(1) Number of pages ~~46~~ 36

(2) Date of repair Aug 1987

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No. / B.P. No.: 373-W

Press. / Mis.

Dated 14-2-1885 ~~198~~ .

Not to be folded or roughly handled

Archives I--10,006 I -80.

14th February 1885, No. 373 W., Public Works.

1/373

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following letter from Lieutenant-Colonel J. L. L. MORANT, R.E., Offg. Consulting Architect to Government, to the Chief Engineer, Public Works Department, dated Chepâk, 5th February 1885, No. 1616 :—

I have the honor to submit a revised estimate, amounting to Rs. 43,875, for the Senate House bridge sanctioned in Public Works G.Os., No. 1160 W., dated 7th May 1884, and No. 2828 W., dated 11th November 1884. The original sanctioned estimate has, I regret to say, been exceeded by 35 per cent.

2. The revised estimate now submitted ought to have been sent in earlier. There was a large expenditure on this bridge during last October. In the middle of November, when the accounts of October were before me, I first realised the probability of the estimate being largely exceeded. I immediately, on the 14th of November, directed Honorary Assistant Engineer Mr. Ottmann, who had all along been in charge of the work, to submit a revised estimate; but, notwithstanding reminders, he did not place all the figures in my hands until the 15th of January, and even then they proved to be in many respects wanting. I should have taken the whole matter into my own hands from the first had I anticipated there would have been so much delay.

3. The excess over the sanctioned estimate is due to the six following causes :—

		RS.
To	Foundations	5,058
,,	Substituting stone for brick	2,876
,,	Additional works	1,654
,,	Increased share of contingencies	1,539
,,	Clerical errors in original estimate	314
,,	Trifling excesses...	96
	Total excess ...	11,537

4. The foundations gave us much anxiety and proved very troublesome. Instead of finding the soil at the bridge site in any way homogeneous, as we had hoped it would be when framing our first estimate, it proved to be in layers of clay and semi-liquid sand. The inflow of water from the adjoining canal (which surrounded the excavation for the bridge on three sides) was so great as to require a prolonged use of the steam pump by night as well by day. The treacherous soil and excess of water in the foundations compelled us to somewhat deepen our concrete base and to protect the sides of this base with sheet piling. The outer sides of our brickwork as it rose had also to be laid in cement and to be plastered to protect it from the salt water which poured in so fast around it.

5. It was at first intended to build the whole of the arched portion of the bridge arch with brick in mortar, only facing its two outer sides with cut-stone; but the curvature of the arch having been made very flat (only [illegible]th of span) in order to afford a wider and more convenient headway for the canal beneath it, I thought it essential on reflection to connect the two outer stone faces with three lines of key stones laid right across the arch. For a similar reason I had the stone skew backs continued right through the bridge instead of laying them only at the four corners of the faces as was at first contemplated. The work of the bridge was for several reasons (some unavoidable) delayed, and the arch had to be turned during the monsoon. As the weather looked very threatening I thought it safer to have the arch bricks laid in cement. When one-half of the arch was finished the severest part of the late extraordinary

monsoon burst upon us. The work had to be stopped for several days. It thus had a very severe test, and I feel confident that had the bricks been laid in ordinary mortar it would have been necessary to pull down the then finished portion of the arch and re-erect it when the weather had become settled, which it did not become for many weeks after the usual close of the monsoon. The bridge was required to be opened for traffic before Christmas.

6. The other causes of the excess need no particular remark here. Full explanations for them will be found in the comparative statement.

7. The bridge might doubtless have been built for 2,000 or 3,000 rupees less had I had a subordinate in immediate charge who would have exercised ordinary forethought and energy. Honorary Assistant Engineer Mr. Ottmann proved very disappointing. Having come to me after some years' service on the Buckingham canal, I had a right to expect much better things of him.

8. Funds to the extent of Rs. 11,537 are requested to be provided.

ORDER—dated 14th February 1885, No. 373 W., Public Works.

In G.O. No. 1160 W., dated 7th May 1884, an estimate, amounting to Rs. 29,455, was sanctioned for constructing a bridge over the Buckingham canal near the Senate House at Madras, and in G.O. No. 2828 W., dated 11th November 1884, a further sum of Rs. 2,883 was sanctioned for forming approaches to the bridge. The total sanction for the work was thus Rs. 32,338.

2. The Officiating Consulting Architect now submits a revised estimate, amounting to Rs. 43,875, the excess over the original sanction being Rs. 11,537 or 35 per cent.

