

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	2421	Press
B.P. No.		Mis
Dated	26-8	195
		1874

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
26th August 1874.*

Read the following papers:—

No. 643. Endorsement of the Inspecting Engineer for Civil and Military Buildings, dated Chepauk, 26th March 1874, No. 494.

From R. SMITH, Esq., District Engineer, Nellore, to Colonel E. A. FOORD, R.E., Inspecting Engineer for Civil and Military Buildings, dated Nellore, 21st March 1874, No. 169.

I HAVE the honor to inform you that in consequence of the inferior masonry and the bad concrete used in the foundation of the 2nd class Cutcherry at Sularpet in 1869, I have had all removed. This will, of course, add to the cost of the structure now under erection, but an extra outlay of about Rupees 1,000 is small in comparison with the interests at stake and the difference between good and indifferent work. I had hoped to utilize a large proportion of the former masonry, although the dimensions of the walls according to the revised plan do not agree with those built in 1869, but the detailed examination recently made, before resuming building operations, showed that it would not be prudent to build on any portion of the original work. A revised estimate has been called for, and will be submitted for your consideration at an early date.

2. The concrete appears to have failed principally in consequence of shell lime having been used without any attempt to make it hydraulic, a precaution which should, I think, have been taken at the site of the Sularpet Cutcherry.

FORWARDED to the Chief Engineer and Secretary to Government, Public Works Department, for information. The estimate for the Cutcherry was sanctioned in G. O., No. 2,539, dated 17th October 1873.

(Signed) E. A. FOORD, Colonel, R.E.,
Inspecting Engineer for Buildings.

No. 644. From R. SMITH, Esq., District Engineer, Nellore, to Colonel G. W. WALKER, R.E., Chief Engineer, Public Works Department, dated Camp at Sarvapally, 27th May 1874, No. 15.

In reply to your memorandum, No. 287, dated 24th April 1874, calling for the names of the officers and subordinates responsible for the faulty construction of the foundation of the Sularpet Cutcherry, I have the honor to report that Major (now Lieutenant-Colonel) Clay was the Range Officer, and that Mr. Assistant Engineer Lyon was the officer immediately in charge of building operations. No subordinate of the permanent establishment was, as far as I can learn, employed on, or connected with, the work.

2. With reference to my not having reported the circumstance sooner, I beg to explain that it was only discovered in January last, when the whole foundations were opened out to admit of a thorough examination being made, before resuming building operations; that I had to communicate with Mr. Lyon on the subject; and that I waited for some twenty-six days after receiving his reply with the hope of being able to send up the revised estimate at the same time, but in this I was disappointed.

between

*Proceedings of the Madras Government, Public Works Department,
26th August 1874.*

3. The slow progress made with the Sulurpet Cutcherry is owing principally to all the available material and labor being required for the construction of the bridge across the Kalinganady, adjacent to Sulurpet. I hope, however, to be able to proceed vigorously with the Cutcherry from July, as the archwork of the bridge referred to will be completed about the end of next month.

4. For your information I annex extracts of the following letters:—

Lieutenant Henderson's No. 87, dated 26th January 1874.

Mr. Lyon's No. 806, dated 14th February 1874.

The former is a report on the foundation of the Sulurpet Cutcherry, the latter contains Mr. Lyon's remarks on the concrete used for that structure. The masonry and concrete were executed in 1869 at a cost of Rupees 563.

From Lieutenant HENDERSON, R.E., to the District Engineer.

"The concrete appears to have been made of broken brick and shell lime, and though put in some years ago has not acquired in the slightest degree the characteristics of true concrete; there is a complete failure in the cementing material, and I could with a slight kick bring down a cubic foot at a time; using a mamooty with one hand I had no difficulty in excavating a large quantity of this supposed concrete; the whole of the foundations are of the same kind. This concrete foundation was put in crookedly at first, and in order to make the rooms or the Cutcherry square, the walls have been built in some places so as to overhang the concrete several inches with such a foundation; the brickwork above was a secondary consideration; however, I may mention that Mr. Fox was able to pull out two bricks by hand with the greatest ease."

From H. LYON, Esq., to the District Engineer, Nellore.

"In your demi-official of the 9th (received to-day) you mention that the "very bad concrete in the foundation of the Sulurpet Cutcherry has raised the suspicions of the Range Officer about the bridge concrete."

"With reference to this, I may observe that the Contractor stipulated for, and was allowed by the Range Officer and Superintending Engineer to use *shell chunam throughout* for the Cutcherry, and endeavoured to get the same concession for the bridge, but I strenuously opposed it, and the result was that stone chunam was insisted upon for the concrete and foundations of the bridge, and I am not sure by the way whether any *shell chunam* has been used in the bridge, for the Contractor's work was stopped after the foundations were built.

"I am, therefore, not responsible for the fact that *shell chunam* was used for Sulurpet Cutcherry work, but though *shell chunam* is not hydraulic (as the *stone is*) I am surprised to hear that (in the words of the present Range Officer) the "concrete for the Cutcherry came away a cubic foot at a time."

5. In conclusion, I beg to observe that there was probably some misunderstanding about the concrete, and with reference to the masonry, I must state that I was much disappointed with what I saw of it, as Mr. Lyon is a good and an active officer, and well acquainted with the duties of his profession.

No. 645. From the same Officer, dated Nellore, 27th June 1874, No. 20.

With reference to your memorandum, No. 451, dated 20th June 1874, I have the honor to inform you that the revised estimate for the 2nd class Cutcherry at Sulurpet has been, I may say, ready for submission for some time; but in consequence of an unfortunate circumstance connected with the new foundation of that structure, I thought it advisable to detain the estimate until I could authorize working operations to be resumed.

