M.R.O. 1—10,006—28-2-50.

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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No. / ~~B.P. No.~~	2642	Press / ~~Mis.~~	874
Dated	16-9-		—195—

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department, 16th September 1874.

Read the following papers:—

No. 349. From District Engineer, Godavery, dated 10th August 1874, No. 1,512.

No. 625.

No. 349-A. *Note by the Chief Engineer for Irrigation.*

In the estimates for the completion of the Eastern Delta, Godavery, approved by Government in G. O., 28th September 1870, No. 2,335, and subsequently sanctioned* by the Government of India, Rupees 28,060 were provided for the enlargement of the Main Canal, which is 6½ miles in length. An average rate of 1¼ annas was allowed for the earthworks, and the District Engineer now reports that this rate is insufficient, the lift being from 5 to 8 yards and the lead 35 yards. Major Beatty further reports that some silting has taken place since the sanctioned estimate was prepared in 1869, and the quantity of work to be done is 346,741 cubic yards against 306,093 of the estimate. About one-third of the total quantity is stated to be silt. The revised rates for silt and ordinary earthwork are 1½ to 1⅝ annas, while for a small quantity of laterite 3 annas are allowed. These rates appear to be reasonable.

* Proceedings Madras Government, No. 1,409, 22nd May 1871.

2. The clearance of silt should not be charged to the completion estimates, or in other words to Capital, but to Revenue, and should be met from the Agricultural Repair grant. If this arrangement be approved, the estimate for enlargement will not be exceeded, but possibly there will be a small saving as one-third of 346,741 cubic yards at the lowest rate, 1¼ annas, amounts to Rupees 9,030, which is more than the Rupees 8,620 shown in the comparative statement to be required.

Ootacamund, 24*th August* 1874. (Signed) JOHN MULLINS, Lieut.-Colonel, R.E., *Chief Engineer for Irrigation.*

No. 350. Order thereon, 16th September 1874, No. 2,642.

IRRIGATION, No. 44.

The Government concur in the opinion expressed by the Chief Engineer for Irrigation that silt clearances from the Main Canal, Eastern Delta, Godavery, should be charged to the Agricultural Repair grant, and the District Engineer will adjust the expenditure on this canal accordingly.

2. It is observed that under this arrangement the estimate for enlarging the canal is not likely to be exceeded.

(True Extract.)

Lieut.-Colonel, R.E.,
Joint Secretary to Government.

To the District Engineer, Godavery.
,, Chief Engineer for Irrigation.
,, Officiating Controller of Public Works Accounts.

Fxd. S. T. Austin.

Spare Copies

2

Extracts from Reports by the Executive Engineer No. 1 Range

I commenced work last December upon widening the Main Duct for which an estimate amounting to Rs. 28,000 was framed by Mr. Sage Executive Engineer in the year 1869-70, I found that, taking into account the stiff nature of the soil in the portion to be widened, as well as the lift to top of the existing spoil bank beyond which the spoil from the Canal had to be thrown, that the rate allowed in the original estimate viz- 1-4 A.P. was by no means sufficient. In the estimate for improving the Toolia-baga, Takee and Bickavole Drainage Channels the rates allowed in the estimates which were framed in the same year varied from 11 pice to 1-6 A.P., the depth of cutting and lead being, at the same time, with the exception of the Takee Drain, about the same as on the lightest portion of the Main Canal.

2 The whole length of the Main Canal

Canal so called is 6½ miles, and from the sections taken in 1869-70, copies herewith forwarded, it will be seen that the lift for the first 5 miles varies between 5 to 8 yards from the sole of the Channel to the top of present spoil bank, with an average lead not less than 35 yards; and for the remaining 1½ miles the lift varies from 3 to 4½ yards, with an average lead of not less than 25 yards.

3. Of the earth to be excavated, about ⅓ consists of silt clearing, leaving ⅔ of widening, in soil of very stiff clay; whilst for about a quarter of a mile the Canal runs through a laterite stratum. This material when excavated however can be utilized for road making in this Delta and its cost eventually recovered to the Main Duct Estimate.

4. In addition to this the cross sections taken this year show that the Main duct had somewhat silted up to the extent of about 40,000 Cubic Yards. Since the original estimate was framed.

5. Providing for this excess in quantity and raising the rates to what I consider fair amounts for the leads and lifts involved, causes an excess on the original estimate of Rs. 8,620.

(True extracts)
L. Beatty. Major. R. E
District Engineer

for about a quarter of a mile the Canal runs through a laterite stratum. This material when excavated however can be utilized for road making in this Delta and its cost eventually recovered to the Main Duct Estimate.

4 In addition to this the cross-sections taken this year show that the Main duct had somewhat silted up to the extent of about 40,000 Cubic Yards. Since the original estimate was framed.