3. The excess is distributed as follows:—

	RS.
Foundations	5,058
Substitution of stone for brick work	2,876
Additional work	1,654
Contingencies	1,539
Clerical errors and trifling excesses	410
Total ...	11,537

4. The Government cannot but regard this large excess over the sanctioned estimate as highly unsatisfactory, while the delay in bringing the matter to notice is still more so. As the officer vested with chief executive control of the work, the Consulting Architect should, during its progress, have been fully acquainted with the rate of expenditure on the various items of the estimate; and, under paragraph 2306 of the Public Works Code, should have at once brought to notice the probability of excess. There seems no reason why the chief part of the excess should not have been foreseen and reported on at least two months ago. It is only after completion of the work that the Government are now, for the first time, apprised of the excess outlay which has been incurred. This failure to obey the instructions laid down in the code for guidance is viewed with serious displeasure.

5. Mr. Ottmann, Honorary Assistant Engineer, has been in immediate charge of the work throughout its construction, and he is without doubt greatly in fault for failing to bring to the notice of his superior officer the large expenditure which was being incurred in excess of sanction; but such failure on Mr. Ottmann's part does not relieve Lieutenant-Colonel Morant from the responsibility which lay on him as the Executive Engineer of the division.

6. The Government have now no alternative but to sanction the excess, and to provide, with much inconvenience to the Provincial exchequer, the amount required to cover the outlay. An allotment of Rs. 11,537 is accordingly sanctioned from the Provincial reserve.

7. The sanction to the revised estimate has been registered as Provincial No. 251 W. of 1884-85, and classified as Communications, Original Works.

(True Extract.)

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

To the Consulting Architect to Government, with two enclosures.
" Examiner, Public Works Accounts, with duplicate abstract estimate, } with extract paragraphs 1, 2, 3, 6 and 7 of order.
" Public Department, } with extract paragraphs 1, 2, 3, 6 and 7 of order.

Exd. E. Fernandez.
Spare Copies

CIVIL WORKS.

Govt. of (1885) Madras.

PUBLIC WORKS.

Dated February, 14th.

Recd. *Encl.*

G.O., 14th Feb. 1885, No. 373 W.

FEBRUARY.

Bridge over the Buckingham Canal near the Senate House.

Revised estimate for constructing a sanctioned with remarks.

11th November 1884, No. 2828 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following letter from Lieutenant-Colonel J. L. L. MORANT, R.E., Officiating Consulting Architect to Government, to the Chief Engineer, Public Works Department, dated Chepâk, 4th November 1884, No. 1205 :—

I have the honor to submit, for sanction and provision of funds, an estimate, complete, amounting to Rs. 2,883, for forming the approaches of the stone bridge across the Buckingham canal opposite to the Senate House.

2. I had hoped to have been able to save money for this work out of the estimate for the bridge, but the cost of the bridge has been more than I anticipated owing to much water having been met with in the foundations, and a good deal of spare earth that I had hoped to utilise has been used up in forming the road from the bridge to Marine Villa.

3. Embankment slopes of even 5 to 1 are not sufficiently easy for the approaches of this bridge, but I purpose levelling up and causing them to almost disappear altogether by improving the adjoining ground out of funds provided for park improvements.

Order—dated 11th November 1884, No. 2828 W., Public Works.

The estimate, amounting to Rs. 2,883, for forming approaches to the new bridge across the Buckingham canal at Chepâk, is sanctioned, and the amount is appropriated from the Provincial reserve.

2. This sanction has been registered as Provincial No. 191 W. of 1884-85, and classified as Communications, Original Works.

(True Extract.)

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

To the Consulting Architect to Government, with two enclosures.
" Superintending Engineer, V Circle.
" Examiner, Public Works Accounts, with duplicate abstract estimate.
" Public Department.

Exd. E. Fernandez.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1884) Madras.

PUBLIC WORKS.

Dated November, 11th.

Recd. *Encl.*

G.O., 11th Nov. 1884, No. 2828 W.

NOVEMBER.

Bridge across the Buckingham Canal at Chepak

Estimate for approaches to the new —, sanctioned.

21st January 1885, No. 173 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

From the Government Solicitor, dated 13th January 1885, No. 12.

ORDER—dated 21st January 1885, No. 173 W., Public Works.

The construction of the bridge across the canal to the north-west of the Senate House having opened a new and direct communication between the Mount Road and the South Beach through the Government House Park, His Excellency the Governor in Council sanctions this line of road being thrown open to the public.

2. The Police authorities will, however, be instructed to see that no *carts, jutkas, or vehicles plying for hire* are allowed upon it.

3. The maintenance of the road and bridge will be intrusted to the Consulting Architect to Government.

(True Extract.)

