

- (1) பக்கங்களின் எண்ணிக்கை 16
 (2) புதுக்கித் திருப்பிய நாள் 6/88
 (3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம் 6/88

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

மொழியணி துறை

அரசாணை எண். 913 அச்சகம்
 மு. கோப்புத் தாள் எண். பலவகை

நாள் : 20-3-1888 198 .

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

ஆவண. கர-1-18,000-15-6-87.

A. Nani

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From J. W. MARTIN, Esq., Officiating Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 28th February 1888, No. 72 E.W.

As mentioned in paragraph 7 of this office letter printed with G.O., No. 950 W., of 30th March 1887, regarding Calicut-Vayitri road and noticed in paragraph 3 of that order, I have the honor to forward for sanction revised plans and estimates, amounting to Rs. 85,279, for constructing the bridges in the Calicut-Vayitri road, together with a general abstract of the estimate, report, and a comparative statement. In the estimate sanctioned in the Government order referred to, the amount provided for iron bridges is Rs. 48,892. For this sum Rs. 85,279 should now be substituted, making complete revised estimate for road amount to Rs. 4,11,965.

2. The estimate now submitted provides for making the bridges with the girders, &c., sent from England by the Secretary of State. The excess, amounting to Rs. 36,387, is due chiefly to excess in weight and size of the girders over the original designs and to alterations necessitated in the masonry works to make them suit the girders as explained in report, and partly to omissions for baling, painting, iron work and rough stone revetment in the original estimates. In the accompanying report from the Executive Engineer the details of excess for each bridge is given and explained. The abstract for the items of the excesses is as follows :—

	RS.
Iron work received from England	18,277
Additional masonry involved in making slight alterations to the masonry works to make them suitable for the girders	5,488
Making central pier of Kadangampoya bridge with concrete cased with granite for reasons stated in paragraph 7 of the report	1,926
Extra work for baling, painting iron, teakwood and revetment	8,464
Contingencies	558
Superintendence	1,674
Total	36,387

3. In paragraph 7 of this office letter, referred to above, it is stated that "the item bridges will have to be specially revised as soon as full information is obtained regarding the cost of iron work, including carriage to site and filling up." This information has now been obtained because Kadangampoya bridge is nearly completed, and the estimates now submitted provides for rates based on data derived from that bridge.

Note by the Chief Engineer, Public Works Department.

In G.O., No. 950 W., dated 30th March 1887, a reference was made to the revised plans and estimates that would be required for the bridges on the Calicut-Vayitri road as soon as the iron work had been received from England. These have

now been sent in by the Superintending Engineer, IV Circle, and show an increase of Rs. 36,387 over the approximate estimate of Rs. 48,892.

2. The excess is mainly due to the iron work in the girders being heavier and therefore more expensive than was anticipated; provision has also been made for certain items omitted from the approximate estimate; and the rates have been revised upon data furnished by the construction of the Kadangampoya bridge, which is nearly completed.

3. The drawings in some instances show face work of concrete, which is evidently not intended, and the necessary alteration has been made in the Chief Engineer's office.

4. The question of the depth to which the foundations must be carried is one to which the Superintending Engineer should give particular attention, depending, as it does, entirely on the nature of the soil. Wherever the foundations do not rest on sound rock, they should be protected from scour by a flooring of rough stone with retaining walls up and down stream.

5. With these remarks the revised plans and estimates, amounting to Rs. 85,279, are submitted and recommended for the sanction of Government.

(Signed) H. R. MEAD, Colonel, R.E.,
Chief Engineer, P.W.D.

ORDER—dated 20th March 1888, No. 913 W., Public Works.

The revised estimate, amounting to Rs. 85,279, for constructing twelve iron girder bridges on the Calicut-Vayitri road, is sanctioned in supersession of the estimate of Rs. 48,892 included in the general estimate for the road sanctioned in G.O., No. 950 W., dated 30th March 1887. The total sanction for the road will now stand at Rs. 4,11,965.

2. Attention is drawn to the note by the Chief Engineer, Public Works Department, above recorded.

3. This sanction has been registered as Provincial, No. 194 W. of 1887-88, and classified as Communications, Original Works.

(True Extract.)

Captain, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintending Engineer, IV Circle, with twenty-two enclosures.
" Examiner, Public Works Accounts, with the general abstract estimate.
" Local and Municipal Department.

Exd. J. Moses.
Spare Copies

913
2

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1888) Madras.
PUBLIC WORKS.

Dated March, 20th.

