

(1) Number of pages 19

(2) Date of repair 2-5-38

(3) Initials of the Referee J

MADRAS RECORD OFFICE.

Government of Madras.

P
Public Works DEPARTMENT.
Can 28/11/59

G.O. No. <u>779</u>	Press <u>Mis.</u>
<i>99.100</i> Dated <u>28</u> <u>4</u> <u>1859</u> .	

Not to be folded or roughly handled

No. 99. Read the following letter from Colonel C. E. FABER, Chief Engineer ; to J. D. BOURDILLON, Esq., Secretary to Government, dated 30th March 1859, No. 9148.

SIR,

The Government in Extract Minutes Consultation No. 565, dated 29th March 1858, were

pleased to accord sanction for the construction of three Transport Carriages for the use of the D. P. W. at an estimated cost of Rupees (900) nine hundred. The work was entrusted to the Acting Garrison Engineer, who has lately finished one of the three Carriages, at an expenditure of Rupees (531-14-11) five hundred and thirty-one, annas fourteen, and pice eleven, or Rupees (231-14-11) two hundred and thirty-one, annas fourteen and pice eleven, in excess of the amount sanctioned for each carriage, as will be seen from the comparative Statement herewith forwarded. The Superintendent of the Gun Carriage Manufactory was then requested to furnish an Estimate of what he considered to be the probable amount required for constructing a similar one in his yard. In compliance with this requisition, he has kindly forwarded an Estimate, amounting to Rupees 345-3-10 or Rupees 45-3-10 only above the original Estimate sanctioned by Government.

1 Letter from the Acting Garrison Engineer No. 584, dated 21st January 1859.
1 Comparative Statement.
1 Memo. by Conductor Hill, dated 24th November 1858.
1 Letter from Colonel Maitland No. 175, dated 28th February 1859.
1 Original Estimate for Rupees 345-3-10.

2. It is evident from the above circumstances that the increase reported by the Garrison Engineer has arisen mainly from his not having experienced men or proper means and appliances

	Ra.	A.	P.	
Already sanctioned.....	900	0	0	
Cost of Carriage already constructed.....	531	14	11	
Balance remaining.....	368	1	1	
Cost of two new Carriages as per Colonel Maitland's Estimate.....	690	7	8	
Sum for which sanction is now required.....	322	6	7	

I would therefore beg to recommend that the remaining two Carriages be constructed at the Gun Carriage Manufactory, at the aggregate cost of Rupees (690-7-8) six hundred and ninety, annas seven and pice eight, and that the balance of Rupees (322-6-7) three hundred and twenty-two, annas six and pice seven, after deducting the expenses already incurred by the Garrison Engineer for one carriage, out of the sanctioned amount of Rupees (900) nine hundred, be authorized in addition to the latter sum for the completion of the remaining two Carriages.

Letter from Captain H. L. PRENDERGAST, Acting Garrison Engineer ; to the Chief Engineer, dated 21st January 1859, No. 584.

SIR,

With reference to your Resolution No. 8897 of the 10th April 1858, I have the honor to report, that one of the 3 Transport Carriages has been constructed, according to the plan furnished to me, the Estimate for which, provides only 300 Rupees, whereas the actual cost has amounted to Rupees 531-14-11, a comparative Statement is forwarded, shewing the amount of material and labour, according to the Estimate, and what has been required for the work.

2. The excess in expenditure is caused by a large additional quantity of square Swedish Iron, but principally in the Smith's cooly-hire, further particulars are given in the report enclosed, which I called on Conductor Hill, in charge of the work yard, to make, in explanation of the expenditure.

3. I have not commenced the other 2 Carriages, as I see no prospect of reducing the cost, the work being of a heavier description than we are accustomed to undertake, and perhaps it would be done cheaper at the Gun Carriage Manufactory. If it is necessary that I should proceed with the other two, I have to request you will be good enough to obtain sanction for the requisite amount as shewn in the Statements now submitted.

Memorandum

Regarding the construction of a Transport Carriage for weighing Machines.