*Proceedings of the Madras Government, Public Works Department,
26th August 1874.*

2. The new foundation was commenced when the sub-divisional officer, Mr. Supervisor Doheny, was ill, and he allowed an important letter from Lieutenant Henderson, R.E., relating to that work, to remain unopened, and the result was the foundation was commenced without leave, and with a very different concrete to what had been contemplated by the Range Officer or myself. The new concrete contains stone-lime it is true, but I was so dissatisfied with it that I considered it desirable to wait for some time before deciding whether it should be retained or removed, and now after a lapse of upwards of two months, I am convinced from Lieutenant Henderson's report that it may be safely trusted, and that the cost of the foundation, as shown in the accompanying revised estimate, will not be exceeded.

3. From this document, and the enclosed comparative statement, it will be observed that the *actual* loss sustained by the inferior work referred to in my letter to the Inspecting Engineer for Buildings, No. 169, dated 21st March 1874, will not exceed Rupees 411.

4. In the revised estimate* now submitted provision has been made for a verandah round the Sub-Magistrate's Court, and for a masonry compound

* Amount Rupees 12,830.

wall; the latter will be in accordance with the design circulated with G. O., No. 1,014, dated 20th April 1874.

No. 646. ORDER THEREON, 26th August 1874, No. 2,421.

CIVIL WORKS, No. 35.

With his letter above recorded the District Engineer, Nellore, forwards a revised estimate, amounting to Rupees

12,830, and a comparative statement relating to Sulurpet Cutcherry.

2. This work was under construction in 1869, when the foundations were laid under the immediate supervision of Assistant Engineer Mr. Lyon. Further operations were stopped by order of Government, but the work was included in the Budget of 1873-74, and its estimate approved of in G. O. of 17th October 1873, No. 2,539.

3. In a letter to the Inspecting Engineer for Buildings, under date the 21st March 1874, forwarded for the information of Government, the District Engineer reported that in consequence of bad concrete and inferior masonry having been used in the foundations, he had been compelled to remove the whole, thus adding to the cost of the building.

4. The reports, whether of the officers at present in charge or of the one actually responsible for the bad work, tend to show that there has been great neglect of duty. That a Contractor should have been allowed to use worthless material throughout a foundation, and that he should have been paid for his work under certificate of its proper performance, is certainly not creditable to the officers and subordinates concerned.

5. Although it is not desirable to use shell lime for concrete, especially in foundations, where stone-lime is procurable, and notwithstanding that it was an error in judgment on the part of the Superintending Engineer to authorize its

*Proceedings of the Madras Government, Public Works Department,
26th August 1871.*

application, the Government concur with the Chief Engineer in considering that if the line had been good of its kind, the result would have been very different from that described by Lieutenant Henderson, R.E.

6. In view, however, of the length of time which has elapsed since the work was carried out, and the inexperience of Mr. Lyon at that date, (seeing that he had not long joined the department,) the Government refrain on this occasion from taking more serious notice of this failure in efficiency of the officer concerned.

7. It would appear from the letter of the District Engineer of the 27th June last in connection with this case, that there was actually another failure in the executive arrangements for relaying the foundations of the building, attributable to Mr. Conductor Doheny's intemperate habits. But as his services in the department have been dispensed with in consequence of such habits, nothing further need here be said on the subject.

8. Turning to the details of the comparative statement, it is observed that the increase of the revised over the original sanctioned estimate amounts to Rupees 3,300. It is clearly accounted for. The chief additions are—

For teakwood in the roof, etc.	Rs. 180
For a verandah provided in accordance with the revised design ...	630
For a compound wall and railings not provided in the former estimate	1,460
For sundries and petty superintendence not entered in the former estimate ...	487
	<u>2,757</u>

The balance of the increase covers sundry additions to rates and petty details.

9. The estimate as now presented is sanctioned, and the building will be completed with as little delay as possible. The District Engineer is not to be commended for the considerable time allowed by him to elapse between the discovery of necessity for revision and its actual accomplishment.

(True Extract.)

Colonel, R.E.,
Secretary to Government.

To the District Engineer, Nellore.
.. Officiating Controller of Public Works Accounts.

Exd. S. T. Austin.
Spare Copies

No 169 District Engineer's Office
Nellore, 21st March 1871
From

R. Smith Esq.

District Engineer
Nellore

Colonel E. A. Ford R.E.

Respecting Engineer's Office
for Civil & Military Buildings
Madras

Sir I have the honor to inform

you that, in consequence of the inferior masonry and the bad concrete

used in the foundation of the Second Class Cutcherry at Sularpet in 1869

I have had all removed. This

will, of course, add to the cost of the structure, now under erection,

but an extra outlay of about Rs 1000

is small in comparison with the

interests at stake and the difference

between

between good and indifferent work. I had hoped to utilize a large proportion of the former masonry, although the dimensions of the walls according to the revised plan do not agree with those built in 1869, but the detailed examination recently made before resuming building operations, showed that it would not be prudent to build on any portion of the original work.

A revised estimate has been called for, and will be submitted for your consideration at an early date.

2. The concrete appears to have failed, principally, in consequence of shell lime having been used without any attempt to make it hydraulic, a precaution, which should, I think, have

have been taken at the site of the Sulurpet Cutcherry.

I have the honor to be
Signed, R Smith
District Engineer

N^o 494

Forwarded to the Chief Engineer and Secretary to Government P. W. Department for information
The Estimate for the Cutcherry was sanctioned in G.O. N^o 2539 dated 17 Oct. 1873.

Office of the Dist^y Eng^r
for Public Buildings
Dated 25 March 1874

E. A. Mull Coll R.C.

Inspecting Engineer
for Buildings

To
The Chief Engineer and
Secretary to Government
P. W. Department.