Recd.

Encl.

G.O., 20th Mar. 1888, No. 913 W.

MARCH.

Calicut-Vayitri Road

Revised estimate for constructing twelve iron girder bridges on the —, sanctioned with remarks.

12TH OCTOBER 1885, No. 2373 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads,
Civil Works.

READ—the following letter from Colonel ROSS THOMPSON, R.E., Officiating Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 24th September 1885, No. 384 E.W. :—

I have the honor to report that I have lately inspected the Calicut-Vayitri road and ghât, and have gone through the estimates with Mr. Cormac, Vayitri sub-divisional officer. A sum of Rs. 40,727 has been sanctioned in G.O., No. 1527 W., dated 1st July 1885, for purchasing land and houses and constructing quarters for the executive staff of the Vayitri sub-division; but I do not think it is necessary to spend so much money in this way, and I foresee that every rupee that can be saved will be required to meet expenditure on the ghât upon items which have, I think, been under-estimated for. For instance, the amount of blasting to be done is greater than provided for, and a sufficient margin has not been allowed for the construction and repair of parapets along dangerous portions of the ghât.

2. I have just seen a type of house which would suit admirably for the executive staff and for inspection huts. The house I refer to was constructed by Mr. Tomlinson, a coffee-planter at Chundale, near Vayitri, in the year 1878. It is perfectly sound and good now, and I would not desire a better temporary residence for myself. With the exception of renewal of thatch, it has not required repair since it was constructed.

3. It is wind and rain proof and does not retain the damp as brick, mud and stone houses do in the Wynaad.

4. As a proof of the dryness of the house (although situated in the midst of jungle), Mr. Tomlinson showed me several handsomely-bound books which have been in the house since 1878, and these books had no traces of damp or mould about them.

5. The house is simply a sawn timber frame, with double bamboo mat walls and partitions, and cadjan and grass roof; doors and windows glazed in squared wooden frames.

6. Two rooms, each 14 feet square, with two bath-rooms; verandahs 6 feet wide in front and rear and a porch in front; stables for two horses and three rooms for servants, viz., watchman, servants and cook; also one latrine.

7. A house and outhouses of this description can be constructed in six weeks for about Rs. 700.

8. Mr. Cormac, the sub-divisional officer, now lives at "Coolaquee," the bungalow which it was proposed to buy and repair for him. He only pays Rs. 30 per mensem for it and is perfectly satisfied with the arrangement.

9. The office for the sub-divisional officer is now rented for Rs. 20 per mensem and can be kept on at the same rate. Nothing further is required.

10. Cooly lines are not wanted as the contractors provide their own.

11. The clerks, draughtsmen and lascars have already found quarters for themselves and require nothing further. The contractors will take care of their own people; so we require no hospital buildings nor medical aid beyond what is already available in the Vayitri dispensary.

12. I have the honor to submit an estimate of Rs. 8,904 for the temporary buildings which I have recommended.

ORDER—dated 12th October 1885, No. 2373 W., Public Works.

The Government approve the proposals of the Superintending Engineer, IV Circle, and sanction the revised estimate, amounting to Rs. 8,904, in lieu of the estimate of Rs. 40,727, sanctioned in G.O., No. 1527 W., dated 1st July 1885, for housing the working staff on the Calicut-Vayitri road.

2. The total sanction for improvements to the section of road between Calicut and Vayitri will now stand at Rs. 3,19,788.

3. This sanction has been registered as Provincial No. 148 W. of 1885-86, and classified as Communications, Original Works.

4. If necessary, a revised estimate should be submitted to cover the anticipated excesses on other items.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, IV Circle, with estimate.
" Examiner, Public Works Accounts.
" Financial Department.

Exd. J. Henrious.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1885) Madras

PUBLIC WORKS.

Dated October, 12th.

Recd.

Encl.

G.O., 12th Oct. 1885, No. 2373 W.

OCTOBER.

Housing working staff on the
Calicut-Vayitri road

Revised estimate for —, sanctioned.

913
30TH MARCH 1887, No. 950 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following letter from Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 15th March 1887, No. 131 E.W. :—

With reference to paragraph 4 of G.O., No. 2373 W., dated 12th October 1885, I have the honor to submit, for sanction, a revised estimate, amounting to Rs. 3,75,578, for improvements to the Calicut-Vayitri road.

2. The revision has been necessitated by excesses arising from omissions * and insufficient † provision for certain items in the original estimate. These, I find, have all been fully explained in the Executive Engineer's report, except items 1 and 8, blinding and superintendence.

