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MADRAS RECORD OFFICE

Government of Madras

Public Works

DEPARTMENT

G.O. No.	3242	(w) Press
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Not to be folded or roughly handled

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(1)

*Proceedings of the Madras Government, Public Works Department,
1st December 1876. No. 3,242.*

No 25. Read the following letter from Major J O HASTED, R.E, Superintending Engineer, Kistna, to Major-General G W. WALKER, R E, Secretary to Government, Public Works Department, dated Camp at Bezoarah, 22nd June 1876, No. 36.—

I HAVE the honor to forward herewith revised estimates, amounting to Rupees

- 1 Comparative Statement
- 1 Revised estimate of Cutcherry
- 1 Do do of cook-room
- 1 Do do of Jail latrine
- 1 Do do of public latrine
- 1 Do do of ryots' shed
- Return requested when sanctioned
- 1 Copy of Range Officer's letter, No 88

24,644, and comparative statement, for constructing a first-class Taluq Cutcherry at Bezoarah

2 The original estimate, amounting to Rupees 17,540, was sanctioned in G O, No. 453, dated 17th February 1875 Work was commenced in 1872-73, in anticipation

of sanction on the standard plans then in force During the time the work has been in progress, the standard plans have been revised, and several alterations in the original design necessitated

3 The excess of the revised over the original estimate is Rupees 7,104, and of this, as stated by the Executive Engineer, about half is due to the excess quantities in the new standard designs, in conformity with which the building has been constructed, the remaining excess is due principally to an increase of rates, which were under-estimated for this class of works

4. The estimate was framed when I first joined the district, the rates having been filled in by Range Officers concerned, and I was not then in a position to check them properly Brickwork was allowed at Rupees 4-8-0 per cubic yard, this being the rate at which ordinary brickwork of a class quite unsuited for public buildings had been executed Looking on the construction of a large Cutcherry as an opening for teaching the artificers, the way in which work should be done, I insisted on the bricks being all platform moulded, and on the walls being built not of brick bats, but of whole bricks properly bonded This innovation led doubtless to expenditure beyond that which had been anticipated, but I consider the expenditure has answered, the rate in the revised estimate for thoroughly good brickwork being only Rupees 6-1-0 per cubic yard

5 The increase in woodwork was unavoidable, the estimated rate would cover only the cost of country teakwood, and I found shortly after joining the district that the workshops which had been doing very little work were actually charging rates which could not possibly pay I raised the rates accordingly, laid in a stock of timber, and took measures to have woodwork of a better description turned out The rate is now high, but I anticipate lowering it shortly, and the workshop accounts show that it could have been lowered last year

6 The rate of ironwork has increased considerably since the estimate was framed

7 A considerable increase of Rupees 680-13-0 has occurred in the item of flooring Flooring tiles were allowed in the original estimate, but it was found impossible to procure tiles that would stand ever fairly, and I determined to substitute cut-stone flooring which, I believe, will prove an economy in the end I have ventured to direct this work to be put in hand in anticipation of sanction, the building being nearly completed, with the exception of flooring.

8 I regret extremely that the work has been so nearly completed, without the necessity for a revised estimate being explained earlier. Before I left the district a year ago, I was led to believe that the estimate would immediately be submitted, and I was annoyed to find on my return this year that it was still in abeyance. I must do the Range Officer the justice to state that its final submission was delayed by references that had to be made from this office, but his excuse for the delay is that his work has been so very heavy, that arrears have unavoidably accumulated. I am aware that this is the case, and have made arrangements for placing an officer under him as sub-divisional officer, this would have been done earlier but for the reduction of the number of officers in the district.

No 88, dated 23rd May 1876

9 Copy of the Range Officer's letter is enclosed

From C J PETERS, Esq, Executive Engineer, Bezoarah Division, to Major J O HASTED, R E, Superintending Engineer, Kistna, dated Bezoarah Division, 23rd May 1876, No 88

I HAVE the honor to forward a revised estimate and comparative statement for the construction of the new Taluq Cutcherry at Bezoarah

The original estimate amounted to	RS
	17,540
The revised estimate amounts to	24,644
Difference	7,104

Of this, about Rupees 3,400 is due to increased quantities, the additional verandahs, larger latrines and other alterations made in the standard designs, since the original estimate was made, and omissions in that estimate, the remainder, Rupees 3,704, is due to the working rates being higher than estimated for. In the following remarks I have endeavoured to explain the differences in each principal sub-head of the estimate.