In making the Transport Carriage a difficulty was experienced in getting good and able Smiths and Hammermen willing to work at it, for the usual rates of wages allowed in this De-

Fort Saint George, Public Works Consultation of 29th April 1859.

partment, in consequence of its great weight, as they had not been accustomed to work so large a mass of Iron for such small wages.

The Iron bands to fix round the Axle tree were the most difficult part of the work, particularly in making the double bend, in consequence of their great weight (each weighing 261 lbs) it required the aid of tackle to lift them on, and off the fire, each time they had to be heated: the other portions of the work although heavy, was comparatively easily accomplished.

In framing the Estimate there has only been allowed Rupees fifty for Cooly hire, Coals and Paddy husk, which is at the rate of Rupees 16-10-8 per Candy, whilst it appears from information, the general price that would have been charged in the Bazar for a similar work, would have been about (40) Rupees per Candy, independent of the cost of Coals, &c. It will also be seen by the reports furnished daily to the Office, that the expenditure of Coal, &c., has exceeded the whole amount provided in the Estimate, and has left nothing for Cooly hire. Again in the item of the two Venny wood Naves for the wheels, these are put down at Rupees five, whilst those used could not be got for less than Rupees 9-10, considerable time was lost in procuring them, as this kind of wood was scarce in the market and very dear, and could not be purchased of the size we required for a less sum than the one stated above.

There is also another item which has caused a little increase to the Estimated amount, namely, the making of Tools that were found necessary, as we had none in Store suitable for such heavy work, these took up time and required about 120 lbs of Iron to make them. These instruments are now in Store and available for similar work whenever they may be required.

Garrison Engineer's work yard, }
21st November 1858.

(Signed) JOHN HILL,
Conductor.

Letter from Lieutenant-Colonel J. MAITLAND, Superintendent Gun Carriage Manufactory;
to the Officiating Superintending Engineer, Central Circle, dated 28th February 1859,
No. 175.

SIR,

I have the honor to acknowledge your letter No. 7830, dated 12th February 1859, with its accompaniments as per margin, and I herewith forward an Estimate prepared in my Department to the amount of Rupees 315-3-10, for the construction of a Transport Carriage similar to the one sent to be reported upon.

- 1 Plan of the Transport Carriage.
- 1 Estimate for the same. Rupees. 307-0-0
- 1 Letter from the Ag. Garrison Engr. No. 584, dated 21st January 1859.
- 1 Comparative Statement.
- 1 Memo. by Contractor Hill.

2. The Acting Garrison Engineer's probable Estimate for the construction of the Carriage is Rupees 300, but the actual cost of its construction by the Garrison Engineer is Rupees 331-14-11, which shows a difference of Rupees 186-14-1, between my Estimate and what it cost the Garrison Engineer.

3. I do not consider this difference to be a heavy charge on the following grounds.

4. The price of the Iron in the Engineer's Estimate is about 50 Rupees per Candy, but the English Iron charged in my Estimate is only Rupees 31-12-2 per Candy.

5. The cost of the labor and fuel in the Engineer's Estimate is Rupees 194-9-7, but mine is only Rupees 67-14-2.

6. Although in the cost of the labor and fuel there is a great difference between them both, I however consider it a fair charge, because at the Gun Carriage Manufactory, I have qualified workmen who could from their experience in Wood and Iron work and the ready means and appliances, turn out work in less time than it could be done elsewhere. Besides this, the construction of such kind of work being a new one to the Engineer Department, it accounts for the increased cost of the labor and fuel.

No. 100. ORDER THEREON, No. 979; dated 28th April 1859.

Under the circumstances represented by the Chief Engineer the Governor in Council sanctions the sum of Rupees (331-14-11) five hundred and thirty-one, annas fourteen and pice eleven,

Fort Saint George, Public Works Consultation of 29th April 1859.

the amount expended in the construction of one of the Transport Carriages authorized in Extract Minutes Consultation 29th March 1858 No. 565; and grants authority for the construction of the remaining two Carriages at the estimated cost of Rupees (690-7-8) six hundred and ninety, annas seven and pice eight, at the Gun Carriage Manufactory.

2. This sanction cancels the former sanction of 900 Rupees above quoted, for the three Carriages.

(Signed) J. D. BOURDILLON,
Secretary to Government.