No 15

From

J. C. Smith Esquire
District Engineer
of Mallore

Jan

Colonel G. W. Walker?
Chief Engineer
Public Works Department
Fort Saint George

Dear

In reply to your Memorandum,
No 287 dated 24th April 1874,
calling for the names of the
Officers and Subordinates responsible
for the faulty construction of
the foundation of the Salurpet
Cutcherry, I have the honor to
report that, Major (now Lieut.
Colonel) Gray was the Range
Officer, and that Mr. Assistant

x ab long

[illegible]

John (Jr) Brown

Charlton, the Fragment

Dr. J. H. H. H.

494

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Oct 21. 1880

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John Brown, Abolitionist

Senior Mason, & Lead.

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March 20. 1880. 1880.

known & natural.

Engineer Lyon was the Officer immediately in charge of building operations. No subordinate, of the Permanent establishment, was, as far as I can learn, employed on, or connected with, the work.

2 With reference to my not having reported the Circumstances sooner I beg to explain that it was only discovered in January last, when the whole foundations were opened out, to admit of a thorough examination being made, before resuming building operations; that I had to communicate with Mr Lyon on the subject, and that I waited for some 26 days, after receiving his reply, with the hope of being able to send up the revised estimate, at the same

time, but in this I was disappointed.

3 The slow progress made with the Salarpet Catcherry is owing, principally, to all the available material and labour being required for the construction of the Bridge, across the Kalinganady, adjacent to Salarpet, I hope, however, to be able to proceed vigorously with the Catcherry from July, as the archwork of the bridge referred to, will be completed about the end of next month.

44 For your information I annex extracts of the following letters.

Smith & Anderson's No. 87 dated
 26th January 1874
 from Lyon's No. 806 dated 14th
 February 1874.

The former is a report on the foundation of the Suburpet Cutcherry; the latter contains Mr. Lyon's remarks on the concrete used for that structure. The masonry and concrete were executed in 1869 at a cost of Rs 563-...

From Lieut. Henderson R.E. to the District Engineer

"The concrete appears to have been made of broken brick and shell lime, and though put in some years ago, has not acquired in the slightest degree the characteristics of true concrete; there is a complete failure in the cementing material and I could with a slight kick bring down a cubic foot at a time, using a

13
masonry with one hand I had no difficulty in excavating a large quantity of this supposed concrete; the whole of the foundations are of the same kind. This concrete foundation was put in crookedly at first and in order to make the rooms of the Cutcherry square, the walls have been built in some places so as to overhang the concrete several inches. with such a foundation, the brickwork above was a secondary consideration, however I may mention that Mr. Fox was able to pull out two bricks by hand with the greatest ease.

From H. Lyon Esquire to the District Engineer of Malabar
"In your demi-official

of the 9th (received to day)
you mention that the very
bad concrete in the foundation
of the Salurpet-Catcherry
has raised the suspicions of
the Range Officer about the
Bridge Concrete.

With reference to this
I may observe that the Contractor
stipulated for, and was allowed
by the Range Officer and
Superintending Engineer, to
use shell Chunan throughout
for the Catcherry and endeavoured
to get the same concession
for the bridge, but I strenuously
opposed it and the result
was that stone Chunan was
insisted upon for the concrete
and foundations of the bridge
and I am not sure by the
way

15
way whether any shell
Chunan has been used in the
bridge, for the Contractor's
work was stopped after
the foundations were built.

I am therefore not responsible
for the fact that shell
Chunan was used for Salurpet &
Catcherry work, but though
shell Chunan is not hydraulic
(as the stone is) I am surprised
to hear that (in the words of
the present Range Officer)
the "concrete for the Catcherry
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In conclusion I beg to
observe that there was probably
some misunderstanding about
the concrete, and with reference
to the masonry I must state
that

that I was much disappointed
with what I saw of it,
as Mr. Lyon is a good and an
active officer, and well
acquainted with the duties
of his profession.

I have the honor to be
Sir
Your most obedt. Servt.

G. M. S.
District Engineer

Mr 1874 Rept
From Mr. G. M. S.
The District Engineer

G. M. S.
No 3234
The Chief Engineer
P.W. Department
Madras.

Dated 27th } May 1874.
Desp^d 29th }
Rec^d 1 June
June 15th

Reporting the names
of Officers &c. who
were in charge of the
construction of the
foundations of the
Sulurpett Catchment
G.O. No. 2621. 26-8-74

No 644

Desp^d to Govt 1st June 74

No 20

District Engineer's Office
Mellore. 27th June 1874.

From,

R. Smith Esquire,

District Engineer of
Mellore.

To,

Colonel G. W. Walker R.E.

Chief Engineer,

Public Works Department,

Fort St. George.

Sir,

Enclosures 2.

With reference to your Memo.

x At copy. - remainder, No 451 dated 20th June 1874,

I have the honor to inform you that
the revised estimate, for the second
class hutchery at Achurpet, has
been, I may say, ready for sub-
mission for some time, but in
consequence of an unfortunate circum-
-stance, connected with the new
foundation of that structure, I

thought it advisable to detain the estimate until I could authorize working operations to be resumed.

2. The new foundation was commenced when the Sub-Divisional Officer - Mr. Supervisor Doherty - was ill and he allowed an important letter, from Lieutenant Henderson R.E. relating to that work, to remain unopened, and the result was the foundation was commenced without leave, and with a very different concrete to what had been contemplated by the Range Officer or myself. The new concrete contains stone lime, it is true, but I was so dissatisfied with it, that I considered it desirable to wait,

with D.S.

for some time, before deciding whether it should be retained or removed, and now, after a lapse of upwards of two months, I am - convinced, from Lieutenant Henderson's report, that it may be safely trusted, and that the cost of the foundation, as shown in the accompanying revised estimate, will not be exceeded.

3. From this document, and the enclosed Comparative Statement, it will be observed that the actual loss sustained by the inferior work, referred to, in my letter to the Inspecting Engineer for Buildings No 169 dated 21st March 1874, will not exceed Rs. 411.