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

To the Consulting Architect to Government.
„ Superintending Engineer, V Circle.
„ Judicial Department.
„ Financial „

Exd. E. Fernandes.
Spare Copies.

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1885) Madras
PUBLIC WORKS.

Dated January, 21st.

Recd. *Encl.*

G.O., 21st Jan. 1885, No. 173 W.

JANUARY.

Bridge across the Canal near the Senate House

Orders throwing open to the public the new bridge across the canal to the north-west of the Senate House and road between the Mount Road and South Beach through the Government House Park.

No. 625 D

GOVT. OF MADRAS. } 1884. { P. W. DEPT.

SECRETARY. 3

31/3

Chepauk, 28th March 1884.

OFFICE NOTE.

To

The Consulting Archt. to Govt.

H. wishes you to undertake the work connected with the proposed new bridge across the Buckingham Canal, west of the Senate House. which it is desirable should be completed during the next 6 months.

2. The project submitted for same was rejected and the plans returned for revision. I have asked S. E. V. to hand same over to you, in view to your prepar

3

a fresh design.

3. The papers* connected therewith are now forwarded to you for perusal and return.

Sd/ C.B.
Ex. E.
28.3.82

* No. 612 C of 13-3-82
" 2296/1 C of 5-2-82
" 2296 C of 22-11-81
G.O. 1534 W of 30-6-80
" 370 R of 28-6-80
Appendix to G.O. No. 234 W of 6.2.80 and
a sketch of the bridge in duplicate [illegible]

C.A. 3/88

We wishes you to undertake the work connected with the proposed new bridge across the Buckingham Canal, West of the Senate House — which it is desirable should be completed during the next 6 months.

The project submitted for same was rejected & the plans returned for revision. I have asked S.E.V. to hand same over to you, in view to your preparing a fresh design.

The papers connected therewith are now forwarded to you for perusal & return.

28th

H.C. Please let me know the No & date of the C.E.'s with which the papers are sent away. Until this is known they will be sent to H.C.

D.P.
29/3/82

S.A.E. —

Vais On [illegible]

[illegible]

a fresh design.

3. The* papers connect

therewith are now forward

to you for perusal an

return.

Sd/ C. B.

Dy. 15

28-3-8

To W for orders.

Revised Estimate for the Senate House Bridge — Rs. 43,578.

Excess — Rs 11557.

CB

9. 2. 85

a fresh design.

3. The papers connec*

therewith are now forward
to you for perusal an
return.

Y/ C.B.
Dy. S
28. 3. 8

C.A.W.

On attached slip I have noted the points which seem to me to require special notice in passing orders on revised estimate for Senate House [illegible]

I am not quite clear whether, in such matters, the C.A. occupies the position of an E.E. I shall be glad to know whether it occurs to you that, in that respect, or in any other, my remarks are incorrect.

If they appear to you correct, please draft a G.O. on those lines.

M.
10.2.85

To W/

The remarks seem quite correct. The position of the Consulting Architect with reference to this work is that of Executive Engineer.

a fresh design.

3. The papers connec
therewith are now forwar
to you for perusal an
return.

N/ C.B
Dy. S
28.3.8

There is only one p
that occurs to me
requiring any notice
Mr Ottmann is en-
titled to an
opportunity of expla-
nation. The draft
G.O. is, however,
strictly based on
the Consulting
Architect's report.
and may thus
perhaps issue
in its present form

A.S.
11.2.88

---

is large excess over sanctioned
estimate is highly unsatisfactory,
but the delay which has been allowed
to occur in bringing it to notice
is still more so. The attention
of C.A. should be drawn on this
point to section 2306 of the Code,
and he should be informed
that the Govt. view with serious
displeasure the failure to
obey the instructions therein
laid down. It seems
clear that ~~a large~~ the first part of the
excess outlay should have
been foreseen & reported at
least two months ago,
instead of which no intimation
of any possible excess has
been reported until after the
completion of the work, ~~&~~ with an
excess expenditure of ~~35 per~~ R 11,537, 12
35 per cent over the sanctioned
estimate.

Mr Ottmann, Honorary Asst.
Engineer, has been in immediate
charge of the work throughout
its construction, and was
without doubt greatly in fault
for failing to bring to the notice
of his superior officer the large
excess expenditure which was
being incurred; but great
failure on Mr Ottmann

a fresh design.

3. The papers connec
therewith are now forwar
to you for perusal an
return.

Sd/ C.B.
Dy. 15
28. 3. 8

does not relieve the C
the responsibility which
on him as the Exec. Eng
of the Division

Judicial Department

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following

Government of Ma[illegible] Works Department
dated 21st January 1885 No 173 W, regarding the
Bridge across the Canal near the Senate House.

