M.R.O. 1—77,006—8-6-37.

(1) Number of pages 28

(2) Date of repair 5.5.63

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No.	3342	Press Mis.
463-464. Dated	19. 10.	1866.

Not to be folded or roughly handled

No. 463. Read the following letter from the Collector of the Kistna District, to the Secretary to Government, Department Public Works, dated Gudiwada, 2nd October 1866, No. 34:—

1. In forwarding the accompanying plans and estimates, together with Colonel Winscom's letter No. 115, dated 27th September 1866, recommending the construction of side channels to the east and west banks of the Bandar canal, with a view to relieving the main canal from a large quantity of the water which now passes through it, and deposits so much silt on its way as to lead to the necessity of very heavy yearly clearances, I have the honor to state that the project appears to me well worthy of attention.

2. In addition to the reasons set forth by Colonel Winscom, I would urge that the existence of these channels will probably enable the main canal to be kept open for navigation a month or six weeks longer every year, than is now the case.

3. At present it is invariably closed for three or more months, and the traffic from the interior to the coast interrupted at what is often the most important time of the year for commerce.

From the Superintending Engineer, 2nd Division, to the Collector of the Kistna District, dated Masulipatam, 27th September 1866, No. 115.

West side channel of the Masulipatam Canal from Kankipad to Auga-codu.
1 Detailed Estimate.
1 Abstract do., No. 49,860.
East side channel from Pullairoo to Aukumurru.
1 Detail Estimate.
1 Abstract do., No. 15,610.
Head Sluice.
1 Detailed Estimate.
1 Abstract do.
Bridge and Calingulah.
1 Detailed Estimate.
1 Abstract do.
Bridge.
1 Detailed Estimate.
1 Abstract do
3 Specification Reports.
1 Sketch.
1 Longitudinal Section of west side channel.

I have the honor to forward estimates, &c., as per margin, and request you will be good enough to submit them to Government for sanction after affixing your countersignature, together with my letter to the Secretary to Government, in which the necessity of the proposed works has been explained.

From the Superintending Engineer, 2nd Division, to the Secretary to Government, Department Public Works, dated Masulipatam, 27th September 1866, No. 47.

West side channel of the Masulipatam Canal from Kankipad to Auga-codu.
1 Detailed Estimate.
1 Abstract do., Rupees 49,860.
East side channel from Pullairoo to Aukumurru.
1 Detailed Estimate.
1 Abstract do., Rupees 15,610.
Head Sluice.
1 Detailed Estimate.
1 Abstract do.
Bridge and calingulah.
1 Detailed Estimate.
1 Abstract do.
Bridge.
1 Detailed Estimate.
1 Abstract do.
3 Specification Reports.
1 Sketch.
1 Longitudinal Section of west side channel.
3 Plans.

1. I have the honor to enclose plans and estimates as per margin, for the sanction of Government. As mentioned in my letter No. 44, dated 24th instant, it is very desirable that these side channels should be commenced without delay, in order that the existing main duct may be converted as soon as possible into a still water navigation canal, whereby the excessive deposit of silt will be prevented, and the time now annually lost in clearances will become available for "original works."

2. It will be observed that, as regards the western side channel, no new masonry works are proposed; the present calingulahs at Veerunky and Needimole will be taken advantage of for the drops that are needed, to regulate the slopes; and the drainages which will cross the channel in two places, are already provided for by the existing under-tunnels, which were made, in the first instance, of sufficient length to meet this contingency.

3. For the eastern side channel from Pamurroo to Aukoomurroo, only three masonry works are needed, viz., a head sluice to regulate the supply from the Pullairoo ; a bridge where the Bezoarah road will cross the new channel ; and a bridge and fall combined at Needimole, where the local road passes.

4. Rupees 30,000 have been included by me in my Budget Estimate for 1867-68 for the first, and Rupees 9,000 for the second work. The rates I have allowed are, I hope, sufficient to ensure a good supply of labor, for these are works which should now be executed, in my opinion, in preference to almost all other works in progress, and the quicker they are finished, the greater the economy and advantage gained by the comparative cessation of silt doposit, and the consequent celerity with which it will be possible to carry out the highly remunerative works contemplated in the Kistna Delta.