In the revised Estimate, now
 Submitted, provision has been made
 for a Verandah round the Sub-
 Magistrate's Court, and for a masonry
 compound wall; the latter will
 be in accordance with the design
 circulated with G. O. No 1014,
 dated 20th April, 1874

* Amount
 Rs. 12,830.

I have the honor to be,
 Sir,
 Your Obedient Servant.

[Signature]
 District Engineer.

[Initials]

For 1874 Sep 11
 From: *[Signature]* 4068
 The District Engineer
 get there.
 To The Chief Engineer
 P. O. Secy
 Madras.
 Date 27th
 Sep 30th } June 1874
 Rec 4 July

No 20
 Encl. 2.
 Submitting a revised
 Estimate and a Com-
 parative Statement
 for the 2nd Class put-
 terry at Sular Pett
 with explanation.

[Signature] 26-874

Tab 45
 Sent to City 4 July 1874

Comparison of statement showing the difference between the Original and Revised Estimates for Construction of the ... and on houses, at the ...

Description of Work	Original Estimate		Revised Estimate		Difference		Remarks
	Quantity	Rate	Quantity	Rate	Quantity	Amount	

Concrete work Cys 70.3 3. - 210 145 71 3. - 213. -

Brick in Chumam do 383.6 4. - 1534 65 403 7/8 4. - 1612 96 19.5 78 31

Cut Stone work Cft 60 1. - 60. - 53 8/8 1. - 53 2. - 6 7/8 6 14. -

Flat slab work do 164. - 3 6 35 14. - 153 7/8. - 3 6 33 101. - 10 7/8 2 8 11

Circular do do " " " 77 8/8. - 4. - 19 66 77 8/8 19 66. - Relieving arches

Brick on edge in Chumam Cys 734 4 4. - 31 31 6 7/8 4 4. - 27 63. - 9. - 3 12 10

Flooring with 8" square flooring bricks set diagonally over 3" of broken rubbish including pointing & complete. 11.6 8. - 92 129 11 8. - 88. - 6 4 129. -

Flooring with 3/4 thick Asphalt with 4" of Concrete in Chumam and with a Substratum of Brick rubbish of 3" thick & complete. 7.2 22 8. - 162. - 7 22 8. - 157 8. - 2 48. -

Pointing 42 2 4. - 94 8. - 38 2 4. - 85 8. - 4 9. -

According to the revised design there is a greater quantity of masonry in the foundation, basement, and superstructure.

Comparison statement showing the difference between the Original and Revised Estimate for constructing Police Station, Cuttack, and out-houses, at Salarpit									
Description of Work	As per Original Estimate		As per Revised Estimate		Difference		Remarks		
	Quantity	Rate	Quantity	Rate	Quantity	Amount	Quantity	Amount	
Plastering with one coat of Chinam ^{lgs}	66.5	12.0	114.10	69 1/4	1 1/2	122.1	4.25	7.75	
Colour wash ^{lgs}	65.5	3.9	15.5	1.69 3/4	3.9	16.5	4.25	1.06	
Roofing with flat and Paints, nails and Chinam borders & complete ^{lgs}	43.25	10.0	432.8	44.10		440.0	75	7.80	
Teak wood work including wastage ^{Cft}	412	3.4	1339	411 1/2	3.8	1439.6	100	6.3/4	The rate originally allowed is rather low to cover wastage and the cost of putting up
Teak wood for repairs ^{Cft}	64.87	3.6	218.14	66	3.6	222.12	1.13	3.13	
Painting doors both sides and the exposed surfaces of wood work of Cutcherry and prison wards with 3 coats of Carson's Oak colour ^{lgs}	73	2.12	200.12	73	2.12	200.12			
Exterior flat drain all round the building 4' 8" from the basement respectively for Cutcherry and Prison Ward ^{lgs}	336	5.6	115.8	336	5.6	115.8			
Teak wood battens railing in front and rear of the Police Guard ^{lgs}	22 3/4	6.0	85.15	67 1/4	6.0	67.15		48.18	

Comparison statement showing the difference between the Original and Revised Estimate for constructing
 2nd Class. taking into being and on 6 houses, at Salurpet

Description of Work
 Estimate
 Revised Estimate
 Difference
 Remarks

Chyam moulding work
 to the doors of Deputy
 Thasildar's Room Rft
 30 . 2 . 3 1/2 . 30 : 2 . 3 1/2
 Dental Cornices work
 Rft 132 . 4 . 33 . 132 . 4 . 33
 Pairs of Doors 5 Panelled
 and 3/4 finished with
 hinges, bolts & complete
 4 3/4 x 8 1/4 feet each
 11 54 . 594 . 11 54 . 594
 Doors inside iron
 barred and outside battens
 according to the standard
 design 4 x 7 1/2 ft with
 Padlocks & complete each
 6 75 . 450 . 6 75 . 450
 Iron barred Ventilators
 for Prison wards 4 x 2 feet
 6 11 . 66 . 6 11 . 66
 Iron work for 3 trusses
 of 16 feet span including
 iron tieing Rods nuts,
 straps, bolts & fitting
 complete each
 3 68 . 198 . 3 68 . 198
 Iron work for 2 trusses
 of 16 feet span do do
 2 6 . 12 . 2 6 . 12
 Teakwood Ornamental
 Board in front of Deputy
 Thasildar's Room with
 cross including iron and
 wood work complete
 1 10 . 10 . 1 10 . 10

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Comparison of Statement showing the difference between the Original and Revised Estimate for constructing
 2nd Class. taking into being and on houses, at Palurpet

Description of Work	Original Estimate		Revised Estimate		Difference		Remarks
	Rate	Amount	Rate	Amount	Rate	Amount	
Strong Iron Cage for Treasury 6'x5'x4' internal dimensions each	100	100					
Stones for resting trusses	10	12	7	8	10	12	
Excavating foundations and filling up Basements and complete		75		75			
Sundries and scaffolding	44	45	10	44	5	103	
Verandahs per separate Estimate		630		630			
		6560		7360			
Removing & rebuilding portions of existing foundations		205		616	3	5	
Amount allowed for Constructing Cool House		285		305		20	
Amount allowed for constructing latrine of 8 seats for Establishment		560		585		25	
Amount allowed for constructing latrine of 6 seats for Prisoners		490		510		20	
Amount allowed for constructing Pyot shed		580		660		80	

In consequence of the inferior work in the original foundations, the whole had to be removed. This sum was allowed for the alteration of portion of foundation, as there is a difference between the original and revised designs.