Order 3 January 1885 No [illegible] Mis
Communicated to the Inspector Genera
of Police who will [illegible] orders in accordance with para
(True Extract)

H.R. Stuart
Ag. Assistant Secretary

To
The Public Works Department.

Memo: 98/373

G O No. 373 W

14th Jany/85

(1) Print Cons
Architect's letter
in full and the
order complete $\frac{30}{2}$ copies

(2) Quote no and
date of the
Cons ~~Eng~~
Architect's letter
and in printing
the order please
omit paras 4 & 5
inserting * * * * for the
omission
$\frac{20}{3}$ copies of these are
required —

For the monthly
G O issue please print
everything complete

17/1/85

[1]

Govt. of 188 : Madras.

To

The P.W. Dept.

4 FEB 85

Proceedings, dated 31/1 1885
No. 781 W.

Subject.

Copy to the Secy of Public for the issue of orders in accordance with para 2. regarding Bridge across the Canal near the Senate House

[illegible]

Recorded

Public Works Department, 188‑‑85.

Current No. 335

Letter No. 316

Dated the 5th February '85

From the Consulting Architect to Govt.

NOTE OF REMARKS.

1. This is a revised estimate for the Senate House Bldg at Chepauk, and amounts to Rs. 43,875 — being Rs. 11,537 in excess of the amount, Rs. 32,338, sanctioned in G.O. No. 1160 W. of the 7th May '84 and G.O. No. 2828 W. of the 11th Nov. '84.

2. C.A. divides the excess, Rs. 11,537, as follows:— Foundations — Rs. 5,058; Substitution of stone for brick — Rs. 2,575; Additional works — Rs. 1,654; Contingencies — Rs. 539; Clerical errors — Rs. 314; and trifling excesses — Rs. 98.

3. C.A. enters very fully into the causes and particulars of the excess of the revised above the original estimate and

13

Consulting Architect's Office

it may be learnt from
his letter and the com-
parative statement
that he considers this
revision to be based
on the whole, on just
and fair grounds. -
he however, states: - "the
Bridge might doubtless
have been built for
2 or 3000 Rupees less had
I had a subordinate
in immediate charge
who would have exer
ordinary forethought
and energy."

9th Feb /85

P. W. D.

Consulting Architect's Office,
Chepauk, Madras,
5th February 1885

No. 1616

From

The Consulting Architect to the Government of Madras,

To

The Chief Engineer, Public Works Department.

To.

Enclosures.

1 Comparative statement
1 Abstract Estimate in duplicate

I have the honor to submit a revised Estimate amounting to Rupees 43,875 for the Senate House Bridge sanctioned in P.W.G.O. No. 1160W. dated 7th May 1884 and 2828 W. dated 11th November 1884. The original sanctioned Estimate has, I regret to say, been exceeded by 35 per cent.

2. The Revised Estimate now submitted ought to have been sent in earlier. There was a large expenditure on this Bridge during last October. In the middle of November when the accounts of October were before me I first [illegible]

probability of the Estimate being largely exceeded. I immediately on the 14th of November directed Hon. Asst. Engineer Mr. Ottmann who had all along been in charge of the work to submit a Revised Estimate. But notwithstanding reminders he did not place all the figures in my hands until the 15th of January and even then they proved to be in many respects wanting. I should have taken the whole matter into my own hands from the first had I anticipated there would have been so much delay.

3. The excess over the sanctioned Estimate is due to the 6 following Causes: —

	Rupees
To foundations	5058
To substituting stone for brick	2876
To Additional Works	1654
To increased share of Contingencies	1539
To clerical errors in original Estimate	314
To trifling excesses	96
Total Excess Rs	11,537

4. The foundations gave us much anxiety and proved very troublesome. Instead of finding the soil at the Bridge site in any way homogeneous as we had hoped it would be when framing our first Estimate, it proved to be in layers of clay and semi liquid sand. The inflow of water from the adjoining Canal (which surrounded the excavation for the bridge on 3 sides) was so great as to require a prolonged use of the steam pump by night as well by day. The treacherous soil and excess of water in the foundations compelled us to somewhat deepen our concrete base and to protect the sides of this base with sheet piling. The outersides of our brickwork as it rose had also to be laid in cement and to be plastered to protect it from the salt water which poured in so fast around it.