I may mention that, though the actual cost has largely exceeded the original estimate, it has apparently been considerably less than most of the estimates for the same work in other districts—

Concrete—Increase in quantity of 192 cubic yards owing chiefly to additional depth and width substituted for brickwork in foundations, about 50 cubic yards due to additional verandahs, and 40 to steps omitted in original estimate, only one set of steps was provided in the original estimate, and no means of ingress and egress, but by jumping up and down the height of the basement. The increase in depth was substituted in foundations by your verbal orders, in order to save brickwork, but the saving was more than covered by the extra quantity of that item, owing to additional verandahs, increased thickness to walls, &c

Brickwork—Increase in quantity of 35 cubic yards owing to additional verandahs according to revised standard plan, and partly to increased thickness of walls, the thicknesses in the original estimate were fixed apparently without regard to the width of bricks, they were 1' 3", 1' 6", 1' 9", &c, increasing by 3", which could not be built except with bricks of 3" width. The thicknesses were therefore altered to agree with the dimensions of ordinary bricks 9" x 4 1/2" x 3"

The estimated rate, Rupees 4-8-0, would have been sufficient for the ordinary rough brickwork, but endeavours were made to produce better work and a perfect bond.

The cost of brick-manufacture was high, Rupees 9-4-0 per 1,000, good material was not obtainable near at hand, frequent trials were made to get a better sort of earth, more care than usual was taken in the moulding. The earth had to be carted from 1/2 a mile to 1 mile, and where the earth was dug, there was no place for manufacture.

Cut-stone—Increase in quantity owing to steps omitted in the original estimate and additional verandahs. The actual rate for this Rupees 10-8-0 is not high, the estimated rate was only Rupees 6

Flooring—Increased quantity by 13 1/2 squares by additional verandahs. The estimate allows for tiled flooring, but no material having been found after various trials fit for making durable tiles, cut-stone has been substituted.

Roofing—Increase in quantity of 22 squares owing to additional verandahs, the increased rate is due to extra labor incurred in making superior flat and pan tiles, and in laying them properly, the earth for making the tiles had to be carted about 1/2 a mile, and they were moulded on the same floor with the bricks.

Teakwood wrought and put up planed—This was increased in quantity 188 cubic feet by the additional verandahs, &c

The rate, Rupees 3-12-0, is 2 Annas more than the present workshop rate, it was a new style of work to the carpenters, the first trussed roofs that has been made here, and it took more labor than usual.

Pointing with cement of finely ground sookee and lime. Rate Rupees 3-8-9 against Rupees 2-5-0 original, this is owing to the cost of grinding the brick-dust and the extra time taken by the bricklayers at the work which was new to them. Not that the pointing where done is very superior, but it is always expensive, teaching men a new style of work.

OUT-HOUSES—Palmyra roofing—The actual rate, Rupees 21 per square, is nearly double the estimated rate. It might have been done at a cheaper rate if the common inferior tiles have been used, but same sort were used for all the buildings, and they are not too good. Palmyras cost more than they used to do, they have to be brought about 30 miles distance.

The ryots' shed, latrines, and cook-room were all considerably increased in cost by the alterations in the standard plans.

No 26

ORDER THEREON, 1st December 1876, No 3,242

CIVIL WORKS, Nos 2 & 3

(a) Heads of Service—Provincial
Fund—Ordinary
Class—Original Works
Main-head—Civil Buildings
Sub-head—B, Revenue Department
Section—1, General, &c, Cutcheries
Name of Work—First-class Cutcherry at Bezoarah
Amount—Rupees 24,644
To be carried out by the Public Works Department

UNDER the explanation offered by the Superintending Engineer, His Grace the Governor in Council sanctions the revised estimate of Rupees 24,644 for constructing a first-class Cutcherry at Bezoarah in the Kistna District in lieu of that for Rupees 17,540 sanctioned in G O, No 453, dated 17th February 1875.

2 The great delay that has occurred in submitting the revised estimate and reporting the probability of the original estimate being so greatly exceeded is far from satisfactory, and the Superintending Engineer will take care that a similar neglect of the very stringent orders of Government on the subject does not again take place.

3 It is observed that up to the 31st of March 1876 Rupees 19,867 were expended on the work, to admit of its completion in 1876-77 Rupees 4,777 are appropriated for it from the Provincial Reserve of 1876-77.

4 This sanction is registered as Provincial No 192 W of 1876-77

(True Extract)

Major-General, R E,
Secretary to Government

To the Superintending Engineer, Kistna
" Examiner of Public Works Accounts
" Judicial Department
Exd A. Grubert
Spare Copies

No 88.

Bengal & Division Office
23rd May 1876.