This sum is to cover the extra cost of Roofing with Ceylon Palmyrahs, as no good Palmyrahs are procurable in this District.

This sum is for three tie beams, and for to cover the extra cost of Roofing with Ceylon Palmyrahs.

Comparative statement showing the difference between the Original and Revised Estimate for constructing
 2nd class village cutting, and 6 houses, at Palurpit

Description of work	Original Estimate		Revised Estimate		Difference		Remarks
	Quantity	Rate	Quantity	Rate	Quantity	Amount	
Constructing a masonry well of 4 feet inside diameter with laterite stone in Chinnam including excavating &c complete	100		97				
Constructing Compound wall 1704 feet long all round 9 feet high (including 3 feet foundation) with mud and coping with brick in Chinnam and a Railing gate of 10 feet wide and 5 feet high and two masonry pillars of 3 feet square and 9 feet high with brick in Chinnam &c complete	750		2210		1460		This is for a masonry compound wall, and gate, according to the design circulated with G. O. No 1014 dated 20 th April 1874 -
Indries and special Petty Superintendence			486 12 7		486 12 7		Owing to the number of masonry work now under construction in this District special superintendence to be paid from the estimate is necessary
	9530		12830				
						52 13 9	Net Increase

District Engineer's Office
 Palurpit
 27th June 1874.
 A/P

1530
 2757
 12297

G. M. S.
 District Engineer

Enclosure in a letter No 20
dated 27th June 1874 from
The District Engineer Nellore
to the Chief Engineer P.W.D.
Madras.

MV 4068/74
1

P.L. 726 Aug^r 1874
In P.N. 645

Comparative
Statement showing
the difference betⁿ
between the original
and Revised
Estimate for
Constructing 2
Class Taluk Cutchery
and out house
at Sulerpet.

Nellore District
Detailed Estimate
Work Revised Estimate for Constructing
2nd Class Taluk Cutchery and out house
at Sulerpet.

Particulars	Number	Length	Breadth	Depth	Cubical Contents	Superficial Contents
<u>Concrete</u>						
Wall all round the Cutchery	1	169' 6 1/2"	0' 1"	0'	847' 6"	
Cross walls of do do	3	12' 6 1/2"	0' 1"	0'	187' 6"	
Longitudinal wall of	2	59' 0 1/2"	0' 1"	0'	590' 0"	
Prison ward						
End and cross walls of do	5	11' 6 1/2"	0' 1"	0'	287' 6"	
Total Cft of Concrete					1912' 6"	

Footings under foundations

Wall all round the Cutchery	1	167' 6 1/4"	0' 0"	3'	167' 6"	
1 st Footing	1	168' 0 3/4"	0' 0"	3'	147' 0"	
2 nd Do	1	168' 6 3/4"	0' 0"	3'	126' 4 1/2"	
3 rd Do	1	169' 0 1/2"	0' 0"	3'	105' 7 1/2"	
4 th Do	3	13' 6 1/4"	0' 0"	3'	40' 0"	
Cross walls of do 1 st Do	3	14' 0 3/4"	0' 0"	3'	36' 9"	
2 nd Do	3	14' 6 3/4"	0' 0"	3'	32' 9"	
3 rd Do	3	15' 0 1/2"	0' 0"	3'	28' 1 1/2"	
4 th Do	3	15' 0 1/2"	0' 0"	3'	28' 1 1/2"	
Longitudinal wall of Prison	2	58' 0 1/4"	0' 0"	3'	116' 0"	
ward 1 st Footing						
2 nd Do						
3 rd Do						
4 th Do	2	56' 6 1/2"	0' 0"	3'	70' 7 1/2"	
End and cross walls of do 1 st Footing	5	12' 6 1/4"	0' 0"	3'	62' 3"	
Carried forward					1119' 9 1/2"	

Brought forwards 1119'-9 1/2

End and cross wall of do 2nd footing 5 13-0 3-6 0-3 56-10 1/2
 3rd do 5 13-8 3-0 0-3 50-7 1/2
 4th do 5 14-0 2-8 0-3 43-9

Steps in front of Thasildar's room 1 8-0 3-0 1-0 24-0
 Do Do Prison ward 4 5-0 3-0 1-0 60-0

Basement and part of Foundations

Wall all round the Cutcherry 1 12-7 1/2 1-10 3-1 1/2 1173 3/4
 Cross walls of do 3 15-7 1/2 1-10 3-1 1/2 318 7/8
 Longitudinal walls of prison ward 2 55-10 1/2 1-10 3-1 1/2 759 6 1/4
 End and cross walls of do 5 14-7 1/2 1-10 3-1 1/2 497-0
 Steps in front of prison wards 4 5-0 6-0 0-6 60-0
 Do do in Thasildar's room 1 6-8 6-0 0-6 20-0