3. With regard to blinding, only one inch of gravel was allowed, in the original estimate, over the metal, and experience has shown that two inches are most necessary. The revised estimate therefore provides for two inches of gravel over the 12 feet breadth of metal for the whole length of the road.

4. In regard to the item superintendence, insufficient provision was made in the original estimate for work establishment, because it was then expected that the greater part of it would be charged to a special head of temporary establishments provided in the budget; and, under present circumstances, the percentage has had to be increased from 2 to 6 per cent. The latter percentage may seem high, but the special circumstances of the work, in a particularly unhealthy locality, where it is most difficult to obtain or keep superintendents, clerks, &c., must be borne in mind. The item superintendence includes the pay of an experienced mechanic, Mr. Wiggins, who has been engaged to superintend the erection of the iron work.

5. With regard to increase under the head of maintenance, before the road was handed over to this department, the insufficiency of the provision for this item was foreseen. Only Rs. 11,000 per annum were allowed in the original estimate, while I found, from inquiries made, that the Local Fund Board had spent on it annually Rs. 16,000, which had been insufficient to keep it in tolerable order. The Executive Engineer's proposal amounts to Rs. 15,650 annually, and on this head very full information is given in the report. The average income from tolls is Rs. 18,413.

6. The excess of Rs. 55,790 ‡ over the original estimate will be seen to be chiefly on the following items :—

- I. Blasting rock.
- II. Picking or breaking up the old surface.
- III. Revetments and parapets.
- IV. Mile and furlong stones.
- V. Maintenance of road while the improvements are in progress.
- VI. Superintendence.

‡ About 17 per cent. of the original sanction of Rs. 3,19,788.

For convenience of reference, I append to this letter two statements, marked A and B, by which the nature and amount of excess on each item will be readily understood.

7. The item "bridges" will have to be specially revised as soon as full information is obtained regarding the cost of iron work, including carriage to site and fitting up. As soon as one of the large bridges is completed, there will be sufficient data for this revision. The only alteration now made in this item is the provision of Rs. 807 for demolishing the old bridges.

8. When the original estimate was framed, it was anticipated that the work would be three years in hand, and, now that it has been in progress about 18 months, it seems likely it will be completed within the three years.

9. This Calicut-Vayitri road has long found a place in the Examiner's objectionable items statements, and early sanction to the revised estimate is desirable.

ORDER—dated 30th March 1887, No. 950 W., Public Works.

The revised estimate, amounting to Rs. 3,75,578, for improving the road from Calicut to Vayitri, is sanctioned.

2. The excess of Rs. 55,790 over the estimate of Rs. 3,19,788 sanctioned in G.O., No. 2373 W., dated 12th October 1885, is fully explained in the Superintending Engineer's letter above recorded or the report submitted therewith. In the circumstances stated by the Superintending Engineer, the increased charges under the heads "maintenance" and "superintendence" are approved.

3. It is understood that the amount provided for bridges will be subject to revision when reliable data is available as to the cost of the iron bridges now under construction.

4. This sanction has been registered as Provincial, No. 201 W. of 1886-87, and classified as Communications, Original Works.

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, IV Circle, with thirty enclosures.
" Examiner, Public Works Accounts, with general abstract estimate.
" Local and Municipal Department.

Exd. E. Fernandez.

Spare Copies

913
6

BUILDINGS AND ROADS.
CIVIL WORKS.

G.O. of 1887 Madras.
PUBLIC WORKS.

Dated March, 30th.

Recd.

Encl.

G.O., 30th Mar. 1887, No. 950 W.

MARCH.

Calicut-Vayitri Road
Revised estimate of Rs. 3,75,578, for im-
proving the —, sanctioned.

213
Supr. Engineer's Office 4th Circle,

Coimbatore, 28 February 1888.

No. 72

120

From,

J. W. Martin, Esq.,
Offg. Superintending Engineer,

Fourth Circle.

To,

The Chief Engineer
P. W. Department.

Sir,

As mentioned in para 7 of
this office letter printed with G.O. No. 950
of 30th March 1887, regarding
Calicut-Vayitri road and noticed in
para 3 of that order, I have the honor
to forward for sanction Revised plans
and Estimates amounting to Rs. 85,279
for constructing the bridges in the Calicut
Vayitri road, together with a general
Abstract of the estimate report and
a Comparative statement. In the
estimate sanctioned in the G.O. referred to
the amount provided for iron bridges is
Rs. 1,48,892. For this sum Rs. 85,279 should

Should now be substituted making complete revised estimate for road amount to Rs 4,11,965.

