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MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No.	2637	Press
187-188		Mis.
Dated	9 - 9 -	1885.

Not to be folded or roughly handled

No. 187. Read the following :—

MEMORANDUM on the Plans, &c., submitted with Mr. Nordmann's letter No. 21 of 18th July 1865, No. 109.

1. These are for completion of the road from Manantoddy to the head of the Tambracherry Ghát, viâ Terriote, and the total amount of the estimates is Rupees 66,000, against a guess estimate of Rupees 30,140 ; of which Rupees 16,140 were sanctioned in G. O. No. 3,264 of 15th November 1864, and Rupees 13,720 were actually spent in 1864-65, the current year's allotment being Rupees 14,000 (Item No. 111 of Part II. of printed Budget.)

2. The accompanying Statement shows each item of work estimated for, the expenditure on the same in 1864-65, that proposed in 1865-66, and that which will be reserved for further consideration.

Nos. 1, 2, and 3 are three masonry culverts of 6 feet height and span, to cost Rupees 1,072 each. Their localities are not specified as should be done. They are not emergently required, but their plan and estimate are approved.

No. 4, Rupees 1,610. A timber platform bridge on piles, with a central opening of 20 feet, and two side openings of 10 feet each. Locality not specified. From the section it would appear as if the waterway required could have been better given in a single span of 30 feet, piles being dispensed with, and abutments of rough stone in chunam laid upon the high banks, (the footings protected with piling, if found necessary). Superstructure to be of the Canara Standard Plan, that designed having an insufficient number of main beams, unnecessarily scarfed together by failure to resort to the use of sleepers on which their ends might simply abut.

N. B.—It being requisite to simplify the carpentry as much as possible in such localities, having reference to the scanty supply of skilled labor and its high price, and to unseasoned timber alone being procurable, Mr. Nordmann himself does not propose to construct this bridge till 1866-67; meanwhile its plan and estimate can be revised as above noted.

Nos. 5 and 6. Two timber spans of 20 feet each, Rupees 905 and Rupees 962. Not immediately required. To be altered as above noted, and localities specified.

Nos. 7 & 9, designed as Queen Post Truss bridges of 64 feet span. Rupees 6,724 each, half of which amount is put down by Mr. Nordmann to the current and next years; but their construction will be postponed in deference to the sentiments of the Planters, as represented by Mr. Beaumont of Tamoortha, who has urged that all the Wynaad communications should be completed as dry weather roads, before any large bridges be undertaken. The trusses are well designed, but as a good foundation offers it would be advisable, for the reasons above given, to simplify the carpentry to the utmost, by adding a central pier, and adopting the Canara plan of superstructure. The cost of the pier might be saved by using rough stone for the wing walls, instead of laterite in chunam.

No. 8. A timber span of 24 feet, on piles. Design objectionable, as stated of Nos. 1 to 3, and 5 and 6; but Rupees 500, out of the total estimate of Rupees 770

*Proceedings of the Madras Government, Public Works Department,
3th September 1865.*

having been spent in 1864-65, there is no alternative but to carry out the work at once. If not too late, however, it is desirable that two piles be added at each side and two additional beams be placed on them.

No. 10. Same as Nos. 5 and 6, and objectionable accordingly; but must be completed, with the additions suggested in last paragraph, if not too far advanced.

No. 11. A masonry culvert of 10 feet span and 7 feet height. Approved, and having been commenced, must be completed.

No. 12. A timber bridge of one central span of 30 feet, and two of 22, each on piles. Approved, with the addition of two piles in each row, and two additional beams. Sleepers having been used, (the ends of which should be strutted), scarfing of the beams is unnecessary; they may simply abut, and be strapped to the sleepers and each other.

No. 13. Timber span of 24 feet. Same remark as to No. 8. Rough stone abutments would have been preferable. Locality, four miles south of Terriote.