Superstructure

Wall all round the Cutcherry
 Except the Police guard 1 12-8 0 1-6 12-0 2304-0
 Cross walls of do do 3 16-0 1-6 13-11 1002-0
 Longitudinal walls of Prison ward 2 55-6 1-6 13-9 2289 1/2
 End walls of do 2 15-0 1-6 13-9 618-9
 Cross do do do 2 15-0 1-6 14-3 967-6
 Projection of walls at the sides of
 Prison ward and the record room 2 1-6 1-6 12-0 108-0
 Piers in the Police room 2 5-6 1-6 12-0 198-0
 Gable in front of Thasildar's Court 1 19-0 1-6 7 3/4 116-3
 Do Do Prison ward 1 19-0 1-6 5 1/2 78-5
 Do of Cross walls of Cutcherry 3 16-0 1-6 5 1/2 192-0
 Do Prison ward 3 15-0 1-6 5 1/2 168-9
 Total 12226-11

Deduct for

Doors to Cutcherry 11 4-4 1-6 7-9 554-7 1/2

Doors to Prison ward 6 4-0 1-6 7-0 252-0
 Ventilators 6 4-0 1-6 2-0 72-0

Flat archwork as specified

Segmental do do

Coping work on top of

Basement

Rft. of Cut Stone Steps 1 85-0 1-3 0-6 53-1 1/2

Total Deductions

Total Cft. of Brick in Chumam less deductions

or Cgys of do

Flat Archwork

Over 3 doors in Thasildar's Court 3 5-0 1-6 1-1 1/2 25-3 3/4

Do other doors 8 5-0 1-6 1-3 75-0

Do Prison ward 6 4-9 1-6 1-3 53-5 1/4

Total Cft. of Flat archwork

Segmental archwork

Over 3 doors of Thasildar's Court 3 11-6 1-6 1-6 77-7 1/2

Total Cft. of Segmental Archwork

Coping work with brick on edge

Around the Cutcherry except Steps 1 168-10 1-7 8-0 4 1/2 103-7 1/2

Do the Prison ward including

Steps in front female ward 1 114-9 1-7 8-0 4 1/2 70-4 1/2

Total Cft. of Coping Brick on edge

or Cgys of do

Flooring to

Thasildar's Court Clerk

record and Police rooms 1 7-11 0 15-7 1/2

Total Sq. of Flooring

1109-4 1/2

11

Asphaltic flooring

Male and female Prison ward	1	46'-6"	14'-7 1/2"	680-0 3/4
Total Squares of Asphaltic flooring				7
<u>Pointing Outside</u>				
Basement all round except steps	1	304'-0"	2'-0"	608-0
Steps in front of Thasildari Court	1	24'-0"	1'-0"	24-0
Do. Do. doors (heads)	1	30'-0"	0'-6"	15-0
Do. to female ward doors (heads)	2	5'-0"	4'-0"	40-0
Do. at sides and rivers	4	3'-0"	1'-0"	12-0
Wall round the Basement of Cutcherry	1	148'-0"	12'-0"	1776-0
Gables in front of do	1	19'-0"	4'-1"	77-1
Wall round the prison ward				
Except the wall between the Police and Prison ward	1	128'-0"	13'-3"	1696-0
Total				4218-7

<u>Deduct for</u>				
Doors to Cutcherry	9	4'-4"	7'-9"	302-3
Do. Prison ward	4	4'-0"	7'-0"	112-0
Ventilators	6	4'-0"	2'-0"	48-0
Total Deductions				462-3
Total Pointing & less Deductions left				3786-4
or Squares of do				38

<u>Plastering Inside</u>				
Thasildari Court	1	84'-0"	12'-0"	1008-0
Clerks & record rooms	2	56'-0"	12'-0"	1344-0
Piers and projections of walls of the Police room & inside wall of do	1	61'-0"	12'-0"	732-0
Gables of Crisp walls	7	16'-0"	7'-3 1/2"	513-4
Male Prison wards	2	62'-0"	14'-4"	1767-0

Female Prison wards	2	46'-0"	14'-3"	1311-0
Gables of do	6	15'-0"	5'-0"	225-0
Do. do	2	16'-0"	5'-6"	88-0
Sides and soffits of doors	11	19'-10"	1'-6"	327-3
Do. do	6	15'-0"	1'-6"	135-0
Do. do do to hills of Ventilators	6	12'-0"	1'-6"	108-0
Total Plastering				7558-7

<u>Deduct for</u>				
Doors of Cutcherry	13	4'-4"	7'-9"	4136-7
Do. of Prison ward	8	4'-0"	7'-0"	224-0
Ventilators	6	4'-0"	2'-0"	118-0
Total deductions				708-7
Total sqft. of Plastering & less deductions				6850-0
or Squares of do				68 1/2

<u>Colour work</u>				
Roofing with Flat iron Portland, nails Chumam borders & complete Cutcherry and Prison ward	1	282'-9"	15'-6"	4382-4 1/2
covered Square				4382-1 1/2
Total sqft. of Roofing				44
or sqft. of do				

<u>Wood work</u>					
Tie beams to Cutcherry and Police room	3	19'	0'-4"	0'-6"	9'-6"-0"
Principal rafters	6	10 $\frac{1}{2}$ '	0'-4"	0'-4"	6'-10"-8"
Struts	6	5'	0'-3"	0'-3"	1'-10"-6"
Tie beams to prison ward	2	18'	0'-4"	0'-6"	6'-0"-0"
Principal rafters to prison ward	4	9 $\frac{3}{4}$ '	0'-4"	0'-4"	11'-4"-0"