2. The estimate now submitted provides for making the bridges with the girders sent from England by the Secretary of State. The excess amounting to Rs. 36,387 is due, chiefly, to excess in weight and size of the girders over the original designs, and to alterations necessitated in the masonry works to make them suit the girders, as explained in report; and partly to omissions for painting, iron work and rough stone revetment, in the original estimates. In the accompanying report from the Executive Engineer the details of excess for each bridge is given and explained. The abstract for the items of the excesses is as follows:-

Iron work received from England Rs. 18,277.

Additional masonry involved in making slight alterations to the masonry works to make them suitable for the girders — " — 5,488.

Carried over Rs. 23,765

Brought forward Rs. 23,765
Making Central pier of Kadamgampoya bridge with Concrete Cased with granite for reasons stated in para 7 of the report — " — 1926
Extra work for painting, iron, Teak wood & revetment — " — 8,464.
Contingencies — " — 558
Superintendence — " — 1,674
Total Rupees 36,387.

3. In para 7 of this office letter referred to above it is stated that "the item bridges will have to be specially revised as soon as full information is obtained regarding the cost of iron work including carriage to site and filling up" This information has now been obtained because Kadamgampoya bridge is nearly complete and the estimates now submitted provide for rates based on data derived from that bridge.

I have the honor to be,
Sir,
Your most obed^t servant,
L. W. Martin
Mg Supply Engineer
W Circle.

No. 950 W of 30-3-87

From

The Offg. Supt. Engineer
Fourth Circle, S.P.W.

Dated 25th }
Recd. 1-3-88 } Feby. 1888

No. 42
E.W.

Circle 44 23
(43 plan)

Bridges on the Calicut

Forwarding for
sanction revised plans
and estimates of Rs.
85,279 for constructing
the —.

Circ. 19-3-88

913/9

Note by the Chief Engineer B. W. D.

In L. O. No. 950 W dated 30th March
1887, a reference was made to the revised
plans and estimates that would be
required for the bridges on the Calicut
Vayitri road, as soon as the iron work had
been received from England. These
have now been sent in by the Supt.
Engineer IV Circle, and show an increase
of Rs. 36,387 over the approximate esti-
mate of Rs. 48,892.

The ^{excess} increase in cost is mainly
due to the iron work in the girders
being heavier and therefore more
expensive than was anticipated; pro-
vision has also been made for certain
items omitted from the approximate
estimate; and the rates have been
revised upon data furnished by
the construction of the Kadangam-
poya bridge, which is nearly completed.

The drawings in some instances
show face work of concrete; which

is ~~accidentally~~ not intended, and the necessary alterations have been made in the Chief Engineer's office.

The question of the depth to which the foundations must be carried is one to which the Supty. Engr. should give particular attention; depending as it does, entirely on the nature of the soil. Whenever the foundations do not rest on sound rock, they should be protected from scour by a flooring of rough stone with retaining walls up and down stream.

With these remarks the revised plans and estimates amounting to Rs. 85,279 are submitted and recommended for the sanction of Govt.

[Signature]

E. W.

W. C. 19.3.88

Public Works Department.

Current No. 2023

Letter No. 72 E 4

Dated the 28th January 1888

From the Supty. Engr. II Circle

NOTE OF REMARKS.

The work plan and estimates under review amounting to Rs. 85,279 provide for constructing 12 wrought iron girder bridges on the Calicut-Triplicane road.

In the original estimate amounting to Rs. 3,75,578 sanctioned in G.O. No. 950 N of 30th March 1887 a sum of Rs. 48,892 was provided for bridges there is therefore an excess of Rs. 36,387 which will increase

The total Estimate to
 Rs 4,11,965. It was
 however explained
 in Mr. Supdt. Engr's letter
 recorded in the
 above L. O. that the sum
 set apart for bridges
 would be liable
 to revision when
 reliable data was
 obtained.

It is stated that
 the excess is due to
 increased size and
 weights of the girders
 over the original
 designed and to
 the consequent attention
 of the masonry work
 to suit the girders,
 also to omission
 in the Estimate
 for bolting, painting
 iron work, and
 rough stone revetment.
 The excess on each

913/1
 item is as follows.