1858.

Garrison Engineer's Office. 5

From, Captain H. L. Prendergast

Acting Garrison Engineer

To, The Chief Engineer D. P. W.

Fort Saint George.

Sir,

With reference to your resolution No 8897 of the 10th

April 1858, I have the honor to report, that one of the 3 transport
carriages has been constructed, according to the plan furnished
to me, the Estimate for which, provides only 3000^{rs} whereas the
actual cost has amounted to Rupees 531-14-11 a comparative
statement is forwarded, shewing the amount of materials
and labour, according to the estimate, and what has been
required for the work.

2 The excess in expenditure is caused by a large addition
quantity of square and Swedish iron; but principally in the
Smith's cooly hire. further particulars are given in the report
enclosed, which I called on Conductor Hall, in charge of the
work yard to make, in explanation of the expenditure.

3 I have not commenced the other 2 carriages, as I see
no prospect of reducing the cost, the work being of a heavier
description than we are accustomed to undertake, and perhaps
it would be done cheaper at the Gun Carriage Manufactory.

It is necessary that I should proceed with the other two I have to regret
you will be good enough to obtain sanction for the requisite amount
as shown in the statements now submitted.

Fort Saint George
21st January 1859

I am Sir
Yours truly
H. L. Prendergast
Capt. Engr in Ch. of E. S.

I have
D. P. W.
Chief Engineer

Madras 28th February 1859

Super. Gun Carriage Manufactory

Gun carriage manufactory,
Madras 28th February 1859

1875

From Lieutenant Colonel J. Maitland
Supt. Gun carriage manufactory
To The Officiating Superintending Engineer
Central Circle

Fort Saint George

Sir,
I have the honor to acknowledge your letter of 12th February 1859 with its accompaniments as per margin, and I herewith forward an estimate prepared in my Department to the amount of Rupees 345-3-10 for the construction of a Transport carriage similar to the one sent to be reported upon.

2 The Acting Garrison Engineer's probable estimate for the construction of the carriage is Rupees 300 but the actual cost of its construction by the Garrison Engineer is Rupees 531-11-11 which shews a difference of Rupees 186-11-1 between my estimate and what it cost the Garrison Engineer.

3 I do not consider this difference to be a heavy charge

- 1 Plan of the Transport Carriage
- 1 Estimate for the same Rs 300-0-0
- 1 Letter from the Acting Garrison Engineer 1858 dated 21st Jan 1859
- 1 Comparative statement
- 1 Memo by Contractor Hill

Engineer in a letter from the
Acting Engineer
of the Garrison Engineer
21st Jan 1859.