No. 464. ORDER THEREON, 19th October 1866, No. 3,342.

CIVIL WORKS, No. 89.

1. These papers give cover to estimates amounting to Rupees 49,860 and 15,610, respectively, for the excavation of side channels along the western and eastern banks of the Masulipatam canal from Kankipad on the former, and Pullairoo at Pamaroo on the latter bank of the canal.

2. These, with other projects, were some time ago brought to the notice of Government by Colonel Anderson and Captain Ryves in connection with the works which are required to develope and to perfect the system of irrigation and navigation in the Kistna Delta. As the enlargement of the Masulipatam canal to a width sufficient to enable it to carry the supply of water which is required for the irrigation of all the land under its command would be attended with considerable expense, it was proposed to retain it almost as a still-water line of navigation from certain points, and to carry water from those points downwards for irrigation in side channels having such a fall as to need little capacity, and to create a current strong enough to carry off silt. The estimates now submitted by Lieutenant Colonel Winscom are for the execution of these works, which will not only tend to keep the main canal open for navigation for a longer period than is now practicable, and that, in the opinion of the Collector, the most important time of the year for trade, but will set free for appropriation to important works of improvement in the delta, the large sums which are now annually expended on the clearances of silt.

3. Under these circumstances the Government sanction the estimates for entry in the Budget of 1867-68.

(True Extract.)

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

To the Superintending Engineer, 2nd Division.
" Controller of Public Works Accounts.
" Accountant General.

Exd. S. T. Augustin.

No. 34.

Kistna District Collr's
Circuit Kacheri Gudewada
2nd October 1866.

From
C. Thornhill Esqre
Collector of Kistna District

To
The Secretary
to Government M. P. W.
Fort St George

Sir,

In forwarding the accompanying Plans and Estimates together with Col. Winscom's letter No. 415 dated 7th September 1866, recommending the construction of side channels to the East & West banks of the Bandar Canal, with a view to relieving the main Canal from a large quantity of the water which now passes through it, and deposits so much silt on its way as to lead to the necessity of very heavy yearly clearances, I have the honor to state that the project appears to me well worthy of attention.

2. In addition to the reasons set

set forth by Col Winscom, I would urge that the existence of these Channels will probably enable the Main Canal to be kept open for navigation a month or six weeks longer every year, than is now the case.

3. At present it is invariably closed for 3 or more months, and the traffic from the interior to the coast interrupted at what is often the most important time of the year for Commerce.

I have the honor to be
sir,
your most obed't Serv't

P. Hamblett
Collector.

Gen. Totten

A

No 115.

Superintending Engineer
Kistnah Circle
21st September 1866.

From Lieut Col G. F. Cruesemann C.E.
Superintending Engineer 2nd Circle

To J. C. Hornhill Esqre
Collector Kistnah District

Sir,

I have the honor to forward herewith Estimate No 2 for Sluices and Regulating Bridge across the Buckingham Canal at Ellore, and to request you will be good enough to submit them to Government for sanction.

2. I have also the honor to forward herewith Estimate No 1 for Sluices and Regulating Bridge across the Buckingham Canal at Nellapilly, and to request you will be good enough to submit them to Government for sanction.

3. The Estimates are forwarded in duplicate.

I have the honor to be
Sir,
Your most obedient Servant
(signed) G. F. Cruesemann
Supdg. Engineer 2d Circle.

What sites should be chosen for Regulating Bridges across Buckingham Canal.
To whom Estimates sent.
1 Detailed Estimate
1 Abstract of Qty & Cost
Each site should have separate Estimates.
Annexures.
1 Detail Estimate.
1 Abstract Qty & Cost
Plan & Sluice.
1 Detailed Estimate
1 Abstract Estimate
Plan & Calingula
1 Detailed Estimate
1 Abstract Do
Bridge
1 Detailed Estimate
1 Abstract Do
3 Boundaries
Profiles.
1 Sketch.
1 Longitudinal Section
Levels
of N. S. channel.