5. It was at first intended to build the whole of the central portion

of the bridge arch with brick in mortar only facing its two outer sides with cutstone. But the curvature of the arch having been made very flat (only $\frac{1}{10}$th. of span) in order to afford a wider and more convenient headway for the canal beneath it, I thought it essential on reflection to connect the two outer stone faces with 3 lines of Key Stones laid right across the arch. For a similar reason I had the stone skew backs continued right through the bridge instead of laying them only at the four corners of the faces, as was at first contemplated. The work of the bridge was for several reasons (some unavoidable) delayed and the arch had to be turned during the monsoon. As the weather looked very threatening I thought it safer to have the arch bricks laid in cement. When one half of the arch was finished the severest part of the late extraordinary monsoon burst upon us. The work had to be stopped for several days. It thus had a very severe test and I feel confident that had the bricks been laid in ordinary mortar it would have been necessary to pull down the then finished portion of the arch and re-erect it, When the weather had become settled, which it did not become for many weeks after the usual close of the monsoon. The bridge was required to be opened for traffic before Xmas.

6. The other causes of the excess need no particular remark here. Full explanations for them will be found in the comparative statement.

7. The Bridge might doubtless have been built for 2 or 3000 Rupees less had I had a Subordinate in immediate charge who would have exercised ordinary forethought and energy. Hon. Asst. Engineer Mr. Ottmann proved very disappointing

Having come to me after some years service on the Buckingham Canal I had a right to expect much better things of him.

8. Funds to the extent of Rs 11,537 are requested to be provided.

I have the honor to be

Sir

Your most obdt Servant

J. L. Worrant

Lt. Col. R.E.

Offg. Consg Archt to Govt.

B No 254 W a/ 3-2-85
G.O. 173 W a/ 21-1-85
" 2828 W a/ 11-11-84
" 1160 W a/ 7-5-84

P. W. D.

Roads and Buildings.

From

The Consulting Architect
to the Government of Madras,

To

The Secretary to Govt
P. W. D.

5 FEB 85

No. 1616

Dated 5th February 1885
Received

No. of Enclosures. 3

Subject.

Submits a revised estimate amounting to Rs 4,3875 for constructing a bridge across the Canal near the Senate House

Cir: 11/2/85

No 373 W

P.W. Department

Proceedings of the Madras Government

under date the 14 Feby/85

Read the following

Letter from the Consulting Architect to Govt. H.E. No 1616 d/ 5 Feby/85

In G.O. No 1160 W a/ 7 May/84, an estimate amounting to Rs 2,255 was sanctioned for constructing a bridge over the ~~[illegible]~~ Buckingham Canal near the Senate House at Madras and

2828 W dated 11th November/82 a further sum of Rs 2,883 was sanctioned for forming approaches to the bridge. The total sanction for the work was thus ~~amounts to~~ Rs 32,338.

2. The Honorary Consulting Architect now submits a revised estimate amounting to Rs 43,875, the excess over the original sanction being Rs 11,537 or 35 per cent.

3. The excess is distributed as follows.—

Foundations	Rs 5,058
Substitution of Stone for Brickwork	" 2,876
Additional work	" 1,654
Contingencies	" 1,539
Clerical errors and trifling excesses	" 410
Total	Rs 11,537

4. The Government cannot but regard this large excess over the sanctioned estimate as highly unsatisfactory, ~~the~~ while ~~and~~ the delay in bringing the matter to notice is still more so. As the officer vested with chief executive control of the work, the Consulting Architect should during its

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the

excess outlay which has been incurred. This failure to obey the instructions laid down in the Code for guidance is viewed with serious displeasure.

5. Mr. Ottmann, Hony. Assistant Engineer, has been in immediate charge of the work throughout its construction, and he is without doubt greatly in fault for failing to bring to the notice of his superior officer the large expenditure which was being incurred in

xcess of sanction, but uch failure on Mr. Ottmann's part does not relieve ~~the Consulting~~ W. Wood Mozant ~~rchitect~~ from the responsibility which lay n him as the Executive ngineer of the division.

The Government ave now no alternative ut to sanction the xcess, and to provide, ~~ith much inconvenience~~ the Provincial exchequer he amount required to over the outlay. An llotment of Rs 1537 is

accordingly sanctioned from the Provincial Reserve.

7. The sanction to the revised estimate has been registered as Provincial No. 251 W of 1884-85, and classified as Communications, Original Works.

W.
11-2-85

Consg. Archt. to Govt. with 2 encls ✓
Ex. P.W. accts } with extract ✓
[illegible]
Public Dept. } paras 1. 2. 3. 6 & 7 of mem.

Des. 14
16/2/85

RA

14 FEB 55

Ca: 11/2/15

22

Govt. of [illegible] Madras.

PUBLIC WORKS.

17/12

30/2 20/3

17/12