- 1 Iron work - Rs 18,277
 - 2 Masonry work " 5,488
 - 3 Forming a
 central pier to
 the Kodanagam.
 pylon bridge - 19,26
 - 4 For bolting
 painting, work.
 work & revetment - 8464
 - 5 Contingencies - 558
 - 6 Superintendence " 1674
- Total Excess Rs 36,387

The bridge to be
 constructed was of
 the following spans -

- 1 of 12 span 56 feet
- 1 of 2 spans 50 - do -
- 1 of 2 - do - 40 - do -
- 1 of 1 - do - 21 - do -
- 1 of 1 - do - 20 - do -
- 1 of 1 - do - 16 - do -
- 4 of 1 - do - 15 - do -
- 1 of 2 - do - 12 - do -
- 1 of 1 - do - 10 - do -
- 12 Bridges in all.

The foundations
of the bridges
of 16' & 12' Span
are shown on
the plans to be
of concrete carried
down to a depth
of only 3 feet which
appears to be insufficient
they should be carried
down to 6 feet unless
rock is met with
at 3 feet. The
bridge of 16 feet
Span appeared
to have no floor
or aprons but
the bridges of 12 feet
Span are provided
with floor and
aprons of loose stone.

The foundations
of the bridge of
56 feet Span are to be
carried down 8 feet
including 1 foot of concrete,

213/2
if the ground is rock,
as stated in the
plan, the foundation
appears to be un-
necessarily deep.

The purpose of
the wing and
sides of the bridge
appears to be at
two different
levels it would
perhaps look
better if the
barren road
raised to the
level of the latter
and properly
connected -
The bridge also
has no floor or
apron.

The bridge of 40'
Span is to have
foundation 8 feet

deep incline of
1 foot of concrete
on floor on aprons
appear to be provided
for it.

The cut line which
it is assumed indicates
the bed level is
very irregular and
is carried just the
width of the
bridge.

In not a single
instance have
flood levels been
marked on the
plans, and no
sections of the river
have been submitted.

Plans for the bridge
of 56', 40', 16', & 12'
spans only have
been submitted.

The rates were
specified and a
separate data is
submitted with the
estimate. *C. P.*
10/2/88

2023
1911
Note by C. P. 9/13/11

In Co No 950 W of 30" March
1887 a reference was made
to the revised plans & estimates
that would be required for
the bridge on the Culcut-Vijitra
road; as soon as the work
had been received from England.

These have now been ~~received~~
sent in by the S. E. IV Circle
and their ^{increase} ~~amount~~ of
£ 36,387 on the approximate
estimate of £ 48,892.

The increase in cost is mainly
due to the iron work in the
girders being heavier & therefore
more expensive than was
anticipated; provision has
also been made for certain
items omitted from the
approximate cost; and
the rates have been revised
upon data furnished by
the construction of the
Kadamgumpur bridge,
which is nearly completed.

The drawings in some
instances show face work
of concrete; which is evidently
not intended.

Recent very alterations have been made in the Chief Engineer's Office.

The question of the depth to which the foundations must be carried is one to which the S.E. must give particular attention; depending as it does, entirely on the nature of the soil.

Wherever the foundations do not rest on sound rock, they should be protected from scour by a flume or rough stone with retaining walls up & down the river.

With these remarks the revised plans, and estimates amounting to Rs. 85,279 are submitted & recommended for the sanction of Government.

W.W.
14.3.58

913/14

B. J. H.
at works

PUBLIC WORKS DEPARTMENT.

No 913W

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 20th March

Read the following

From the Asst. Engineer IV Circle. H. E. No. 72 E. W. of 28th February 1888.
Note by the Chief Engineer, P. W. D. of

The revised estimate amounting to Rs. 85,279 for constructing 12 iron girder bridges on the Calicut-Vayitri road, is sanctioned in supersession of the estimate of Rs. 48,892 included in the general estimate for the road sanctioned in G. O. No. 950 W of 30th March 1887. The total sanction for the road will now stand at Rs. 4,11,965.

2. Attention is drawn to the note by the Chief Engineer P. W. Department above recorded.

3. This sanction has been registered as Provincial No. 194 W of 1887-88 and classified as Communications, Original Works.

cc
4/4/88

To The Asst. Engr. IV Circle with 22 enclos.
" Examiners of P. W. Accts with the general abstract estimate.
" Local & Municipal Department

W.W.
19.3.58

29/3/88

Govt. of Madras.

PUBLIC WORKS.

22/3

Date

By

Engl.

G.O. No. 1888, No. 913 W.

Calicut - Vayitri road

Revised estimate for
constructing 12 viaduct
bridges on the — Sanction
with remarks.

70/5