(True Copy)
Mundahl
Collector

A 1866 Department
Pro: of Govt for October
From, The Collector
Kistna District
To, The Secretary
to Govt D. P. W.
Fort Saint George
Dated 22 October 1866.
Rec: //

No 34.

Enclosures (thirteen) 21.

4 Plans Estimates & Colonel Cruesemann's letter forwarding Plans and Estimates together with Colonel Winscom's letter regarding the construction of the side Channels to the east and west banks of the Buckingham Canal.

No 463

No 3342 - 19th October 1866

Sub. Letter from the Collector of Kistna Dist.
No. 1. Ke Secretary to Govt. P.W.D. Fort St. George
Dated 22 October 1866.
Rd 24 October 1866.
No 34.

Forwarding for approval and submission to Govt. for sanction Plans and Estimate for the proposed irrigation Channels on the East and west sides of the Kaulipatam Canal amounting to Rs 49860, and Rs 11510 respectively

ABSTRACT ESTIMATE No. 6 OF 1866-67.

District Kistna

Work

Excavating a Channel along the western side of Kaulipatam Canal from Kunkepad to Aukunnarroo.

Quantity.	Description of Charges.	Rate.	Amount.	Total.
26,3338	Cyds of Channel from Kunkepad to Aga Codu	0 1 1	17830 2 10	
13,1637	Do from Aga Codu to Vurunky	" 1 1	8912 11 9	
22,3627	Do from Vurunky to Nidumole	" 1 1	15141 6 7	
84,923	Do from Nidumole to Aukunnarroo	" 1 1	5749 15 11	
12	Sluices each	100	1200 " "	
	Contingencies 5%		1025 7 11	
			Total Rupees	49860 " "

Superintending Engrs Office
2nd Div
Masulipatam
27. September 1866.

Commanding Engrs & Secy
Superintending Engrs 2nd Div

V Mundell
Collector

ABSTRACT ESTIMATE No. 7 OF 1866 67.

Wisha District

Work

Excavating a Channel from the Pallair at Pannurrio to run along the eastern side of Masulipatam Canal to Aukunnarroo.

Quantity.	Description of Charges.	Rate.	Amount.	Total.
84,872	Cyds Channel from Pannurrio to Ridmundle	6 1 1	5746 8 8	
72,135	Do from Ridmundle to Aukunnarroo.	6 1 1	4904 7 3	
	Contingencies. vide per centage allowed	2 8 "	349 " 1	11.000 " "
	1 Head Sluice as per Estimate	A		1640 " "
	1 Caligulah Bridge as per Estimate	B		1370 " "
	1 Bridge as per Do	C		1000 " "
	6 Sluices each.	100 " "	" " "	600 " "
			Total Rs.	15610 " "

Superintending Engineer's Office Vizd.
Masulipatam
27th September 1866

Commissioner Circar Nth

Superintending Engineer S. D.

Collector

Collector's Letter No 47 dated 27th September 1866 forwarding Estimate for excavating a Channel along the Eastern side of Masulipatam Canal to Aukunnarroo & Plan.

Estimate for excavating a Channel along the Eastern side of Masulipatam Canal from Pallair to Aukunnarroo & Plan Rupees 15610 =

A

ABSTRACT ESTIMATE No. OF 18 ;

13

District Kistna

Work Constructing a sluice at the Head of East side Channel of Masulipatam Canal from Pallair at Tammaram

Quantity.	Description of Charges.	Rate.	Amount.	Total.
54 31/321	Cft. of Concrete Work	1 2 "	223 2 4	
174 95/162	Do of stone in Chunam	4 12 "	829 4 6	
13 7/51	Do of Brick in Do	5 6 "	70 9 2	
23	Sft. pointing in Chunam	1 " "	28 12	
256	Sft. plastering with 2 Coats of Chunam.	3 8 "	8 15 4	
100	Running feet of Cornice Work	" 3 10	23 15 4	
35	Do of Stone Work	" 8 "	17 3 "	
38 18/47	Cft. of rough stone Arrows	2 8 "	96 10 8	
46 1/2	Cft. of Teak shutters with Iron fastenings &c	3 " "	139 8 "	
	Re establishing		50 " "	
	Excavation & Baling		100 " "	
	Centring		20 " "	
	Contingent charges &c	" " "	31 10 8	
			Total Rupees	1640 " "