No. 14. Timber span of 30 feet. One and half miles south of Terriote. On masonry abutments. Approved, with the addition of two intermediate beams, three only having been allowed in a width 16½ feet over all.

No. 15. A timber span of 24 feet, by this time completed. Should eventually have two piles added on each side, and two additional beams.

No. 16. Masonry arch of 10 feet by 8 feet in height. Approved, execution to be deferred.

No. 17. Masonry arch of 10 feet by 10 feet in height. Approved, to be deferred.

Nos. 18 to 21. Masonry arches of 6 feet by 4 feet in height. Approved, to be deferred.

No. 22. Flying bridge for the Manantoddy river. Approved for immediate completion.

No. 23. Two timber trusses of 64 feet each. Disapproved, as of Nos. 7 and 9, and execution to be deferred. Meanwhile plans and estimates for spans of 30 feet, with Canara superstructure, to be substituted. It is believed that three such will be sufficient, the section being supposed to be taken at an unusually wide part of the stream.

No. 24. Work executed in 1864-65.

No. 25. Removing rocks	...	Rupees	9,130
Earth-work	...	"	5,274
Sundries	...	"	356
Total	...	"	14,760
Whereof spent in 1864-65	...	"	4,675
Balance to be provided	...	"	10,085

The rates allowed, viz., Rupees 2½ per cubic yard for rock, and four Annas for earth, are much more than should obtain with tolerable superintendence. But

*Proceedings of the Madras Government, Public Works Department,
9th September 1865.*

Government have sanctioned rates as high in south Wynaad, and the Terriote road is a worse locality to work in. The work is absolutely necessary, especially the blasting, if the road is to be made use of at all by carts.

3. The amounts which it is proposed to lay out this year, as above stated, are as follow, viz:—

For Item	8	...	...	Rs.	270
Do.	10	...	...	833	
Do.	11	...	...	845	
Do.	12	...	...	735	
Do.	13	...	...	904	
Do.	14	...	...	1,831	
Do.	15	...	...	138	
Do.	22	...	...	386	
Do.	25	...	...	10,086	

Total ... 16,028, whereof Rupees 14,000

are provided by the Budget allotment, and Rupees 2,028 must be provided by transfer from the maintenance allotment of the road from Manantoddy to Calicut, whereof the north Wynaad share is Rupees 3,630.

4. To rehearse—the expenditure in the year 1864-65 is	...	Rs.	13,720
That proposed in 1865-66	...	...	16,028
Total of estimates herewith transmitted for sanction	...	...	29,748
Total deferred, and returned for revision	...	...	36,252
Total	...	...	66,000

(Signed) G. W. WALKER, Lieut.-Colonel, R. E.,
Superintending Engineer, 7th Division.

Revised Abstract of Estimates for completing the Terriote road, Budget No. 111 of 1865-66.