Struts	4	4 $\frac{1}{2}$	0-3	0-3	1-1-6
Ridge piece to Cutcherry	1	92	0-0	2-0-7	11-2-2
Pieces below do	3	0-4	0-4	0-4	0-1-4
Purlins to do	1	175	0-5	0-8	36-5-6
Pole plate do	1	166 $\frac{1}{2}$	0-4	0-4	18-6-0
Ridge piece to prison ward	1	37 $\frac{1}{2}$	0-2 $\frac{1}{2}$	0-7	4-6-8
Pieces below do	2	0-4	0-4	0-4	0-0-10
Purlin all round	1	83	0-0	5-0-6	17-3-6
Pole plate all round	1	121 $\frac{1}{2}$	0-4	0-4	13-6-0
Shipon Valley rafter to Cutcherry	2	15	0-0	3-0-5	3-1-6
Do do do prison ward	6	14 $\frac{1}{4}$	0-3	0-5	8-10-10
Do do do upper	8	20	0-0	3-0-6	20-0-0
Common and Jack rafters Cumbered	170	15	6-0	2-0-3	122-8-6
31 Uprights on the North Side of					
20 Do do East Side					
21 Do South side of Clerk's room					
7 Do West of Shasildar's Court					
79 Uprights (double)	158	4-2	0-3	0-1	13-8-8
Struts	79	3-0	0-2	0-3	9-10-6
37 Uprights in rear 26 at Sides					
and 20 in front (Total 83x2=166)	166	4-2	0-3	0-1	14-4-11
Struts	83	3-0	0-2	0-3	10-4-6
Eave board to Cutcherry & prison ward	307	0-0	2-1-6	76-9-0	
Total Effect of Teakwood Work					411-3-1
Repairs 21 per square of 10 feet					
Long Each 210x2x $\frac{1}{2}$ " = 1 $\frac{1}{24}$ or say					
1 $\frac{1}{2}$ feet per square for 44x1-1					66-0
Total Effect of Repairs of Teakwood					66-0
Painting.					

Both.

Both Sides of doors & the Exposed Surfaces of the wood work to Cutcherry and Prison wards to be painted with 3 Coats of Oak Colour. Total Sq.					73
Exterior flat drain all round the building at 4' x $\frac{1}{2}$ feet from the Basement for the prison ward and Cutcherry respectively					
Teakwood battens Railing in front & rear of Police guard	2	7-3	12-6	181-3	
Total Effect of Teakwood Railings					181-3
Chimney molding work to Deputy Shasildar's room & down					30-0
Deduct Cornice work					
Records and Clerks room	2	24-0		48-0	
Shasildar's Court	1	84-0		84-0	
Total Effect of Dental Cornice work					132-0
Doors					
2 to Clerk's room 3 to records room and 6 to Deputy Shasildar's Court		11	4-4	8-4	
To Prison ward	6	4-0		7-6	
Ventilators	6	4-0		2-0	
Iron work for trifles of Cutcherry and Police guard room	3				
Do do to Prison ward	2				

Teakwood Ornamental Board
in front of Deputy Thasildar's room 1
Bed Stones for Trusses 10
Excavating foundations and
filling in Basement & complete
Superintendence & Sundries
Removing old foundations.

Concrete work below
foundations of the Cutchery
and Prison wards main
and cross walls.

Removing Masonry foundations
of the Cutchery & Prison wards
Main & Cross walls.

Baling
Masonry etc of
old foundations

Excavation	Cyds	225
Concrete	C ft	1161
Brick in Chumam	Cyds	114 $\frac{2}{3}$

38 $\frac{1}{2}$ Cyds

114 $\frac{2}{3}$ do

Constructing Cook house as
per Sanctioned Estimate

Constructing Ryots' Shed

Concrete as per Sanctioned Estimate Total C feet 144
or C yards 5.33

Masonry do do Total C feet 408 $\frac{1}{2}$
or C yards 15.1

Flooring do do Total C sq feet 665
or C sqs 6.65

Roofing do do Total C sq feet 1100
or C sqs 11

Wood Work

Breftimmer 108 0-50-7 26.25
Do pieces between posts 3 16 $\frac{1}{2}$ 0-30-3 3.09

Total C feet of Wood Work 30

Plastering as per Sanctioned
Estimate Total C sqs 1 $\frac{1}{2}$

12 Country teak wood Posts
of 12 feet long each do 12

Excavating foundations and
basement etc complete as per
Sanctioned Estimate

Probable value of Compensation Cyos of Excavation 436
for land as per Sanctioned Estimate Do of Concrete 145 $\frac{1}{2}$

Compound wall as per Revised Design C sqs of Plastering 108
Do do

Well
Constructing a Latrine of 8 Seats for Establishment Do Do
Constructing Do of 6 Seats for Prisoners Do Do

Vellore District

Detailed Estimate

Work: Constructing Verandah round the
Sub Magistrate's Court room at Sulerpet

Particulars of work.	Number	Length	Breadth	Depth	Measurement. Cubic or Superficial Contents.
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Concrete.
Under foundations of retaining walls 1 117'-6" 8'-0" 0'-6" 175'-8 1/2
Total Cubic feet of concrete
or C. Yards of do. 6 1/2

Foundations.
Under retaining walls 1 117'-1/2" 2'-0" 2'-0" 468'-6"

Basement
For do. 1 117'-1/2" 1'-6" 1'-6" 263'-6 3/8
Total 732'-0 3/8
Deduct for laterite 21
Total C. ft. of Brick in Chumaw 711
or C. Yards of do. 26 3/4

Flooring
Verandah 1 90'-0" 5'-0" 450
Total Sq. ft. of flooring 450
or Squares of do. 40

Roofing
Verandah in front of Court 1 35'-0" 9'-6" 332'-6"
do in right and rear of do. 1 65'-0" 5'-6" 357'-6"
Total Sq. ft. of roofing 690-0
or Squares of do. 6.9

Nellore District
Abstract Estimate.