From

C. J. Peters Esquire
Executive Engineer, Bangalore
Major J. O. Hasted Esq
Super Engineer, District

Sir,

I have the honor to forward
a revised estimate and Comparative
Statement for the construction of the
new Sahy Cutchery at Bangalore.
The original estimate amounted to Rs 17540.
The revised estimate amounts to Rs 24646.
Difference Rs 7106.

Of this, about Rs 3400 is due to
increased quantities, the additional
windows, larger latrines and other
alterations made in the standard
designs, since the original estimate
was made, and omissions in that
estimate, the remainder Rs 3706 is
due to the working rates being higher
than estimated for. In the following
remarks, I have endeavoured to
explain the differences in each principal
sub-head of the estimate.

I may mention that, though the
actual cost has largely exceeded the
original estimate, it has apparently
been considerably less than most
of the estimates for the same work.

in other districts, Concrete. Increase in quantity of 192 Cys² owing chiefly to additional depth and width substituted for brickwork in foundations, about 50 Cys² due to additional verandahs, and 40 to steps omitted in original estimate, only one set of steps was provided in the original estimate, and no means of ingress and egress, but by jumping up and down the height of the basement. The increase in depth was substituted in foundations by your verbal orders, in order to save brick-work, but the saving was more than covered by the extra quantity of that item, owing to additional verandahs, increased thickness to walls &c.

Brickwork. Increase in quantity of 35 Cys² owing to additional verandahs according to revised standard plan, and partly to increased thickness of walls, the thicknesses in the original estimate were fixed apparently without regard to the width of bricks, they were 1'-3" - 1'-6" - 1'-9" &c. increasing by 3" which could not be built except with bricks of 3" width. The thicknesses were therefore altered to agree with the dimensions of ordinary

Ordinary bricks 9" x 4 1/2" x 3" (7) The estimated rates Rs. 6-8-0 would have been sufficient for the ordinary rough brickwork, but endeavours were made to produce better work and a perfect bond.

The cost of brick manufacture was high Rs. 9-4-0 per 1000, good material was not obtainable near at hand, frequent trials were made to get a better sort of earth, more care than usual was taken in the case, the earth had to be carted moulding. The earth had to be carted from half a mile to one mile, and where the earth was dug, there was no place for manufacture.

Cutstone. Increase in quantity owing to steps omitted in the original estimate and additional verandahs. The actual rate for this Rs. 10-8-0 is not high, the estimated rate was only Rs. 6-0-0.

Flooring. Increased quantity by 13 1/2 square by additional verandahs. The estimate allows for tiled flooring, but no material having been found, after various trials fit for making durable tiles. Cutstone has been substituted.

Roofing. Increase in quantity of 2 1/2 square owing to additional verandahs, the increased rate is due to extra labour incurred in making superior flat and

and parties and in laying them properly
the earth for making the tiles had to
be carted about $\frac{1}{2}$ a mile and they
were moulded on the mud floor
with the bricks.

Teak wood was brought and put up plained.

This was increased in quantity 18% Cpl
by the additional verandahs.

The rate Rs 3-12-0 is 2 annas more
than the present workshop rate, it
was a new style of work to the
carpenters, the first banded roof
that had been made here and it
took more labor than usual.

Pointing with cement of finely ground
soot and lime. Rate Rs 3-8-9 against
Rs 2-5-0 original, this is owing to the
cost of grinding the brickdust and
the extra time taken by the bricklayers
at the work which was new to them.

Not that the pointing here done is
very superior, but it is always expensive
teaching men a new style of work.

Outhouses. Palmyra roofing.

The actual rate Rs 21 per square
nearly double the estimated rate.
It might have been done at a
cheaper rate, if the common inferior
tiles had been used, but same sorts
were used for all the buildings.

and

and they are not too good. Palmyras
cost more than they used to do; they
have to be brought about 30 miles
distance.

The Ryots shed. Latrines and Cook-
room were all considerably
increased in cost by the alterations
in the Standard plans.

I have the honor to be
Sir
Your most Obedt Servt
Signed C. J. Peters
Executive Engineer
Bengal Division

/ True Copy /

In sub. Major M. C.
Supt Engineer District.

Compd
H.

Enclosure in a letter
from the Supr. Exr.
1st V. R. to the Secy
to Govt. P. R. dated
22nd June/76 No 36

Camp Beywadah... }
22nd June 1876... }
From... Dep^y 30 - - -
Major J. A. Hasted R.E.
Superintending Engineer Victoria

I have the honor to
forward herewith revised estimates
P. 665 24644 and

Encls: 7
 1 Comparative statement of Receipts 24644 and
 1 Revised Comparative statement for
 of Cutchery
 or of constructing a first class Taluq
 1 Cook room
 or of Cutchery at Beggarah
 1 Jail at B... the original estimate amount
 1 do do of Public Works 17540 was sanctioned
 1 do do of ... 453 dated 17 February/75
 6 Return re ... commenced in 1872-73,
 1 Sanctioned ... of sanction on
 1 Cops of Range in ... then in force.
 1 ... the standard Plans then in force.
 7 Total - During the time the work has
 been in progress, the Standard Plans

Plans have been revised, and several alterations in the original design, necessitated.