Numbers.	Description of Work.	AMOUNT OF ESTIMATE.						Total.	Remarks.
		Expenditure in 1864-65.		Amount pro- posed to be ex- pended in 1865-66.		Amount de- posed for fur- ther consi- deration.			
		RS.	A. P.	ES.	A. P.		RS.		
1	Estimate of Masonry culvert of 6 feet span	...	...	...	...	...	...	...	
2	Do.	...	...	...	...	...	...	1,072 0 0	
3	Do.	...	...	...	...	...	...	1,072 0 0	
4	Do. of timber bridge of 40 "	...	...	...	...	...	...	1,072 0 0	
5	Do. of do.	...	...	...	...	...	...	1,610 0 0	
6	Do. of do.	...	...	...	...	...	...	905 0 0	
7	Do. of do.	...	...	...	...	...	...	962 0 0	
8	Do. of do.	...	...	...	...	...	...	6,724 0 0	
9	Do. of do.	500 0 0	...	270 0 0	...	...	...	770 0 0	
10	Do. of do.	...	...	...	...	...	...	6,724 0 0	
11	Do. of Masonry culvert of 10 feet span	500 0 0	...	833 0 0	...	...	...	1,333 0 0	
12	Do. of timber bridge of 74 "	500 0 0	...	845 0 0	...	...	...	1,345 0 0	
13	Do. of do.	1,600 0 0	...	735 0 0	...	...	...	2,335 0 0	
14	Do. of platform bridge of 30 "	250 0 0	...	904 0 0	...	...	...	1,154 0 0	
15	Do. of timber bridge of 24 "	250 0 0	...	1,831 0 0	...	...	...	2,081 0 0	
16	Do. of Masonry culvert of 10 "	1,436 8 2	...	138 7 10	...	...	...	1,575 0 0	
17	Do.	...	...	...	...	...	...	1,592 0 0	
18	Do.	...	...	...	...	...	...	2,012 0 0	
19	Do.	...	...	...	...	...	...	754 0 0	
20	Do.	...	...	...	...	...	...	754 0 0	
21	Do.	...	...	...	...	...	...	754 0 0	
22	Do. Flying bridge for the Mauntoddy river	...	...	...	...	...	...	754 0 0	Do.
23	Do. Timber Truss bridge of two bays each 64 feet span (Kudrapandy river) ...	719 2 0	...	385 14 0	...	...	...	754 0 0	Do.
24	Cutting approaches to large rivers, and raising approaches to small existing bridges	...	...	...	...	...	...	1,105 0 0	
25	Removing rock and clearing for cart traffic the Terriote road from Mauntoddy to Luckady (31 miles) ...	3,290 0 0	...	...	...	...	...	9,124 0 0	Do.
	Sundries at three-fourths per cent. say	4,674 8 1	...	10,085 7 11	...	...	...	3,290 0 0	
	Total	13,720 2 3	16,027 13 9	36,252 0 0	...	...	...	14,760 0 0	
		...	...	367 0 0	...	...	...	367 0 0	
		...	...	...	...	...	...	66,000 0 0	

COONOR,

26th August 1865.

(Signed) G. W. WALKER, Lieut.-Colonel, R. E.,
Superintending Engineer, 7th Division.

Proceedings of the Madras Government, Public Works Department,
9th September 1865.

No. 183. ORDER THEREON, 9th September 1865, No. 2,637.

CIVIL WORKS, No. 23.

1. The Superintending Engineer of the 7th Division submits with these papers an abstract of the estimates which have been prepared for completing the road from Manantoddy via Terriote to the head of the Tambracherry Ghát, amounting in the aggregate to Rupees 66,000. Of this sum Rupees 13,720 were expended in the year 1864-65, and Colonel Walker now submits for sanction estimates amounting to Rupees 29,748, and recommends an expenditure of Rupees 16,028 in the current official year. He proposes to defer applying for sanction to the other estimates which either need revision or provide for works that are not urgently required.

2. The Government approve of the Superintending Engineer's proposals, and sanction the estimates now laid before them. They observe that a sum of Rupees 14,000 is provided in the Budget of 1865-66 for the Terriote road, and the difference* between it and the proposed expenditure during 1865-66 will, as recommended by Colonel Walker, be met from the maintenance grant for the road from Manantoddy to Calicut.

* Rs. 2,028.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 7th Division.
.. Controller of Public Works Accounts.
.. Accountant General.

Exd. T. O'Connor.

No. 109 76

Memorandum on the Plans &c. submitted with Mr. Sordani's letter No. 11 of 15th July 1865.

These are for completion of the Road from Manantoddy to the head of the Tamborey Channel via Triole and the total amount of the Estimates is Rupees 66,000, against a guess Estimate of Rupees 30,000, of which Rupees 16,140 were sanctioned in G. O. No. 3264 of 15th November 1864, and Rupees 13,720 were actually spent in 1864/65, the current year's allotment being Rupees 14,000 (G. O. No. 11 of Part II of Printed Budget). The accompanying Statement shows each item of work estimated for, the expenditure on the same in 1864/65, that proposed in 1865/66, and that which will be reserved for further consideration.