Superintending Engineers Office &c
Masulipatam
27th September 1866

Commanded Lieut Colonel &c

Superintending Engineer 2d Class

Merrifield
Collector

Estimate for excavating a channel from the Pallair a Tammaram to join the Canal of Masulipatam

Rupees 1640 - -

Amount by Estimate Rupees 1640 - -

Amount by Contract Rupees

Superintending Engineer 2d Class
Kistna Division

B

ABSTRACT ESTIMATE No. OF 18 ;

District Kistna.

19

Work

Constructing a Bridge & Calingulah across the proposed East side Channel of Masulipatam Canal from Pullair at Pamarra to Akumurroo near Redumole Lock.

Quantity.	Description of Charges.	Rate.	Amount.	Total.
182 58/81	Cy.ds of rough stone in Chunam	4 12 -	867 14 5	
28 35/81	Cy.d. of Brick in Chunam	5 6 -	152 13 2	
84	Sq.ft. Plastering with 2 Coats of Chunam	3 8 -	2 15 -	
1968	Do. pointing Chunam	1 4 -	24 9 7	
43 17/27	Cy.ds of rough stone apron	2 8 -	109 1 1	
8 24/27	Cy.ds of metalling	1 2 -	10 - -	
5	Cast Iron posts	12 - -	60 - -	
11/4	C.ft of Teak wood planks with Iron fastenings	3 - -	33 12 -	
	Excavation & Baling		60 - -	
	Centring		15 - -	
	Contingencies &c.		33 14 9	
	Total Rupees			1370 - -

Superintending Engrs Office
Masulipatam
27th September 1866

Chas. Morrison Lieut. Colnl.
Supg Engineer 2d. Grade

Collector

Do Rupees 1370 - - dated 27th September 1866 passed the Estimate.
Chapple. Engineer & Secy.
to the Secretary to Govt.
P.W.D.

Received from Executive Engineer
the Estimate and Plan of the Road &
the Bank with Channels
& Culvert Bridge over Calingulah Canal
Signed C. Williams Lieut. R.E.
Executive Engineer

From 19th October 1866 to 15th 1865.

ESTABLISHMENT CHARGES.

Estimate for Contingency Bridges &c. Charges on a cost of the Road side Channel of Mareebpatam Canal.

Approved by Chief Engineer 2nd Class in his letter No 4 dated 27th September 1866

Approved by Superintending Engineer 2nd Circle Guntur 27th September 1866

C

17

ABSTRACT ESTIMATE No. OF 18 :

District Kistna

Work

Constructing Bridge on the East side Channel of the Mareebpatam Canal across Hydrabad Road near Pamurru

Quantity.	Description of Charges.	Rate.	Amount.	Total.
143 5/224	Cft of stone in Chunam	4 12 -	679 15 11	
27 47/105	Do of Brick Do	5 6 -	147 7 5	
52	Cft Plastering with 2 Coats of Chunam	3 8 -	1 13 1	
1531	Do of pointing Chunam	1 4 -	19 2 2	
18 2/27	Cft of rough stone apron	2 8 -	45 2 11	
8 24/27	Do of Rubbling	1 2 -	10 - -	
	Excavating foundation & Bailing		50 - -	
	Centring		15 - -	
	Contingencies		31 6 6	
	Total Rupees		1000 - -	

Superintending Engineers Office 2nd Dist. Mareebpatam 27th September 1866

Commn

Lieut Col Rl

Superintending Engineer 2nd D

Collector

No 47

Supdg. Engr. Office D.D.
Masulipatam
27 September 1866

From
Lieut Col G. T. Haviland R.E
Supdg. Engineer D.D.

To
Col Charles A. Orr, R.E
Secretary to Government
D.P.W.