21st Jan 1859

1875

1. Estimate for construction of the
Transport carriage
2. Estimate for construction of the
Transport carriage
3. Estimate for construction of the
Transport carriage
4. Estimate for construction of the
Transport carriage
5. Estimate for construction of the
Transport carriage
6. Estimate for construction of the
Transport carriage
7. Estimate for construction of the
Transport carriage
8. Estimate for construction of the
Transport carriage
9. Estimate for construction of the
Transport carriage
10. Estimate for construction of the
Transport carriage
11. Estimate for construction of the
Transport carriage
12. Estimate for construction of the
Transport carriage
13. Estimate for construction of the
Transport carriage
14. Estimate for construction of the
Transport carriage
15. Estimate for construction of the
Transport carriage
16. Estimate for construction of the
Transport carriage
17. Estimate for construction of the
Transport carriage
18. Estimate for construction of the
Transport carriage
19. Estimate for construction of the
Transport carriage
20. Estimate for construction of the
Transport carriage
21. Estimate for construction of the
Transport carriage
22. Estimate for construction of the
Transport carriage
23. Estimate for construction of the
Transport carriage
24. Estimate for construction of the
Transport carriage
25. Estimate for construction of the
Transport carriage
26. Estimate for construction of the
Transport carriage
27. Estimate for construction of the
Transport carriage
28. Estimate for construction of the
Transport carriage
29. Estimate for construction of the
Transport carriage
30. Estimate for construction of the
Transport carriage
31. Estimate for construction of the
Transport carriage
32. Estimate for construction of the
Transport carriage
33. Estimate for construction of the
Transport carriage
34. Estimate for construction of the
Transport carriage
35. Estimate for construction of the
Transport carriage
36. Estimate for construction of the
Transport carriage
37. Estimate for construction of the
Transport carriage
38. Estimate for construction of the
Transport carriage
39. Estimate for construction of the
Transport carriage
40. Estimate for construction of the
Transport carriage
41. Estimate for construction of the
Transport carriage
42. Estimate for construction of the
Transport carriage
43. Estimate for construction of the
Transport carriage
44. Estimate for construction of the
Transport carriage
45. Estimate for construction of the
Transport carriage
46. Estimate for construction of the
Transport carriage
47. Estimate for construction of the
Transport carriage
48. Estimate for construction of the
Transport carriage
49. Estimate for construction of the
Transport carriage
50. Estimate for construction of the
Transport carriage
51. Estimate for construction of the
Transport carriage
52. Estimate for construction of the
Transport carriage
53. Estimate for construction of the
Transport carriage
54. Estimate for construction of the
Transport carriage
55. Estimate for construction of the
Transport carriage
56. Estimate for construction of the
Transport carriage
57. Estimate for construction of the
Transport carriage
58. Estimate for construction of the
Transport carriage
59. Estimate for construction of the
Transport carriage
60. Estimate for construction of the
Transport carriage
61. Estimate for construction of the
Transport carriage
62. Estimate for construction of the
Transport carriage
63. Estimate for construction of the
Transport carriage
64. Estimate for construction of the
Transport carriage
65. Estimate for construction of the
Transport carriage
66. Estimate for construction of the
Transport carriage
67. Estimate for construction of the
Transport carriage
68. Estimate for construction of the
Transport carriage
69. Estimate for construction of the
Transport carriage
70. Estimate for construction of the
Transport carriage
71. Estimate for construction of the
Transport carriage
72. Estimate for construction of the
Transport carriage
73. Estimate for construction of the
Transport carriage
74. Estimate for construction of the
Transport carriage
75. Estimate for construction of the
Transport carriage
76. Estimate for construction of the
Transport carriage
77. Estimate for construction of the
Transport carriage
78. Estimate for construction of the
Transport carriage
79. Estimate for construction of the
Transport carriage
80. Estimate for construction of the
Transport carriage
81. Estimate for construction of the
Transport carriage
82. Estimate for construction of the
Transport carriage
83. Estimate for construction of the
Transport carriage
84. Estimate for construction of the
Transport carriage
85. Estimate for construction of the
Transport carriage
86. Estimate for construction of the
Transport carriage
87. Estimate for construction of the
Transport carriage
88. Estimate for construction of the
Transport carriage
89. Estimate for construction of the
Transport carriage
90. Estimate for construction of the
Transport carriage
91. Estimate for construction of the
Transport carriage
92. Estimate for construction of the
Transport carriage
93. Estimate for construction of the
Transport carriage
94. Estimate for construction of the
Transport carriage
95. Estimate for construction of the
Transport carriage
96. Estimate for construction of the
Transport carriage
97. Estimate for construction of the
Transport carriage
98. Estimate for construction of the
Transport carriage
99. Estimate for construction of the
Transport carriage
100. Estimate for construction of the
Transport carriage

Madras 28th February 1859

Supt. Gun Carriage Manufactory

Central Office of P. Works
 No 9148
 Fort Saint George
 30 March 1859

From
 The Chief Engineer.
 To
 The Secretary to Government P. W.

Sir,
 The Government in E. India. Lond. No 565 dated

Enclosures 5
 Letter from the Chief Engineer 29th March 1858, were pleased to accord sanction for the
 Engineer No 584 d/21 Jan 1859
 Comparative Statement construction of three Transport Carriages for the use of the
 1. The Chief Engineer
 2. The Secretary to Government
 3. The Government in E. India
 D. P. W. at an Estimated cost of Rupees (900). Nine
 hundred. The work was entrusted to the Acting Garrison
 Engineer, who has lately finished one of the three
 carriages at an expenditure of Rupees (531-14-11)
 Five hundred and thirty one Annas fourteen and
 Pice eleven, or Rupees (231-14-11) Two hundred and
 thirty one Annas fourteen and Pice eleven in excess of
 the amount sanctioned for each Carriage, as will be
 seen from the Comparative Statement herewith forwarded.
 The Superintendent of the Gun Carriage manufactory

was

28th Feb. 1859
 Superintendent of the Gun Carriage Manufactory

Enclosure in a letter from
 the Chief Engineer.
 to the Secretary to Government
 P. W.