5. Providing for this excess in quantity

No 1 or Eastern Delta Range Godry Dt.

Comparative Statement showing the original and revised Estimates for widening and deepening the main duct.

Original Estimate					Revised Estimate					Remarks.
Quantity	Description of work.	Rate	Per item	Amount	Quantity	Rate	Per item	Amount	Total Excess	Total Surplus	
		Rs as p		Rs as p		Rs as p		Rs as p	Rs as p	Rs as p	
C.yds 3060933/3	Widening and deepening the main duct	= 14	C.yds	2550125	C.yds 2040433/9	= 18	C.yds	212291			The original estimate was framed by Executive Engineer W.G. Sage in the year 1869/70 - It is not apparent why the low rate of 1" 4 per was then allowed for this work, whilst similar and even higher rates were allowed in Estimates framed by this Officer at the same time for earthwork on the Buccavelo and Lookai bagasse Drainages.
					18,592 7/9	= 3	=	34861			
					62,960 26/27	= 16	=	59965			
					33,682 10/27	= 15	=	29824			
					26,461 8/9	= 13	=	20675			
					346741/2						
								357861			
	Contingencies			2552 37	28060			893 5 11	36680	8620	
						Amount requiring Sanction				8620	

R.R. Bonham Captain R.E. Executive Engineer No 1 Range

No 1 Range office
Dowlaiswaram
5th August/74

L. Beatty Major R.E
Divisional Engineer Godry

ABSTRACT ESTIMATE No. 63 OF 1874

GODAVERY EASTERN DELTA

WORK *Widening and deepening the main cut.*

Quantity.	Description of Work.	Rate.	Amount.	Total.
1	2	3	4	5
41,83[illegible] 7/9	C. yds. Earth work ——— C. yds.	"	1 8 9566 7 "	
45674 4/9	" ——— Do ——— "	"	1 8 4757 12 "	
66531 2/3	" ——— Do ——— "	"	1 8 6930 6 1	
18592 17/27	" ——— Laterite ——— "	"	3 " 3486 1 11	
63960 26/27	" ——— Earth work ——— "	"	1 6 5996 5 5	
33682 1/27	" ——— Do ——— "	"	1 5 2982 4 8	
13444 25/27	" ——— Do ——— "	"	1 3 1050 6 2	
13016 2/3	" ——— Do ——— "	"	1 3 1016 14 10	
			35,786 10 1	
	Contingencies ———	— — —	893 5 11	
				36,680 " "
	Deduct amount already received			28060 " "
	Balance requiring grant Rs.			8,620 " "

No 1 Stange Office
Dowlaiswaram
5th August 1874.

A Wells Ormsby Captain R. E
Executive Engineer No 1 Stange

E. Beatty Major R. E
District Engineer Godavery

From
The Officer In charge No. I or
Eastern Delta Range,
Godavery District.

To
The District Engineer Godavery
Doulaishwaram,

Dated 5th
Despatched } August 1874.
Received

P. W. 5579/74.

Abstract—
Estimate for
Re-forming the
Anicut

Rup. 2 to Sept. 74
Ld. 13 Aug. 345.

District Engr. Office Godavery.

No. 1512 Dowlaishweram, 10th Augt. 1874.

Despt. 11th Do.

From,

Major J. Beatty R.E.

District Engineer Godavery.

To,

Lieutenant Colonel J. Mullins R.E.

Chief Engineer for Irrigation

Madras.

Sir,

I have the honor to furnish herewith a Revised Estimate, accompanied by Comparative Statement, cross sections, and a special report by the Range Officer for the work entitled, widening and deepening the main duct in the Eastern Delta.

2. The original estimate, amounting to Rs. 28,060 was framed so far back as 1869-70 by Mr. Sage. It was sanctioned in G.O. No. 1523 of 6th June 1871, and work commenced in December 1873. About half the work has been done this year, and the remainder must be deferred until 1875.

3. The excess is due partly to the Canal

Canal having somewhat silted up since the original estimate was framed, and partly to the fact that the rates provided are found to be insufficient.

4. Whether the sanctioned estimate would have been sufficient for the work three years since, appears extremely doubtful, and considering the rates now prevailing for such work, and the length of lead and height to which the soil has to be raised, ~ I am of opinion that the revised rate provided by Captain Brockman is not excessive; and my only doubt is in regard to its sufficiency. He is, however, confident he can get the work done.

5. The revised estimate amounts to Rs 36,680, being in excess of the original one by Rupees 8,620 or about 30.72 per cent on the original estimate, to which I have to request the favor of your obtaining the sanction of Government.

I have the honor to be,
Sir,
Your most obedient Servant.
P Beatty. Major R.E.
District Engineer Godavery.