Work. Constructing Verandah round the Sub-Magistrate's Court room at Sulerpet

Laterite Stones under post.	19	1-6	1-6	0-6	
Woodwork					
Post.	19	7-0	0-5	0-5	23-11
Bressumer.	1	11-5	0-5	0-5	20-13
Trip rafters in front Verandah	2	12-9	0-3	0-5	2-7-10 1/2
do in rear	1	9-6	0-3	0-5	0-11-10 1/2
Common and jack rafters in front	27	11-6	0-2	0-3	12-11-3
Counted Square					
do on right and rear	50	5-6	0-2	0-3	11-5-6
Eave board	1	6-5-0	0-2	1-6	16-3-1
Total C. ft. of Teak wood.					87-3-1
Teak wood for keepers 1 1/2 C. ft. per square 6.9 Squares =					10-20

Painting
To all the exposed surfaces of wood-work of Verandah to have 3 coats of oak colour.
Excavating foundation and filling up Basement.
Superintendence and Sundries.

Quantities	Description of Charges	Rate	Amount	Total
6 1/2	Cubic yards of concrete	3	19	8.
26 3/4	do of Brick in Churnam	4	105	54
4 1/2	Squares of flooring	8	36	..
6 9/10	do of roofing	10	69	..
19	Laterite Stones. 1 1/2 x 1 1/2 x 1/2	4	4	12
87 1/4	C. ft. of Teak wood	3	8	305
10 7/20	do do for keepers	3	6	34
8	Squares of painting	2	12	22
	Excavating foundations and filling up Basement.			7
	Sundries.			261

Total Estimate Rupees 630

District Engineer's Office
Nellore 27th June 1874
A.S.K

G. Smith
District Engineer.

Enclosure in a letter No 20
dated 27 June 1874 from
The District Engineer Melton
to the Chief Engineer R. N. H.
Madras

Mr 4068/74

2

N. G. 26 Aug 1874
In B. N. 645

Revised Estimate
for Constructing
2nd Class Salug
Katchery and
out-houses at
Sulurpet.
Amounting to Rs.
12,830.

Note by Chief Engineer.

The condition of the concrete in the old foundations of the
Sulurpet Katchery cannot be attributed to the use
of shell instead of stone lime. Although stone
lime is much to be preferred to shell lime especially in
foundations, good lime of the latter kind should
with broken stone or bricks or when used under water
give a fairly sound foundation.

C. N. H.

Added

Public Works Department
 Proceedings of the Madras Government
 From the Supply Bill
 " St Engr. M. K. (H. C. 169 dated 25th March 1874)
 do do (H. C. 15 dated 27th May 1874)
 do do (H. C. 20 dated 27th June 1874)

2421

With his letter above
 recorded the strict
 perances, he has for-
 -warded a revised
 estimate amounting
 to Rs. ¹²⁸⁵⁰ ~~12,300~~ and a
 comparative state-
 -ment relating to
 Sularpet butchery.

2. This work was under
 construction in 1869,
 when the foundations
 were laid under the
 immediate super-
 -vision of Assistant
 Engineer

M. K.
 7/10

Engineer Mr. Lyon. Further operations were stopped by order of the Govt; but the work was included in the budget of 1873-74 and its estimate approved of by the order of Government in G.O. of the 14th October 1873 No 2539.

3. In a letter to the Inspecting Engineer for Buildings under date the 21st March 1874 forwarded for the information of Government the District Engineer reported that in consequence of bad concrete and inferior masonry having been used in the

the foundations he had been compelled to remove the whole, thus adding to the cost of the building. 4. The reports, whether of the officers at present in charge or of the one actually responsible for the bad work, tend to show that there has been great neglect of duty. That a Contractor should have been allowed to use worthless material throughout a foundation and that he should have been paid for his work under Certificate of its proper performance is

is certainly not creditable
to the officers and Subordi-
nates concerned.

5. Although it is not
desirable to use shell
lime for concrete, especially
in foundations, where
stone lime is procurable,
and notwithstanding
that it was an error
in judgment on the
part of the Superintendents
to authorize its applica-
tion, the Government
concur with the Chief
Engineers in considering
that if the lime had
been good of its kind
the result would have
been very different
from that described
by Lieut Henderson R.E.

47
6. In view however
of the length of time
which has elapsed
since the work was
carried out and the
inexperience of Mr.
Lyons at that date,
seeing that he had
not long joined the
Department, the
Govt. refrain on this
occasion from taking
more serious notice
of this failure in effi-
ciency of the officers
concerned.

7. It would appear
from the letter of the
District Engineer
of the 27th June last,
in connection with

this case, that there was actually another failure in the Executive arrangements for relaying the foundations of the building - attributable to Mr. Conductor Doherty's intemperate habits. But as his services in the Department have been dispensed with in consequence of such habits nothing further need here be said on the subject.

3. Turning to the details of the comparative statement it is observed that the increase of the revised over the original sanctioned estimate,

amounts to Rs 3300.
It is clearly accounted for - The Chief additions are:
for teak wood in the roof ^{Rs} 180
for a Verandah provided in accordance with the revised design } 630
for a compound wall and railings not provided in the former estimate } 1460
for sundries and petty superintendence not entered in the former estimate } 484
Total Rs 2954

The balance of the increase covers sundry additions to rates and petty details.

9. The estimate as now presented is sanctioned and the buildings will be completed with as little delay as possible. The District

Engineers is not the com.
-mended for the consi.
derable time allowed
by him to elapse
between the discovery
of necessity for revision
and its actual accom-
-plishment.

C. W. W.

P
To the D. C. Miller
a Controller with H. C. Estlin
J. Copier des/ 31/8/74.

643-646.

Gir 7/8/74 Rd 1/8/74

1843
3234 4068

Govt. of 1874 Madras.

PUBLIC WORKS.

To
The Dist. Engr.
Vellore.
12th Aug 1874

Dated

Recd.

Encl.

26 Aug No. 2421

645-646

Suherpet Fitcherry
Vellore District.

Revised estimate
sanctioned for its con-
struction with remarks
in the proceedings of
Mr Asst Engr Lyon
and Conductor Bohery
in connection with the
building -