No. 1, 2, 3. are 3 Masonry Culverts of 6 feet height and span, to cost Rs. 1078 each. Their localities are not specified as should be done. They are not emergently required, but their Plan and Estimate are approved.

No. 4. Rupees 1800. A timber Platform bridge on piles, with a central opening of 20 feet, and 2 side openings of 10 feet each. Locality not specified. From the section it would appear as if the waterway required could have been better given in a single span of 30 feet, piles being dispensed

with and Abutments of rough stone
in Chinnam laid upon the high banks.
(the footings protected with piling if
found necessary). Superstructure
to be of the Canara Standard Plan,
thus designed having an insuffi-
cient number of main beams, in-
necessarily scarfed together by fail-
ure to resort to the use of sleepers
on which their ends might simply
abut. N. B. It being requisite
to simplify the Carpentry as much
as possible in such localities, having
reference to the scanty supply of
skilled labour and its high price,
and to unseasoned timber alone being
procureable. Mr. Boardman himself
till 1866/67, meanwhile its Plan and
Estimate can be revised as above noted.
Nos 5-86. 2 Timber spans of 20
feet each, Rupees 905 and Rupees 962-
Not immediately required. To be
altered as above noted, and localities
specified.

Nos 7 & 9 (Designed as Quern Post.
Two Bridges of 64 feet span. Rupees
674 each, half of which amount is
put down ^{by Mr. Wardington} to the current and next
year, but their construction will
be postponed in deference to the
sentiments of the Planters, as re-
presented by Mr. Beaumont of Tanjore -
who has urged that all the Im-
proved Communications should be
completed as Dry weather Roads, before
any large Bridges be undertaken.
The Designs are well designed, but
as a good foundation offers it

would be advisable for the reasons above
given to simplify the Carpentry to the
utmost, by adding a Central Pier,
and adopting the Canara Plan of su-
perstructure. The cost of the Pier
might be saved by using rough
stone for the wingwalls instead of
Sateite in Chinnam.

N. B. A Timber span of 24 feet
on Piles. (Design objectionable as stated
of Nos 1 to 5, 85, 6, but Rupees 500 out
of the total estimate of Rupees 770
having been spent in 1864/65, there
is no alternative but to carry out
the work at once. If not too late
however, it is desirable that 2 Piles
be added at each side and 2 addition-
al beams be placed on them.

N. B. Same as No 5 & 6, and ob-
jectionable accordingly, but must
be completed, with the additions sug-
gested in last para if not too far
advanced.

N. B. A Masonry Culvert of
10 feet span and 7 feet height. Ap-
proved, and having been com-
menced, must be completed.

N. B. A Timber Bridge of Central
span of 30 feet, and 2 of 22 each on
Piles. Approved, with the addition of
2 Piles in each row, and 2 additional
beams. Sleepers having been used
(the ends of which should be studded),
scarfing of the beams is unneces-
sary, they may simply abut, and
be strapped to the sleepers and
each other.

N. B. Timber span of 24 feet
Same Remark as to No 8. Rough

Stone abutments would have been pre-
-ferable. Locality 1/4 Miles South of
Trioite.

No 14. Timber span of 30 feet.
1/4 miles South of Trioite. On Masonry
Abutments. Approved with addition of
2 intermediate beams & only having been
allowed in a width 16 1/2 feet over all.

No 15. A timber span of 26 feet
by this time completed. Should
eventually have 2 Piles added on each
side, and 2 additional beams.

No 16. Masonry Arch of 10 feet
by 8 feet in height. Approved. Execu-
-tion to be deferred.

No 17. Masonry Arch of 10 feet
by 10 feet in height. Approved. To be
deferred.

No 18 to 21. Masonry Arches of 6
feet by 4 feet in height. Approved
to be deferred.

