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MADRAS RECORD OFFICE.

Government of Madras.

Public Works **DEPARTMENT.**

G.O. No. 3357	Press ~~Min.~~
464-465	
Dated 22-11-	1864.

Not to be folded or roughly handled

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*Proceedings of the Madras Government, Public Works Department,
22nd November 1864.*

No. 464 Read the following letter from Captain J. MULLINS, R E, Consulting Engineer for Irrigation and Canal Company, to Colonel C. A ORR, R E, Secretary to Government, Department of Public Works, dated Madras, 4th November 1864, No. 132.—

SIR,

1. In forwarding for the sanction of Government a supplemental* estimate, Rupees 1,16,650, for earthwork in the 5th section of the main canal, 61st to 72nd miles, I have the honor to enclose the correspondence marginally noted, explanatory of certain differences between this and former estimates for the same work.

* With a detailed estimate for the new bank in 63rd and 64th miles.
From Agent No 1,361, 28th September, with Chief Engineer's No 891, 23rd idem
To Agent No 264, 4th ult mo
From Chief Engineer, No 958, 25th idem, with Agent's No 1,632, 2nd instant

2. It will be seen that of the Rupees 1,16,650, the amount of this supplemental estimate, Rupees 47,950 are for the second bank in the Teragopila valley, provision for which was supposed to have been made in the sanction given in Proceedings of the Madras Government of the 19th August 1864, No. 2,382. That sanction allowed—

For raising banks	...	...	...	...	...	...	...	RS.
For the Aqueduct	...	...	...	...	...	...	...	51,565
Do. supplemental	...	...	...	...	...	...	...	36,244
								666
								88,475

The estimate for the aqueduct was described as for the aqueduct and embankment both, but the item for the embankment was left out, as explained by the Chief Engineer, and the addition, at the foot, of a large item for earthworks, though for a distinct work, probably led to the omission being overlooked.

No. 958, paragraph 1.

No 958, paragraphs 2, 3, and 4

3. It further appears that much of the earthwork in the first of the above estimates was not required in consequence of the altered arrangements in the Teragopila valley. From the 52nd to the 60th miles inclusive, the provision of additional earthwork was to make up the banks in those miles to a safe section. I find from the original estimates that out of the Rupees 51,565, Rupees 29,027 should be so considered, and the cost of the alterations in the valley according to present information, will stand thus:—

Earthwork	...	...	...	...	RS	A	P
Contingencies	...	...	...	...	27,002	0	8
					2,024	15	4
					29,027	0	8

Raising bank 2 feet, Rupees 51,565, less Rupees 29,027...	...	...	...	...	...	...	...	RS
Aqueduct	...	...	...	...	...	...	...	22,538
Do. supplemental	...	...	...	...	...	...	...	36,244
2nd bank	...	...	...	...	...	...	...	666
								47,950
								1,07,398

while the sum Rupees 29,027 is really a supplemental earthwork estimate for the 4th section.
4. From the estimate now submitted it will be seen, however, that the actual cost of the altered works will be in excess of the sum 1,07,398 just made out, owing to rise in rates; but as to take this into account would render the comparison between the original and revised arrangements difficult, I have made no addition on that account.

*Proceedings of the Madras Government, Public Works Department,
22nd November 1864.*

5	It appears also that the supplemental sanction now asked for, being	Rs	1,16,650	
	if the new second bank		47,950	
	be deducted, the remainder		68,700	is due to
	First extra rates in—			

								R.S.	A.	P.
61st	mile being	29	per cent.	...	..	...	...	3,698	10	2
62nd	do.	16½	do	...	...	...	...	1,954	2	0
63rd	do.	4⅝	do.	...	...	...	...	1,203	10	3
64th	do.	46¾	do.	...	...	...	...	3,664	13	8
65th	do.	56	do.	...	...	...	...	8,454	12	5
66th	do.	46¾	do.	...	...	...	...	3,715	1	11
67th	do.	33⅜	do.	...	...	...	...	2,990	7	7
68th	do.	27	do.	...	...	...	...	1,981	8	9
69th	do.	39⅝	do.	...	..	...	...	2,681	9	6
70th	do.	83½	do.	...	...	...	...	8,945	11	6
71st	do	20¼	do.	...	...	..	...	4,504	13	3
72nd	do.	10 ⁷ / ₁₆	do.	...	...	...	...	10,130	0	0

Add share of contingencies...	53,925	5	0
	4,047	11	0

Second to extra work in	57,973	0	0
72nd mile at an increase on original rates of 10 $\frac{3}{4}$ per cent.	104	2	3

Do.	do.	do.	of 419 per cent...	104	2	3
Do.	do.	do.	of 46 per cent...	6,000	0	0

Parapet wall not included in original estimate	do.	do.	do.	of 46	do.	...	3,274 14 0
					...	...	666 10 8

Contingencies...	10,045	10	11
	681	5	1

10,727 0 0

6. It may be noticed that the Metacondal cut, so far as the original quantity allowed was concerned, was executed at a moderate rate, the excess on the most difficult portion, that in the 72nd mile, being under 11 per cent on an original average rate of Rupee 0-6-2. The exceptional rates for the comparatively small amount of work remaining to be done, are, I presume, for trimming the sides of the cut, &c, a sort of work which will be more expensive than the excavation in the mass. The details given in the preceding paragraph of the per-centages of increase of rates, shew that the excess can be attributed only very partially to rise in the price of labor, and that much of it is due to defective original estimates.