3. The excess of the revised over the original estimate is Rs 7104, and of this, as stated by the Executive Engineer, about half is due to the excess quantities in the new Standard designs, in conformity with which the building has been constructed, the remaining excess is due principally to an increase of rates, which were under-estimated for this class of works.

4. The estimate was framed when I first joined the District, the rates having been filled in by Range Officers concerned, and I was not then in a position to check them properly. Brick-work was allowed at Rs 4-80¢ per cubic yard, this being the rate at which ordinary brick-

-work

-work of a class quite unusual for Public Buildings had been executed. Looking on the construction of a large Cutchery as an opening for teaching the artificers the way in which work should be done, I insisted on the bricks being all platform moulded, and on the walls being built not of brick bats, but of whole bricks properly bonded. This innovation led, doubtless to the expenditure beyond that which had been anticipated, but I consider the expenditure has answered the rate in the revised estimate for thoroughly good brickwork being only Rs 6-1-0 per cubic yard.

5. The increase in woodwork was unavoidable, the estimated rate would cover only the cost of Country Teakwood, and I found shortly after joining the District, that the workshops which

had been doing very little work, were actually charging rates which could not possibly pay. I raised the rates accordingly, laid in a stock of timber and took measures to have woodwork of a better description turned out. The rates are now high, but I anticipate lowering it shortly, and the Workshop Accounts show that it could have been lowered last year.

6 The rate of iron work has increased considerably since the estimate was framed.

7. A considerable increase of Rs 680-13-0 has occurred in the item of flooring. Flooring tiles were allowed in the original estimate, but it was found impossible to procure tiles that would stand even fairly, and I determined to substitute cut stone flooring which, I believe, will prove on economy

economy in the end. I have now started to direct this work to be put in hand, in anticipation of sanction, the building being nearly completed, with the exception of flooring.

8. I regret extremely that the work has been so nearly completed, without the necessity for a revised estimate being explained earlier. Before I left the District a year ago, I was led to believe that the estimate would immediately be submitted, and I was arranged to find on my return this year that it was still in abeyance. I must do the Range Officer the justice to state that its final submission was delayed, by references that had to be made from this office, but his excuse for the delay is that his work has been so very heavy, that appears have unavoidable.

No: 4828

K_u 25

Pr 3242.

Public Works Department

19

PROCEEDINGS OF THE MADRAS GOVERNMENT

OF THE MADRAS GOVT.
Under date the 15th Dec/96.
Read the following —

Dear Sir,
Recd. Superior 2 (St. C. No. 36 of 22 June 1876)
Hevina
I am the explanation

I enclose the explanation
 offered by the Superintend-
 ing Engineer. His Grace
 the Governor in Council
 sanctioned the Revised
 Estimate of No 24614
 for sanctioning a first
 class Engineer at Bogar
 in the Madras District
 in lieu of that for No. 17540
 sanctioned in by O. No. 453
 dated 17th February 1895
 The great delay that has
 occurred in submitting
 the Revised Estimate
 and passing the pro-
 bability of the original
 Estimate being so greatly
 exceeded is far from
 satisfactory and the

Superintending Engineer
will take care that
a similar piece of the
very stringent orders
of Govt on the subject
does not again take
place.

It is observed that
up to the 31st of March
1876 Rs 19867 were
expended on the work,
to wit of its comple-
-tion in 1876-77. Rs.
4777 are appropriated
for it from the Provincial
Revenue of 1876-77.

This sanction is
Registered as Provincial
No 192 N of 1876-77.
W. H.
24.11.76.

No 2576

W. H. C. 24-11-76.

S. C. Kistna 61
S. A. W. A. 50
Jull. Dept 7
24-12-76

7.8.03 ✓

1878

Govt. of 1876 India.

PUBLIC WORKS.

To

The S. E. Kistna

Dist.

Isol

Ref

Encl

10th December 76, No

321/2

Nos. 15-20

Fruit Clap Talug Cutchery
at Bazarah, Krishna Dist.

The revised estimate
amounting to Rs 24,544
for constructing a —
sanctioned sanctioned
with remarks.

But no Reg.