No 22. Flying Bridge for the Mianam
-toddy River. Approved for immediate
completion.

No 23. 2 Timber Trusses of 64
feet each. Disapproved, as of No 24
and execution to be deferred. Mean-
-while Plans and Estimates for spans
of 30 feet with Canvas superstructure
to be substituted. It is believed that
3 such will be sufficient the section
being supposed to be taken at an
unusually wide part of the stream.

No 24. Work executed in 1864/65

No 25. Removing Rocks Rs. 9130
Earthwork " 577 1/2
Timber " 356

Total Rs. 14760

whereof paid in 1864/65 " 1475

Balance to be provided " 13285

The rates allowed viz Rupees 2 1/2
per Cubic yard for Rock, and 6 Annas
for earth are much more than should
obtain with tolerable superintendence.
But Government have sanctioned
rates as high in South Wynnad, and
the Trioite Road is a worse locality
to work in. The work is absolutely
necessary, especially the blasting if
the Road is to be made use of at
all by Carts.

3. The amounts which it is
proposed to lay out this year, as
above stated are as follows viz

For Jan 8 " 270

10 " 833

11 " 845

12 " 735

13 " 904

14 " 1231

15 " 138

22 " 386

25 " 1086

Total Rupees 16028, whereof Ru-
-pees 14,000 are provided by the Budget
allotment, and Rupees 2028 must be
provided by transfer from the Main
-tenance Allotment of the Road from
Kannantoddy to Calicut whereof the North
Wynnad share is Rs 2650.

4. To rehearse - the expenditure in
the year 1864/65 is " 13720
That proposed in 1865/66 " 16028

Total of Estimates herewith trans-

-mitted for sanction " 29748

Total deferred, and returned
for revision " 36252

Rupees - 66000

Public Works Department
No. 2637

Proceedings of the Madras Government
Under date the 9th Sept 1865
Read the following

From the Supy Engineer
J. D. S.

Memo on the Plans
and Estimates for the Sericote (Now called 26th August 1865) Road
in the North Wynnad
Range.

The Supy Engineer of the S. D. submits with these papers an abstract of the estimates which have been prepared for completing the Road from Oranahaddy via Terriker to the head of the Tambacherry lagoon amounting in the aggregate to Rs 66,000. Of this sum Rs 12,720 were expended in the year 1864/5, & Col Walker now submits for sanction estimates amounting to Rs 29,768, & recommends an expenditure of Rs 16,028 in the current fiscal year. He proposes to defer applying for sanction

W.D.
W.D.

Munster Smith Col M.B.
Superintending Engineer

Supy. Engr. Office
London 26th Aug 1865

The Secretary of Government
Dept. Public Works

Enclosed in the
plans and estimates
for the Sericote Road
in the North Wynnad
Range.
Read 29th Aug 1865
J. D. S.
The Supy Engineer
J. D. S.

No. 154/1865

3225

2. 1865/1865

2637-97

8

to the other estimates which
either need revision or provide
for works that are not urgently
required.

The Govt approve of the
Engl's proposals & sanction the
estimates now laid before them.

They observe that a sum of
Rs 14000 is provided in the
Budget of 1885/86 for the Terriok
road, & the difference between Rs 2028
is to the proposed expenditure
during 1885/86 will, as recommended
by Col. Walker, be met from
the maintenance grant for the
road from Branantaddy to
Pahicut.

W.B.

$\frac{21}{3}$

6 To The Dy Commr "Estimate" ✓
4 " Controller ✓
3 " Asst Secy ✓
Sent 11th September

Govt. of Madras
No. of Govt. Order

No. 2607
Dated 9th Sept 1855

23/9
1855

CP 1437/56

Estimates amounting
to Rs. 29,748 for completing the
road from Maunulay via
Sertote to the head of the
Tambacherry Ghat, Malabar
District. Sanctioned.

A. 187. 188.

C. 105 Sept 1855 D. 2nd