Date 30 March 1859
 Recd

No 9148
 P. W. 777/59

Copy of a letter from the
 Superintendent of the Gun Carriage
 Manufactory in Estimation of
 the cost of the carriage
 in his Report to the
 Government in E. India
 to be reported on.

Gun Carriage Manufacture at the aggregate cost of
 Rupees (690-7-8) Six hundred and Ninety
 annas seven and pie eight and that the balance
 of Rupees (322-6-7) Three hundred and twenty two
 annas six and pie seven, after deducting the expenses
 already incurred by the Garrison Engineer for one carriage
 out of the sanctioned amount of Rupees (900) Nine hundred

Already sanctioned
 Rs 900-0-0
 Cost of carriage 753-14-0
 already sanctioned
 Balance remaining 146-6-0
 Cost of carriage
 not sanctioned 169-7-8
 Estimate
 sum for which
 sanction is now
 required 322-6-7

To The Secretary to Government

Madras 28th February 1859 }

Suppl. Gunbar Mann

Memorandum

Regarding the construction of a Transport Carriage for weighing machines.

In making the Transport Carriage a difficulty was experienced in getting good and able Smiths and Teammermen willing to work at it, for the usual rates of wages allowed in this department, in consequence of its great weight, as they had not been accustomed to work so large a mass of iron for such small wages.

The iron bands to slip round the axle tree were the most difficult part of the work, particularly in making the double bend, in consequence of their great weight (each weighing 261 lbs) it requires the aid of tackle to lift them on, and off the fire, each time they had to be heated; the other portions of the work although heavy, was comparatively easily accomplished.

In framing the Estimate there had only been

Wm. D. D. D. D. D.

1800: 30 March 1859

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

Wm. D. D. D. D. D.

been allowed Rupees fifty for cooly hire, coals
and Paddy husk, which is at the rate of 16-11-8
per Candy, whilst it appears from information
for the general price that would have been charged
in the Bakhur for a similar work, would have
been about (40) Rupees per Candy, independent
of the cost of coals &c. It will also be seen
by the Reports furnished daily to the Office,
that the expenditure of coal &c. has exceeded the
whole amount provided in the Estimate, and
has left nothing for cooly hire; again in the item
of the two venny wood naves for the wheels, these
are put down at Rupees five, whilst these could
not be got for less than Rupees 9-10...
considerable time was lost in procuring them,
as this kind of wood was scarce in the
market and very dear, and could not be
purchased of the size we required for a life
sum

17
sum than the one stated above.

There is also another item which has
caused a little increase to the estimated amount,
namely, the making of tools that were found
necessary, as we had none in store suitable
for such heavy work, these took up time and
required about 120 lbs of iron to make them.
These instruments are now in store and
available for similar work whenever they
may be required.

Garrison Engineer's Work Yard, } J. D. John Hill
24 November 1858. } Conductor

A true Copy
J. D. Prendergast Captain
At Garrison Engineer
J. D. True Copy.

Amth. Br. Captain
Supr Engr in ch: of C. B.

Madras 28th February 1859 }

Supdt. Gunpowder Manuf.

enclosure in a letter from
the Chief Engineer.

