to Calicut running close to, and parallel with, the railway; the river is easily crossed by a good ford in the dry season, and it is only for a few days during the height of the monsoon that it is not fordable. I do not, therefore, consider it necessary that it should be rebuilt, though a heavy traffic at present exists on this road, and for mere local purposes the loss of the bridge is to be deplored; its general usefulness will, in a great measure, cease as soon as Coimbatore is placed in direct communication by railway with Palghaut, and thus admit of through traffic without, as at present, twice breaking bulk.

5. While in Canara I examined the Goletuttoo Bridge. Its failure I attribute to the foundation of the central pier having sunk, the materials used being of very indifferent quality. The persons who were engaged in the construction of the bridge have left the Department. An estimate for repairing the bridge has been submitted, and the work has, under my instructions, been commenced on emergency, and funds have been allotted for its completion.

6. I regret very much to have to notice that a great aversion appears to exist in some of the Local Fund Boards to employing the Public Works Workshops for the supply of iron girders, &c., &c. I would, therefore, respectfully urge the early distribution of the plans and memoranda promised by the Superintendent, the weight of girders, &c., &c., their cost per foot run, and rail and steamer carriage to the principal ports and railway stations should be noted; bolts and nuts should be submitted, where possible, for "rivets," and "Mallet's patent buckled iron plates" used for flooring instead of timber.

Transferred to the Financial Department.

2. The subject of paragraph 6 will receive consideration in this Department.

FORT ST. GEORGE,
13th April 1872.

(Signed) J. CARPENDALE, Colonel, R. E.,
Secretary to Government, P. W. D

No. 246. ORDER THEREON, 19th April 1872, No. 542.

Communicated to the Board of Revenue.

(True Extract.)

Officiating Chief Secretary.

To the Board of Revenue.

Exd. J. Wright.

No 3 Supdg Engineer Office, 7th Dist
Commissioner & Agent 12

From Lieutt Colonel W. Farewell R.E.
Sg Supdg Engineer
7th Division

To The Secretary to Government
Pub Department
Madras

Sir,

With reference to G.O. No 2138 related 19th August 1871 and Para 8 of my Report No 196 dated 7th December 1871. I have the honor to state, that with the exception of the Bowstring Bridge on Malabar on the Line of Road between Tellicherry and Mercara all the Timber Bridges, which line our Division, were erected in December 1871 vide Letter No 204 dated 12th December 1871. I strongly recommended the abandonment of the Bridges in question and the substitution of Iron Girders and Lattice Work for the Timber as follows:— To report on them as follows:—

Col. I have inspected the whole of the Bridges in question and beg to report on them as follows:—

2. The Range Officer notes that the connection of the Roads, the Bridge having failed, to be the Bridge having failed, to be in consequence of insufficient waterway, and that the work — which was constructed under the

---

Govt. of {1872} Madras.

FINANCIAL.

To

THE BOARD OF REVENUE.

Dated April, 19th.

Recd. *Encl*

G. O., 19th April 1872, No. 542.

APRIL.
Nos. 245-246.

Communicating letter from the Superintending Engineer, 7th Division, reporting the cause of the failure of certain bridges in the Malabar and South Canara Districts.

personal supervision of Private Hyde of the 16th Lancers, late an Overseer in the Department, was badly done; as the Bridge is not required I recommend the materials be sold or transferred to some other work.

3. The Make Bridge which I carefully examined, is an old Timber structure on Timber piles, it is in such a rotten condition, that it requires to be reconstructed entirely, I fear the funds available in the District will not allow of Iron bridges being used, and that both this, and several similar Bridges on the Cannanore and Calicut Road must simply be reconstructed of Timber, I have however addressed the President of the Local Fund Board on the subject, and will provide him with such Estimates as the Board may be in a position to furnish allotments for.—

4. The Naringapully Bridge situated at the 5th mile from Palghaut on the road to Coimbatore which fell on the night of 5th November is a masonry Bridge of 5 arches, it was originally built many years ago, during some heavy freshes in 1857 it was destroyed, and again whilst being reconstructed in 1859 met with accident, but eventually was completed in 1864; and shewed every sign of being a substantial work until the time under notice. I inspected the Bridge on the 23rd of February 1872 and examined the foundation as far as I was able, the foundations of three of the piers and the abutments, are built on rock exposed above the bed of the river, but though the records in my Office shewed all the foundations to be upon rock, I had some doubt about the foundation of the second pier from the left bank of the River being so; here nothing but sand with bits of bamboos and Trees sticking out of it was visible, and the masonry appeared rent and to have moved, in two or three places as close to the site of the pier as the debris would admit of. I bored with an iron bar which entered easily into the sand to a depth of about 7 feet when it apparently came in contact with wood. I therefore directed the Range Officer to have the foundation further examined, and the result is, that

who were engaged in the Construction
of the Bridge have left the Department.
An Estimate for repairing the Bridge
has been submitted, and the work
has under my instructions been com-
menced on emergency and funds
have been allotted for its completion.
6. I regret very much to have to
notice that a great aversion appears to
exist in some of the Local Fund Boards to
employing the P. W. Workshops for the supply
of Iron Girders &c. &c., I would therefore
respectfully urge the early distribution of the
Plans and Memoranda promised by the
Superintendent, the weight of Girders &c. &c.
their cost per foot run, and Rail and Steamer
carriage to the principal Ports and Railway
Stations should be noted. Bolts and nuts
should be substituted where possible,
for "Rivets" and "Mallets Patent Buckled
Iron plates" used for flooring instead of timber.

I have the honor to be,
Sir,
Your Most Obed.t Serv.t

Lt. Col. R.E.
Ag. Supt. Engineer 7th Div.n.

Pw 19 Cauz 1/71 Bn 249-250
" 23 Jany 1/72 — 394-396

P. W. 1872 Depart.
Financl

No 3 No 1737.

From

The Supg Engineer
7th Division

To

The Secretary to Govert.
D. P. W. Madras

Dated 4th
Recd 9th } April 1872
Cy 15th

No 734

Reports the cause of the failure of the Kondatye and Karunga-pully Bridges in the Malabar and Golithattoo Bridge in South Canara District

Transferred
With an Order

Communicate to the Board of Revenue

A.G.

cb/4-
219-

4

Transferred to the Financial Dept.

The subject of Para 6 will receive Consideration in this Department.

Col Rs

Secy to Govt
19 April 1872 No 542 W&D
13 April 72

Comd Rs

B. of Rev.

Govt. of {1872} Madras.

Financial

To the Board of Revenue

Dated Apl. 19.

Recd. Encl.

G. O. 19 Apl. , 1872, No. 672.

Nos. 245. 246

Commg. letter from the Supg. Engr. 4th Division regarding the Cause of the failure of certain bridges in the Tinnevelly & South Canara Dts.