No. 465. ORDER THEREON, 22nd November 1864, No. 3,357.
The Government sanction the

The Government sanction the supplemental estimate of Rupees 1,16,650, submitted with the foregoing letter, for earthwork in the 5th section of the Main Canal.

(True Extract.)

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

To the Consulting Engineer for Irrigation and Canal Company.
 „ Manager for do. do.

Exd. S. T. Augustin,

Consulting Engineers' Office,
Irrigation & Canal Company
Madrid, 4 November 1904

L. 139

Hon. Captain, J. Mulline, R.E.
 Comd'g Eng'rs & Co

The Secretary to Government
Department of Pub. Works

In forwarding for the sanction of Government a Supplemental Estimate Papers 116,650
with a detailed estimate - for earthwork in the 5th section of the Main Canal
- make for the new bank in 63rd to 66th miles - 61st to 72nd miles. I have the honor to enclose the
correspondence marginally noted, explanatory
of certain differences between this and former es-
timates for the same work. -

2. It will be seen that of the 116650, the amount of this supplemental estimate, Rupees 47950, are for the second bank in the Tiragopila valley, provision for which was supposed to have been made in the sanction given in Proceedings of the Madras Government of the 19th August 1864, p. 2382. — That sanction allowed,

For raising banks ————— No. 54565
 For the Aqueduct ————— 36,244
 — do — supplemental ————— 666
 88,475.

The estimate for the aqueduct was described as
for the aqueduct and Embankment both, but the
item for the Embankment was left out, as explain-
ed by the Chief Engineer, and the addition, at the foot,
of

£950 paid

of a large item for earthworks, though for a distinct work, probably led to the omission being overlooked.

3. It further appears that much of the earthwork in the first of the above estimates was not required in consequence of the altered arrangements in the Teragopila valley. From the 52nd to the 60th miles inclusive, the provision of additional earthwork was to make up the banks in those miles to a safe section. And from the original estimate, that out of the Rupees 51,565, Rupees 29,027 should be reconsidered, and the cost of the alterations in the valley according to present information, will stand thus.

Raising bank 2 feet	Rs 51,565 less 29,027	Rs 22,538
Agri-drain		36,244
dam supplemental		666
2 nd bank		4,795
		<u>107,390</u>

Earthwork Rs 27,002-8
contingencies 2,024-15-4
29,027-11-12

while the sum Rupees 29,027 is really a supplemental earthwork estimate for the 4th section.

4. From the estimate now submitted, it will be seen however, that the actual cost of the altered works will be in excess of the sum 107,390 just made out, owing to rise in rates, but as to take this into account, would render the comparison between the original and revised arrangements ^{difficult}. I have made no addition on that account.

5. It appears also that the supplemental sanction now asked for, being Rupees 11,6650 if the new second bank 4,7950 be deducted, the remainder 68,700 is

is due to

1 st extra rates in			
61 st mile being 29 per cent			3,690-10-2
62 nd do 16 1/2	do		1,954-2--
63 rd do 1 1/2	do		1203-10-3
64 th do 46 1/5	do		3,664-13-8
65 th do 56	do		3,454-12-5
66 th do 46 1/5	do		3,715-1-11
67 th do 33 3/5	do		2,990-7-7
68 th do 27	do		1,981-3-9
69 th do 39 1/5	do		2,681-9-6
70 th do 83 1/2	do		3,945-11-6
71 st do 20 1/5	do		4,504-13-3
72 nd do 10 1/10	do		10,130--
			<u>53,925-5--</u>
		add share of contingencies	4,047-11--
			<u>57,973--</u>

2nd extra work in

72 nd mile at an increase on original rates of 10 1/10 per cent		104-2-3
do do do of 4 1/10 per cent		6,000--
do do do of 46 do		3,274-14--
Parapet wall not included in original estimate		666-10-8
		<u>100,45-10-11</u>
contingencies		621-5-1
		<u>107,27--</u>

6. It may be noticed that the Mftacondal cut, so far as the original quantity allowed was concerned, was executed at a moderate rate; the excess on the most difficult portion, that in the 72nd mile, being under 11 per cent on an original average rate of 6-6-2. The exceptional rates for the comparatively small amount of work remaining to be done, are, I presume, for trimming the sides of the cut ^{for}, a sort of finish which will be more expensive than the excavation in the mass. The details given in the preceding para: of the per centage of increase of rates, shew that the excess can be attributed only very partially to

I have the honor, Sir,
Your most obedient servant,
Wm. Lyall Esq. Captain
Coast and Geodetic Company.

Chas. H. Brock

3357

The Government sanction
the supplemental estimate of Rupees
116,650- submitted with the foregoing
letter for earth work in the 5th Section
of the Main Canal -

The Consulting Engineer
J. H. C. &
Manager - A

Manager - A. J. [unclear] 10/4/28

19th Aug 1864 2382 }
 20th Aug 1864 2382 }
 21st Aug 1864 2382 }

2382

A.B.

977/1866 D. J. 2/1866

1899

1887

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The Secretary to the Board: Wm

Dated at _____
Road } _____

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Sept.

Wethers in on
— 2000

Charges/bb

Theresa and I in our living

in them in a subordinate

To: 116650 for Eastbury

the graduation of the Marine

quad - 64th to 92nd included

With an order

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