To the Secretary of the
Society of Engineers

Date 10th March 1859
No. 1

No 9148

10th March 1859

Copy of a memo. by
the Secretary of the
Society of Engineers
concerning the
construction of a
machine for weighing
machines. —

Comparative statement showing the Quantity of materials and labours for Carriage with the amounts actually expended by the Garrison Engineer decrease between the Estimate and the actual cost

Amount of materials and labours provided for in the sanctioned Estimate Amount of materials and labours actually incurred by the Garrison Engineer's Department and

Description of works	Quantity	Rs.	As	P.	Description of works	Quantity	Rs.	As	P.
Teak wood wrought and put up	1483	32	4	10	Teak wood wrought and put up	1346	53	2	7
Square Iron	lbs 1500	150	.	.	Square Iron	lbs 2002	201	.	10
Flat Iron	lbs 360	30	3	10	Flat Iron	lbs 260	18	13	2
					Sundries Iron	lbs 376	17	6	.
					Stub	lbs 77	3	1	7
Four Stuns of Iron fixtures	13	9	8	.					
Heavy wood braces	2	5	.	.	Heavy wood braces	2	9	10	.
Smiths Coaly hire		50	.	.	Smiths Coaly hire		19	7	7
Paintings and sundries		22	15	4	Paintings & sundries		2	2	.
Total Rupees		300	.	.			531	14	11

Amount of Actual cost 531 14 11
 Est. of Estimate 300 . .
 Amount of net Excess Rupees 231 14 11

Garrison Engineer's Office
 Fort St. George
 21st January 1859

True to
 Charles B. L.
 Supd Engineer

provided for in the Estimate sanctioned for the construction of Transporters' Department for the same, together showing the increase and

Amount of Increase of materials and labours in the Estimate Amount of decrease of materials and labours in the Estimate Remarks.

Description of works	Quantity	Rs.	As	P.	Description of works	Quantity	Rs.	As	P.
Teak wood wrought and put up	1483	32	4	10	Teak wood wrought and put up	1346	53	2	7
Square Iron	lbs 1500	150	.	.	Square Iron	lbs 2002	201	.	10
Flat Iron	lbs 360	30	3	10	Flat Iron	lbs 260	18	13	2
					Sundries Iron	lbs 376	17	6	.
					Stub	lbs 77	3	1	7
					Four Stuns of Iron fixtures	13	9	8	.
					Heavy wood braces	2	9	10	.
					Smiths Coaly hire		19	7	7
					Paintings and sundries		22	15	4
					Total Rupees		300	.	.
							531	14	11

Amount of Increase 231 14 11
 Est. of Decrease 39 11 10
 Amount of net Increase Rupees 231 14 11

ofy.
 Captain
 in ch of C.B.

Signed H. L. Pendergast Captain
 Acting Garrison Engineer

Gun carriage Manufactory
 Madras 28th February 1859

James W. Smith Esq
 Supd Gun Carriage Manufactory

Estimate for the construction of a Transport Carriage²³
for Weighing Machines.

Percentage for Superintendence 79 10 10
Total Rupees 345 2 3

Gun Carriage Manufactory
Madras 28th February 1859 }

Military Sixth Coll.
Exptl. Gun Cars Mar.

P. W. Depart.

N^o 979

Extract from the Minutes of Consultation
Under date the 28th April 1859.

Read the following letter
from the Chief Engineer

(Here enter 30th March 1859
No 9145)

Under the circum-
stances represented by
the Chief Engineer the
Governor's Council sanc-
tioned the sum of Rupees
(531-14-11) five hundred and
thirty one annas fourteen
and pice eleven, the
amount expended in
the construction of one of
the Transport carriages
authorized in Ex. Min
No 29th March 1858 -
18565, and grants au-
thority for the construction
of

Cl

11/11

11/11

1859 777/59

Estimate for the

Construction of a

carriage for carrying

machines

Number 345-10

11/11

of the remaining two car-
riages at the estimated
cost of Rupees (690-7-8) six
hundred and ninety Rupees
seven pice eight, at the
Gun Carriage Manufactory.

2 This sanction
cancels the former
sanction of 900 Rupees
above quoted for the
three carriages.

For
J. H. S.

10 Copies to the Secy. Genl. Dated 19th
1- " " Account Genl. D.
1- " " Civil Audit

1
with the following
to the 29th of April

1899.

Robert Blair
of the 29th of April 1899.

1899-18-11 for the
construction of the
2. Transport Carriage
and the construction
of the remaining 2, authorized
at the cost of \$10,000.00
the construction of the
carriage. The construction
of the carriage is the
construction.

1899-18-11

1899-18-11