Enclosure v. 18

Sir,

I have the honor to enclose plans and Estimates as per Margin for the Sanction of Government to the Alterations in my letter No 44 dated 24th instant. It is very desirable that these side Channels should be Commenced without delay, in order that the existing Main duct may be connected as soon as possible into a Mill water Navigation Canal, whereby the expensive deposit of Silt will be prevented. & the time now annually lost in Clearances will become available for Original Works.

2. It will be observed that as regards the Western side Channel no new Masonry Works are proposed, the present Culverts &

Yours &c

West Side Channel of the Injeroulpetgui Canal from Kumbhapad to Anga Kodi.
1 Detailed Estimate
1 Abstract Estimate Rs 49860
East Side Channel from Pullairu to Achamurri.
1 Detailed Estimate
1 Abstract Estimate Rs 15610.
Road Bridge
1 Detailed Estimate
1 Abstract Estimate.
Bridge Calingulahs
1 Detailed Estimate
1 Abstract Estimate
Bridge.
1 Detailed Estimate
1 Abstract Estimate
3 Specification Reports
1 Sketch.
1 Longitudinal Section of West Channel
3 Plans

No 47

the letter noted above
From Lieut Col G. T. Haviland R.E
Supdg. Engineer D.D.
To Col Charles A. Orr, R.E
Secretary to Government D.P.W.

Estimate for Construction of Bridge on the Eastern Channel of Injeroulpetgui Canal across Kumbhapad Anga Kodi

Rs 49860

— Eleuriky and Reedimole will be taken Advan-
tage of for the drops that are needed, to
regulate the Slopes, and the drainages which
will Cross the Channel in two places, are
already provided for by the Existing Under
tunnels, which were made in the first
instance of sufficient length to meet this
Contingency.

3, For the Eastern Side Channel from
Pamurroo to Akammurroo, only 3 Masonry
Works are needed. Viz. a Head Sluice to
regulate the Supply from the Pullaroo. a
Bridge where the Batcoorah Road will Cross
the new Channel, and a Bridge & Fall Com-
bined at Reedimole, where the local Road
crosses.

4 Rs 30,000 have been included by me
in my Budget Estimate for 1867/68 for the
first, & Rs 9000 for the second works. The
Rates I have allowed are I hope sufficient
to ensure a good supply of labor. for there
are works which should now be executed, in any
Division, in preference to almost all other works
in

in progress; and the quicker they are finished,
the greater the economy and Advantage gained,
by the Comparative Cessation of Silt deposit
and the Consequent Celerity with which it
will be possible to Carry out the highly
Remunerative Works Contemplated in the
Kistna Delta.

I have the honor to be,
Sir,
Your Most Obed.t Servt.

Geo.e Turnbull Talbot
Supdg. Engineer 2d Dv.

Copy

Capt. Ryves in connection with the works which are required to develope and to perfect the system of irrigation and navigation in the Kistna Delta. As the enlargement of the Bandipatam Canal to a width sufficient to enable it to Carry the supply of water which is required for the irrigation of all the land under its Command, ~~and to diminish as much as possible the silting that now take place,~~ would be attended with Considerable expense, it was proposed to retain it almost as a still water line of Navigation from Certain points, and to Carry water from

those points downwards for irrigation in side Channels having such a fall as to need little Capacity, and to create a Current strong enough to Carry off silt. The estimates now submitted by Lt Col: Winscom are for the execution of these works, which will not only tend to keep the Drainage Canal open for navigation for a longer period than is now practicable, and that, in the opinion of the Collector, the most important time of the year for Trade, but will set free for appropriation to important works of improvement in the Delta, the large sums which are now annually expended

in the clearances of silt.

Under these circumstances the Govt. sanction the estimates for entry in the Budget of 1867/8.

J

A/4063-4064.

To
The Engr. 2d Div with five details Estts three Specfns & one Section
" Controller
" Asst Genl
Sept 23d October

9-11-3 [illegible]

21-11-a-5

26

J. W. 1866 Depte

Pro. of Govt. for Octr.

No 3342

Pro. of the Madras Govt

Dy 19. October 166.

Estimates amounting to Rs 6470 for the excavation of side Channels along the east and west banks of Masulipatam Canal for irigation purposes in the Kistna Delta sanctioned for entry in the Budget of 1867-68

No 463-464.