Encd.
G 13.

the sanctioned estimate was prepared in 1869, and the quantity of work to be done is 346,741 cubic yards against 306,093 of the estimate. About one-third of the total quantity is stated to be silt. The revised rates for silt and ordinary earthwork are 1¼ to 1⅓ annas, while for a small quantity

El. No. 1477.

From,

The District Engineer
Godavery.

To

The Chief Engineer
for Irrigation
Madras.

Dated 10th August 74
Recd 17th

No. 1512

El. No. 2642. 16-8-74.
Submits revised estimate accompanied by Comparative Statement, Sections, and report, for the work widening and deepening the Main Canal on the Eastern Delta-

No 349

L.W. 557 9/74

to Rs. 36,680, being in excess of the original one by Rupees 8,620 or about 30.72 per cent on the original estimate, to which I have to request the favor of your obtaining the sanction of Government.

I have the honor to be,
Sir,
Your most obedient Servant
C. Beatty. Major R.E.
District Engineer Godavery.

Rejd.
G.B.

No 625

Note by the Chief Engineer for Irrigation

In the estimates for the completion of the Eastern Delta, Godavery, approved by Government in G.O. 28th September 1870 No 2336 and subsequently sanctioned by the Government of India, Rupees 28,060 were provided for the enlargement of the main Canal, which is 6½ miles in length. An average rate of 1⅓ annas was allowed for the earthwork and the District Engineer now reports that this rate is insufficient for the left being from 5 to 8 yards and the lead 35 yards. He also further reports that some silting has taken place since the sanctioned estimate was prepared in 1869, and the quantity of work to be done is 346741 cubic yards against 306,093 of the estimate. About one-third of the total quantity is stated to be silt. The revised rates for silt and ordinary earthwork are 1⅔ annas, while for a small quantity

Ph. G.O. 1409 22nd May 1871

quantity of laterite to 3 annas are allowed. These rates appear to be reasonable.

2. The clearance of silt should not be charged to the completion estimates, or in other words to Capital, but to Revenue, and should be met from the Agricultural repair grant. If this arrangement be approved, the estimate for establishment will not be exceeded, but possibly there will be a small saving as one third of 34674 cubic yards at the lowest rate, 1/4 annas, amounts to Rupees. 9,030 which is more than the Rupees. 8,620 shown in the Comparative statement to be required.

Octacamund 2nd September 1874.

L. Holland. Lt. R.E.
Chief Engineer for Irrigation

To The Secretary to Govt. P.W.D.

S.V.

Despatch
Government
following
2 dated
674)
ated 26th
1874
2642
nment
the opinion
the Chief
Irrigation
clearances
main Ca-
ew Delta
ould not
to the
estimates,
to the Agricul-
tural repair grant,
and the District En-
gineer will adjust
the expenditure on
this Canal accord-
ingly.

2. It is observed
that

quantity
allowed
reasonable
2. The
not be
estimates
Capital,
be met
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be "appro
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but
saving
the yards
annas, a
which is
8,620 cha
statement

Ordered, that a copy of this letter be forwarded to the Chief Engineer for Irrigation, for information.

Ordered also, that a copy be forwarded to the Secretary to Govt. P.W.D.

Ordered further, that a copy be forwarded to the Secretary to Govt. Fin. Dept.

Ordered also, that a copy be forwarded to the Accountant General, for information.

Ordered also, that a copy be forwarded to the Secretary to Govt. Rev. Dept. for information.

Ordered also, that a copy be forwarded to the Secretary to Govt. Mil. Dept. for information.

Ordered also, that a copy be forwarded to the Secretary to Govt. Judl. Dept. for information.

Ordered also, that a copy be forwarded to the Secretary to Govt. Ecclesiastical Dept. for information.

Ordered also, that a copy be forwarded to the Secretary to Govt. Public Works

that under this arrangement the estimate for the enlarging ~~part of~~ the Canal is not likely to be exceeded.

Lee. 25/8/74

Chas

40
4

Fo
The D.E. Godavery
— Chf Engr for Irr
— Controller of Wks
S. Cojis dispt 12/10/74.

349-350.

Cir 28/8/74 Rd 1/9/74

5579

Govt. of 1874 Madras.

PUBLIC WORKS.

To

The Secy. Govt.
Godavery

Dated

Recd. Encl. 5

G. O. 16 Sept. 74. No. 2642

Nos. 749-750.

Main Canal, Eastern
Delta - Godavery

Concurring in the opinion
expressed by the Chief Engr
& Secy. that silt clearances from the ~~main~~ Canal
should be charged to the
Agricultural repair grant,
requesting the Secy. to
adjust the establishment
in the Canal accordingly -

Tir 28/8/74 [illegible] 11/9/74